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The Hidden Face of Urbanity

Morphological Differentiation of Degraded and Restituted Towns in Poland in the Context of the Efficacy of the National Administrative System

Mirek Dymitrow

UNIVERSITY OF GOTHENBURG
Department of Human and Economic Geography
& Department of Earth Sciences
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UNIVERSITY OF GOTHENBURG
Department of Human and Economic Geography
& Department of Earth Sciences
Geovetarcentrum/Earth Science Centre
Master of Science Program in Geography
Supervisor: Åsa Westermark

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Mailing address	Address	Telephone	Telefax	Geovetarcentrum
Geovetarcentrum S-405 30 Göteborg	Geovetarcentrum Guldhedsgatan 5A	031-786 19 56	031-786 19 86	Göteborg University S-405 30 Göteborg SWEDEN

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Mirek Dymitrow

Abstract

This master's thesis deals with the concept of *urbanity* in Poland, where it coincides with a judicial, administrative understanding of urbanity. A specific of the Polish administrative system is that it utilizes town privileges – a mediaeval remnant – to symbolically define formally urban areas. Such a practice inadvertently creates confusion in terms of what urbanity exactly means. Town privileges are widely associated with historical events, such as the 1869-70 administrative reform enforced by the Russian occupation of Poland, depriving 336 towns (75 %) of their urban status. The issue of foreign oppression, as well as Poland's chequered relations with Russia, makes this particular loss of urbanity an important identity issue for the towns concerned. Loss of urban status is further emphasized by the fact that the lack of town privileges in Poland degrades a settlement to rural status, which – in this particular context – may be disadvantageous in terms of prestige, economic growth, community cohesion and preservation of cultural heritage. Although 40 % of the reform towns have to date been restituted, recovery of urban status has been hampered by an array of obstacles, which in turn could be tantamount to the undermining of the meaning and the purpose of the concept of urbanity. Such a situation cannot be satisfactorily accommodated today, particularly when granting urban status may be restricted by specific official prerequisites.

One of the most important constituents of urbanity in governmental evaluations today is the attribute *urban morphology*. However, urban morphology – along with the derivative attribute urban consciousness – is considered to be the most difficult to assess, most likely as a result of its close association with the subjective arts of architecture and urban design. The difficulties in obtaining relevant data have resulted in these two attributes of urbanity being the least examined. Consequently, the task of this study has been to investigate how the concept of urbanity – as conveyed by the Polish administrative system – corresponds to de facto conditions in regard to the variable urban morphology. In order to conduct a large-scale comparative inquiry on the matter, a necessary intermediate – yet major – objective has been to assemble and devise an appropriate methodology for this particular task.

Drawing upon a wide range of theories as well as observations of current trends and practices in urban design (including field studies in various degraded towns), I propose an approach based in part on eclectic methods (regarding town plan complexity and physiognomy) as well as a totally new methodology. The latter acknowledges market squares as the most important commercial, social, cultural, functional and symbolic hubs of small traditional towns, along with their crucial role as denominators of small-town urbanity. With the intent to moderate the impact of subjectivity inherent to traditional field-based observations (including approximation-laden impreciseness and human error), I have resorted to satellite imagery and aerial photography as primary sources of data subject to analysis. The new methodology was subsequently validated by field observations in 69 of the studied towns.

The objects of study were the aforementioned 336 reform towns and the analytical basis consisted mainly of comparisons between the morphologies of restituted (formally urban) and degraded (formally rural) towns. An important finding is that although the restituted towns are generally morphologically more urban than the degraded ones, the problem is not in what the system includes but in what it excludes, as illustrated by the large number of degraded towns that fully meet the current criteria for urbanity. Inclusion itself may also be problematic as granting town privileges to units significantly divergent from contemporary urbanization standards automatically deepens the breach between de jure and de facto urbanity. In conclusion, the studied set of towns shows an immense morphological differentiation with extremes at either end of the rural-urban divide, and a distinct reshuffle of urban and rural units in its middle part. Previous studies have shown occurrences of continuum structures in various geographic contexts, particularly in regard to heterogeneous groups of towns; this study stipulates that continual morphological configurations occur just as much in sets of towns with similar morphogenetical backgrounds and histories. As such, I argue that the reform of 1869-70 can no longer act as an umbrella term affixed to towns that are 'de facto urban yet unjustly rural', but is rather a cloak of misinformation under which reactionary aspirations are allowed to flourish.

Furthermore, I have examined the spatiality of current restitutions, taking into account factors such as diffusion of innovations, agglomeration proximity, territorial-administrative barriers and occurrences of city deserts, concluding that the lingering restitutional inertia is most likely the effect of a faulty system that permits the retention of the aftermaths of the old reform. I argue that the system is deceptive, counterintuitive and discriminatory, but also inconsistent in terms of susceptibility to manipulation, improper monitoring and lack of self-regulatory mechanisms. Last but not least, it renders a misconceived national urbanization profile, which nonetheless serves as a foundation for official statistics and the various developmental policies and strategies derived therefrom. It is argued that one way of improving the system could be through separation of the cultural element from the administrative arena.

Keywords: urbanity, urban morphology, rural-urban, degraded town, town privileges, civic rights, restitution, urbanization, revitalization, Poland, Congress Poland, 1869-70 administrative reform.

Sammanfattning

Denna masteruppsats behandlar konceptet *urbanitet* i Polen, med fokus på urban morfologi som en av dess beståndsdelar. Polen är ett land som formellt klassificerar alla bebyggelseenheter (orter) som antingen urbana eller rurala, trots att den strikt dikotomiska synen på ruralitet/urbanitet idag anses vara anakronistisk. Inte nog med att en felklassificering kan synbart missgynna formellt rurala dock de facto urbana orter i termer av ekonomisk tillväxt, prestige, lokal sammanhållning och bevarande av kulturarv, systemet är också förvirrande. Förvirring uppstår i och med att urbana enheter i Polen betecknas med hjälp av stadsrättigheter, en historisk kvarleva som dock tillåts definiera den moderna synen på urbanitet. Problemet blir mest påtagligt i fallet med så kallade degraderade städer, dvs. formellt rurala orter som förlorat sina stadsrättigheter i slutet av 1800-talet i samband med Rysslands ockupation av Polen. Urbana enheter i Polen utses centralt genom att man väger en rad kriterier. Ett av dessa kriterier är *urban morfologi*, ett urbant attribut som på grund av sin subjektiva karaktär anses vara det mest oprecisa och – av samma skäl – det minst undersökta inom forskningen. Å andra sidan anses urban morfologi vara de degraderade städernas starkaste urbana attribut som – på grund av sin påfallande visualitet – förmår att skapa en urban identitet bland de boende.

Uppsatsens övergripande mål har varit att utvärdera det polska administrativa systemet genom att undersöka graden av urbanitet hos 336 städer degraderade under den ryska reformen från 1869-70, varav ca 40 % har under tidens gång återfått sina stadsrättigheter (restituerats). Genom att jämföra urbanitetsgraden hos degraderade (formellt rurala) och restituerade (formellt urbana) städer kunde systemets effektivitet analyseras. För att möjliggöra detta har ett morfologiskt index skapats utifrån ett brett teoretiskt ramverk, kartläggning av samtida trender inom urban design samt talrika fältobservationer. Det metodologiska bidraget har validerats med hjälp av fältstudier genomförda i 69 degraderade städer.

Ett intressant resultat är att de undersökta städerna uppvisar stark differentiering (kontinuumstruktur) som sträcker sig över den formella uppdelningen mellan stad och land med extremer åt vartdera hållet, något som i sin tur pekar på systemets felbarhet. Även om de restituerade städerna är generellt mer urbana än de degraderade städerna, ligger inte problemet i det som systemet inkluderar utan i det som det exkluderar. Detta har härletts bland annat till systemets passivitet i att motverka den forna reformens destruktiva inverkan på det polska stadsnätets rumslighet. Resultaten visar också att Polens urbanisering idag är i hög grad avhängig faktorer som skulle kunna betraktas som avskilda från objektiva indikatorer för urbanitet. Samtidigt pekar studien på att flera degraderade städer omöjligen kan betraktas som urbana idag och att den ofta anförda 'orättvisa' reformen från 1869-70 kan även fungera som en täckmantel för gammalt agg mot Ryssland men också som en förevändning vid svårgenomförliga restitutioner.

Nyckelord: urbanitet, urban morfologi, rural-urban, degraderade städer, stadsrättigheter, restitution, urbanisering, revitalisering, Polen, Kongresspolen, administrativ reform från 1869-70.

Отрывок

Данная кандидатская диссертация рассматривает концепцию *городского характера* в Польше, где она совпадает с юридическим, административным пониманием городского характера. Особенностью польской административной системы является то, что она пользуется городскими правами, средневековым пережитком, чтобы символически определить городские районы; практика, которая невольно создаёт путаницу в отношении того, что на самом деле означает термин «городской характер». Городские права главным образом ассоциируются с историческими событиями, такими, как административная реформа 1869-70 годов, приведённая в исполнение оккупацией Польши Россией, которая лишила 336 городов (75 %) их городского статуса. Проблема иностранного притеснения, также как и изменчивые отношения Польши и России, делают потерю городского статуса важной проблемой самоопределения для вышеупомянутых городов. Потеря городского статуса ещё более усугубляется тем фактом, что потеря городских прав в Польше понижает поселение до деревенского статуса, что в данном контексте может быть невыгодно в плане престижа, экономического роста, сплочённости населения, и сохранения культурного наследия. Хотя 40 % из реформированных городов к настоящему моменту были восстановлены в своём первоначальном положении, возвращению городского статуса мешает масса препятствий, которые, в свою очередь, могут быть равносильны подрыву значения и цели самой концепции городского характера. С подобной ситуацией трудно смириться сегодня, особенно когда предоставление городского статуса может быть ограничено особыми официальными предварительными условиями.

Одной из самых главных составляющих городского характера в правительственных оценках сегодня является атрибутивная *городская морфология*. Однако, городская морфология, наряду с производным городским сознанием, считаются самыми трудными в плане оценки, весьма вероятно, в результате её тесной связи с субъективным архитектурным искусством и городским дизайном. Ввиду трудности в получении существенных данных эти два свойства являются наименее изученными. Следовательно, задача данного труда состояла в том, чтобы исследовать, как понятие городского характера – как передано польской административной системой – соответствует де-факто условиям в отношении переменной городской морфологии. Чтобы провести крупномасштабное сравнительное исследование по данному вопросу, необходимая промежуточная, – но, тем не менее, важная цель состояла в том, чтобы собрать и изобрести соответствующую методологию для этой конкретной задачи.

Опираясь на широкий круг теорий, а также наблюдений нынешних тенденций и практики в области городского дизайна (включая изучение в реальных условиях в различных городах, лишённых городского статуса), я предлагаю подход, основанный частично на эклектических методах (в отношении сложности городского плана и внешнего вида), а также совершенно новой методологии. Данная методология признает рыночную площадь в качестве наиболее важных торговых, социальных, культурных, функциональных и символических узлов малых традиционных городов, наряду с их решающей ролью в качестве знаменателя городского характера малых городов. С намерением умерить воздействие субъективности, присущее традиционным наблюдениям на местности, (включая неточности приближённого значения и человеческой ошибки), я прибегнул к спутниковым изображениям и аэрофотосъёмке в качестве первичных источников данных с учетом анализа. Новая методология была впоследствии подтверждена наблюдениями на местах в 69 из изучаемых городов.

Объектом исследования были вышеупомянутых 336 реформированных городов и аналитическая основа состояла главным образом в сопоставление структур реституированных (официально городских) и пониженных в статусе (официально сельских) городов. Сделан важный вывод, что, хотя реституированные города в целом имеют более развитую городску структуру, чем те, что потеряли свой статус, проблемой является не то, что система включает, а то, что она исключает, как об этом свидетельствует большое число городов, лишённых статуса, в полной мере удовлетворяющие нынешним критериям городского характера. Включение само по себе может также быть проблематичным, так как предоставление городских прав единицам, значительно расходящимся с современными стандартами городского характера, автоматически углубляет разрыв между статусом де-юре и де-факто. В заключение, изученный комплекс городов свидетельствует об огромной структурной дифференциации с диаметрально противоположенными значениями в разнице между сельскими и городскими районами, и отчётливой перестановке в городских и сельских подразделений в средней части. Ранее проведённые исследования показали наличие непрерывных структур в различных географических условиях, особенно в отношении разнородных групп города; это исследование обуславливает, что постоянные морфологические конфигурации происходят столь же и в городах с аналогичным морфогенетическим происхождением и историей. Таким образом, я утверждаю, что реформа 1869-70 годов больше не может действовать как обобщающий термин, прикреплённый к городам, которые являются «де-факто городскими, но несправедливо сельскими», но скорее прикрытия дезинформации, в рамках которой реакционным чаяниям разрешается процветать.

Кроме того, я изучил пространственность нынешних реституций, принимая во внимание такие факторы, как распространение нововведений, близость агломерации, территориально – административные барьеры и наличие «городских пустынь», заключив, что длительная реституциональная инерция, вероятнее всего вызванная несовершенной системой, позволяет сохранить последствия старой реформы. Я считаю, что данная система вводит в заблуждение, противоречит здравому смыслу и носит дискриминационный характер, а также не согласуется с точки зрения восприимчивости к манипулированию, недостаточного контроля и отсутствия механизмов саморегулирования. И последнее, но не менее важное, она передаёт неверный национальный урбанизационный профиль, который, тем не менее, служит в качестве основы для официальной статистики и различной политики в области развития и стратегии, вытекающей из него. Утверждается, что одним из способов улучшения системы может быть отделение культурного понимания городского характера от административной деятельности.

Ключевые слова: городской характер, городская морфология, сельский-городской, город лишённый городских прав, городские права, восстановление городских прав (реституция), урбанизация, ревитализация, Польша, Царство Польское, административная реформа 1869-70 годов.

Zarys treści

Niniejsza praca magisterska poświęcona jest problematyce pojęcia miejskości w Polsce. Mimo powszechnie przyjętego stwierdzenia że dychotomiczny podział miejscowości na miejskie i wiejskie jest w obecnych warunkach anachronizmem, polski system administracyjny nadal właśnie taki stosuje. Ponadto, *miejskość* w formalnym kontekście polskim wyrażana jest przez prawa miejskie (a więc przez zdezaktualizowany zbiór praw i przywilejów szczególnie istotny w średniowieczu), mimo że winna ona odpowiadać konkretnym, współcześnie uwarunkowanym kryteriom. Takie przemieszanie teraźniejszości z elementem historycznym sprawia że rozbieżność między formalnym a faktycznym stopniem miejskości miejscowości polskich może być uderzająca. Niezgodności te są szczególnie przypisywane tzw. miastom zdegradowanym, czyli formalnie wiejskim miejscowościom, pozbawionym praw miejskich w XIX wieku. Miejscowości te nie są typowym składnikiem wiejsko-miejskiego kontinuum, ponieważ, w przeciwieństwie do zurbanizowanych tradycyjnych wsi, miasta zdegradowane były niegdyś miastami z prawdziwego zdarzenia.

Ponieważ miejskość nie jest zjawiskiem jednoaspektowym, może ona być zdekonstruowana na poszczególne parametry i badana za pomocą redukcjonistycznych metod poznawczych. Jednym z atrybutów miasta jest jego specyficzna *morfologia*, powszechnie kojarzona z kulturowym zrozumieniem miejskości. Jej wszechobecny, rejestrowany wzrokowo charakter sprawia że morfologia miejska jest jednym z najważniejszych czynników kreowania miejskiej świadomości społecznej, a przez to – zjawiska miejskości. Niejednak, ocenę morfologii poszczególnych jednostek znamionuje często duża nieścisłość, co wynika głównie z subiektywności w definiowaniu i określaniu a nieraz także mierzalności fizycznych cech krajobrazu miejskiego. Stwarza to problemy zarówno w procesie przyznawania praw miejskich jak i w badaniach nad geografią osadnictwa.

Metodologicznym – aczkolwiek pośrednim – celem niniejszej pracy było zatem skonstruowanie syntetycznego wskaźnika morfologii miejskiej, porównywalnego z innymi, bardziej obiektywnymi atrybutami miejskości. Wskaźnik ten został opracowany przez zestawienie zarówno eklektycznych jak i oryginalych metod, sporządzonych w oparciu o dotychczasowy dorobek teoretyczny, poprzez śledzenie obecnych trendów w planowaniu przestrzennym oraz na podstawie obserwacji terenowych. Do badanych elementów zaliczono: układ przestrzenny, typ zabudowy oraz stan rynku analizowanych miejscowości. W celu zminimalizowania wpływu subiektywności, za podstawę syntetycznego wskaźnika przyjęto dane morfometryczne, otrzymane głównie przez teledetekcję oraz – rzadziej – ze źródeł statystcznych. Zgodność wskaźnika została zweryfikowna poprzez badania terenowe w 69 miastach zdegradowanych. Głównym celem pracy było natomiast zastosowanie owego wskaźnika na zbiorze 336 miast zdegradownych w ramch reformy administracyjnej, przeprowadzonej w latach 1869-70 przez władze rosyjskie w Królestwie Polskim (Kongresowym). Ponieważ około 40 % owych osad odzyskała odtąd prawa miejskie, porównanie stopnia miejskości miast restytuowanych i tych nadal zdegradowanych pozwoliło na ocenę skuteczności polskiego systemu administracyjnego pod względem wyznaczania jednostek formalnie miejskich w sensie morfologicznym (a także demograficznym).

Mimo że miasta restytuowane wykazały ogólnie wyższy poziom cech miejskich aniżeli miasta zdegradowane, analizowany zbiór charakteryzuje się bardzo dużym zróżnicowaniem, szczególnie w sektorze środkowym, w którym formalnie miejskie i wiejskie miejscowości są wymieszane. Ponadto, w zbiorze występują niepokojące ekstremy. Wcześniejsze badania wskazały na występowanie struktur typu kontinuum w różnych kontekstach geograficznych. Niniejsze opracowanie potwierdza że struktury takie występują również w zbiorach miejscowości o podobnych uwarunkowaniach morfogenetyczno-historycznych, także w sensie morfologicznym. Uzyskane w wynikach duże rozbieżności danych wskazują na zwodniczość polskiego pojęcia miejskości, którego wadą – wydaje się – jest specyfika systemu który je definiuje. Około 50 (25 %) miast zdegradowanych – liczba ta waha się pomiędzy 33 (17 %) a 61 (32 %) zależnie od metody analitycznej – wykazuje pełny zestaw morfologicznie miejskich cech, odpowiadając zatem współczesnym standardom urbanizacji w Polsce. Nieskuteczność ich restytucji zależna jest natomiast od czynników innych niż 'obiektywna miejskość takim jak dyfuzja idei umiastowienia, oddolny charakter wszczęcia procesu restytucji czy też narzucone bariery terytorialno-administracyjne, niekorzystnie utrzymujących następstwa dawnej reformy, ciągle widocznej w nierównomiernym rozmieszczeniu miast w Polsce. Przeciwnie, występowanie wielu morfologicznie 'nie-miejskich' miast zdegradowanych wskazuje także na nietrafność bezwarunkowgo kojarzenia ich z tzw. 'krzywdami dziejowymi', do których nierzadko zalicza się reformę z lat 1869-70.

Słowa kluczowe: miejskość, morfologia miejska, miasto-wieś, miasta zdegradowane, prawa miejskie, restytucja praw miejskich, urbanizacja, rewitalizacja, Polska, Królestwo Kongresowe, reforma administracyjna z 1869-70.

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1. Focus of the research

1.1. Introduction

This master's thesis is concerned with the concept of urbanity in its most elementary form, with Poland as an area of study. In Poland, all human settlements are designated by a dichotomous administrative system as either formally urban or rural. Urban status is granted when a settlement receives a set of legally binding privileges called civic rights (also known as town privileges). All settlements that lack civic rights are considered rural, not only in the eyes of the law but also in a wider sense (by the general public). Since particular elements that make up the concepts of urbanity and rurality – and combinations thereof – are constantly shifting due to a wide range of spatial and temporal factors, neither urbanity nor rurality is a static condition. Thus, two perspectives on urbanity have been set into opposition – the formal (*de jure*) and the actual (*de facto*). The focus of this study is, consequently, the level of concurrence between the two perspectives. Given that urbanity is a much more exclusive status than rurality (only 1.65 % of all settlements in Poland are formally urban) this study opts for focusing on the former in terms of demarcation.

In this study, the relation between formal and actual urbanity will be addressed by examining the phenomenon *degraded town* in Poland. A degraded town is a town deprived of its civic rights, and therefore – according to the Polish law – of its legal claim on urbanity. Poland is a country where degraded towns abound due to the country's stormy political history, and particularly one episode, the administrative reform of 1869-70, implemented during the years of Russian occupation, responsible for erasing 75 % of Polish towns. The 336 towns that lost their urban status during the reform are the subject of this study. Once Poland regained its independence, restitution (recovery) of urban status to degraded towns has been hampered by many obstacles: political agendas, ambiguous criteria, arbitrary evaluation methods and decentralization of the process itself, which assumed a bottom-up mode. The resulting chaos has disrupted the Polish formal rural-urban system and there are premises suggesting that restitution of urban status has not always been granted to the most urban of the degraded towns. This in turn could be tantamount to the undermining of the meaning and purpose of the concept of urbanity.

Within geographical studies, the transition zone between rural and urban settlements is called the rural-urban continuum. Degraded towns are not typical components of this continuum (cf. Sokołowski 2008) which predominantly consists of traditionally agrarian villages that become successively urbanized as a result of societal changes. The difference is that degraded towns were in fact fully urban once, only to become ruralized as a result of dubious political agendas. This fact makes them unique to traditionally rural villages, at least in regard to their morphology, i.e. their form and appearance. Given the critical role of urban morphology in governmental evaluations of urbanity today (but also in scientific definitions), degraded towns are most likely to be misplaced across the rural-urban divide. Therefore, this study attempts to shed light on the conditions within this particular section of the Polish rural-urban continuum by focusing on one specific yet – in this context – unsatisfactorily explored aspect of urbanity, namely that of urban morphology.

Realizing that possession of an inappropriate administrative status may be disadvantageous to a degraded town in terms of prestige, economic growth, community cohesion and preservation of cultural heritage, this study proposes a methodological approach in order to minimize presumable misplacement. By scrutinizing current restitution trends as well as comparing the morphological make-up of restituted and non-restituted reform towns, this study goes out for an analysis of the validity of the term *urbanity* as conveyed by the Polish administrative system. The methodology developed and assembled for this purpose could also serve as a tool for more adequate and accurate governmental evaluations of the morphological criterion, as well as a source of information for candidate towns about their morphological predispositions. Given the considerable amount of time that has elapsed since the 1869-70 degradations, the point of departure of this study is not such that all degraded towns are unjustly formally rural and should by any means become formally urban just because of their urban past. On the contrary, it seeks for an objective differentiation of the current morphological urbanity status of both restituted and non-restituted towns in order to render the restitution process more transparent.

Although predominantly geographical, this thesis cuts occasionally across the disciplines of history, politics, public administration, spatial planning, urban design and ethnology.

1.2. The hidden face of urbanity

Imagine a city. What is the first thing that comes to mind? Is it its size? The people who inhabit it? Or perhaps bright neon lights, exclusive shops, art galleries, red buses, tailbacks, smog, crime, segregation or poverty? We all have an intuitive notion of what constitutes an urban settlement; however, those notions vary depending on who we are, when we live and where we dwell. There are many aspects that define urbanity and there is no one unanimous, satisfactory answer as to which aspect is the most dominant. To me, it all begins with the physical appearance of a city – its *face*. In the same manner as when we form a quick opinion about the people we meet on the basis of their looks alone – handsome, ugly, old, well-groomed, scary, sexy, interesting, worn-out, respectable and so forth – I believe, we identify a city or a town. Such identification might be short-lived; again, analogously to our human acquaintance-making, when we get to know a person better, we are most likely to change our opinion. We will discover other qualities – or lack thereof – underneath the surface that will make us either fall in love with or hate their owner. Obviously, a city cannot survive on its looks alone; there has to be more substance than that. Still, that first impression is very important for our reconnaissance, as well as an example of how the human cognitive process works.

Now, what is the *face of urbanity*? If we look around, what is it we see? Apart from humans, cars and pigeons – objects that could easily be put in a non-urban context – we most certainly will notice buildings, streets and markets, monuments and columns, parks and lawns, street lamps, fountains and benches. All of these artifacts can be described as elements that constitute the form, or the morphology of a city. Even if most of them could be found in some traditionally rural settlements, they would most likely differ in shape, size, height, intensification and historical content when compared with their traditionally urban counterparts. Thus, urban-specific morphology, or simply *urban morphology*, can be regarded as an intrinsic part of an urban settlement. Now imagine urban morphology in a non-urban context: all those buildings, streets and markets, monuments and columns, parks and lawns, street lamps, fountains and benches as part of a village. Is that possible? How can the very face of urbanity simultaneously constitute a feature of rurality?

As a 5-year-old, I remember having a specific conversation with a somewhat older friend on the status of the small Polish town we lived in. For me, Tarnogród was definitely a town: it had a market square; it had streets and apartment blocks; it also had a hospital, a department store and a cinema, located opposite a lush park, outside of which a long line of taxis queued up. It *was* a town. 'No', said the friend, 'It's not a town because it doesn't have civic rights'. I was not sure what that meant at the time, but it certainly felt odd.

This tiny episode illustrates that the face of urbanity can be misleading, a fact that even children (*above* 5 years of age I may add) are aware of. The problem is that Tarnogród is not an isolated case; in Poland, there are many others. The reason for this is the discrepancy between the Polish formal definition of a town and the frequent incidence of settlements possessing a set of de facto urban features, and not only in regard to their morphology. Allowing for some simplifying generalization, such a scenario is to a great extent inherent of the 19th century, the time when Poland was torn apart by its neighboring superpowers. As a direct result of 123 years of occupation (and subsequent annexation), hundreds of Polish cities lost their civic rights, becoming degraded to rural status. To some extent, this situation has been corrected over the years, as was the case with Tarnogród. However, there is evidence suggesting that many former towns linger in a state of indefinable hibernation. They are rural embodiments of urbanity, with their faces hidden beneath a veil of an unfortunate past; a past ignited by oppression and misgovernment, furthermore marred by disinterest and dereliction, and nowadays perpetuated by a peculiar, possibly antiquated administrative system.

Beyond the somewhat sentimental tone of this introduction emerges a notion about the specific position – not necessarily duly – of *the degraded town* within the Polish rural-urban hierarchy. The tension this position creates in terms of adequacy of the hierarchical administrative system is the concern of this thesis. In order to approach the problem with a sufficient amount of relevance, I have chosen to plunge into the largest abrogative urban reform in Polish (if not European) history, widely regarded as the epitome of depreciation: the reform of 1869-70 that eliminated 336 towns during the course of one year. Are they all there just waiting for their hidden urban faces to be unveiled, or is the ghost of the past nothing short of a mystification? Let us find out.

1.3. Background

> The small traditional city and those parts of the traditional city which survived twentieth-century development have qualities admired by people, many of whom feel psychologically alienated by the impact of a visually bland and overpowering city governed, not by local burgers, but by the power of international commerce. Legibility is one of the qualities of the traditional city. The traditional city is 'easy to read'. The important public and religious buildings were the tallest and most imposing in the city; the main public squares and streets for parade were embellished with decoration, fountains, sculpture and ornamental lighting. Districts within the city were clearly apparent, defined and given

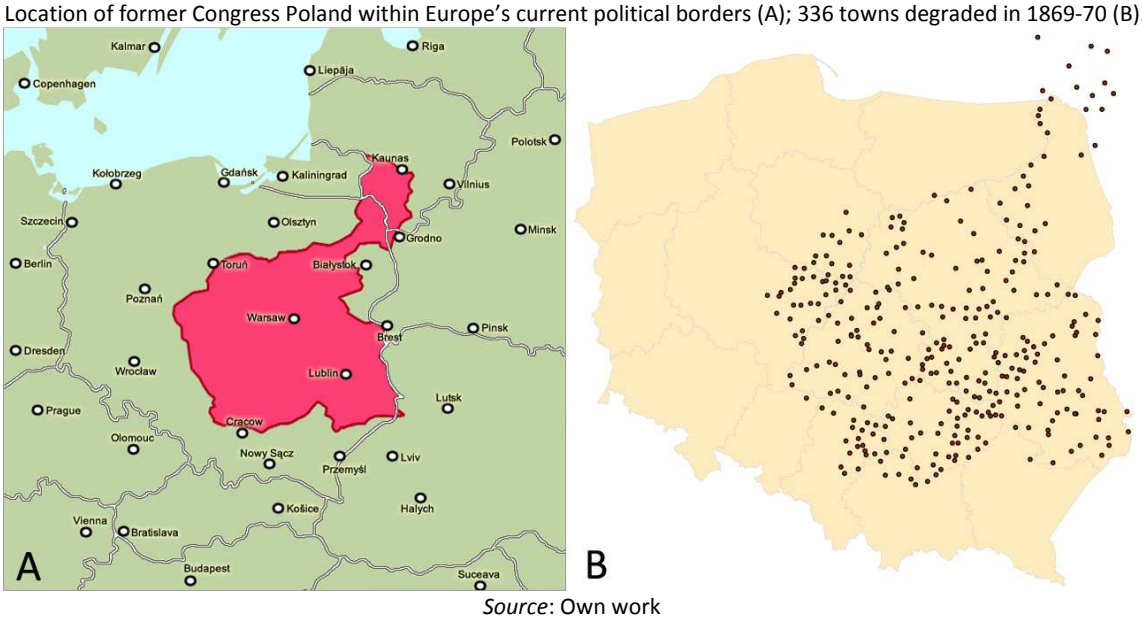
> distinct names (…). Places had a beginning, an end, a defined boundary and, above all else, a centre for meeting and commercial display (Moughtin et al 2003: 49).
>
> The durability of urban forms and functions is confirmed by the urban character retained by numerous ex-towns on the [Polish] territories formerly annexed by Russians, despite the 120 years which have passed since the tsar's ukase reduced over 300 towns to the rank of rural settlements (Sokołowski 1999: 206).
>
> [Degraded towns] are part of [Polish] history, heritage and culture. They constitute a specific element within Poland's spatial economic structure. They are also an integral part of the country's settlement system, a component unknown of in other European countries. They linger in Poland's local tradition and in spite of many historical storms they have managed to survive in oblivion. They are a testimony of foreign violence, old injustice and present incomprehension (…). In an era of globalization, internationalization of the world economy, European integration and new regionalism (…), no perspectives of development and no rational way towards development can be sighted for this type of towns (Siemiński 2000: 14, my translation).

The quoted excerpts quite accurately capture my inclination toward the microcosm of small towns, and particularly that of degraded towns[1], many of which have escaped the altering forces of economic development while reposing in a non-urban state and preserving valued qualities of a traditional city. Today, when development is defined by other means, not least with respect to human sustainability as reflected in sound living environment and preservation of cultural heritage, the role of the traditional city is being imbued with new meaning.

In Poland, however, the general view of urbanity still coincides with the judicial concept of urbanity and is expressed through the formalized tradition of using civic rights[2]. This means that a settlement is understood as urban (in the eyes of the law, within research and planning, and widely by the general public) irrespective of the quality of its substance provided that it has been granted civic rights. Degraded towns are thus units which were bereft of their existential foundation according to old and often highly questionable standards that are no longer applicable today. Moreover, this alleged inconsistency – where pertinent – has not yet been dealt with by the Polish state in terms of conducting a large-scale multiaspectual inquiry on the matter.

Lack of sufficient legal action is strikingly visible in central and eastern Poland where the urban network is disproportionate to the rest of the country (cf. Drobek 1999: 130; Siemiński 2000: 16) and the low level of urbanization is associated with backwardness and underdevelopment (Siemiński 2000: 22). This particular territory, known during the Russian occupation in the 19th century as Congress Poland (fig. 1.1), succumbed in 1869-70 to a massive, mechanized administrative reform which erased 75 % of Polish towns (336 units). Although seeing the reform solely as an act of repression is an oversimplification (cf. Sokołowski 2011: 369), the reform is still emotionally charged among Poles and is often brought up when the question of urban restitution (recovery of civic rights) becomes topical (Dymitrow 2012). Although many former towns have to date been restituted, no less than 58 % remain rural. Such situation is disadvantageous to the non-restituted towns, as civic rights do not merely boost the prestige of a settlement; they also have a significant impact on its development in terms of raised attractivity towards investors and tourists (Rosa 2010; Pacholak 2010; Bernal 2009; Drobek 2004; Borusewicz 1999; cf. also Danida 2000).

Fig. 1.1. Location of former Congress Poland within Europe's current political borders (A); 336 towns degraded in 1869-70 (B).



Source: Own work

[1] A discussion on what exactly this term implies will take place in chap. 3.4.3.
[2] Discussed in more detail in chap. 3.5.1.

The problem is partly due to restitution of former towns in Poland being a bottom-up process, which in turn is evaluated and executed on the basis of guidelines rather than rules and regulations (cf. Drobek 1999: 121; Sokołowski 2002: 16; Szpor 1998). These two aspects result in ad hoc restitutions which in turn determine the official Polish urban make-up. Since the administrative system employed in Poland is uncompromisingly dichotomous – its components are either urban *or* rural (Drobek 2005a: 53) – the entire Polish urbanization profile could thus be said to be a reflection of isolated, arbitrary decisions. Furthermore, the benevolent bottom-up restitution mode introduced in the 1990s as a democratic element seems to be unable to effectively rectify the outcome of the top-down decisions that had caused the degradations in the first place. In other words, the damage of past anti-democratic infractions is actually thwarted by current decentralization, and particularly so because the restitution procedure is fairly complex and the knowledge of its intricacies among the local governments is limited (cf. Jaskiernia 1999). Suspiciousness and inability to see benefits with regaining urban status are other factors, all of which can act as deterrents toward due restitutions (cf. Drobek 1999: 130; Dymitrow [2010] 2012: 67). This creates a tension between approach and results; in this particular matter, decentralization is likely, if not tended to, to generate abnormalities within the Polish urban-rural system.

Another reason adding to the confusion is the lack of unanimous restitutional criteria. The main difference between guidelines and criteria is that guidelines imply *which* attributes of urbanity (so called prerequisites) a settlement must possess in order to obtain formal urban status, but they do not state the *level of intensity* of these attributes, something that formal criteria would normally do. Furthermore, guidelines work on a praxis basis and lack the strictness and formality of criteria. One such guideline-based prerequisite seems to be possession of urban morphology (Dz.U. 1990 Nr 16, poz. 95; more on this in chap. 3.8). Unlike other, statistically supportable and less complex prerequisites (such as supralocal traditions, sufficient demography, extra-agrarian population make-up and local consent), urban morphology is neither supported by a direct referential database nor by satisfactory methods for creating one:

> Among the applied criteria for distinguishing [formal] towns [in Poland], the one least applied is the physiognomic [morphological] criterion, which is considered to be the least precise. The reason for this is the subjectivity of defining and designating urban types of the built environment; the other reason is the lack of measurable traits that could legibly indicate the character of the built environment (Szmytkie 2003: 346; my translation).

Surely, the structure of a specific town can be analyzed in isolation, but there is no satisfactory way of conducting a systematic, quantitative validation of such structure in relation to that of formal towns – or even of future towns – on the basis of the same methods of conduct (cf. Drobek 1999: 10; 2005: 53). Moreover, subjectivity and (alleged) immeasurability of morphology results in urbanity being often confused with picturesqueness or charm of a place (Sumień 1989: 143). This in turn renders difficulties in monitoring and controlling the urbanization process. Furthermore, lack of unilateral criteria cannot rule out the possibility of human mistakes (Sokołowski 2002: 16), especially when the foundation for a morphological assessment is supplied by different district-level offices around the country (Borusewicz 1999). Since degraded towns are the most likely to be restituted, the need for a morphological evaluation regarding those is well-founded. Furthermore, the issue of urban morphology has recently been reinvented in Poland, spawned by an immense EU-subsidized revitalization campaign aimed at degraded town centers (discussed in chap. 4.9.3).

1.4. Problem formulation

According to Sokołowski (1999: 44-45), the formal rural-urban divide in Poland as a whole[3] is largely consistent with the settlements' possession of traits widely considered as either typically urban or rural. Studies have shown that the majority of formally urban units are actually urban and the majority of formally rural units are actually rural. However, one major deviation from this balance are towns degraded in the second half of the 19th century (the reform towns), the major part of which could currently substitute for de jure urban units. Moreover, there are several instances of restituted towns (i.e. formally urban towns) which only fulfill some 'criteria' of urbanity (ibid., p. 43). In order to evaluate the de facto state of urbanity of settlements straddling the rural-urban divide (placed within the so-called rural-urban continuum, cf. chap. 3.3.3), one must conduct large-scale comparative analyses. Some of these analyses are inevitably hampered by technical difficulties. One such barrier is the unavailability of data. In most cases, data to serve as a basis for analyses are readily available from statistical bureaus, e.g. data regarding the economic base, the employment structure, centrality, demography, geodesy etc.; however, data regarding more complex features such as urban morphology or local urban consciousness have to be gathered in the field or via surveys (cf. Sokołowski 1999: 38; 42). The difficulties in obtaining such data result in the last two aspects of urbanity being the least examined (cf. also Szmytkie 2003).

[3] I.e. considering *all* human settlements, including traditionally agrarian villages.

Departing from this knowledge gap, I believe it is also important to motivate why this gap should be filled. Urban morphology is clearly mentioned as a prerequisite for granting civic rights in governmental evaluations; however, the guidelines do not provide sufficient clues. I would argue that the importance of morphology lies on two levels: the functional and the psychological. The first one is of a general geographic nature; the second – closely associated with local consciousness – is somewhat more hypothetical, and cannot be exhausted within the scope of this study; however, there are premises suggesting its accuracy[4]. The impact of urban morphology on urban function (morphophysiology), i.e. the way urban form dictates evolution of certain functions, and how desired functions entail a specific urban form, will be addressed in more detail in chap. 4.3.1. At this point though, I would like to address the role of local consciousness, as it plays a specific role within the restitution debate.

Urban consciousness is an abstract concept of many components, whose distribution is not uniform, varying between individuals and neighborhoods (Beyazli & Aydemir 2011). Seen as an important determinant of urbanity, local consciousness is often overlooked (Sokołowski 1999: 42), although, as Beaujeu-Garnier & Chabot (1971: 37) put it, 'the conviction of the inhabitants that they live in a town is an indication that it actually *is* a town they live in'. It could be assumed that if such conviction is widely consensual within a formally rural settlement and if it is widely expressed on the local forum it may finally be enunciated as a desire for legal action (cf. Krzysztofik 2006: 14). Considering the bottom-up mode of the restitutional process in Poland, the difference between urbanity and rurality may thus lie in the sheer submission of an application. Hence, the role of local consciousness as a determining factor for urbanity should not be underestimated. Some even contend that urbanity is more a perceptual concept rather than a physical or visual entity per se (Jadon 2007: 70; Grönlund 1996: #2), and that such imageability is probably the single most important factor in the identity of a place (Lynch 1960). However, the identity of a place – or the level of local consciousness – is not random:

> Local consciousness seems to be intimately related to the morphology of a settlement; to a large extent, it is the result of a past or present possession of civic rights. Taking this [relation] into account would require minute cartographic and survey analyses, which (…) something that exceeds the technical limits of [my] work. At this moment, it is however appropriate to point out the *usefulness of such studies in the future*, particularly in regard to formally rural settlements with other, well-developed attributes of urbanity (Sokołowski 1999: 42, my translation and emphasis).

Indeed, the importance of the morphological factor is stressed – beginning with Ratzel (1891) – in most synthetic definitions of a town as one of its fundamental components (Szmytkie 2003: 346). According to Lefebvre (1996, in: Westin 2011: 227), 'the urban' is a delicate quality that is wholly dependent on the physical morphology of the city. In general perception, a town is associated with its overall appearance and those traits that are visible at first glance (Chądzyńska & Litwińska 2005: 169). These traits are also a statement of the town's socio-economic relations and a sign of its urban 'naturalness' (Pacione 2009: 158). In his dissertation, Sokołowski had statistically distinguished a set of rural settlements in Poland endowed with urban features, which, according to the author, 'after the verification of their morphological element (…), [could] have a chance to be qualified as towns (and even should become towns)' (1999: 206). It is my ambition to hereby contribute to such verification.

Fig. 1.2. Example of morphological differences between a formal town with a rudimentary structure (A) and a degraded town with a well-developed urban structure (B). *Source*: geoportal.gov.pl

A. Suraż – formal town B. Zaklików – degraded town

[4] I have subsumed this hypothesis as my second point of departure for writing this thesis (see chap. 1.5)

There are also premises other than theorists' statements that speak for the need of a verification of the morphological element. Empirical spot checks can be very convincing: a quick glance at the morphological structure of two settlements – one formally urban (Suraż) and one formally rural (Zaklików) reveal how alarming these differences can be (fig. 1.2). The degraded town of Zaklików is endowed with a complex, well-developed street-grid, good infrastructure (including railway); an intact, well-defined urban market square; and high physiognomic density – all occupying a relatively large area. Conversely, the formally urban Suraż consists of a scarce, amorphous town plan with houses scattered along a few badly linked roads, dispersed over a vast territory (low connectivity typical of towns); there is no defined center and the urban area is frequently interspersed with agricultural fields.

Morphology aside, differences in population size are also easily detectable. Within the territory of former Congress Poland, the smallest restituted town is more than five times smaller than the largest town that still remains rural, while – as of 2009 – twenty restituted towns were less populous than the corresponding number of non-restituted towns. For the whole of Poland, such differences are even more striking. On the 1st of January 2010, there were all in all 52 towns with less than 2.000 inhabitants (GUS 2011), a number widely considered as the lowest appropriate limit for a formally urban unit (MSWiA 2006). Furthermore, 596 rural units exceeded that limit in 1988 (Sokołowski 1999: 64-65). Such discrepancies indicate that urbanity cannot be measured by demography alone (a determinant factor applied in most countries; cf. Szymańska 2009: 355-359); otherwise there would not be villages as large as 11.929 (Kozy), i.e. almost 14 times larger (!) than the smallest of formal towns – Wyśmierzyce (GUS 2009).

Such indications suggest inconsistencies within the formal rural-urban divide in Poland. In order to make predictions about future urban restitutions more reliable and more relevant, it is imperative to assemble and systematize a substantial body of information to form the basis for more informed evaluations of plausible candidate towns:

> After all, a complete, non-defective hierarchic structure of the settlement system should be in the best interest of the state; [a structure] through which the state organizes and performs its duties towards its citizens (also vice versa); [a structure] within which the local centers – along with their development – have a defined, specific place (…) (Drobek 1999: 132, my translation).

In conclusion, a chain of nine factors motivate the relevance of conducting an extensive systematic study regarding the current morphological status of Polish towns degraded during the reform of 1869-70:

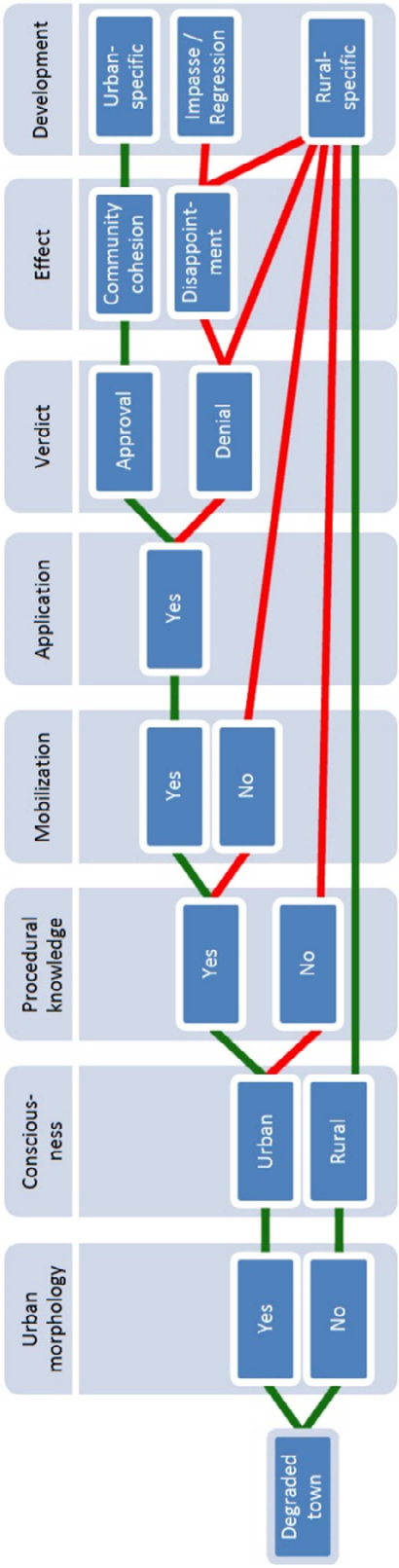
1. Generally questioned usefulness of the concept of rural-urban dichotomy.
2. Disturbing spatial irregularity in distribution of towns within the Polish urban network as a result of past politics[5].
3. Attribution of the rural status of *de facto* urban settlements to developmental barriers in terms of economic growth, community cohesion and preservation of cultural heritage.
4. High probability for towns degraded in the second half of the 19th century to regain their civic rights.
5. Critical role of urban morphology as a determinant of urbanity in governmental evaluations.
6. Critical role of urban morphology in the formation of local urban consciousness; the latter acting as a catalyst within a bottom-up restitutional process.
7. Premises suggesting morphological (and other, e.g. demographical) inconsistencies within the present dichotomous rural-urban administrative system.
8. Lack of a direct, systematized referential morphological database.
9. Lack of satisfactory methods to create such a database due to the complexity of the subject.

1.5. Points of departure for the direction of this study

Before presenting the aim and the objectives of this thesis, it is important to become acquainted with some points of departure that will guide the direction of my study.

1. The first point of departure deals with the legitimacy of the Polish urban-rural administrative system. The heterogeneity of spatial and temporal factors that shape the Polish settlement structure causes natural deviations from the classical rural-urban dichotomy as reflected in the formation of the so-called transient settlements. These transient settlements constitute a segment of the rural-urban continuum within which a number of formally rural settlements would theoretically meet the criteria of urbanity[6]; in other words, the number of *de facto* towns would be larger than the number of *de jure* towns (Sokołowski 1999: 10). The rationale of holding on to a dichotomous system based on urban and non-urban units would be unwarranted if the principles upon which such system rested lacked repercussion

[5] Rather than natural causes, such as unfavorable topography.
[6] Or vice versa, a number of formally urban settlements would *not* meet the criteria of urbanity.



in reality. If it can be illustrated that the balance between *de facto* urban towns and *formally* urban towns within a historically homogenous sector of the rural-urban continuum (the reform towns) is excessively disturbed, then such a system could be said to falter on its own principles and be deemed as either a misconstruction or an anachronism[7]. As such, it should be revised, and then either reformulated[8] or abandoned[9].

2. The second point of departure addresses the impact of urban morphology on the formation of local urban consciousness by means of collectivized perception. Perception is a constant process operating between man and his environment on the basis of previous knowledge by interpreting stimuli that are registered by our senses (Jadon 2007). However, since humans do not exist in a vacuum, such values are seldom highly individual, but rather a result of experiences, memories, norms, traditions and so forth (cf. Rapoport 1977: 174). Therefore, a village with an urban morphology is more likely to appeal to the local mind as being urban rather than rural[10]. Such identification – if accompanied by procedural knowledge and sufficient local mobilization – may spawn the submission of an application for restitution of urban status. Given that the application will meet with an approval, the community cohesion of the candidate town will be strengthened and the future development of that town will continue in an urban-specific manner, i.e. in synergy with the prevailing local consciousness. On the contrary, lack of knowledge of procedural requirements may avert the application submission and suppress due urban-specific development of that settlement. Also, even if the knowledge and the application are in order, an ill-informed denial may have an equally inimical effect or even worse (disappointment), both resulting in impasse or regression (fig. 1.3). Therefore, a large-scale comparative assessment of the morphological predispositions of degraded towns could act as a source of information both for local authorities (evaluation of their chances of restitution) and regulatory bodies (conformity of decision).

3. The third point of departure partially links the alleged inconsistencies within the Polish systemic urban-rural divide with difficulties of practical/objective/accurate assessment of the settlements' morphology, here understood as a major factor conducive to changes within that divide. Such difficulties are closely interconnected with the qualitative and variform character of morphological analyses, which often involve tedious field studies (impracticality) that are performed on an ad hoc basis (incomparability of results) using unstandardized methods, most notably visual analysis[11] (limitations inherent to perception and approximation, including human error). My assumption is that if field studies could be substituted by a set of alternative methods – mainly derived from remote sensing – in terms of a strong correlation between such set and traditional field-based visual analyses, then assessment of a settlement's morphological urbanity could be performed easier, quicker, cheaper and more accurately. Such an assessment mode would also create a referential

Fig. 1.3. Impact of urban morphology on a settlement's development – a hypothetical envisioning. The model shows possible scenarios of the rural-to-urban transformation process of degraded towns. Green links symbolize positive/appropriate progression, while red stand for negative/inappropriate progression in terms of concordance with prevailing morphology. *Source*: own work

[7] Sokołowski (1999: 204) regards such dichotomy as an anachronism in terms of urbanization *sensu largo*. In a formal context (*sensu stricto*) such dichotomy is nevertheless present: a settlement can either be urban or rural.
[8] Like in Czech(oslovak)ia, in respect to different categories, not merely civic rights (cf. Drobek 1999)
[9] Like e.g. in Sweden in 1971.
[10] Cf. Beaujeau-Garnier & Chabot 1971: 137 – if people think it is urban, it *is* urban.
[11] Cf. Moughtin *et al* (2003: 56): 'The most common tools for recording spatial composition are the camera and the three-dimensional perspective drawn from normal eye-level'.

platform for more informed civic rights bestowals, which in time could strengthen the consistency and the efficacy of the Polish urban-rural system.

4. In contrast to the practical (applicative) dimension suggested in point 3, there is also a theoretical aspect. Since size is obviously not an asset of *small* towns – which are all the same urban in the eyes of the law – then urbanity of those must be assessed contextually, that is with regard to *scale* but also to their *origin*. Given the vast array of morphogenetically different types of towns, small towns cannot (and should not) be evaluated solely by methods aimed at towns of incompatible scale and origin (e.g. large or postindustrial towns). Therefore, new methodological approaches must be elaborated in order to more accurately convey the contents and the meaning of small traditional towns (degraded or not). It is my conviction that the contextual core of small traditional towns is largely dependent on the quality of their nuclei, or, more exactly, their market squares. Seen as important commercial, social, cultural, functional and symbolic hubs of small traditional towns, market squares, I believe, constitute the effigy of urbanity in respect to small size and pre-industrial origin. Accordingly, the fourth point of departure assumes that by focusing more on the morphological qualities of market squares, the physical urbanity of small towns could be assessed much more adequately.

1.6. Objectives, aim and research questions

Given the preceding factors, the main objective of this study is…

> *…to investigate to what degree the concept of urbanity – as conveyed by the Polish administrative system – corresponds to de facto conditions, and particularly so in regard to urban morphology, a feature considered as one of the most important constituents of urbanity in governmental evaluations today.*

This will be done by examining the 336 towns degraded during the urban reform of 1869-70, of which some have been restituted and some remain rural. By comparing the morphological constitution of the two groups of towns, the degree of convergence and divergence with the Polish definition of urbanity (in regard to the morphological criterion) should be apparent. With this objective as a starting point, a more general aim of this thesis is to expound, discuss, and hopefully contribute to a deeper understanding of the concept of urbanity in Poland.

In order to accomplish the main objective, it is imperative to operationalize the morphological urbanity criterion. Therefore, assembling and devising an appropriate methodology for this task is an intermediate – yet major – objective of this study.

The character of this study extends beyond the scope of an academic work in that both objectives automatically entail information of a more applicative nature. The collected data provide: (1) information about particular former towns that – according to the findings in this investigation – could regain their civic rights in regard to their morphology; (2) information about particular restituted towns that do not live up to the morphological criterion; as well as (3) guidelines for identifying towns with valuable morphological potential that might have been inadequately harbored, and thus being in most need of an investment program. Departing from the assumption that urban status is often seen as a means of development and of improvement in the standard of living for the residents of de facto urban settlements[12], both the results and the devised methodology could act as an aid in steering on-course the concerned settlements towards an adequate path of development. It may also act as a source of reference in preservation of cultural heritage – yet another dimension of societal relevance that currently experiences its renaissance through various revitalization projects.

In order to meet the aim and the objectives a number of research questions will form the basis of this work. The questions are arranged thematically according to their character: methodological, descriptive and analytical:

Methodological:

1. While assessing morphological urbanity, can field observations be substituted by non-field methods?

Descriptive:

2. What is the current morphological status of the studied towns?

3. Which and how many degraded towns meet the morphological criteria for restitution?

Analytical:

4. In what way are towns that meet the criteria for restitution impeded from it by secondary factors, i.e. factors not pertaining to urbanity per se?

[12] This issue is discussed in chapter three.

1.7. Objects of study and spatial and temporal demarcation

1.7.1. Introduction

The objects of study of this thesis are the 336 towns degraded during the 1869-70 urban reform conducted by the Russian administration in the then-occupied section of Poland referred to informally[13] as *Congress Poland*, i.e. a remnant of the original Poland that had become besieged by the Russians, following the country's partitions in 1772-95. Congress Poland was a semi-autonomous political body, functioning within Russia between 1815 (following the Congress of Vienna, hence the name) and World War I (until Poland's independence), with its autonomy ultimately revoked in 1867 (see maps in Annex 5). The degraded towns and the reform of 1869-70 will be deliberated in greater detail in chap. 3.6. In this section, my aim is to account for my choice of spatial and temporal demarcation and its relevance to this study.

As Vaishar & Zapletalovà (2008) put it, 'geographers usually perceive the reality regionally and in some hierarchic order'. Regional geography is – in regard to humans, nature, and the society – a holistic and synthesizing approach which is 'needed in order to create context from the shattered images of the surrounding world (…)' (Blom Mondlane & Jansund, 2003; my translation). Accordingly, when studying a geographic problem, authors limit themselves to a certain region. Since studies on degraded towns have en embedded temporal factor – history vs. the present, researchers are struck by the dilemma of choosing an appropriate spatial and temporal demarcation. This might not prove an easy task, especially when relevance is to be sustained in the consecutive analyses.

1.7.2. Choosing a region and the border problem

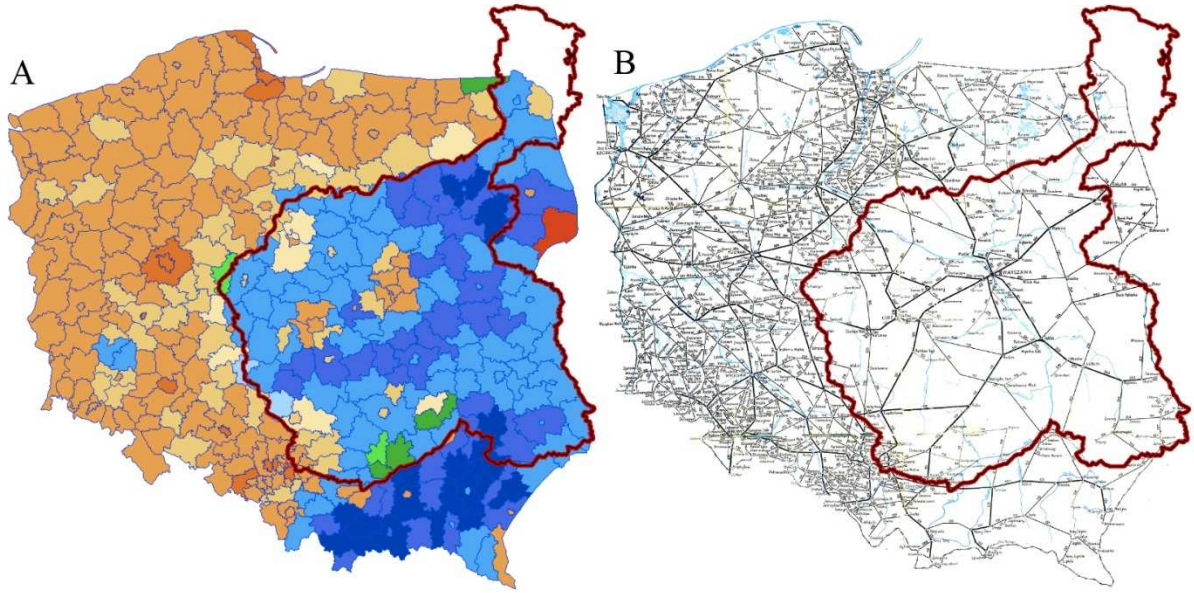
Studies on degraded towns have been conducted both regionally and nationally. When approached from the latter perspective, the focus tends to be on the current political borders, thus automatically emphasizing *the present*. This may have analytical implications, because present borders are often – in a historical sense – a new creation, and may comprise elements of a much diversified array of geopolitical influences. Given Poland's location in Europe's shatter belt (Otok 2009: 186), the frequent changes of political borders play indeed an important role in any study with historical anchoring. Nietyksza (1986: 7) is explicitly sceptical to the works of many geographers; she sees their genetical frameworks (going back to the time of Poland's Partitions) as historically unfit, when put to analysis from within Poland's present borders. The same could be said about the demarcation of historical studies departing from present regional administrative borders; since administrative borders tend to be even more transient than political borders, the results of such studies may become contrived. Górak (1990: 6) notices this problem in his own work on historical towns within the short-lived (1975-98) Zamość Voivodeship[14], a demarcation he deems as 'slightly artificial and poorly motivated'. Indeed, the volatility *or* stability of borders have a strict bearing on the formation of social and economic relations that are reflected in the landscape (Otok 2009: 82); this imprint has to be especially considered when studying eastern European landscapes, which are subject to past political changes (Palang, Spek & Stenseke 2011: 345). Rykiel (2006: 126-128) divides borders into antecedent (preceding) and subsequent (succeeding) in regard to the time of domiciliation and economization of the adjacent territories. Antecedent borders are considered more natural than subsequent borders, which tend to be imposed and artificial[15]. However, a subsequent border can transform into an antecedent border, if given sufficient time. In retrospect, that was the case with the former partitional (superimposed) borders of Poland, a transformation cemented by the co-occurrence with the industrial revolution (Rykiel 2006). The Partitions of Poland (see Annex 5) are considered as the most destructive historical caesura to the spatial transformation of Poland to which they pose a serious developmental threat. The effect of the partitional borders is still clearly present within the mentality of the inhabitants (as articulated through norms and habits), but it is also visible in the landscape (M.P. 2001 nr 26 poz. 432: 524; Sokołowski 1999: 19). Fig 1.4 shows two examples of this legacy: in the political affiliations in the 2011 parliamentary elections (map A) and in the density of the national railway network (map B); in both cases the old partition boundary has been visibly sustained.

On the opposite, limitation to a historical region may cause methodical and interpretative problems, especially when such a region is presently divided between different political entities. Another problem with historical regions is their proneness to evolution, which poses questions as to which phase of a region's history should be acknowledged. An aggregate of all (or most) phases of a region's areal evolution is – in my opinion – not the best option, because such demarcation unfortunately concocts temporal (historical) dissimilarities with spatial inconsistencies between the present and the past.

[13] The official name was *Kingdom of Poland*, but is used reluctantly as the word *Kingdom* refers to a Russian czar.
[14] A *voivodeship* is the highest-level administrative subdivision unit of Poland since the 2nd century.
[15] Within *subsequent* borders, Fellman *et al* (2007: 428) further distinguish consequent and superimposed borders, the first being in concordance with prevailing ethnographical conditions, the latter – defying them.

There is no unequivocal solution to this problem. Some geographers approach the subject from a present-time regional perspective – probably for the sake of manageability (cf. Nawrot 1995; Rykel 1993; Przesmycka 2001; Sokołowski 2011); while others assume a more ambitious whole-country-approach (Siemiński 1989; Sokołowski 1999). Publications of the latter kind are often multiaspectual and explorative. Rewieńska (1938) and Drobek (1999), on the other hand, approach the problem from historical contiguousness. In his study on degraded towns of Silesia, Drobek demarcates the studied region to its most stable historical form, automatically including territories presently outside of Poland (in Czech Republic and Germany). However, he includes *all* historically documented degraded towns within a region defined by borders from one specific period[16]. By mixing so-called 'failed' early medieval urban establishments with Soviet-style urban-type settlements abolished as late as in the 1970's, Drobek's results become extremely ambiguous and possibly incommensurable (however, the author addresses this discrepancy by making adequate stratification and conducting separate analyses). This shows that the time aspect is also an important factor for demarcation; the more homogenous the premises concerning the degradation, the more comparable and meaningful the analysis when approached from a present-time perspective (as this study does).

Fig. 1.4. Two examples of the robustness of partitional borders (as of 1815). Outline of Congress Poland superimposed on (A) results of Polish parliamentary elections in 2011; and (B) Polish railway network



Source: My adaptation of material from:
(A) http://commons.wikimedia.org/wiki/File:Wybory_parlamentarne_2011_zabory_powiaty.png
(B) http://upload.wikimedia.org/wikipedia/commons/2/22/PKP1952-53.jpg

1.7.3. Choice of demarcation: the motivations

From the preceding account it can be drawn that studies on degraded towns should respect the historical circumstances that created them in the first place – both spatially and temporally – as well as the stability (longevity) and homogeneity of such demarcations. My choice of Congress Poland is therefore the result of a number of considerations. Here are my main points:

1. From a historical perspective, Congress Poland is an interesting example of an ethnically fairly homogenous entity (75% Poles; Eberhardt 2003), enclosed by force within a hostile empire and separated from the rest of former Polish lands by political borders. It lasted for over 100 years (1815-1918), a time span that could be considered as sufficiently perennial for creating and consolidating a new cultural identity, yet not long enough to erase its Polish character (which eventually led to the recovery of independence). Partitional borders (especially the German-Russian border) are today considered antecedent borders, a fact implying historical stability of the demarcated area. The significance of the partitional borders was cemented by its co-occurrence with the industrial revolution (differences are still visible in e.g. Poland's railway network, agrarian land fragmentation, degree of economic development, morphological differentiation etc.).

2. Degraded towns are found throughout the country. However, in regard to the relatively recent (in historical terms) time of degradation, the territory of former Congress Poland comprises the largest concentration of degraded

[16] As opposed to Rewieńska (1938) who applied the contemporaray administrative division on a historical region.

Polish towns endowed with the overall highest intensification of urban features[17], most notably urban morphology (given that physical urban features are least likely to change; Słodczyk 2003: 119). Furthermore, the fact that 336 towns throughout Congress Poland became degraded simultaneously marks their belonging to the same genetic type in terms of historical consistency[18]. In a geographical study, this is obviously an advantage as towns belonging to the same genotype are directly comparable in analysis (as opposed to if the selection were made for *any* degraded town within a specific region or for *every* degraded town in possession of a certain criterion, e.g. a specific population number).

3. In pre-partition Poland (before 1772), but also in the German and Austrian partition zones (1772-1918), penitentiary political actions aimed towards cities were not enforced. In post-partition Poland (from 1918 onward) urban degradations were conducted tentatively and in accordance to the actual demographic and economic. However, the Russian rule exercised in Congress Poland was the direct cause of simultaneous (mechanized) degradation of 336 towns within this particular territory. The massive scope of the urban reform of 1869-70 (a 75 % reduction) destroyed the endemic Polish urban network that had taken centuries to develop. The damage was not attended properly after regaining independence and its consequences are still persistent today. Also, given the very size of the affected area (the area of Congress Poland is equivalent to roughly half of that of present Poland), the impact of the reform may be considered as severe. All these factors speak for the representative character of this territory in regard to studies on degraded towns.

In conclusion, a study based on a static analysis of urbanity that seeks to attach the impact of a historical event to a present problem must rely on the most adequate demarcation in order to make comparison and differentiation relevant. Given the presented facts, Congress Poland could from a geographical perspective be regarded a homogenous region, i.e. an area with similarities that distinguish it from neighboring territories (cf. Olsson & Vilhelmson 1997).

1.8. Methodology and research methods

1.8.1. Introduction

In methodological terms, this study could be described as one that attempts to quantify selected aspects of urban morphology in order to make comparison between towns' morphological level of urbanity possible. Jones & Stenseke (2011: 6) argue that studies treating landscapes[19] as morphology are conducted in an *ostensibly* objective manner, but nonetheless express a particular view: the choice of what is studied is bound up with ideas of importance and significance (good/bad, right/wrong, desirable/undesirable). Instead, according to the European Landscape Convention, a landscape is more adequately formulated as 'an area, as perceived by people (…)' (ibid. p. 8). Nonetheless, in the context of this study, with the Polish definition of physical urbanity being very vaguely defined, in order to make an analysis of urbanity operable, the choices of which Jones & Stenseke speak of are inevitable. It is however true that such choices are subjective, with the relative objectivity being confined to the very step of methodical performance, which – in the view of a general analysis – is nonetheless a strength (taking into account all local variations in perception would be inoperable). Also, given the similarity of cultural and historical traits of the studied area, there are few premises suggesting incidence of abnormal local variations. Finally, morphology must not only be viewed as a (perceived) landscape; it may also constitute a stricty utilitarian framework dictating a certain (here urban) way of life: a complex street grid enables greater accessibility; a developed housing structure provides more locales for commercial enterprises and enables cheaper maintenance; the public character of a market square creates more natural possibilities for human interaction, and so on.

1.8.2. Measuring urban morphology

Urban morphology is an aspect of urbanity that distinguishes itself from other aspects by its lack of a direct referential database. This implies that most data has to be acquired by means of morphometry (measurements) or – more

[17] Cf. Sokołowski's quote (1999: 206) in chap. 1.3.

[18] In this context, by *historical consistency* I refer to a specific level of urbanity that was – reasons notwithstanding – obviously not acceptable at the time of degradation. Since many degradations of the least urban of towns were in fact conducted prior to the 1869-70 reform, thereto spontaneously and individually (and therefore presumably on a more informed basis than the mechanical reform), it is fair to assume that those that were permitted to remain urban right until the very reform were the most urban ones. This assumption also resists a possible reservation that the 336 towns were of *different age* at the time of degradation, even though no less than ¾ of them were founded between A.D. 1300 and 1600, and could be therefore found comparable in this aspect also (cf. chap. 5.4).

[19] Note that the term 'landscape' is widely used for *urban* landscapes, sometimes called 'Stadtlandschaft', 'townscape' or 'cityscape' (cf. Schlüter 1899; Smailes 1955; Conzen 1960; Whitehand 2005, Ashworth 2007), where the city is envisaged as part of the wider landscape (Whitehand 2007).

rarely – by processing available statistics. Drawing from the third point of departure (chap. 1.5), in order to make morphological analyses more readily accessible, this study consciously opts for an alternative approach that discriminates involvement of field studies/in-person visits (typically used within physiognomic studies – cf. Drobek 1999; Szmytkie 2009; Borcz *et al* 2009). Another reason for this is to substitute approximated evaluations with more stringent, mathematical approaches that are more resistant to human subjectivity and error. Opting out of field studies means that only two specific groups of morphological features can be examined:

a) horizontal features that are quantifiable from a top-down perspective[20] by means of GIS-assisted remote sensing and cadastral cartography
b) features that are already quantified and available as an indirect source of information (statistical data)

Horizontal features are always better viewed from above because perception of large horizontal structures (such as a town plan) is strongly limited in the field. Vertical features are a different matter. Since neither *Street View*-imagery ('eye-level' photos of building façades) nor 3D-orthophotography (including stereovision) are as of yet not available for small towns and villages[21], some important vertical features such as building height and building quality could not be studied. Instead, they were substituted with calculations based on statistical data. The objects of study were approached with a wide array of different methods, including models formulated by various researchers, including Zagożdżon's graph method (1970) aimed at town plans and Szmytkie's housing structure index (2009) aimed at buildings. Additionally, a third feature – the market square – was added. Drawing from the fourth point of departure in chap. 1.5, it was assumed that the contextual identifiers of urbanity of small pre-industrial towns are their market squares, or, more exactly, the quality thereof. Constituting the original part of this study's methodology, such approach lacks predefined methods. Therefore, a significant amount of space has been dedicated to their development, including verificatory fieldwork conducted in 69 of the 336 studied towns

Summarily, following three main features of morphological urbanity will be examined:

a) the complexity of the town plan ('the skeleton of the town')
b) the character of the town's housing structure ('the body of the town').
c) the quality of the market square ('the heart of the town')

The output from the very different methodological approaches has been integrated and made comparable through encapsulation within specially constructed *indices* (discussed in the next subchapter), devised upon theoretical framework and contextual analysis. The comparative analysis itself was performed by statistical methods, mainly by correlation. All of these approaches are described in greater detail in chapter six.

This study is based on a large amount of detailed empirical data, as well as suggestions for new methodologies. Both the findings and the suggested methodology may be used to complement quantitative geographic scientific studies on urbanization in Poland (such as those of Sokołowski's – 2011a; 2011b), as both provide a multiaspectual morphological index (applicable to small towns) that is directly comparable with available comprehensive indices of other aspects of urbanity. Since data will also be presented in an unprocessed form (on subscale item level), it can also be used in future studies with different purposes, or in studies aiming to develop the proposed methodology. Finally, the enclosed findings may also be used as a source of reference – both on a general and on a particular level – for any actor concerned with the current morphological predispositions of the studied towns (e.g. local governments interested in restitution of urban status, as well as governmental officials in charge of the corresponding evaluation process). As a source of reference, this study also offers information relevant to historians, urban planners, or simply amateurs of the qualities of small historic towns.

1.8.3. Specifics of a morphological index and ethical considerations

At this point, it is important to briefly discuss the meaning and the characteristics of a morphological index. An index is a statistical measure of changes in a representative group of individual data points compiled to render a new property (Halvorsen 2006: 115), for example human development (HDI), 'ecological footprints', 'world cities' or bankability of Hollywood A-list actors (cf. Ulmer 2000). In urban studies, indices have been used widely (cf. Sokołowski 1999, McDade & Adair 2001), including for morphology (cf. Drobek 1999, Cudny 2008, McDonough et al 2010). A morphological index is a complex calculation integrating a set of features reflecting the physical structure of a given settlement. If the data forming the base for a morphological index is of good and uniform quality, then such an index may be used as a powerful comparative tool for analyses of a large amount of settlements. Since a morphological index integrates

[20] Note that 'street view photography' (increasingly available for larger cities) is not yet available for small towns and villages and probably will not be so for a considerable amount of time.
[21] These features are becoming increasingly available in on-line telephone directories for large cities. For small settlements these will probably not be available for a considerable amount of time.

much differentiated aspects, it is both a quantitative and a qualitative reflection of what might be perceived as a determinant of urbanity. Therefore, a morphological index (in its summative form) is not meant to be implemented as an unexceptionally undivided figure; it may very well be deconstructed in order to highlight some particular aspect that requires special scrutiny[22]. In conclusion, a morphological index is not a marker made up of strategically equal components; it is rather a synergy of elements that define the character (and the actual state) of any given settlement in terms of its predisposition to a certain ideal, which in turn can be examined in either an aggregated or disaggregated fashion.

It is extremely important to say something about the quality of a morphological index, in that it also involves some ethical considerations. Unlike, say, a demographic index, which is always based on finite population numbers, with urban morphology, there is always room for alternative interpretations. Despite many similarities, urban settlements are highly individual and often incommensurable human creations that cannot be indexed without a certain degree of flexibility; flexibility, on the other hand, calls for bias. A town can only have, say, 5 000 inhabitants, no more and no less (given that we first demarcated the area of that town and then correctly counted all humans living within it). Conversely, we cannot unambiguously say that a town has 'an appropriate urban morphology', because 'appropriate' is an opinion and an opinion is a matter of taste. We cannot even say that a town has so and so many houses, because it is not unambiguous what exactly a house is: do we include sheds, kiosks, gazebos etc.? My point is that an urbomorphological index is always a biased reflection of the researcher's personal convictions (cf. Cudny 2008: 78) as well as more general tastes and trends which are bound to change in time (cf. Sawicka & Pirveli 2005: chapter 3). Nonetheless, the collective denomination 'urban morphology' or 'urban character' is used all the same, particularly as a prerequisite for urban restitutions, and, as such, it must be deciphered. It means that 'an appropriate urban morphology' is an expression that conveys a value and that such a value will be sought for while evaluating the morphological make-up of a candidate town. If we are to strive for a consistent definition of what is urban and what is not, then we must implement a specific strategy. First, we should define what we are looking for; then we should look for geographic patterns on a larger scale in order to finally establish summative criteria that take into account both the sought-for values and the context that imbues them. Indexation of urban morphology is thus about balance between bias (taste/trend) and systemization (quantification). It will never be perfect but, I believe, it can be sufficiently consistent for the intended purposes.

1.9. Source material and data quality

1.9.1. Remote sensing and its limitations

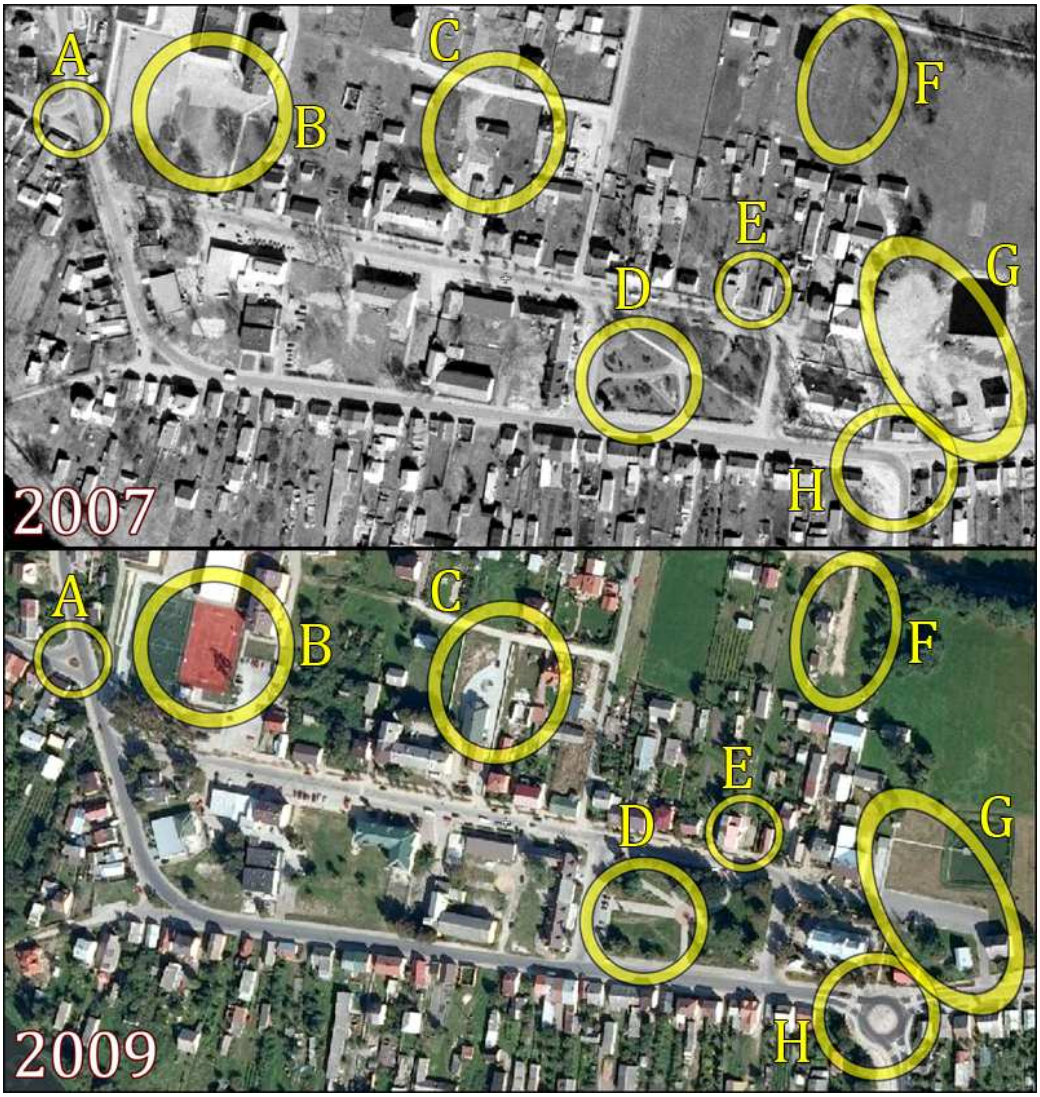
> The timely and spatially explicit characteristics of remotely sensed data not only provide a means for exploring and testing hypotheses and models about urban areas, but also for constructing new theories that can help in the formation of policy in anticipation of the problems that accompany urbanization processes (Rashed et al 2005: 699).

Satellite imagery and aerial photography are widely recognized as important sources of information for urban analysis, not the least within morphological studies and studies dedicated to measuring urbanicity (Taylor *et al* 2011; Rashed *et al* 2005; Tatem & Hay 2004; Weeks *et al* 2004; Donnay *et al* 2001). The advent of Google Earth and other interactive geographical information software has enabled access to a range of magnifications over large areas of the world. The relatively high image resolution makes it possible to develop a measure of public open spaces without the necessity of direct observations. Taylor *et al* (2011) have evaluated the potential of a remote method of assessing the quality of urban spaces to provide rapid and inexpensive assessment for studies involving a large number of spaces. Their assessment of 50 Sydney parks by remote sensing took 4 hours whereas direct observation took 42 hours; the obtained Spearman correlation between the two methods produced a coefficient of incredible 0.9 ($p<0.0001$). Departing from such impressive results, I decided to attempt a similarly fashioned morphometric assessment of urbanity, although in the context of degraded towns.

Most data serving as a base for this study's morphological analysis have been extracted from the web-GIS service *geoportal.gov.pl*. Aerial photography used in this service is updated regularly, but not simultaneously for the whole country. Although most imagery is relatively recent (2005-2010), it is unfortunately not homogenous, rendering analytical data of slightly different quality; both in terms of time/evolution (changes in morphology) and pixel resolution (the quality of orthophotography being continuously improved). Normally, urban morphology is a fairly slow-going process of change, however in recent years (2009-2011) the revitalization trend in Poland (cf. chap. 4.9.3) has perceptibly altered the centers of many Polish towns, including a fair share of degraded towns. Whenever possible, I tried to catch up with these changes; still, it has not always been successful. However, a random comparison of aerial imagery of the center of the degraded town of Adamów recorded in 2007 and 2009 respectively (fig. 1.5) reveals following changes:

[22] For example, a market square with an excellent enclosure but a poor legibility would significantly lower the summary index value. If deconstructed, such discrepancies would show and could be used as a guide for e.g. a specific revitalization approach (enclosure is more critical for the overall look of a market square than its legibility while legibility is more customizable than enclosure.

Fig. 1.5. Example of morphological changes executed during a two-year-period (2007-2009) in the center of Adamów.



Source: My adaptation of imagery from geoportal.gov.pl (access 2011-05-27)

a) Reshaping of a small roundabout
b) Creation of a tennis court
c) New driveway, demolition of a storage building
d) Regulation of a pedestrian pathway within the market square park
e) Addition of a building to the northern market square frontage
f) New driveway and building
g) Land regulation: new asphalted street, leveled terrain and a new walkway towards the reservoir
h) New roundabout at a major junction at the expense of a demolished house

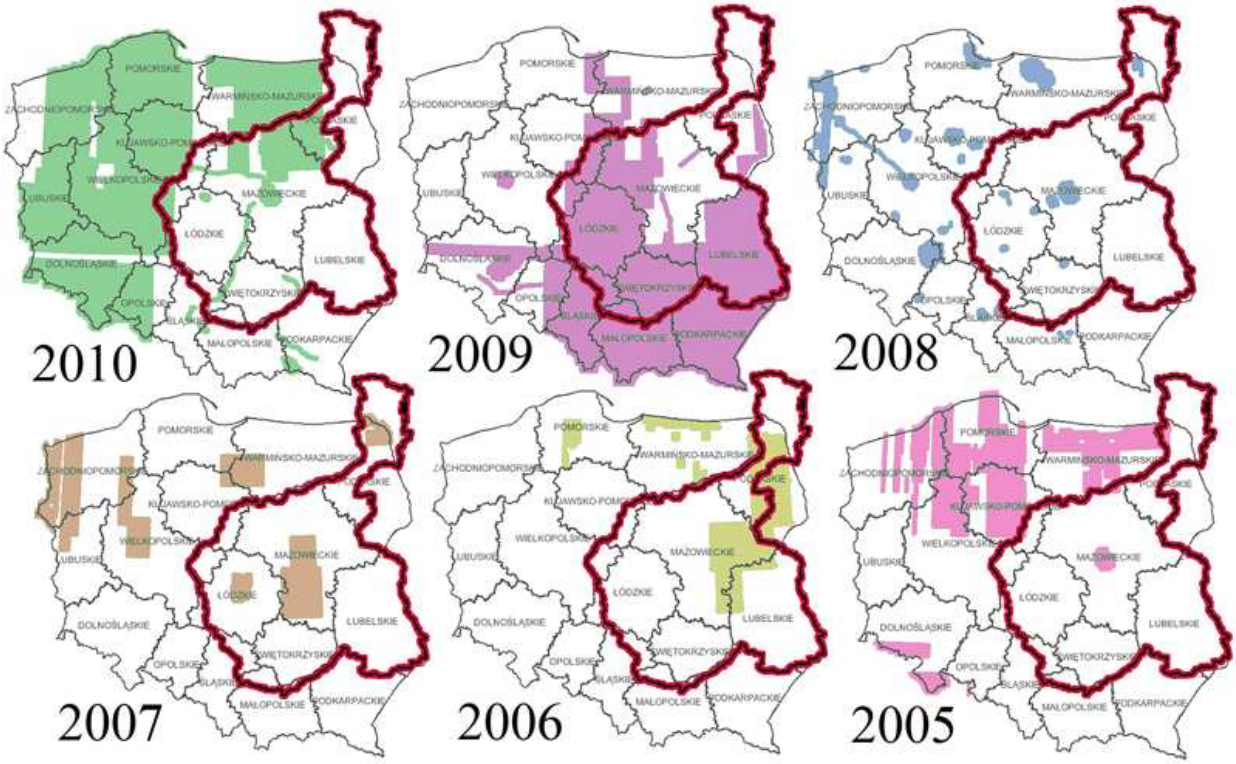
These changes could be described as minor regulations and/or improvements to the public space in terms of safety, convenience and aesthetics. They are not drastic enough to have a significant effect on the results of this study, save for some isolated cases subject to total make-overs. In most such cases – whenever detected – I have taken into consideration the forthcoming conditions available from on-line construction plans. My conclusion is that the data forming the basis for the general analysis are of fairly good quality and the results, allowing for some minor modifications, are adequately suited for broader conclusions.

The maps in fig. 1.6 illustrate which areas in Poland have been aerially photographed in what year. Within the boundaries of the former Congress Poland (most of today's Lublin, Holy Cross and Łódź voivodeships, including fragments of the remaining southern and western voivodeships and the western part of the Masovian voivodeship) have been photographed in 2009 with a resolution of one pixel equaling 50 cm[23]. Photography of southern and central

[23] http://geoportal.gov.pl/broszura/geoBroszuraPL.pdf (access 2012-06-28)

Masovia as well as the Suwałki region is from 2007, while western Masovia and Congress Poland's 'bottleneck' is from 2006. Photography of northern Masovia and the westernmost Congress Poland (now in Greater Poland voivodeship) is as recent as 2011. Some minor territorial pockets scattered throughout the country were recorded in 2008, with only a small area in the westernmost Suwałki region dating back as far as 2005. Whenever newer material was available, I used it instead, most notably *Google Earth*, *zumi.pl* and *Yahoo Local Maps* (for Lithuania and Belarus this was the only option). Still, *geoportal.gov.pl* served always as the basis for all cadaster analyses (see next subchapter). Regular street view photography was often used for verification of data or as an arbiter whenever data were ambiguous. Street and road data (for the cohesion index devised in. chapter 4.8.3) were derived mostly from *ViaMichelin.com* and additionally from *pkt.pl*. Many other sources were used, however mostly for one-time verifications or/and clarifications.

Fig. 1.6. Age of aerial photography and its geographic distribution as displayed in *geoportal.gov.pl*., forming the base for morphological analysis of the town centers in this study.



Source: My adaptation of data from Centralny Ośrodek Dokumentacji Geodezyjnej I Kartograficznej[24]

One notable limitation pertained to the issue of precision as a result of the somewhat differing resolutions and lighting (occurrences of shadows) of the imagery used. However, due to the methods employed being very detailed, I would argue that any contingent deflections were minor enough not to have any significant impact on the main findings. Also, the ingrained heterogeneity of morphology has made strictly uniform methodological approaches to all towns impossible. This in turn called for some arbitrary decisions which could have been made differently. On the other hand, this could also be seen as a strength, in that a mechanized approach could have rendered unrealistic data and implausible conclusions.

1.9.2. Significance of cadaster analysis

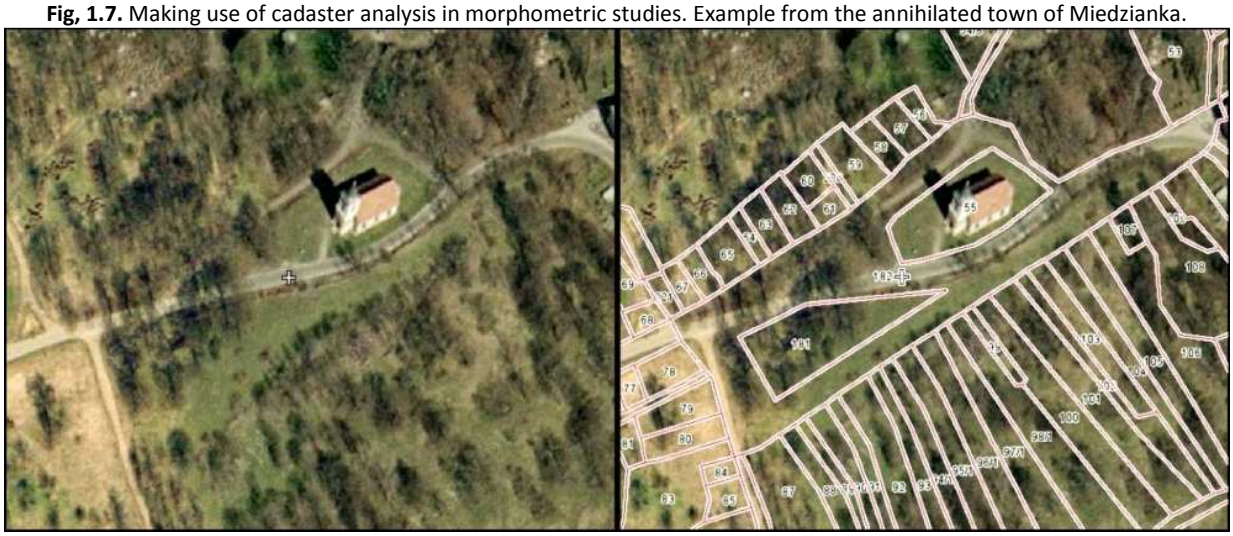
In spite of what one might assume, market squares are not always easy to delimit. Multiple changes that had taken place over time have in many cases altered the geometry of the market square beyond recognition. While performing morphological analyses based on remote sensing one may encounter several problems. Difficulties may arise, for instance, from the optical inability to determine the boundaries between particular houses within densely compacted frontages or even to ascertain the actual outline of a market square, and especially so in heavily degraded towns. Street addresses are sometimes useful, but they too may distort the actual conditions. For instance, the name *Rynek* (Pol. for 'market square') is often assigned to additional streets or street stubs beyond the range of the square proper; the name can also apply only to one, two or three frontage-parallel streets beyond the square, with the remaining streets being assigned a different name. Moreover, many Polish squares are no longer called *Rynek*, which may cause problems with

[24] http://www.codgik.gov.pl/skorowidze/zdjecia-lotnicze.html (access: 2010-05-25)

towns endowed with several public spaces or with those simply lacking a legible (former) square. Historical maps are many times helpful on this point, but they can only act as a general source of information, largely ineffective for minute morphometry. Instead, I have found great utility in *cadaster maps*, whose outline often remains unchanged despite subsequent physical alterations or demolitions.

One example confirming the significance of cadaster-aided analysis is the extreme case of the ghost town of Miedzianka (Ger. *Kupferberg*)[25]. In order to conduct an analysis of the remnants of Miedzianka's urban morphology, one cannot simply turn to visual analysis, be it in field (cf. Drobek 1999: 89) or by means of remote sensing (fig. 1.7, left) – it is plainly imperceivable. However, by turning to the cadaster map, Miedzianka's urban past becomes clearly laid out, as the lot structure has obviously escaped alteration since the town's long-gone dereliction (fig. 1.7, right). This confirms the expediency of cadaster maps as an analytical tool in morphological studies. For this purpose, I have used the official GIS-based cadaster (a digital register of the metes-and-bounds real property of Poland) provided by the Polish Central Office of Geodesy and Cartography (*Główny Urząd Geodezji i Kartografii*), e.g. when measuring the number and the dimensions of market square-adjacent lots of all the 336 studied towns.

Fig, 1.7. Making use of cadaster analysis in morphometric studies. Example from the annihilated town of Miedzianka.



Source: geoportal.gov.pl

1.10. Structure of the thesis

This thesis is divided into eight chapters. Chapter two (2) provides a literature overview of previous research on the subjects pertinent to this study – the degraded towns and urban morphology. Chapters three and four constitute this study's conceptual framework, covering an extensive selection of concepts central to the direction of this thesis. Chapter three (3) discusses the notion of urbanity in Poland to serve as a foundation for the subsequent analyses, while chapter four (4) is dedicated to urban morphology. Its purpose is to discuss the role of urban morphology as an attribute of urbanity but also – most importantly – to provide a broad explorative theoretical framework (including observations of current trends and practices in urban design) necessary for devising this study's methodology. Chapter five (5) is a short presentation of the towns studied in this thesis with focus on their geography, history, demography and administrative situation. Chapter six (6) centers on the methodology, with the most amount of space reserved for devising a new methodology for the purpose of this study (including field verification). In chapter seven (7), the findings achieved by means of the methodology proposed in chapter six are presented and analyzed against a backdrop of geographic themes presented in chapter three. Lastly, chapter eight (8) summarizes the main findings of this study and ends with a discussion on the efficacy of the Polish administrative system, including suggestions for improvements and for future research.

[25] Before WW2, Kupferberg was a thriving German mountain town with boutiques, cafés, hotels, cinemas and cabarets, picturesquely located around a gas-lit square skirted with arcaded buildings and enlivened by a rippling fountain. In short, it was referred to as the most beautiful town in Silesia (Orlicki 2006). After the war, Kupferberg was ceded to Communist Poland and renamed Miedzianka. The curse that came to shape the destiny of the town was the discovery of large uranium deposits right under it. Clandestine excavation of uranium ores along with subsequent shipping to the USSR began immediately after the war and went on until the early 50s. Consequently, the extensive mining resulted in serious health problems such as tuberculosis, pneumoconiosis and lung cancer. In order to sweep away every possible trace of this controversial action, the population of Miedzianka was forcibly resettled and the town was razed to the ground (ibid.). Today, it is barely a hamlet, with a few random houses and a denuded church amidst old adits. For images depicting Miedzianka in its prior urban state, visit: *http://www.redbor.pl/wyprawy/lokalizacje/miedzianka_slaska.htm*

2. Literature overview

2.1. Introduction

The purpose of this chapter is to relate this study's two major subjects to previous research. Subchapter 2.2 provides an outline of the position of degraded towns in previous scientific studies while 2.3 does the same with urban morphology. Since method development is one of the tasks of this study, 2.4 is a continuation of 2.3, with focus on urbomorphological methodology. Next, 2.5 argues for the pertinence of 'old' literature within studies on urban morphology, with a brief summary (2.6) closing the chapter.

2.2. Degraded towns in scientific studies

> In no other European country [other than Poland] will we find the term 'former, degraded town (Siemiński 1996: 149).

Although this may be true as to the very term, degraded towns are also found outside of Poland. As a result of constant spatio-temporal societal transformations, urban decline due to depopulation, economic stagnation and autonomy erosion (cf. Clark 1989; Aydalot 1987) is a common process throughout the world. Between 1790 and 1840, many English towns lost their urban status due to deteriorating service provision and lack of industry (Hann 2005: 45). In India, numerous centers were eliminated from the town list in 1961 in the face of competition with the larger urban centers (Bhattacharya 2006: 288-290). Placer depletion in the 1960s contributed to loss of urban status of several Soviet gold-mining settlements (Kaser 1983: 567-568)[1]. Degraded towns are also found throughout Germany and the former Czechoslovakia, mostly as a result of the changed national definition of urbanity (Drobek 1999). In Sweden, an administrative reform in 1971 dismantled the traditional concept of urbanity altogether, depriving historical cities of their exclusivity by making them just as urban as any settlement of more than 200 inhabitants[2]. Although treated instrumentally by the concerned authorities, loss of urban status may have negative social and economic implications, especially in regard to towns with longstanding urban traditions (cf. Nietyksza 1986; Stobart 2004). In Sweden, for example, some settlements have returned to the informal usage of the term 'stad' (city); a similar – albeit formal – connotation is seen with the city status in the United Kingdom, with no special rights other than prestige. However, in both cases, lack of city status is not necessarily synonymous with rural status, as many towns are still considered urban areas by national standards (Dymitrow 2012). In Poland, on the other hand, lack of city status *is* equivalent with rural status, making degraded towns synonymous with all other non-urban settlements with a strictly rural genesis.

Perhaps due to such lack of administrative exclusivity degraded towns rarely evoke the interest of geographers (cf. Bińczyk & Jażdżewska 2005-2006: 116), although they surely deserve it (Siemiński 2000: 21). On the other hand, small *formal* towns constitute a very popular topic, as expressed, for instance, by the two anthologies edited by Heffner (2005) and Heffner & Marszał (2005-2006), comprising altogether some 40 articles devoted to different aspects of small Polish towns. In the light of the economic restructuration of Poland, problems of small towns are subject of ongoing research, ventilated on sundry yearly scientific conferences; the latest additions – devoted to revitalization, gentrification and development – were held in Katowice in 2010[3] and Łódź in 2011. The imbalance between studies on small towns and studies on degraded towns only stresses the Polish paradox of formality, where settlements only 'become' interesting to academics once they acquire formal urban status; until then they are included in rural studies, a practice, which – given the towns' entirely different morphogenetical backround – could be challenged. This could be inherent to the 'dusty' feel of degradation compared to the modern problem-solving hype associated with small towns and their peripherization.

Beside Wiesław Drobek's (1999) exhaustive study wholly devoted to degraded towns in, as well as some occasional articles (Benko 1956; Siemiński 1989; 1991; 2000; Murzyn & Gwosdz 2003, Borcz 2008a, Sokołowski 2011a; 2011b; Dymitrow 2012) and theses (Szewczyk 1975; Rykel 1993; Nawrot 1995; Dymitrow [2010] 2012), scientific studies most often address the role of degraded towns indirectly. One such topic is urbanization in terms of creation of 'new' towns, where degraded towns play a major role (restitution of civic rights); this is true to studies of Szlachta (1984),

[1] Note that in the former Soviet Union, there are many degraded towns of Polish heritage, ceded to the USSR after consecutive post-WW2 border changes.
[2] Note that in Sweden towns subject to *particular degradations* (cf. chap. 3.4.3) are also found, e.g., Åhus, Avaskär, Brätte, Båstad, Elleholm, Filipstad, Kristianopel, Lomma, Luntertun, Lödöse, Mönsterås, Öregrund, Tommarp.
[3] Cf. Heffner & Marszał (2011)

Drobek & Heffner (1993), Jarczewski (2002), Sokołowski (2002; 2008), Szmytkie (2003), Drobek (2005a), Krzysztofik (2006) and Miszewska (2007).

Axiomatically, degraded towns play an important role in studies on the opposite of resitution, i.e. the historical context of *urban degradation*, most notably the works of Kołodziejczyk ([1961] 1979)**,** Mazurkiewicz (1967) and Nietyksza (1986). A related genre comprises historical studies on urban establishments and urbanization processes in Poland, and is more widespread. Major historiographical publications (alas overly tinted by socialist-nationalist propagandistic overtones) include the 2-volume milestone epitome *Miasta polskie w Tysiącleciu* (Pazyra 1965) and *300 miat wróciło do Polski…*[4] (Grabski 1960). Both give account of all urban settlements within Poland's current borders, both present and former; the first publication focusing on the whole country, and the latter on the so called Regained Territories, incorporated into Poland in 1945. More recent publications – often concerned with the applicative aspect of mapping the history of urbanization – include Drobek (1999), Krzysztofik (2007a) and Najgrakowski (2009). The latter two are humongous undertakings with the ambition of mapping all urban units that ever existed in Poland. To this group of works appertain also countless collective monographies on degraded towns, like those of Górak (1990), Kazimierski (1994), Demidowicz (1996-1999) or Koprukowniak (2000) .

Currently, a new wave of popular scientific books on small towns has made an entrance on the market, combining historical and cultural aspects with recreational and aesthetic values. Most such books opt for settlement size (rather than administrative status) as a criterion for inclusion, focusing both on formal and degraded towns (Kwiatek 2006; Sołtyk 2009; Sańko 2010), while some – including Reader's Digest's lush enterprise (Fronczak 2010) – draw a distinct line at the administrative divide[5]. Even if aimed at a more general public, these accessible and highly informative books still play an important role: they manage to spread the knowledge and propel the problems typical of this type of peripherized settlements.

The alleged academic disregard of degraded towns is partially compensated by studies devoted to certain groups of settlements straddling the rural-urban divide, to which degraded towns certainly pertain; for instance, administrative centers (Kwiatkowska 1976), so-called 'key villages' (Drobek & Heffner 1994), small settlements (Bagiński 1998), agricultural towns (Tłoczek 1955; Krzysztofik 2007b) and health spas (Wdowiarz-Bilska 2005-2006). More recent additions exploring the rural-to-urban and urban-to-rural transformations are the works of Staszewska (2005-2006) and Borcz, Niedźwiecka-Filipiak & Zaniewska (2009). However, the probably most important study (in terms of scope and complexity) dedicated to the concept of rural-urban continuum is the work of Dariusz Sokołowski (1999), which specifically differentiates the role of degraded towns from that of other rural settlements[6]. Both Sokołowski (1999) and Drobek (1999) conclude that many degraded towns play an intermediate role between formal towns and villages within the Polish settlement system, and that many towns have a good a chance to be qualified as formally urban units.

2.3. Urban morphology in scientific studies

In order to qualify as urban units, a settlement must possess a number of urban attributes. Studies on urbanity, including those on the 'informal' urbanity of degraded towns, tend to focus on different aspects. Without delving into definitions of urbanity at this point (this will be done in chap. 3.3), table 2.1 illustrates which attributes different authors have chosen to study. One such attribute is urban morphology – a factor that is frequently pointed out as an important determinant of urbanity (cf. Dz.U. 1990 Nr 16, poz. 95).

Urbomorphological studies are often inspired by the seminal works of Conzen (1960; 2004)[7]. Hitherto, typo-morphological analysis has remained mainly a technique confined to the historical study of urban form (e.g. Koter & Kulesza 1999; 2010; Heffner & Kulesza 2005; Lloyd-Jones & Erickson 2007), as an aid in environmental studies (Knox 1976), spatial planning (Cudny 2008), urban design (Larkham 2005; Marzot 2005; Whitehand 2005; Moughtin & Mertens 2003), architecture (Hwang 1994), functional assessment (Ziębik 2008) and engineering (Kühnel 1918; Shalabi 1998), or simply as a tool in cognitive anthropogeographic studies (most notably Rewieńska 1938). Urban morphology – often referred to as 'urban form' or 'the built structure' – figures also as an indirect object of study (a backdrop) within interdisciplinary subjects, such as urban climatology (e.g. Thorsson *et al* 2009), urban safety (Listerborn 2008; Dymitrow & Andjelić 2008), travel behavior (Tanangsnakool 2011) or spatial sociology (Wallis 1990). The role of morphology has also been widely used in works on urban aesthetics (Adamczewka-Wejchert & Wejchert 1986; Wejchert 2008), urban perception (Cullen 1971; Rapoport 1977; Sumień 1989), local idenity (Gutowski 2009) and cultural heritage (Przesmycka 2001).

[4] In English: *Polish towns during the century* resp. *300 towns have returned to Poland*
[5] Only a few degraded towns are treated succinctly in the annex of that book.
[6] Not only does Sokołowski's work differentiate the role of degraded towns, it also makes a valuable methodological contribution to the field of studies dealing with assessment of urbanity (unfortunately, Sokołowski does not measure urban morphology).
[7] Its ideas were brought to the Polish arena particularly by Dziewoński (1962), Golachowski & Szulc (1963) and Koter (e.g. 1994).

Tab 2.1. Studied attributes of urbanity as chosen by different researchers.

Author / Work	Demography	Function	Centrality	Infrastructure	Morphology	Topography	Cultural values	Social influences	Identity
Rewieńska (1938)					x	x			
Sokołowski (1999)	x	x	x	x					
Drobek (1999)	x	x		x	x				
Szmytkie (2003)	x				x				
Krzysztofik (2006)	x	x						x	
Dahly & Adair (2007)	x		x	x					
Borcz *et al* (2009)	x	x	x		x	x	x		
McDonough *et al* (2010)		x	x		x				
Dymitrow ([2010] 2012)	x	x	x		x	x			
Sokołowski (2011a; 2011b)	x	x	x	x	x				

What most of these studies have in common is that they examine different qualities of urban morphology as an implicitly urban feature with little or no consideration to whether and why it actually is urban (as criticized, for instance, by Stewart 2007). This lack of scientific reference becomes a problem when brought to the context of settlements with ruralized or mixed-type morphologies (i.e. both urban and rural), where designation of the more urban ones actually makes a difference (like in governmental evaluations of applications for restitution in Poland). A few studies that explicitly address this question are the works of Drobek (1999), McDade & Adair (2001), Szmytkie (2003) and McDonough *et al* (2010). These studies are particularly important given that 'urbanity' is a very loose and dissimilarly interpretated concept which, in my opinion, should be pinned down before general statements on urban-related phenomena are made. Another drawback in academia is the dearth of studies that address this relation from a contextual perspective, i.e. the impact of morphology on urbanity in regard to the settlements' size and origin. Urbanity of big cities differs significantly from urbanity of small towns, and so does urbanity of traditional pre-industrial towns from urbanity of later creations. The fact that all these types of towns are nevertheless urban signifies that morphological urbanity is much differentiated and cannot be assessed on equal terms. This brings us to the next aspect, which is the choice of methodology.

2.4. Methodology in previous urbomorphological studies

A significant methodological contribution to the study of urban form has been accomplished by Zagożdżon in his work on the use of the so-called graph methods (1970) (see chap. 6.2) and by Golachowski, Kostrubiec & Zagożdżon (1974) in their valuable compilation of various – now classical – spatial geographical methods. More recent methodological approaches include suvey techniques used in urban design (Moughtin, Cuesta, Sarris & Signoretta 2003), space syntax (Bitner 2010; Hillier & Stutz 2005) and GIS (Maantay & Ziegler 2006; Greene & Pick 2006). Aspatial methodology, i.e. one based on statistics rather than morphometry, has been elaborated by Szmytkie in his studies on population density as a physiognomic identifier (2003) and the use of residential data for assessment of a town's predominant housing structure (2007) (discussed in chap. 6.3). As a notable example of methodology regarding fieldwork-based point bonitation (valued allocation of points) can be mentioned Knox' interesting study (1976).

As table 2.2 shows, both the layout and the physiognomy (built structure) of a town can be studied either visually or mathematically. Both modes denote the way data serving as basis for analysis were obtained and their choice is guided by purpose and data availability. While layout is probably best studied mathematically[8], physiognomic analyses involve more subjectivity (for instance assessment of the degree of urbanity of a specific architectural style), and, as such, tend more often to be visual. Some methods apply to features regardless of their size and morphogenetic origin, like the graph method and assessment of a town's predominant housing structure (all towns have a town plan and dwellings); others have to be devised contextually.

In the context of small traditional towns, one important urban feature is the market square. Drobek (1999), having studied market squares of degraded towns in Silesia, considered them to be 'the most important semantic dominants that influence the emotional sense of an urban space' (p. 86). Seeing market squares as contextual identifiers of urbanity inherent to small pre-industrial towns (see chap. 4.7.2 on the role of market squares), a suitable methodology

[8] The specificity of the human eye is its difficulty to see the complexities of large horizontal spaces (Adamczewka-Wejchert & Wejchert 1986: 24).

regarding those is much more limited. There are however several studies seeking to attach the role of market squares to the overall urbanity of degraded towns. For general theoretical knowledge about the characteristics of market squares, I found particularly Moughtin's and Mertens' book *Urban design – Street and Square* (2003) instructive, recounting many classical ideas from the seminal works of Vitruvius (15 BC), Alberti (1452), Sitte (1901) and Zucker (1959). Studies on morphological qualities of Polish market squares include valuable synopses of Pudełko (1959), Adamczewka-Wejchert & Wejchert (1986) and Borcz (2008b), deliberating variables such as shape, size, orientation, terrain, spatial relation to water, and transport (e.g. role of exit streets and traffic flow). Some of these features – and some new ones – were later explored by Borcz *et al* (2009) in their work on selected degraded towns of Lower Silesia[9]; simultaneously, the authors incorporated an interesting geographic perspective, namely the role of the surrounding landscape's topography (highlands, lowlands) on the appearance of the market square. Drobek (1999), in his search for urban traits among degraded towns in Silesia, surveyed such features like the amount of preserved frontages, number of multistoried buildings, occurrences of town halls and so forth. Kühnel's detailed work from 1918 gives insight into the technical, engineering aspects of small towns of Galicia (southeastern Poland), with a special portion (pp. 32-48) dedicated to the qualities of Polish market squares[10]. Other historico-geographical works deliberating the role of market squares include those of Rewieńska (1938; Vilnius-Navahrudak region[11]), Górak[12] (1990; Zamość region), Przesmycka (2001; Lublin region) and Ziębik (2008; Upper Silesia). In 2010, I made a first approach towards the urban significance of market squares (Dymitrow [2010] 2012), exploring aspects such as cohesion and overtness of the market square's interior, and intactness and compactness of its frontages, i.e. aspects that will be further elaborated in this work (chap. 4.8 and six).

Table 2.2. Methodology used in morphological studies.

Author / Work	Layout (town plan)				Physiognomy (built environment)		
	Visual analysis		Mathematical analysis		Visual analysis		Mathematical analysis
	Cartography /satellite imagery	Field observation	Graph method	Spatial clustering	Photo-graphy	Field obser-vation	Statistics
Rewieńska (1938)	x					x	
Drobek (1999)			x		x		
Szmytkie (2003)							x
Borcz *et al* (2009)	(x)	x			x		
Szmytkie (2009)			x		x		x
McDonough *et al* (2010)				x			
Dymitrow ([2010] 2012)	x				x	x	
Sokołowski (2011a; 2011b)	x					x	

2.5. Morphology and 'old' literature

Finally, I would like to make a comment on my choice of some of the literature. As Plit (2007: 68) puts it, '[g]eographers often have the tendency to quote the most recent literature (…). Sometimes, however, it is also advisable to quote old works, even the very old'. Indeed, in regard to objects prone to relatively slow change such as urban morphology (cf. Słodczyk 2003: 119), it seems justifiable to review its basics from the very roots (as opposed to modern interpretations thereof). One such example is Kevin Lynch' (1960) important work 'The image of the city', whose reprint is still used as a textbook at Swedish universities. Others are the aforememtioned works of Vitruvius (15 BC), Alberti (1452), Sitte (1901), Dziewoński (1953), Zucker (1959) and Conzen (1960). I particularly found Artur Kühnel's excellent book from 1918 on the construction principles of small towns very rewarding[13]. It was written during a time when Poland had regained its independence after 123 years of dissolution, and had to – among a myriad of other tasks – uniform its urban structure that was hitherto regulated by different national laws and codices. This was

[9] Features that were studied were the square's shape (regular/irregular), built environment (surrounding, central), position of exit streets, organization of greenery and small architecture, and spatial relation with the church (cf. the charts on pp. 62-64 and countless photographs throughout the works).

[10] Much attention is given to the shape, size, function and composition of the square, particularily the steering of roads and traffic within the square in terms of road position, road exits and shape of the square's corners.

[11] During the interwar period, Vilnius (Pol. *Wilno*; now in Lithuania) and Navahrudak (Pol. *Nowogródek*; now in Belarus) were part of Poland.

[12] Górak (1990) has a special inset (pp. 113-114) dedicated to the location and shapes of squares of the Zamość region.

[13] This book is quoted in e.g. Sumień (1989) and Przesmycka (2001), Borcz *et al* (2009).

also the time when many crucial decisions were made on the future trends that came to shape the direction of Poland's urbanization. Looking back to such old literature gives insight and perspective to the mentality of the time and contributes to a deeper understanding of the current appearance of small towns. Furthermore, urban morphology – seen as inanimate materia – is a subject that comes relatively unscathed from scientific paradigms and political propagandism. In Poland especially, when publications in many fields were for four and a half decades distorted – or at least tinted – by socialist agenda, works on urban form convey a fairly unbiased framework. This is why books written during this period, even though imbued with socialist spirit, still manage to remain fairly objective whenever urban morphology is deliberated.

2.6. Summary

Having reviewed selected literature within fields that will be touched upon in this thesis, a number of gaps could be observed. Firstly, there is an overall dearth of studies on degraded towns in Poland compared with the amount of studies on small *formal* towns. Also, studies on restitutions tend to focus on the restituted towns only, not on the relation between the restituted and the non-restituted towns[14], thus contributing to the oversaturation of academic studies dedicated to formally urban towns (the paradox of formality). There is also a dearth of morphological studies that would crystallize the relation between urban morphology and urbanity in its most elementary form. Urban morphology is often taken for granted as an implicit urban feature, without consideration to whether and why it actually is urban. Given the seeming arbitrariness within urban restitutions in Poland today, there is still an unsatisfactory amount of methodological studies dedicated to systematical, rapid (and therefore preferably non-field-based) morphological surveys that could bring urban morphology to a level closer to that of the more objective urbanity-defining aspects such as demography, function, infrastructure and centrality[15]. Such proceedings would require an approach that would acknowledge the contextual impact of morphology on urbanity, particularly in regard to the settlements' size and origin.

[14] Post script: Unbeknownst to me, Sokołowski had simultaneously chosen just such approach in his two articles (2011a, 2011b), comparing urbanity of restituted and non-restituted towns of the Kuyavian-Pomeranian and Łódź voivodeships.

[15] Sokołowski (1999: 206) had statistically distinguished a set of rural settlements in Poland endowed with urban features (demography, function, centrality and infrastructure), which, according to Sokołowski, 'after verification of the morphological element (…), have a chance to be qualified as towns (and even should become towns)'.

3. The concept of urbanity in Poland

3.1. Introduction

The purpose of this chapter is to provide a conceptual framework regarding the notion of urbanity in Poland to serve as a foundation for the subsequent analyses of results in chapter seven. The point of departure is such that in Poland there are premises suggesting a preoccupation with the notion of urbanity, which is not quite evident elsewhere. Furthermore, the process of designating urbanity in Poland is accompanied by several intricacies and inconsistencies inherent to different aspects of social and economic life – both in a historical and a contemporary context – that could seem detached from a rational urbanization process. Therefore, in order to understand this phenomenon and to conduct an informed analysis thereof, it is necessary to become acquainted with its specifics on a variety of levels. Although the aim of this chapter is to capture urbanity in a Polish context, some concepts require a broader geographic approach.

In the next three subchapters (3.2–3.4), the fundamental concepts of urbanity and rurality are examined, including the purpose of a rural-urban division, the relation between the concepts of rural-urban dichotomy and rural-urban continuum, the definitions of what constitutes an urban and a rural unit, and how these definitions affect urbanization and ruralization processes; I will also clarify what I mean by 'degraded town'. From 3.5 onwards the focus is strictly on Poland, beginning with a general outline of the idea of urbanity in Poland and the benefits associated with it. 3.6 will take us back in time to where it all began – the notorious reform of 1869-70 – in an attempt to create a substrate for its demystification when approached from a positivist perspective. The impact of the reform on subsequent restitutions in Poland is discussed briefly in 3.7, followed by a discussion on the official criteria controlling these restitutions, including a scrutiny of their current implementation (3.8). Subchapter 3.9 is dedicated to those factors affecting restitutions today that could be described as secondary, i.e. not pertaining to urbanity per se. Lastly, 3.10 raises the question of the identity-laden dimension of urbanity in Poland, one that is largely disconnected from the official standards, and how it communes with the residents of degraded towns through the presence of urban morphology.

3.2. Why urban? Why rural?

> [U]nderstanding rural-urban linkages matters because it provides the basis for measures that can improve both urban and rural livelihoods and environments. Ignoring them means that important opportunities will be lost, and in many cases it will also contribute to poor and marginal people's hardship (Danida 2000).

Most studies on urban or rural topics start off with defining what 'urban' respectively 'rural' means. I would like to precede the defining phase by asking: Why bother? Why do we even have to make such division and label it accordingly? What is the purpose? These questions are especially relevant in the context of this study where arbitrary modes of evaluation and ambiguous criteria bring definitions of rurality and urbanity to a strictly terminological level. In my opinion, it all breaks down to two aspects: lifestyle and governance. Hypothetical rural and urban settlements imply two specific ways of life which in turn have to be governed differently in order to accommodate the different needs associated with such lifestyles[1]. Different lifestyles are also associated with particular problems (environmental and health-related issues, waste management, land use etc.) that need to be adjusted by different ways of governance.

An interesting example of this is the intriguing case of Obrzycko, a former (1934-1990) degraded town in Greater Poland. Until 1990, Obrzycko was part of the rural Obrzycko commune. When it managed to regain its urban status in 1990, due to lack of procedural knowledge and sheer oversight from regional authorities Obrzycko was *mistakenly* separated from the rural commune and made a separate urban commune despite its scarce population (2224) and area (3,74 km²). Although urban communes do exist in Poland, they are normally established in large and middle-sized cities, whereas small towns practically always constitute a rural-urban commune together with their rural hinterland[2]. In Obrzycko's case, the unnatural division has created two sets of administrative posts whose officials preside side by side in the same building. Not only is it extremely costly, it also prohibits the government of the urban commune from investments due to its territorial exiguity. Furthermore, the division limits both communes' access to grants and subsidies, precludes realization of joint projects in spite of local interdependence (which according to Heffner (2005: 14) is unthinkable), and, most disturbingly, it loosens and infects social bonds (Stryjska 2006[3]). Despite the urban commune's

[1] The concept *lifestyle* is closely associated with the immaterial concept *identity*, which is elaborated separately in chap. 3.10.
[2] Notable exceptions are Krynica Morska (topographical conditions) and Stoczek Łukowski (reasons unknown).
[3] http://www.piec.sejm-rp.com.pl/int1-1164.html

numerous attempts to integrate both units (94.4 % *for* integration), the rural commune categorically objects it (98.9 % *against* integration) (Rząd RP 2010), claiming mysteriously that 'the responsibilities of the [rural] commune are so far carried out to an optimum' (PAP 2010). Due to respect for democracy the division remains and the altercation is kept ablaze. This episode illustrates, however, how important lifestyle-specific governance is to people, and whose relinquishment is associated with mistrust of money being put into projects that are not in the best interest of the concerned groups (cf. Spychała 2005). Local development is more and more associated with decentralization and the assumption that local government is 'closer' to citizens in terms of accountability and better understanding of local needs and priorities. Therefore, proper governance of rurality and urbanity may serve as a basis for sustainable regional development (Danida 2000).

Moving forward with this in mind, I hope that the concept definitions that follow will be understood in regard to the underlying lifestyles that are in need of specific types of governance, rather than as mere synthetic constructions.

3.3. What is urban? What is rural?

3.3.1. What is urban?

Fig 3.1. An apartment block in the deserted post-Soviet town of Kłomino, Poland; an example of urban morphology within a non-urban context. Photo: M. Dymitrow

The term 'urban' is widely associated with the commonly used terms 'town' and 'city'. These are two types of human settlements – the first smaller, the second bigger – endowed with certain characteristics that are distinguished intuitively by most people (cf. Drobek 1999: 14-15). Oftentimes, such characteristics are reduced to 'urban images', i.e. schemata that integrate many separate elements including both concrete and abstract stimulus information (Segal 1971; Rapoport 1977: 114). Due to their visual mode, these schemata often coincide with the morphological aspect (cf. Chądzyńska & Litwińska 2005), standing in for a subconsciously coded cultural archetype of urbanity (cf. Rapoport 1977). However, easy as it may seem, the distinction of urbanity becomes problematic with the decreasing size of a town (Sokołowski 1999: 30). No one can possibly deny that New York is anything but urban, whereas a classification of Hum in Croatia, the world's smallest town with only 20 inhabitants (James et al 2009), would most likely cause ambiguity. However, urbanity cannot merely be a morphological concept. This is seen, for instance, with the morphologically urban yet deserted post-Chernobyl town of Pripyet, and many other ghost-towns around the world (cf. fig. 3.1). Another example are functioning towns, such as Arlandastad and Industristaden AR in Sweden, two types of commercial and industrial sites with a townlike appearance yet devoid of permanent residents. According to Persson (1992), such towns – although it is judicially possible – cannot be regarded as urban; when seeing cities as 'the antithesis of nature' (Lawrence 1993: 91), a permanent population seems to be a prerequisite for urbanity. On the other hand, suburbs, while populated and seemingly urbanized, are in fact only functionally specialized, subsidiary segments of larger urban complexes (Fellmann *et al* 2007: 375) and, as such, they lack the *independence* associated with fully urban entities. This lack of urban independence is not reserved to suburbs created as a result of urban proliferation; incorporated units (i.e. previously independent units) also inherit this trait[4]. This in turn signals that *administrative independence* is an important urban feature. Still, since a permanent population *and* administrative independence are also traits of many rural settlements, the question emerges: what distinguishes urbanity from rurality?

Urbanity is more than an exercise in semantics; it is foremost a physical entity. According to Pacione (2009: 19-20), there are four principle methods employed to identify urban places: population size, economic base, functional definitions and administrative criteria. Population size stems from the notion that urban places are generally larger

[4] A study on degraded towns in Greater Poland has shown that prevalence of urban functions among incorporated towns (*de facto* urban after incorporation) were only half the level of rural units performing administrative functions, and equal to the level of villages not performing such functions (Dymitrow [2010] 2012: 59-60, 65).

than rural places; an urban economic base presupposes a predominant engagement in non-agricultural work[5]; functional definitions of urbanity reflect the real extent of urban influence; and, finally, administrative criteria are national, particular definitions of urbanity, that are largely uncomparable between different countries[6]. One major problem with administrative designations of urban areas is their frequent lack (or scarcity) of correspondence with the actual physical extent of the urban area; overbounding denotes incorporation of areas that lack urban character (common in Poland, my postscript), while underbounding may lead to fiscal difficulties for cities with many commuters residing (and paying taxes) beyond the legal city limits. Most of the themes listed by Pacione, though often under different terms, recur in most literature dedicated to the subject of urbanity (Kiełczewska-Zaleska, 1972; Maik 1992; Öhman 1992; Sokołowski, 1999; Drobek 1999; Liszewski & Maik 2000; Szmytkie 2003; Żebrowski 2005; Miszewska 2007; Szymańska 2009). Regarding urbanity as a physical entity, most studies also add the morphological, or physiognomic, criterion. As we can see, urbanity as a physical entity is a synergy of many traits that collectively renders a specific yet familiar concept of 'urban'.

3.3.2. What is rural?

Urbanity can also be analyzed from another angle: what it is *not*, i.e. from the perspective of its counterpart – rurality. Rural studies constitute a much younger genre within geography than urban studies, dating back only to the 1970s; prior tho this, rurality was included in agricultural studies (Bański 2010). It is important to bear in mind that 'rural' does not only refer to a rural settlement, but to the totality of land outside the administrative borders of an urban area (cf. Bański 2010), whereas an urban area coincides with a specific settlement or a group of settlements (conglomeration, agglomeration etc.). Definitions of what is rural are equally problematic like those of what is urban (Ilbery 1998). Rurality is often seen in stereotypes, as the inferior opposite of urbanity, for instance: complexity – simplicity, intensity – extensiveness, polyfunctionality – monofunctionality, dynamism – stagnation, modernity – backwardness, but also as artificiality – naturalness, the last 'in favor' of the rural areas (Bański 2010). According to Gilg (1985), the most satisfactory and complete defnition of a rural area should depart from its physical traits (morphology) – the character of the landscape and the intensity of land use, whose economic activities tend to be *areal* rather than punctual or linear (International Geographic Union[7]). Bański (2010) has summarized the characteristics of rural areas in contemporary studies as: peripherality, open landscape, low population density, sparse and dispersed settlements, and occurrences of agriculture and forestry. Current and future changes to the rural areas (among others in Poland) include larger differentiations in every aspect, particularly the weakening of the agricultural sector (Bański 2010). Such prognosis tells us that some very fundamental, traditional aspects of rurality are being abandonned and that the future of rural areas will instead be confined to aspects such as low population density and rural morphology, but also to rural consciousness (cf. chap. 3.9.4).

3.3.3. Rural-urban dichotomy, rural-urban continuum and urbanicity

The categories 'urban' and 'rural' have been used to study places for a long time. However, during the second half of the 20th century, a growing number of researchers in universities, planners in governments and professionals have questioned the usefulness of these categories in diverse geographical contexts (Morén-Alegret 2006: 80). Already back in the 1960s, Pahl (1967: 299) noted that, although the *layman use* of the terms 'urban' and 'rural' is not disputed, the terms are 'more remarkable for their ability to confuse than for their power to illuminate'. It is not merly a matter of confusion; the entenchment of the rural-urban division in most census reports affects in great profusion the validity of many vital statistics (Stewart 1958: 152). Also, the very fact that nations define 'urban' differently hints at the underlying problem with the dichotomy, as urbanity is too complex to measure so simply (Dahly & Adair 2007: 1408). Moreover, constant spatio-temporal transformations of rural areas, particularly the weakening of the agricultural sector (cf. Fierla 2011: 196-198), contribute to an increased blurring of the urban-rural distinction (Champion & Hugo 2004; United Nations 2011)[8]. Moreover, the rural-urban dichotomy is known for disguising the problems of small towns (UN-Habitat 2006), which, despite their smallness, must not necessarily be rural in other terms. As we can see, the

[5] As examples of urban-specific activities, Fellmann *et al* (2007: 374) mention: 'retailing, wholesaling, manufacturing, professional and personal services, entertainment, business and political administration, military defense, educational and religious functions, and transportation and communication services'.

[6] According to (Danida 2000), '[i]nternational comparisons are difficult, as they may look at settlements which, despite being classed in the same category, may be very different in both population size and infrastructure. In addition, the reliability of data on urbanization trends within one nation can be compromised by changes in the definition of urban centers over time'.

[7] As paraphrased by Bański (2010).

[8] Note, that he rural-urban dichotomy is also prevalent in climatological studies where those parts of large cities (such as Vienna, Singapore, Łódź, Wrocław) that do not constitute the densly built environment are actually called 'rural sites' (Stewart 2007: 114); interestingly, Knez & Thorsson (2006) choose the more neutral expression 'open-air' rather than 'rural' when opposed to 'urban'.

traditional rural-urban dichotomy is today widely regarded as an anachronism (Sokołowski 1999: 204), mainly because the transition zone between urban and non-urban is not abrupt, but smooth and gradual. Such concept is called the *rural-urban continuum* and should be understood as 'a group of settlements occupying the middle part of a rurality-urbanity scale, where formally rural and urban units are interspersed' (Sokołowski 2008: 63).

Three important observations are in place at this point. Firstly, the rural-urban continuum is largely a phenomenon inherent to the western, developed world. According to United Nations (2011), in the developing countries, the traditional urban-rural dichotomy is still needed, although it can be supplemented or replaced with a classification by size of locality. Secondly, it is important not to confuse the rural-urban continuum with so-called MUAs (Morphological Urban Areas), i.e. 'continuously urbanized areas – clusters of contiguous communities, irrespectively of their administrative status, characterized by high population density' (Korcelli *et al* 2008: 33). Although both phenomena are continuous in character and pertain to rurality/urbanity, the difference is that the rural-urban continuum denotes a conceptual transition, while the continuity of MUAs is explicitly spatial. Sometimes, the spatial meaning attributed to the term 'rural-urban continuum' is also used in landscape studies (cf. Wharton 2005). Thirdly, Sokołowski (1999: 6) stresses that the rural-urban dichotomy is in fact not a contradiction of the rural-urban continuum, provided that formal urbanity and rurality are defined by strict criteria. If a settlement fulfills the criteria of urbanity, it 'is' urban, otherwise it is not, despite the *relative* degree of urbanity among the settlements making up the rural-urban continuum[9]. This relativity has led to somes scholars preferring the term *urbanicity* rather than urbanity (or urbanness). The term *urbanicity* (also a concept and a measure) was invented by W. Allen Martin in 1974, and denotes the degree to which a geographical unit is urban (Martin 2004). In a more general sense, the term is used to describe a *state* of relative urbanness resulting from urbanization (McDade & Adair 2001: 55)[10] . In spite of the term's logics, in this study, I opt for the more common term 'urbanity'; however, I do stratify urbanity's 'accomplished' and 'unaccomplished' character by means of circumlocution.

3.4. Urbanization and ruralization

3.4.1. Urbanization

The term *urbanization* denotes an increase in the proportion of the total population residing in urban areas. It is different from the terms *urban growth* – which denotes an increase in the population of towns and cities – and *urbanism* – which denotes urban living, i.e. a way of life characteristic of the city that is accompanied by a loss of tradition and close family ties, and extended across society as a whole (note that it is also different from the term *urbanicity* which denotes a state, whereas urbanization is typically used to describe a process; McDade & Adair 2001: 55). All these concepts define ways in which the global urban pattern is changing (Pacione 2009: 68; Martin 2004). Urban patterns can be laid out in absolute figures, but they can also be observed spatially (i.e. in terms of concentration of urban areas; Gawryszewski 2005) and with a varying degree of temporal delimitation, e.g. as a historical process or as an ongoing phenomenon (Lewan 1990). In 2007, more than half of the world's population was living in urban areas (75 % in the more developed countries) and the figures for the 2030 prognosis are 60% (world) and 81% (developed countries) (United Nations 2006; 2007). The increasing levels of urbanization and urban growth are caused primarily by a combination of natural increase of the urban population and net in-migration to urban areas (Pacione 2009: 71). However, urbanization may also occur by 'creating' new urban areas by changing the national definition of such areas, or (as in Poland) by arbitrarily applying an existing definition on a previously non-urban area. Urbanization can also take place covertly when urban residents move out to the countryside, yet continue to spend a significant amount of time in the city, mostly at work (cf. Lewan 1990: 25).

Urbanization figures and prognoses stem from data compiled from around the world. When assessing levels of urbanization three major factors are taken into consideration: demographical/statistical, behavioral/cultural and structural/economic (Öhman 2003/Lewan 1990). There are however huge local variations:

> Among 228 countries for which the United Nations has data, about half use administrative definitions of urban (e.g., living in the capital city), 51 use size and density, 39 use functional characteristics (e.g., economic activity), 22 have no definition of urban, and 8 define all (e.g., Singapore) or none (e.g., Polynesian countries) of their population as urban (Vlahov & Galea 2002: 52).

Since definitions of what is urban differ, so does the meaning of the associated concept of urbanization (and its reversal – ruralization). Sokołowski (1999: 29-30) introduces the two basic concepts *urbanization sensu stricto* and *urbanization*

[9] In this vein, it could be said that lack of criteria, or not following them rigidly, dissolves the rural-urban dischotomy.
[10] Vlahov & Galea (2002: S5) define urbanicity as 'the impact of living in urban areas at a given point in time'.

sensu largo, varying in the amount of urban-specific components and the occurrence of some qualitative differences. Generally speaking, urbanization sensu stricto denotes transformation or incorporation of rural settlements into urban settlements. Such process is associated with the concept of urban landscape in terms of morphology (town plan, building type and building material, compaction, dispersion etc.) and affects only the nuclei of an urbanized landscape. It is also the only process leading to formal urbanity. Urbanization sensu largo, on the other hand, is a more general process which must not necessarily lead to formal urbanity, and is rather the result of modernization and the population's departure from the agriculture economy. Such process involves changes in lifestyle and living conditions, and is therefore more reminiscent of urbanism. It is also referred to as semi-urbanization[11] (Golachowski 1966) and its products are called half-towns–half-villages (Szymańska 2009) or simply – the rurban community (cf. Patel 1969). Kiełczewska-Zaleska (1972) observes that such urbanization process is seldom isolated, but occurs in groupings, covering larger areas of land (Szymańska 2009: 164).

3.4.2. Ruralization

The opposite of urbanization may denote the social process based on the outflow of urban population to the countryside (also called deurbanization; cf. van der Berg *et al* 1982; Słodczyk 2003: 47), but more often than not refers to the introduction of rural elements within urban areas. The latter is often interlocked with the abrupt invasion of rural population into cities and the associated with it rural standards that become catastrophically inadequate in an urban environment (Szymańska 2009: 330). Ruralization may also occur by means of legislation, either by manipulating the formal definition of urbanity or by annulling the formally urban status of a hitherto urban settlement. The latter is widely referred to as *urban degradation*, and its products are called degraded towns[12] (discussed next in chap. 3.4.3).

Both deurbanization and degradation are two forms of a negative urbanization process, with the first taking place gradually and uncompelledly, the other abruptly and enforcedly. Equally abrupt is the process of *urban restitution*, i.e. reversal of a town's past degradation. It occurs within national systems that define urbanity by the administrative criterion (e.g. Poland). In terms of urbanization, restitution is therefore not really a process (more than in the bureaucratic sense of preparation), but rather an episode. Nevertheless, it should reflect the more intricate urbanization-specific changes that took place in the community being subject to restitution, which is not always the case (Sokołowski 2008: 63-64).

3.4.3. What exactly are degraded towns?

What exactly is a *degraded town*? Due to lack of referential terminology, in order to structure the different types of degradations that may occur I have devised a set of auxiliary terms that will be introduced in this section.

First of all, 'degraded town' is not a generally used term, neither is it unambiguous. This may be because the word 'degradation' does not denote the way in which something has been degraded. I would argue that in any case the word carries an imbedded negative connotation[13]. 'Degraded' implies some kind of breaking or wearing, damage or failure, loss of quality, maybe even decomposition or disintegration. Degradation may thus either be abstract or concrete, and both senses can be applied to towns. However, when I use the expression 'degraded town' I refer to *a town deprived of its formally urban status*, i.e. one that in an unnatural way (i.e. not related to a process) has been bereft of the conceptual foundation of its very existence. Seeing degradation as a decrease in rank rather than in content refers to what I would call *conceptual degradation*. Researchers studying the specifics of towns deprived of their urban status, use the term 'degraded town' in a similar way (Sokołowski 2011a; 2011b; 2002; 1999; Szmytkie & Krzysztofik 2011; Borcz, Niedźwiecka-Filipiak & Zaniewska 2009; Miszewska 2007; Krzysztofik 2007b: 77; Murzyn & Gwosdz 2003; Siemiński 1996; 2000; Drobek 1999; Nawrot 1995; Rykel 1993; Adamczewka-Wejchert & Wejchert 1986: 114; also in non-Polish context, e.g. Bhattacharya 2006: 289). Such usage might be the geographers' perception of reality in a hierarchic order (cf. Vaishar & Zapletalovà 2008). My understanding is that urban areas are perceived as hierarchically more evolved manifestations of human settlements than rural areas; hence, reversal to a less evolved form is regarded as a defamatory action. A similar intimation can be found in Beaujeu-Garnier's & Chabot's aphorism (1971: 115) stating that 'a town is nothing but a village that has been successful'.

The expression 'former town', which is also used, is similar to the expression 'degraded town', as all degraded towns are by definition former towns. However, in my opinion, a former town does not necessarily have to be degraded, if the decision of aborting its urban status was made by the local population in a democratic way (bottom-up). As

[11] Note that semi-urban landscape may have a different meaning, such as the intermediate landscape between the urban and the suburban – 'an unexpected juxtaposition of forms and functions from the neighboring suburban ring and city core' (Fonseca 1977).

[12] In India, were towns and cities are classified by population numbers, losing urban status altogether (or merger with larger towns) is referred to as *de-classification* (Bhattacharya 2006: 288).

[13] Note e.g. how Miszewska (2007) analogically uses the term 'recovered cities' for degraded towns to which urban status has been restituted.

former towns (and not as degraded towns), I also denote towns deprived of urban status due to a top-down procedure, only if such a decision could be rationally motivated and accepted by the locals. This applies to totally dilapidated settlements, bearing no trace whatsoever of their urban past if there ever was one, i.e. failed urban foundations or victims of natural disasters, wars or war-related deeds (cf. Siemiński 2000: 16).

Considering the mode (and the associated magnitude) by which degradations tend to occur, I would also divide them into particular and structural degradations. *Particular degradations* take place due to individual motions or requests; they are usually more informed and as such – more rational (cf. Nietyksza 1986: 90). Particularity is lost to a great extent within *structural degradations*, mostly in connection with larger administrative reforms, when more general groups of towns with similar characteristics are being degraded (e.g. the 1869-70 reform in Congress Poland) or when the traditional concept of urbanity is being dismantled altogether (as in Sweden in 1971).

Besides the conceptual understanding of degradation, there is the *physical* or *morphological degradation* (Przesmycka 2001; Sokołowski 2011a: 374), which often goes hand in hand with the former. Although largely an aesthetic issue, physical degradation is also dependent on the level of technical maintenance. If not tended to, a perfectly preserved town can easily succumb to degradation (cf. chap 4.9.3). Many other aspects of urban degradation could be added, most of which will not be examined in this study. However, I believe it is important not to confuse degradation with inferiority in general. The word 'degradation', if used correctly, implies a *change of state* that has proceeded in an undesired direction. In my opinion, it is misleading to apply the word 'degradation' to, for instance, urban infrastructure, in a historical perspective. Since infrastructure is subject to constant technical innovation and progress, then the apparent 'degradation' in fact signifies lack of modernization.

Two more important aspects of degradation must nevertheless be mentioned: the *social* and *economic degradation*. Beside the sheer emotional aspect of local urban identification associated with the removal of long-lasting urban status (Nietyksza 1986: 92), social degradation may also have more tangible implications. In terms of community cohesion, it is closely intertwined with economic factors, whose degradation may impede development. In Sweden, for example, the abolishment of the term *city* in 1971 has resulted in structural degradation of 132 urban centers in possession of civic rights. Since then, 13 of them[14] have returned to the usage of the informal term *city*, purely for image and marketing reasons. In regard to small towns in rural micro-regions, factors like remoteness, bad accessibility to urban centers, lack of investments, low purchasing power, and problems of human capital are seen as major weaknesses (Vaishar & Zapletalovà 2008). Konecka-Szydłowska *et al* (2010) conclude that the smaller of small towns are characterized by the lowest level of service development. Regardless of the morphological value of a town, deficits such as unemployment, lack of education and culture, and possible pauperization, may create ambivalence and stagnation. Thus, social and economic sustainability is an important factor for small towns – and especially degraded towns. This fact can be traced to the recent intensification of urban restitutions in Poland (discussed in chap. 3.7.3), as urban status is often perceived as an enticement for (often foreign) investment and as a possibility for absorption of EU-subsidies aimed specifically at formally urban settlements.

3.5. Urbanity the Polish way – why such a big deal?

3.5.1. Introduction

This thesis is concerned with the degraded towns in Poland. In order to grasp the Polish notion of urbanity in the context of degradation, let us first recall how degradation should be understood. Degradation is a form of ruralization achieved by means of legislation, or, more precisely, by annulling the formal urban status of a specific, hitherto urban, settlement. This practice is an intrinsic part of Poland's history and its imprint on modernity is largely detectable.

3.5.2. The Polish idea of urbanity

In Poland, formal urbanity coincides with the administrative definition, yet it is formalised by using the traditional concept of *civic rights* (also known as *town privileges*) that gives the right to the city title. In its originel sense, the term denotes a set of legal rules and customs that defined cities in Europe since the early Middle Ages. In Poland, bestowal of civic rights was associated with the act of creating new towns (the so-called 'location') or with the change of status of an existing settlement. Granting civic rights was associated with the introduction of new organizational and legal forms that regulated the towns' economy, physical environment and ways of local government. Urban status also led to the emergence of a middle class and to gradual emancipation from feudal lords (Pazyra 1965; Kołodziejczyk 1961 [1979]; Szymańska 2009). Today, with their original meaning (right to trading, establishment of guilds etc.) long-gone, civic

[14] Borås, Gothenburg, Haparanda, Helsingborg, Lidingö, Malmö, Mölndal, Solna, Stockholm, Sundbyberg, Trollhättan, Vaxholm and Västerås.

rights have no longer any practical importance per se. Given their apparent lack of contemporary purport (other than historico-symbolic), civic rights can be seen as merely a form of cultural heritage (cf. 3.10, 4.9.4), which nonetheless is utilised to define urban areas according to the administrative criterion. This in turn presupposes a set of modern features like sufficient centrality, infrastructure, specific institutions, a large non-agricultural employment sector, etc. (cf. chap. 3.8). Such combination of two platforms is difficult to reconcile, and becomes explicitly apparent when degraded towns apply for urban status on cultural, identity-laden grounds, which do not always coincide with the administrative requirements. This irreconcilability becomes a major source of confusion, particularly within the territory of former Congress Poland. There, the urban network is much less developed than elsewhere in Poland, mainly as a result of the adminstrative reform of 1869-70 (cf. chap. 3.6). Having been enforced by a foreign oppressor (and allegedly as a form of punishment), the reform differs from similar ones around the world whose initiator was the native government enacting a (supposedly) justified domestic strategy. The Russian reform is still a thorn in the side of many Poles, and is often brought up when the question of urban restitution becomes topical (cf. Dymitrow 2012).

The keynote of the Polish administrative system is the notion of a rural settlement climbing up a hierarchical ladder, whose finish line is synonymous with bestowal of civic rights (Drobek & Heffner 1993). In the modern developed world, the progressive urbanization of the traditional rural landscape renders the concept of rural-urban dichotomy anachronistic. In such light, the very usage of civic rights may be regarded as inadequate; not only do civic rights per definition uphold the antiquated dichotomy, but the mere usage of this expired mediaeval charter, whose content has changed entirely through times, could be challenged. In Poland, however, the urban-rural dichotomy is relentless as the system does not acknowledge any intermediate level, which – according to the first hypothesis of this study – conflicts with the concept of rural-urban continuum. This discrepancy between *de jure* and *de facto* urbanity in Poland has been noted and confirmed by academics from various disciplines (e.g. Dobrowolska 1959; Mirowski 1964; Chojnicki & Czyż 1989; Siemiński 1991; Drobek 1999; Sokołowski 1999); only the morphological and the identity-laden dimensions of Polish urbanity remain unsatisfactorily examined (cf. Sokołowski 1999).

Moreover, the mere issue of classification of urban units in Poland has a long history of inconsistency. For example, in the Galician section of Poland (the one that fell into Austrians following Poland's partitions), a reform was conducted in 1784-85 with the intent to classify all settlements as either towns (*Städte*), market towns (*Marktflecken*) or as villages (*Dörfer*), with the first two considered as urban (Karpiniec 1932). However, Karpiniec (p. 18) has found that the reform was introduced only as a means of classifying settlements for the index of the official provincial map, and had nothing to do with the settlements' character[15]; moreover, the classification varied widely between different sources[16]. As a result, the exact number of urban settlements was never known, and, more alarmingly, a reform conducted for fairly trivial reasons posed serious problems when Galicia returned to Poland in 1918 and its chaotic urban-rural structure came to assume formal meaning[17]. A more recent example is the degradation of the town of Sulmierzyce on January 1, 1973, followed by a restitution only eleven months later. How does that sound in terms of purposefullness?

Besides the historical, geographical, administrative and cultural dimension of urbanity/rurality in Poland, there is also an economic presence, as urban status today is also believed to have a significant impact on a settlement's development (e.g. eligibility of applying for urban-specific grants), but also in terms of greater visibility and, as such, raised attractivness for investors and tourists (Drobek 2004; Rosa 2010; Pacholak 2010; Borusewicz 1999).

Summarily, the Polish concept of urbanity – despite its simple definition: 'a settlement in possession of civic rights' – is not a simple one. It is marred by different aspects of social and economic life, both in a historical and a contemporary context, and conditioned by factors that would seem detached from a rational designation of its components. Therefore, in order to interpret the results of this thesis correctly, it is important to become acquainted with some themes that have most bearing on urbanization sensu stricto in Poland with focus on degraded towns, and particularly in regard to towns degraded during the reform of 1869-70.

3.5.3. Benefits from urban status

According to Danida (2000), '[p]ublic investment in services and infrastructure tends to concentrate on centers that are defined as urban. As a consequence, investment can bypass settlements not defined as urban even if these can, and often do, have an important 'urban' role in the development of the surrounding rural areas'. Indeed, the rural-urban distinction is considered as 'at least as important as the east-west development dichotomy in Poland' (Ministry of Labour and Social Policy 2006: 17). The rural-urban divide is sometimes depicted as 'two Polands': a better-developed urban part and a worse developed rural part; a division pointed out as 'the main factor destabilizing Poland's develop-

[15] Moreover, Karpiniec (1932) is sceptical to the way this classification was performed in terms of strigency and thoroughness; whether it took into account all aspects under investigation and ignored possible protectionist tendencies from concerned magnates.
[16] The number of towns varied from 83 (in 1869) to 95 (in 1850) and the number of market towns from 189 (in 1807, 1837 and 1847) to 234 (in 1857) (Karpiniec 1932: 17).
[17] The problem was finally dealt with in 1933-34, introducing a complicated administrative reform.

ment and the functioning of democratic institutions in the longer term' (Gorlach & Foryś 2002: 296). Likewise, urban status is often seen as a means of development and of improvement in standard of living (cf. Dubis, 2012; Maciąg, 2012; TMZB 2006).

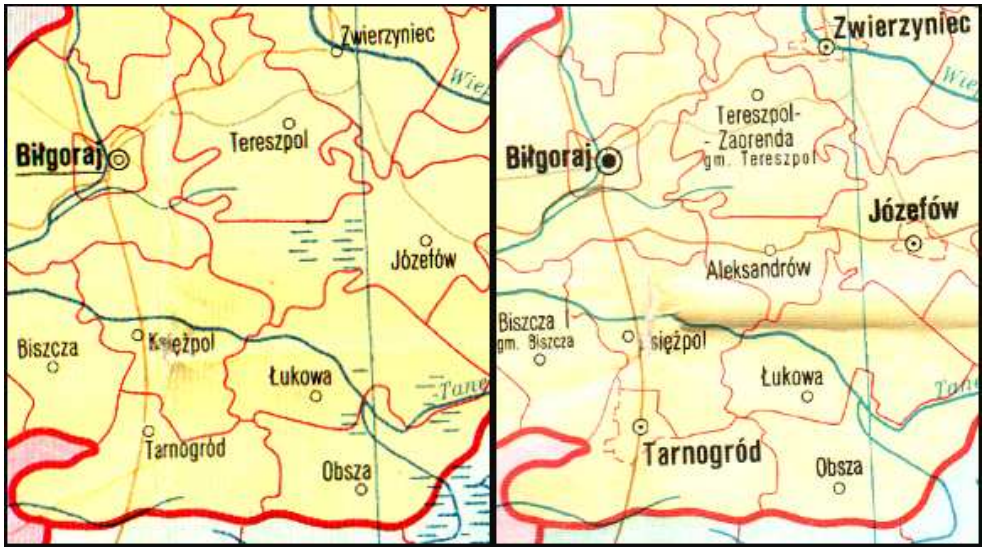
Pacholak (2010) presents a good coverage of possible benefits for rural communes, once their seats are granted town priviliges:

- More possibilities of obtaining grants from the European Union that are not available for rural communes
- If the number of inhabitants of a restituted town is lower than 5000 (which is most likely the case), the teachers will not lose their subsidies awarded to those employed within a rural commune
- Once the urban status is granted, the taxes will not increase; the size of the taxes will still be decided upon by the local government
- An urban-rural commune will not lose priviliges specific to a rural commune
- Restitution does not affect the existing generic and educational subsidies
- An urban-rural commune is also entitled to benefit from the Rural Development Program
- The commune gains on prestige
    - A town attracts investors more than a village
    - Investors generate new employment facilities
    - Investors enable communal development
- Land value increases
    - In-migration increases
    - Out-migration to other towns decreases
- There are more possibilities of promotion
    - Promotion reaches out to potential investors
    - Promotion reaches out to potential in-migrators

There is also evidence that the prospect of urban restitution entails a creative process that strengthens community cohesion and self-assessment among the locals, triggering many initiatives, realized through participation in local planning, such as improvements to the town's appearance and infrastructure (Borusewicz 1999; Sokołowski 2002; 2008). It is also argued that town privileges automatically spawn interest from tourists (Maciąg 2012). Sokołowski (2008: 71) speculates that the expected investments are often ascribed to the short-lived media publicity associated with the act of granting town priviliges. I would argue that such protrusion is even more consolidating.

One important aspect of town priviliges is the sheer *visibility* of an urban settlement due to the strong hierarchization of the settlement system as depicted on maps. Fig. 3.2 shows two editions of the same administrative map (from 1975 and 1992), in between which new formal towns have been created[18].

Fig. 3.2. Supremacy of formally urban settlements over rural settlements on maps through the use of typography and delineation.



Fragment of the south-western portion of the former Zamość Voivodeship as depicted on two editions of the same map (1975 left and 1992 right). Emphasis is added after the three towns Tarnogród, Józefów and Zwierzyniec were granted civic rights. *Source*: PPWK 1975 (left); PPWK 1992 (right).

[18] Within the depicted cropping: two restitutions – Tarnogród and Józefów, and one new location – Zwierzyniec.

The map from 1975 depicts rural administrative villages in exactly the same way, i.e. with a small regular font, making no distinction whatsoever between e.g. Tarnogród with 400 years of urban history and the seven times smaller Obsza to the east, a typical two-street village. The map from 1992 on the other hand strongly accentuates the differences between rural and urban settlements with a striking use of typography (font size and emphasis) and additional delineation of the town's boundaries, a supplement with no administrative connotation attached to it. Such hierarchization creates an impression of a major, almost magical change being made, even if in reality such change was practically limited to the very exchange of the formal label from 'rural' to 'urban'. Given the number of rural adminstrative villages in Poland (1.576 as of 2012) – not to mention the total of all rural units of 56.537 –urban status is synonymous with exclusivity (as of 2012 there are 908 towns) and is treated accordingly in cartography. The rationality of such hierarchization may be debated, nevertheless, civic rights are inevitably associated with increased extrovert visibility.

Last but not least, urbanity is also an identity issue. In Poland, the picture of the country is largely determined by its past (cf. Gorlach & Foryś 2002; Sidorenko 2008), not the least in regard to urbanity, which is also interpreted as a cultural, identity-laden concept. Such understanding of urbanity is particularly important for many Polish degraded towns, whose rural status may conflict with the towns' physical traits and, consequently, the urban consciousness derived therefrom. Heritagization of degraded towns, for instance, is a new expression of discontent towards the Polish formal-cultural divide of urbanity, where the discourse of townscape heritage is used as a means of regaining urban status, i.a. via propaganda and physical revitalisation projects (cf. Dymitrow 2012). Likewise – according to Sokołowski (2008: 70; 2011b: 95) – the most significant benefit with urban status today is actually prestige:

> APPEAL!!! CITIZENS OF THE COMMUNE OF ZAKLIKÓW:
> Do you want to raise the status of your commune and your settlement?
> Come and vote on the restitution of civic rights to Zaklików! (Paleń 2012)

3.6. The reform of 1869-70 – the epitome of oppression?

3.6.1. Introduction

> What distinguishes heritage is its capacity to hide the complexities of history and politics [and its role as] a beautifying gloss, rendering the specificity of past political, economic, and social experiences into far less complex whole than what socio-historical scrutiny would reveal (Bendix 2000: 38).

The scope of this study revolves around the infamous, almost mystified urban reform of 1869-70[19] which – reasons notwithstanding – destroyed the Polish urban network. Currently, many restitutionary movements are accompanied by a desire to seek retribution for old deeds committed by Imperial Russia. However, the wish for reinstating lost urban status may in fact be a reactionary aspiration rather than a developmental turn. There is nothing wrong with such way of reasoning, and my personal standpoint is also that a *de facto* urban unit should unquestionably be legally urban, not rural. However, one should be careful when epitomizing the vast scope (336 towns) of the reform as a uniform action, because intricate and individual circumstances may have been incumbent during the reform's execution. According to Sokołowski (2011a: 369), seeing the reform as an act of repression is an oversimplification.

The aim of this thesis is to evaluate the level of urbanity of towns degraded as a result of the reform, departing from their current morphological predispositions. Nevertheless, in order to interpret the results correctly, it is imperative to learn the specifics that preluded the reform, but also to understand the reform's ambiguity, consequences and entailed logics, reverberating until present day. Following synopsis aims at clarifying these intricacies.

[19] Many sources erroneously state the year of the reform, with instances ranging from 1866 to 1870. Indeed, the whole reform was a lengthy process which may have added to the historical discrepancy. It was planned and laid-out as far as 1866, followed by data being collected and inquiries being made for candidate cities bound to be degraded. The decisive *Czar's Ukase to the governing Senate* was issued on the 1 (13) June 1869 and promulgated on the 1 (13 July) 1869 (Journal of Law 1869, vol. 69, № 235, pp. 244-253). The final resolutions were published seriatim in the official Journal of Laws (*Dziennik Praw*) during 1869 and 1870 and that is why the reform should appropriately be associated with these two years. However, based on original source data published in the Journal of Laws (see table 3.1), the promulgation of the decisions, in all but one case (Stawiski in 1871) took place in 1870. Thus, the implementation of the degradations could not have taken place before they were promulgated. The confusion may also stem from many Poles' conviction of the reform being a direct repercussion of the January Uprising of 1863, thus resulting in the inclination towards the use of the earlier dates. [The dual dates denote the simultaneous use of two calendars: the first, Julian calendar, being the official civil calendar in the Russian Empire; the second, Gregorian calendar (with a 12 days delay), which was used in the Kingdom of Poland (Congress Poland)].

3.6.2. The prequel

Spontaneous degradations of the smallest of towns were initiated already during the end of the First Polish Republic (before the Partitions) and continued throughout the short-lived French-administered Duchy of Warsaw (1807-15) as well as the period of Polish autonomy (1815-31) in Congress Poland (see maps of Poland's territorial changes in Annex 5). In 1810, there were 653 towns[20] (Grossman 1925), 484 of which fell within Congress Poland after consecutive border changes (169 fell outside of it). Before the reform, 45 towns were deprived of their civic rights, 11 new towns were created and 2 were restituted. Thus in 1862 there were 452 towns (484 – 45 + 11 + 2), a number that was retained until the reform of 1869-70 (Kazimierski 1994: 11). Polish towns were either *private* (subject to feudalism) or *governmental*, appearing in more or less equal proportions[21] (Ливанцев 1979). Since the most important characteristic of towns was trade, a town's wealth – and especially its owner's wealth – was dependent on how much income trade could generate. Towns, in contrast to villages, were subject to arduous fees and taxes (for consumption of meat and liquors, fire prevention etc.) in order to maintain an urban administration. Therefore, for towns with insignificant income from trade these extra costs were inevitably a burden. An important factor was the town's size, because more populous towns were able to install more trade opportunities. Scarce income and heavy fees were the primary reason for deprivation of civic rights, for which the application was usually submitted by the town's owner, and only occasionally by the residents themselves. Residents were generally opposed to degradations as they feared the prospect of increased dependence upon the towns' feudal heirs. For certain, degradation relieved the residents from urban-specific fees, but it also implied a total ban on trade, including small-scale weekly markets (Mazurkiewicz 1967: 212). Depending on how well-developed the town's agricultural sector was, degradation could thus either be a relief or a curse in terms of employment and sustentation.

The intricacies and interdependencies of such legal system prevented the Russian administration from conducting a large-scale urban restructuration action in Congress Poland after the loss of Polish autonomy, although plans to conduct one emerged already in the 1840s (Nietyksza 1986: 46). Therefore, the planned reform was immediately preceded by two other reforms. The first (1866-67) regulated the organization of local urban government (it also introduced a new administrative division of Congress Poland); the second (1866) abolished economic and social relations inherent to feudality. Both reforms were necessary to facilitate the implementation of the upcoming urban reform of 1869-70, particularly in terms of abolishment of patrimonial relations (especially in private cities) and removal of towns' monopoly on trade. These changes, as the translated ukase[22] shows (transcript in the next subchapter), were introduced as populist benefits in order to justify a reform of such a massive scope.

The reform itself was not ad-libbed in the slightest. Two years prior to the reform, a special committee was appointed to create a list of towns subject to degradation. The task implied creating a way to resolve the issue of the towns' legal status after their deprivation of civic rights; it also called for assortment of appropriate criteria for degradation. The task evoked many disclaimers and complications resulting from the differing social and economic relations stemming from the sheer fact that – as Nietyksza (1986: 55) puts is – 'even the smallest and mostly agrarian towns were nevertheless not villages'. Still, in order to make the reform operative, the societal reality had to be ignored (ibidem: 54-55).

3.6.3. The reform

The final base for degradation was encapsulated in following three criteria: (1) the town had to have less than 3000 inhabitants; (2) the town's burgher-farmers should account for at least 50 % of the population; and (3) the town's yearly income should be less than 1500 rubles. There is no doubt that the Russian administrators were aware of the possibility that the upcoming reform would be interpreted as an act of repression; Nietyksza (1986: 90-91) points out that in order to attenuate its effect, the reform was implemented gradually – altogether in 20 turns (tab. 3.1). Of the 452 towns of Congress Poland, altogether 336 (74,7 %) were degraded during the reform, depriving a population of 526.299 of its urban citizenship (37,2 %).

The Czar's famous ukase to the governing Senate from the 1 (13) June 1869 commanding degradation of 336 Polish towns read as follows:

> By means of OUR [pluralis majestatis] ukase from the 19th of February 1864, after having devised a durable base for administration of economic provision and local government in the governorates of the Kingdom of Poland, We have then turned Our attention to the needs of the plenteous bourgeoisie of this country, and We have then commenced the removal of obstacles hampering a prosperous development of that class. By means of the ukase from the 7th of June

[20] Kazimierski (1994: 73) corrects the miscalculated amount of 633 given by Grossman (1925).

[21] Ливанцев (1979) states that in 1865, out of the 451 towns in Congress Poland 213 were governmental, 231 were private and 7 subject to various clerical organizations.

[22] A *ukase* is a proclamation of the Czar having the force of law; it is similar in meaning to the terms *edict* or *decree*.

> 1866, We have abolished various consumption fees imposed on cities and towns; and by means of the ukase from the 28th of October that year, we have abolished patrimonial dependences of urban residents to the former owners of cities. During further development of these resolutions, We have noticed that among the 452 cities of the kingdom there are some, which despite being called cities, due to insignificant number of residents, small industrial development and insufficient income, lack in fact the relevance of [true] cities, and were only counted among such due to the former local laws which only permitted practicing trade and crafts within cities. Currently, with the extension of the in Russia general law over the governorates of the kingdom, according to which practice of trade and craft is permitted anywhere, the pretext for transforming villages into cities has been removed. Meanwhile, the residents of such cities cannot benefit from the laws of communal government bestowed upon rural citizens, and, besides the taxes calculated at a greater rate than for rural areas, they are required to pay various fees to the advantage of the city treasuries.
>
> Consequently, considering that transformation of settlements lacking the significance of cities into rural settlements, with the abolishment of all previously mentioned fees, will bring their residents a considerable relief, according to the recommendation of the managing committee as deliberated within the committee for the affairs of the Kingdom of Poland, we command: (…)
>
> (Journal of Law 1869, vol. 69, № 235, pp. 244-245; my translation from Russian/Polish)

Of the 116 remaining towns, two more – Góra Kalwaria and Zawichost – were degraded in 1883 and 1888 respectively, following a minor correction (Nietyksza 1986: 90).

Tab. 3.1. Succession and dates of implementation of the consecutive 336 reform degradations

	Date of decision	Date of promulgation	Journal of Law	Towns degraded	Governorate
1	17 (29) Oct 1869	1 (13 Jan) 1870	1869, vol. 69, № 239, p. 415	18	Radom (1/3)
2	24 Oct (5 Nov) 1869	1 (13 Jan) 1870	1869, vol. 69, № 239, p. 419	33	Radom (2/3)
3	7 (19) Nov 1869	1 (13 Jan) 1870	1869, vol. 69, № 239, p. 425	34	Kielce
4	12 (24) Dec 1869	1 (13 Jan) 1870	1869, vol. 69, № 239, p. 461	29	Siedlce (1/2)
5	19 (31) Dec 1869	1 (13 Jan) 1870	1869, vol. 69, № 239, p. 465	39	Lublin (1/3)
6	19 (31) Dec 1869	1 (13 Jan) 1870	1869, vol. 69, № 239, p. 471	18	Płock
7	30 Dec (11 Jan) 1869/70	19 (31) May 1870	1870, vol. 70, № 241, p. 67	39	Kalisz
8	23 Jan (4 Feb) 1870	19 (31) May 1870	1870, vol. 70, № 241, p. 77	23	Piotrków (1/2)
9	30 Jan (11 Feb) 1870	19 (31) May 1870	1870, vol. 70, № 241, p. 81	17	Łomża (1/3)
10	27 Feb (11 Mar) 1870	19 (31) May 1870	1870, vol. 70, № 241, p. 93	15	Suwałki (1/2)
11	6 (18) Mar 1870	19 (31) May 1870	1870, vol. 70, № 241, p. 97	8	Lublin (2/3)
12	20 Mar (1 Apr) 1870	119 (31) May 1870	1870, vol. 70, № 241, p. 123	16	Piotrków (2/2)
13	20 Mar (1 Apr) 1870	19 (31) May 1870	1870, vol. 70, № 241, p. 127	27	Warsaw (1/1)
14	15 (27) May 1870	19 (31) May 1870	1870, vol. 70, № 241, p. 159	1	Lublin (3/3)
15	21 Apr (3 May) 1870	16 (28) Aug 1870	1870, vol. 70, № 242, p. 167	1	Radom (3/3)
16	3 (15) Jul 1870	16 (28) Aug 1870	1870, vol. 70, № 242, p. 189	3	Suwałki (2/2)
17	17 (29) Jul 1870	16 (28) Aug 1870	1870, vol. 70, № 242, p. 193	2	Siedlce (2/2)
18	28 Aug (9 Sep) 1870	1 (13) Oct 1870	1870, vol. 70, № 243, p. 367	3	Łomża (2/3)
19	28 Aug (9 Sep) 1870	1 (13) Oct 1870	1870, vol. 70, № 243, p. 369	9	Warsaw (2/2)
20	30 Oct (12 Nov) 1870	17 Jan (1 Feb) **1871**	1870, vol. 70, № 244, p. 461	1	Łomża (3/3)

Source: My compilation of information from Journal of Law (1869; 1870).

3.6.4. Impact and consequences

In her detailed study of the reform, Nietyksza (1986: 10-11) contends that the reform was conducted mechanically and inconsistently. According to the stated official motivation, transformation of a settlement from urban to rural was to be dependent of its inadequate size, prosperity and primarily agrarian function. Firstly, such concept was bound to have geographical implications. The highly urbanized southwestern Congress Poland was subject to the largest concentration of towns degraded during the reform, while towns in the eastern area characterized by a less developed urban network had better chances of retaining their civic rights, even if they did not fully meet the criteria (Nietyksza 1986: 113). Secondly, the reform was enacted with a striking inconsistency. The committee in charge clearly strived for an extended agrarization of Congress Poland, and the assumptions of the reform were often interpreted to the disadvantage of the investigated town (ibidem). An example of this tendency, where inflexibility of criteria failed to meet the conjuncture of reality, was degradation of several rapidly developing textile centers (Kołodziejczyk [1961] 1979: 65; Pazyra 1965: 64). There were also social implications; the alluded benefits resulting from urban-to-rural transformation were only to be felt by a limited group of people. Once the towns were transformed into so-called *osady miejskie* (lit. 'urban settlements', although formally rural), most of them were incorporated into neighboring rural communes. However, participation in the (rural) municipal government was only allowed for bourgeois farmers, while non-farmers,

Tab. 3.2. Demographic dynamics in the towns of the Lublin governorate of Congress Poland 1822-90. *Source*: My calculations based on data from Wiercieński (1901: 128-129) *) for non-degraded towns: 1827.

DEGRADED TOWN:	POP. CHANGE AROUND THE TIME OF THE REFORM					POP. CHANGE LONG-TERM		
	1865 PRIOR	*1865–69 %*	1869 REFORM	*1869–90 %*	1890 POST	1822*	*1822–90 %*	1890
Annopol	890	*16,9*	1040	*42,3*	1480	703	*110,5*	1480
Baranów	1628	*11,6*	1817	*49,8*	2721	1266	*114,9*	2721
Bełżyce	1958	*11,7*	2188	*36,8*	2994	1527	*96,1*	2994
Biskupice	830	*18,4*	983	*60,9*	1582	546	*189,7*	1582
Bobrowniki *by Ryki*	1548	*–11,6*	1369	*40,3*	1921	787	*144,1*	1921
Bychawa	1034	*33,2*	1377	*58,4*	2181	712	*206,3*	2181
Chodel	672	*14,0*	766	*120,6*	1690	387	*336,7*	1690
Czemierniki	1361	*29,8*	1767	*31,4*	2322	931	*149,4*	2322
Firlej	1098	*–11,1*	976	*21,9*	1190	630	*88,9*	1190
Frampol	1482	*14,0*	1689	*36,5*	230 6	654	*252,6*	2306
Głusk	768	*4,0*	799	*6,4*	850	530	*60,4*	850
Goraj	1926	*0,8*	1941	*19,7*	2323	1817	*27,8*	2323
Gorzków	535	*6,4*	569	*34,6*	766	301	*154,5*	766
Grabowiec *by Zamość*	2117	*5,8*	2239	*39,4*	3122	1492	*109,2*	3122
Horodło	1837	*9,5*	2011	*42,1*	2858	1479	*93,2*	2858
Izbica & Tarnogóra	1674	*62,4*	2719	*47,0*	3997	1176	*239,9*	3997
Jarczów	279	*–2,5*	272	*26,1*	343	206	*66,5*	343
Józefów	941	*14,6*	1078	*130,2*	2482	1045	*137,5*	2482
Józefów nad Wisłą	1953	*–0,4*	1946	*43,5*	2793	1115	*150,5*	2793
Kamionka	1294	*35,9*	1759	*48,4*	2611	1680	*55,4*	2611
Kazimierz Dolny	3091	*–12,4*	2709	*30,7*	3542	2177	*62,7*	3542
Komarów–Osada	1773	*14,7*	2034	*48,7*	3025	1356	*123,1*	3025
Końskowola	2721	*0,0*	2721	*–8,3*	2496	1903	*31,2*	2496
Krasnobród	1454	*3,2*	1500	*31,2*	1968	973	*102,3*	1968
Kryłów	1415	*13,6*	1608	*45,9*	2346	1102	*112,9*	2346
Krzeszów	1383	*8,5*	1500	*11,3*	1669	1160	*43,9*	1669
Kurów	2817	*6,6*	3004	*44,0*	4326	1920	*125,3*	4326
Łaszczów	1175	*–7,6*	1086	*39,5*	1515	863	*75,6*	1515
Markuszów	688	*84,4*	1269	*19,9*	1522	525	*189,9*	1522
Michów	1848	*7,6*	1988	*41,0*	2803	613	*357,3*	2803
Modliborzyce	1107	*17,3*	1299	*23,9*	1609	893	*80,2*	1609
Opole Lubelskie	2840	*10,1*	3128	*53,8*	4812	1807	*166,3*	4812
Pawłów	686	*5,0*	720	*36,5*	983	541	*81,7*	983
Piaski	1838	*11,2*	2043	*55,4*	3174	909	*249,2*	3174
Puchaczów	879	*5,5*	927	*30,0*	1205	555	*117,1*	1205
Rejowiec	1410	*–12,1*	1239	*55,9*	1932	603	*220,4*	1932
Sawin	812	*1,5*	824	*23,5*	1018	520	*95,8*	1018
Tarnogród	4606	*1,0*	4652	*41,0*	6557	3941	*66,4*	6557
Turobin	2634	*5,6*	2782	*35,4*	3766	2026	*85,9*	3766
Tyszowce	3173	*3,6*	3286	*70,0*	5585	1977	*182,5*	5585
Uchanie	1812	*–12,1*	1593	*49,1*	2375	867	*173,9*	2375
Urzędów	2018	*12,1*	2263	*37,9*	3120	1812	*72,2*	3120
Wąwolnica	1463	*9,0*	1595	*16,1*	1851	1132	*63,5*	1851
Wieniawa	1335	*23,0*	1642	*65,5*	2717	436	*523,2*	2717
Wojsławice	1692	*4,5*	1768	*46,9*	2598	678	*283,2*	2598
Zaklików	1926	*8,0*	2080	*33,3*	2772	964	*187,6*	2772
Żółkiewka	1182	*–0,6*	1175	*45,2*	1706	763	*123,6*	1706
TOTAL DEGRADED TOWNS	**75603**	***8,1***	**81740**	***41,3***	**115524**	**52000**	***122,2***	**115524**
NON–DEGRADED TOWN:								
Biłgoraj	6005	*–0,3*	5985	*37,0*	8199	2945	*178,4*	8199
Chełm	4054	*10,3*	4471	*162,4*	11732	2216	*429,4*	11732
Dubienka	3764	*5,8*	3981	*47,2*	5862	1808	*224,2*	5862
Hrubieszów	7550	*–3,1*	7314	*44,9*	10601	4172	*154,1*	10601
Janów Lubelski	4040	*0,1*	4043	*46,5*	5923	3184	*86,0*	5923
Krasnystaw	4565	*1,4*	4628	*77,8*	8229	2952	*178,8*	8229
Kraśnik	3886	*1,8*	3957	*40,0*	5540	3333	*66,2*	5540
Lubartów	3418	*0,3*	3427	*63,1*	5590	3193	*75,1*	5590
Lublin	21814	*–3,2*	21124	*151,5*	53137	13159	*303,8*	53137
Łęczna	3078	*15,6*	3557	*25,7*	4470	2488	*79,7*	4470
Szczebrzeszyn	4258	*–1,0*	4217	*32,0*	5565	3233	*72,1*	5565
Tomaszów Lubelski	3662	*9,6*	4015	*91,7*	7696	2824	*172,5*	7696
Zamość	5825	*6,6*	6212	*53,5*	9538	4709	*102,5*	9538
TOTAL NON- DEGR. TOWNS	**75919**	***1,3***	**76931**	***84,7***	**142082**	**50216**	***182,9***	**142082**
TOTAL ALL TOWNS	**227125**	***5,8***	**240411**	***55,2***	**373130**	**154216**	***142,0***	**373130**

mostly real estate owners, were only allowed to take part in the local assembly[23] (Nietyksza 1986: 91). Discrimination was also extended towards creed; a specific clause forbade non-Christians to hold communal office, which automatically expelled Jews – a considerable share of inhabitants, predominantly engaged in trade (ibidem: 64).

The framework of the reform was merciless; neither prospects of potential economic development nor performing district-level administrative functions were seen as reasons for not degrading a deemed town (six district capitals – Iłża, Janów Podlaski, Jędrzejów, Stopnica, Włoszczowa and Wysokie Mazowieckie – were degraded). The Russian ministry found that in the light of the new law, a Polish village now had the same opportunities of industrial development as a formal town, and, if such development should actually occur, it could (re)gain civic rights later on (Nietyksza 1986: 59). In reality, only *two* installments of civic rights were made after the reform, to Puławy (in 1906) and Sosnowiec (in 1902), the latter accounting for almost 100.000 (sic!) inhabitants before the eventual concession was made (GUS 1921: 131). On the contrary, many other highly urbanized settlements of many thousand inhabitants were not granted the privilege of civic rights (such Dąbrowa Górnicza, Pruszków, Wołomin, Zawiercie or Żyrardów) until the cessation of Russian rule (Gajewski 1964: 188). However, we should not forget that for those 114 towns who did not lose their civic rights, urban-specific benefits were very limited as virtually no social initiative was allowed, resulting in an ever progressive negligence. Furthermore, the self-governing reform employed in Russia proper in 1870, exempted Polish towns, even though they were legally part of Russia since 1867 (Nietyksza 1986: 93).

Despite its rigidity, the reform was accompanied by some major exceptions to its own rules. Nietyksza (1986: 59; 86-87) noted that if the demographic criterion were employed rigorously, cities like Radomsko, Chełm, Ostrołęka and Sandomierz would have been degraded, while many others would have been preserved. Thereto, the whole process was marred with differences of opinions, where aspects other than the assumed criteria were taken into consideration (practicality of communal government, differing needs of police supervision, urban morphology etc.). Furthermore, by means of internal lobbying some minor towns like Brześć Kujawski, Nieszawa and Błonie managed to escape a rural destiny, while other, most notably Tarnogród, applied voluntarily for degradation due to poor economic conditions (ibidem: 87-90). Interestingly, many degraded towns experienced a demograhic boom directly prior and after degradation (Wiercieński 1901: 128-129; Tłoczek 1955: 51). Tab. 3.2 gives an example from one of Congress Poland's ten governorates (Lublin) where the population of towns bound for degradation rose with 8,1% in four years prior to the reform, more than that of towns that were later preserverd (5,8%). Even more interestingly, directly after degradation the towns' population rose with 41,3% (for some towns even up to 130%), and in a long-term perspective (1822-90) the increase was an incredible 122,2% (for specific towns up to 357%) . Seeing growth as a sign of development (cf. Drobek 2005a: 55), such demographics would contradict the alleged downfall of degraded towns, as asserted by the Russian administration (cf. also Sokołowski 2011a: 369). On the other hand, only four (out of 48) degraded towns in the Lublin governorate exceeded the minimum demographic criterion of 3000 inhabitants[24], a fact that would signify consistency in the reform's implementation.

Such hodgepodge of undermining factors inevitably created an urban network that could be described as offbeat. Although many corrections were made following the recovery of Poland's independence in 1918 (also in regard to small, non-industrialized towns), some peculiarities are still striking, e.g. the town of Działoszyce with 991 inhabitants (GUS 2011) that has never lost its urban status[25].

3.6.5. The Russian issue

Since many thriving reform towns were deprived of or impeded from further possibilities of development (Sokołowski 2002: 16; Nietyksza 1986: 92), '[a]ccordingly, the radically performed transformation (…), sometimes without proper recognition, became interpreted by contemporary and later historiographers as an act of repression by the occupant' (Kołodziejczyk [1961] 1979: 65; my translation). Such contentions can be found in e.g. Koszutski (1915: 5), Gajewski (1964: 187), Siemiński (2000: 16), Miszewska (2007: 36), Zubkowicz (2007), Mielcarek (2008: 19), Kalinowski (2009: 5) and Kiełbasa (2011). Interestingly, the Polish standpoint is also reflected in Russian (Soviet) research:

[23] A rural commune (Pol. *gmina*) with its municipal government was made up of several assemblies (Pol. *gromada*), often coinciding with particular villages. A degraded town that was incorporated into a rural commune became such an assembly. Therefore, participation in an assembly council could exert much less territorial power than participation in a municipal government. The only exception were the most populous towns which were not incorporated into a rural commune but became one themselves (Nietyksza 1986: 91). In these 60 instances the commune coincided with assembly, so all residents were allowed to participate in the municipal government, regardless of profession.

[24] Tarnogród (4652; applied voluntarily), Tyszowce (3286), Opole Lubelskie (3128) and Kurów (3004).

[25] Other notable examples of current small towns (less than 4.000 inhabitants) that passed the reform of 1869-70 unscathed are Nieszawa, Dąbie, Dobrzyń nad Wisłą, Błaszki, Wyszogród, Kałuszyn, Zakroczym, Warta, Szczuczyn and Przedbórz. Dubienka and Tykocin remained urban through the reform but were degraded later (in 1944 and 1951 respectively). Today, only Dubienka remains rural (Tykocin was restituted in 1993).

> Although officially [the reform] was due to alleged economic difficulties, in fact, the population of cities and towns was punished for taking part in the January Uprising (Ливанцев 1979, my translation).

This theory is so wide-spread that the reform has become famous (cf. Górak 1990: 6). Clearly, punishment is never stated as the official reason for the reform; only logically acceptable benefits in terms of tax reliefs and independence from feudal owners were specified in support of its execution. Furthermore, the reform occurred at the time of Imperial Russia's peak in terms of political power and territorial expansion; besides its portion of Poland, Russia reigned over territories equaling those of pre-1991 Soviet republics, thereto Finland (wrested from Sweden in 1809) and – until 1867 – Alaska. Also, let us not forget that after Congress Poland's demise and full incorporation into Russia in 1867, the name *Poland* was officially eradicated (it was renamed *Vistula Land* after Poland's largest river), marking the ultimate act of anti-Polish oppression. In other words, if the reason for the urban reform were punishment, then, given its power, Russia *could* state that, and do so legitimately in that the Polish uprisings did in fact break Russian law. Not only is the reform famous, it is also enigmatic.

According to Kearney (1971: 17), *Whig History* is 'a historical outlook which tends to dominate and distort general accounts'. These distortions occur because 'standards of the present [are imposed] upon the past' and 'explanations based on logical progression [are substituted] for a less rational and more complex interpretation of the past'. Kearney (p. 18) sees most nationalist histories as Whiggish, 'appear[ing] as (…) stor[ies] of those who supported the rise of the nation and those who did not', thus leaving 'progressives on one side and reactionaries on the other'. In line with Kearney's definition, Poland's long and complicated relationship with Russia/Soviet Union could be advanced as a factor shaping the reform's interpretation (cf. Dymitrow [2010] 2012: 68). In the perception of Eastern Europeans, Russia is widely associated with historical events such as conquest, occupation, annexation, enforced Communism, Berlin Wall, Hungarian Revolution, Prague Spring, mass deportations to Siberia and Gulag labor camps (Otok 2009: 186). Even currently, Polish-Russian relations are tense. Poland's willingness to house a US missile defense complex aimed at Russia (the so called European Intercepter Site)[26] is one example. Another is the 2010 crash of the Polish governmental plane in Smolensk that took place prior to a scheduled commemoration of the Soviet-executed Katyn massacre[27]; the crash has spawned a wide-spread, almost fantastic conspiracy theory among Poles about the sudden fog (the contributing factor to the accident) being induced *artificially* by the Russians (Dziennik.pl 2010). There seems to be an immanent element of mistrust and fear. Such development indicates bias.

Even if the reform of 1869-70 was indeed a means of repression, the Polish psyche, I would argue, tends to over-interpret the true circumstances surrounding it. For one, if the reform were executed under the guise of economic improvements in order to implement a faster and more efficient russification of the Polish territories (cf. Górak 1990: 6), seen as a statehood building mechanism, such line of action would be justifiable, or at least expected (note, that this is not synonymous with punishment). For another, the degraded towns were of significantly different quality (Sokołowski 2002; 2011) and some – as mentioned earlier – even applied *voluntarily* for removal of urban status for economic reasons. Nietyksza (1986: 90) contends that degradation of small agricultural towns was a justified procedure. She points out that even during the brief initial period of Polish autonomy in Congress Poland (1815-31) the *Polish* authorities realized that such degradations would be legitimate; however, they should be evaluated *individually*, i.e. in regard to the specific conditions of the towns in question. Nevertheless, the reform affected mostly very small agrarian towns which were towns *in name only*, failing to cope with the rampant development of capitalism (Kołodziejczyk [1961] 1979: 64; Pazyra 1965: 106; Sokołowski 2002: 16). It is therefore fair to assume that for poor dilapidated towns, degradation was more of a benefit in economic terms, such as relief of taxes for maintenance of the mayor's office. However, frequent references to the reform create an illusion that the towns in question were full-fledged, bustling cities falling from grace into the claws of the evil Czar for an honorable act of heroism during the 1863 January Uprising. Fortunately, the Polish government is aware of such displays of Whig history in their evaluation of potential restitutions[28]:

> Deprivation of civic rights was for many towns not only the result of political repression; it was partly associated with their earlier economic collapse. Because of that, any contingent restitution of civic rights to be executed automatically [i.e. as an act of retribution; my postscript] seems questionable (Borusewicz 1999, my translation).

[26] The project was eventually cancelled in 2009.

[27] The Katyn Massacre was a mass execution of Polish nationals carried out by the Soviet secret police near Smolensk, Russia in the spring of 1940. The number of victims is estimated at about 22.000, whereof 6.000 were military officers, 8.000 police officers and the rest primarily Polish intelligentsia.

[28] Not only is the government aware of the emotive underlay in the restitution debate, it is cautious enough to the point of spelling out that there is no such term as 'restitution' (UG Stanisławów 2011).

3.6.6. Conclusion

The urban reform of 1869-70 plays a major role in Polish urbanization history. In conclusion, the main reasons for why the reform was (and often is) interpreted as an act of repression can be summarized as follows: (1) it was implemented by Czarist Russian (i.e. non-Polish) authorities; (2) it was implemented during a period that followed massive Polish-nationalist uprisings in 1863-65; (3) it marked the end of Congress Poland's legal separateness before it became fully incorporated into Russia as its integral territory (Nietyksza 1986: 90). Despite the diffusion of the punishment theory, the arguments to support it are inconclusive. What is conclusive is the Russians' intention to agrarize Polish towns, and the fact that *none* of even the most prosperous degraded towns was ever restituted is instructive here. Moreover, given the durability of local consciousness, the reform was most likely perceived by many residents as an act of social degradation (ibid: 92). Despite the few benefits, such as removal of feudalism, the context of the reform raises questions:

> Revitalization of Congress Poland's urban structure was undoubtedly necessary. Many small towns had in reality lost their urban functions while retaining urban status. Rational implementation of such reform would have to depart from economic premises. Instead, the reform (…) was strained by political agendas (…) (Nietyksza 1986: 93).

Furthermore, the very scope of the reform – the eradication of 75 % of Polish towns – as well as the reform's mechanic and inconsistent implementation speak for themselves. Nevertheless, most degraded towns actually retained the economic significance typical of towns on a national level, even past the break of the 20th century (Wiercieński 1901: 123). Accordingly, due to their urban character, they were regarded as urban in subsequent scientific studies on urbanization (Grabowski & Koszutski[29]). To find out how well this conservation of urbanity has endured into present day is one of the objectives of my study. At this point, it is however appropriate to stress that there is no unanimous answer explaining the reform's effect on the towns' actual urbanity status, neither does its intricacy allow for uninformed synonymization with 'hidden urbanity'. There is also a strong argument for emotions having taken over sound judgment in the restitution debate. Statements depicting degraded towns as 'a testimony of foreign violence, old injustice and present incomprehension' (Siemiński 2000: 14, quoted in chap 1.3) may very well be true in ideological terms, and probably in social terms too, but not necessarily in economic. As such, they may unwittingly pave the way for either biased evaluations on behalf of the legislative bodies, or for unrealistic local restitutionary aspirations, nurtured by identity issues.

3.7. Post-reform restitutions – an outline of temporal traits

3.7.1. Introduction

In order to fully grasp the social and economic impact of the 1869-70 reform on the Polish society, it is important to understand two factors: 1) the reform's relation to degradations employed elsewhere in Poland, and 2) the causes of the conspicuous inertia of restituting the reform towns, and how this inertia affects the Polish society by perpetuating an irregular human settlement network.

3.7.2. Reform degradations vs. degradations employed elsewhere in Poland

In regard to degradations, the problem goes back to the time of of Poland's Partitions. The towns studied in this thesis where under Russian occupation during the 19th century, until Polish independence after WW1. In the other two occupation zones – Prussian and Austrian – degradations (with a few exceptions) were not employed (Gajewski 1964: 187). When these territories came under Polish rule, many towns were too small and had little hope for development (Dymitrow [2010] 2012). Therefore, in order to normalize the Polish level of urbanization, some degradations had to occur. It happened in 1933-34 (40 towns), with minor corrections in the early 1950s. Also, some 60 German towns ceded to Poland after WW2 were deprived of urban status due to severe war damage. Another trend, initiated in the 1950s was merging small towns with nearby large cities. It accelarated in the 1960s to culminate in the 1970s, when some 45 towns lost their independence (although not their urbanity). The last 'true' degradations in Poland happened in 1972-73 (Boleszkowice, Miasteczko Krajeńskie and Lędyczek – at the time one of the smallest towns in Europe). Summarily, the 1869-70 reform was different from the Polish reforms for one major reason. It was subject to foreign interference with an urban system created by the standards of the Polish state, rather than as a domestic correction of that system in the light of developmental continuity. Lack of degradations in the Prussian and Austrian zones permitted the Polish state to duly implement such corrections after indpendence, whereas the huge scope of the 1869-70 reform vitiated that self-regulatory mode.

[29] In: Nietyksza (1986: 11), no source reference stated.

3.7.3. Inertia of restitutions of the reform towns

The second factor pertains to the inertia of restitutions. Of the total of new towns created between 1914 and 2012[30], relatively few were restitutions of the reform towns (fig. 3.3), despite their – in historical terms – relatively recent time of degradation and therefore high probability of retention of urban character (cf. Sokołowski 1999). This is mostly due to the political climate that came to shape Poland's development. Most of the reform towns were restituted directly after Polish independence in 1919, and in the subsequent years (c. 70 towns). This sudden, massive restitution action can be interpreted both as an act of defiance towards the Russian-imposed thralldom, but also as a badly needed correction of the urban system, hitherto lacking reflection in reality (no restitutions whatsoever were performed during the Russian rule). During the next 30 years, restitutions petered out dramatically, despite the humongous urbanization process initiated after WW2 and climaxing in the 1960s. This was due to the rapid industrialization of Poland with civic rights being granted almost exclusively to new industrial towns capable of harboring this heavy-duty task. Small historical towns were largely omitted from this process. A minor upswing came in the 1950s due to an extensive administrative reform seeking to create new counties in areas totally devoid of towns (as a result of the 1869-70 degradations). Consequently, new county capitals were established in seven reform towns, which, accordingly, were restituted[31] (the promotion contributed to their rapid development). The introduction of the semi-urban unit, the '*urban-type settlement*' (Pol. *osiedle*), saw an upgrading of another seven reform towns during the 1950s and 1960s[32], although, compared with the total of 162 such new units, its effect on the restitution of reform towns was marginal. Nevertheless, all seven regained proper civic rights during the administrative reform of 1973 (Gajewski 1964; Pazyra 1965; Gawryszewski 2005; Miszewska 2007; Mielcarek 2008; GUS 2010).

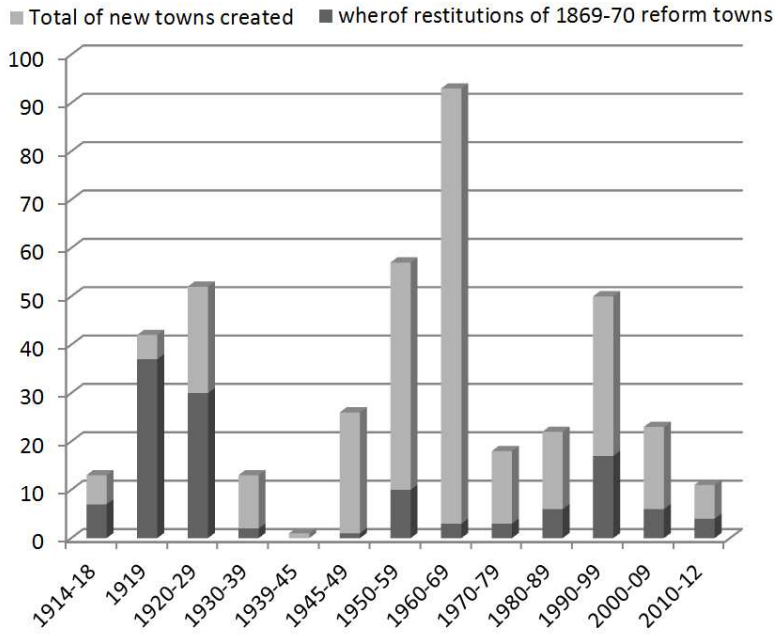


Fig. 3.3. Number of new towns created 1914-2012 within the contemporary territory of Poland[1]. Source: Gajewski (1964); Gawryszewski (2005); div. legal documents

The 1980s saw a change of perspective due to de-industrialization. Urbanity was now assessed more objectively, i.e. in regard to a variety of aspects, not only in terms of the towns' contribution to national economic growth. Accordingly, six reform towns were townified. Until 1989, restitutions were conducted by central authorities, but after the democratization of Poland, the mode was changed to require the initiative to come from the local government. Since the process itself remained contrived and the prospect of an application being approved was contingent on many uncontrollable factors, the concerned local governments began appealing to the negative emotive aspects associated with unduly ruralized townscapes. That is when the concept of 'cultural heritage' was reinvented and began to be heavily exploited as an argument towards due restitutions (cf. Borusewicz 1999; Dymitrow 2012). Likewise, as fig. 3.3 shows, the number of restitutions skyrocketed in the 1990s and continues to present day. Of the 106 'new' towns created 1980-2012, 68% were restitutions, however, only 31 % pertained to the reform towns. This is most likely due to exogenous processes, such as diffusion of innovations (discussed in chap. 3.9.2), which largely passed by much of Congress Poland. Still, although positive in social terms, restitution achieved by means of cultural heritage production rather than by some other, more pragmatic ways, may prove unsustainable, as urbanity is not merely a valued concept, but a synergy of many other, more concrete traits (cf. Dahly and Adair 2007; Drobek 1999). Sokołowski's study (1999) shows that towns created in the 1980's fulfilled all

[30] Note that not all of these towns are still urban units, independent units or units within Poland, due to subsequent degradations, mergers/incorporations and territorial changes.
[31] Opole Lubelskie (1957), Bełżyce, Białobrzegi, Bychawa, Lipsko, Pajęczno and Przysucha (1958).
[32] Ćmielów, Izbica Kujawska, Karczew, Łaskarzew, Ogrodzieniec, Siewierz and Sompolno.

criteria for urbanity, whereas many towns created in the 1990's displayed fewer attributes[33]. Furthermore, according to Miszewska's calculations (2007), the contribution of restituted towns to the overall urbanization of Poland in terms of *population figures* is rather limited – only 3,1 % (although seen to their *amount*, the contribution is as high as 19 %). This concludes that restitution of civic rights today is not as much about increasing the number of urban population as about compliance with local identity. A second implication could be the will of reapportioning spatial irregularities by increasing the concentration of urban centers (Szmytkie & Krzysztofik 2011: 36-37).

Summarily, restitutions of reform towns were for more than a century greatly inhibited by various political, economic and administrative agendas. Today, the situation is completely reversed; restitutions are readily granted with respect to subtleties such as urban identity and urban heritage. However, due to the long time that has elapsed since the degradations, for many towns, the urban association may have weathered away. Since restitutions today require a bottom-up initiative, the lack of urban association may also stand in the way of any contingent urbanization process. Likewise it may also perpetuate the spatial irregularities of the Polish urban network, whose specifics will be outlined next.

3.7.4. City deserts

In mediaeval Poland, towns were evenly distributed according to the so-called 'one-mile-law'[34] (Szmytkie & Krzysztofik 2011). Such distribution was conditioned by the possibility for rural population to access the nearest market (that could only exist in towns) and return back home within one day; that distance could not be longer than one mile. With the advent of motor traffic, the constraints of distance became less important; however, the continued association of towns with specific functions as well as the sheer comfort and practicality of urban proximity did not alter the original premises severely. In 2001, the Polish Prime Minister issued an announcement pertaining to the concept of policy for spatial development of Poland. It departed from the idea that a dense network of relatively evenly spaced small towns should enable the organization of rational service supply to the rural hinterland. Such supply was found necessary for a smooth functioning of agriculture, recreation and forest management, but also for improvement of living conditions of the rural population (M.P. 2001 nr 26 poz. 432).

The map in fig. 3.4 shows distance zones from rural areas in Poland to nearest formal towns, calculated in GIS by accessibility via local roads. The darkest patches represent so-called city deserts[35], i.e. zones of farthest proximity from nearest town (17 km), exceeding more than twice the distance of the original one-mile-law. If we regard the areas outside of the territory of former Congress Poland (outlined in red), we will notice that the urban network is very evenly distributed; in fact, the relatively few desert zones are actually extremely sparsely populated areas due to physiographic conditions: backwoods, sand dunes and alluvial deltas in the north, lakelands in the northeast, and orographic barriers in the south (hills and mountain ranges). As such, they are not really city deserts, as there is no significant population deprived of urban access. Conversely, within the boundaries of Congress Poland, largely dominated by plain agricultural landscape, the many desert zones are a direct result of the 1869-70 degradations. Not only is this territory patched with city deserts; also – for similar reasons – the absolute distances between towns in many areas are greater than those outside of Congress Poland. According to Sokołowski (2011b: 103), the average distance between towns in Congress Poland dropped from 16.9 km prior to the reform (in 1860) to incredible 33.6 km in 1910, i.e. more than four times the original one-mile-law. Today, due to the fairly many towns created/restituted in this area, the average distance between towns within the territory of former Congress Poland[36] has decreased to 20.46 km; however, the same distance for the rest of Poland[37] is more than 3 km shorter – 17.61 km, despite the many physiographic barriers in that area (my calculations[38]).

Such distribution of towns in Poland today does not meet the envisionment of the Polish spatial development policy, which – according to the assumption behind the announcement – would entail negative consequences for the rural population. According to Szmytkie & Krzysztofik (2011: 36), the shortage of towns in townless areas has of necessity resulted in villages taking on certain urban functions. Furthermore, Stasiak & Bolesta (2005/2006: 48) observed that many small towns in sparsely urbanized areas were forcibly made district capitals, a function they are *not* adapted to perform; this happened simply because there were no other suitable towns nearby. According to

[33] Based on Sokołowski's (1999: 177) summative urbanity indices (scale 0-100), I calculated mean values for towns created 1983-89 – index 64,7, and towns created 1990-99 – index 58,4.This implies that the requirements for restitution have been lowered by more than six index units.

[34] One mile equaled circa 8 km.

[35] I have derived the term 'city deserts' from Bedore's (2010) term 'food deserts', i.e. areas far from the nearest grocery store.

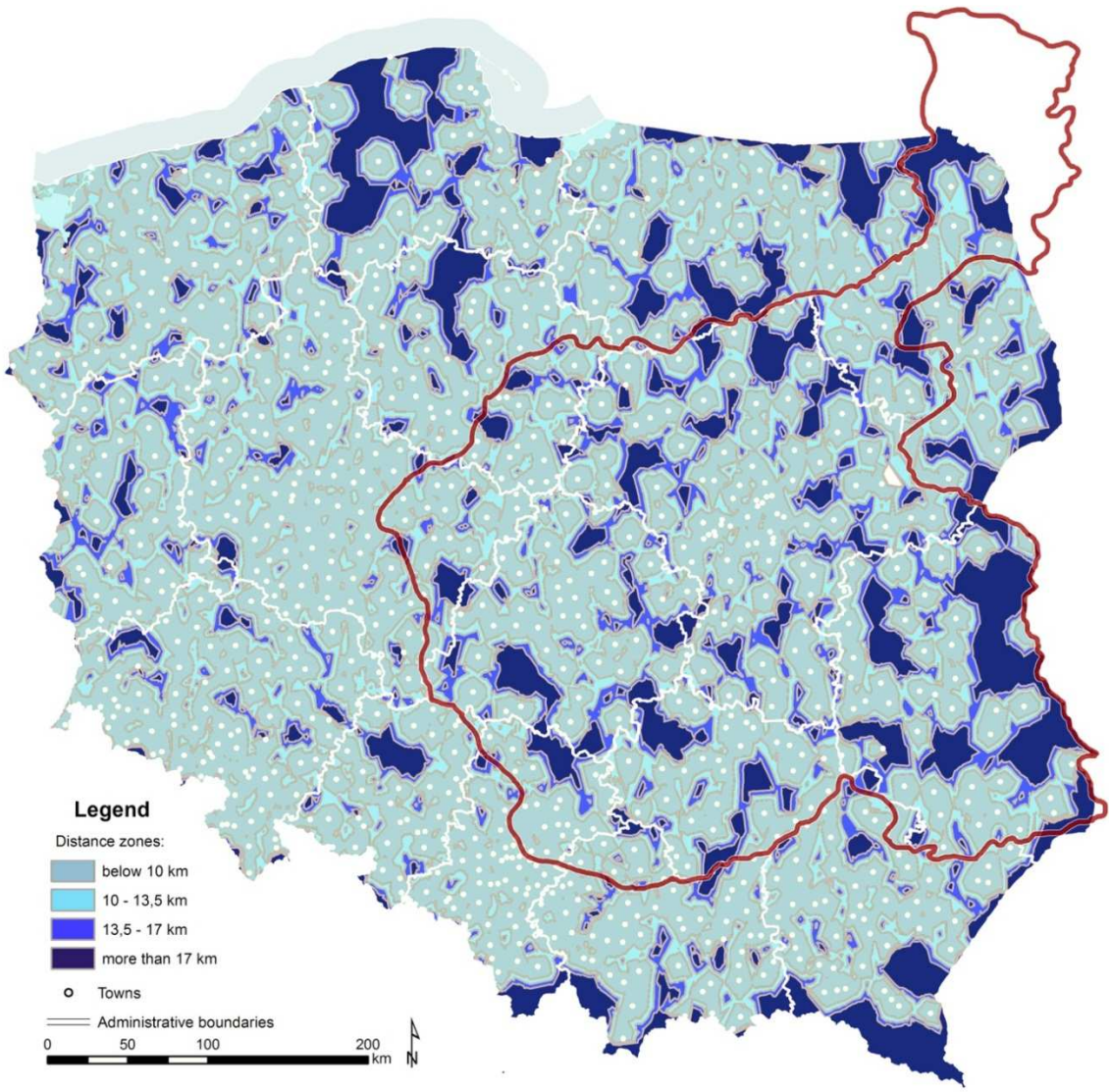
[36] Counting only the territory within current Polish borders, i.e. 119.000 km^2, where (as of 2012) there are 284 towns.

[37] I.e. an area of 193.700 km^2 with 624 towns as of 2012.

[38] Calculated by the formula: $= \sqrt{\frac{A}{N}}$, where: A – area in km^2, N = number of towns (Sokołowski 2011b: 103).

Sokołowski (2008: 77), the specificity of the Polish rural-urban continuum, along with its reflection in the human settlement network, distinguishes Poland from most European countries, as well as most countries around the world. Whether this specificity is harbored rationally within the Polish administrative system in terms of sanctioning due restitutions to *de facto* urban centers is the subject of the next subchapter.

Fig. 3.4. Distance zones from rural areas in Poland to nearest formal towns.



Source: Own work (GIS-based calculations).

3.8. The 'criteria': analysis of current restitution practices

3.8.1. Requirements and inconsistencies

Urban areas in Poland are assigned by the formal-legal criterion; a settlement is considered as formally urban only once it has been granted *civic rights*, the legal denominator of urbanity (Sokołowski 2002). According to the Law on Local Government as issued on the 8th March 1990 and revised on the 19th of March 2007 (chapter 1, article 4), bestowals of urban status and delimitation of boundaries of candidate towns are performed by means of regulation at the discretion of the Council of Ministers, and on request from the local municipal council. Civic rights bestowals should consider the candidate town's social and the technical infrastructure, as well as the occurrence of an urban layout and a built environment with urban characteristics. Administrative changes on municipal level should take into account social, economic and cultural bonds, and secure the ability of performing future public duties (Dz.U. 1990 Nr 16, poz. 95). As we can see, the law is very general, but it stresses specifically the morphological factor, as well as social, infrastructural and economic aspects.

In order to evaluate the level of urbanity of candidate towns, governmental practice acknowledges a set of quantitative indicators. These indicators, although referred to as 'criteria', are more similar to guidelines, as they only specify which aspects are being looked into, but not always the exact quantities. In an official statement, Borusewicz (1999) lists following criteria of urbanity that are taken into consideration:

1. The town's land development conditions should comprise a certain level of services; occurrence of water, sewage – and possibly gas – systems; and a sewage treatment plant.
2. It is required that non-agricultural functions dominate, and that the extent of their impact covers an area larger than the town itself *and* the surrounding municipality.
3. The population threshold has been set to a minimum of 2.000[39], while the share of agricultural employment should not exceed 30 %.
4. The town should possess an urban layout with a well-developed service and commercial center, as well as a built environment that differs from that of rural settlements.
5. The amount of land intended for agricultural purposes cannot dominate other land uses, and must play an insignificant role within the total area of the town

The essence of these criteria can be subsumed into five categories: infrastructure (point 1) centrality (points 1 and 4), function (points 2, 3, 5), demography (point 3) and morphology (point 4). Accordingly, these are also the traits that researchers take into account in studies on urbanicity (cf. tab. 2.1). Boruszewicz's list is much objectified and does not include social factors such as identity, cultural values and local consent, although the latter is implicit within the 1990 Law on Local Government. Due to its difficulty of assessment, the social dimension – along with the morphological dimension – remains the least examined (Drobek 2005a: 53).

An application for urban status requires specific preparations on the local government's behalf. The application is submitted to the regional authorities, who issue an opinion and present it – along with the application – to the Ministry of the Interior and Administration. The application should include the opinion of the municipal council in the form of a resolution, as well as the position in the matter as issued by the district council and the regional parliament. Moreover, the application should include the opinion of the district spatial planner-cum-architect along with photodocumentation of the town's physiognomy; a historical background; maps and an extract from the cadaster register showing the outline of the proposed town's boundaries; basic statistical data (demographics, employment, social and technical infrastructure) and a cost estimate for the change of status from rural to urban. Two important supplements to the application include the local plan for spatial development and the results from consultations with residents (Borusewicz 1999). Given the multiplicity of requirements, the change of formal-legal status is associated with lengthy verificatory procedures, but it is also due to the difficulty of pointing out some stringently measurable traits, whose fulfillment would justify bestowal of civic rights (Drobek 1999: 122-123; Sokołowski 2002). Lack of unambiguous criteria creates paradoxes, like morphologically urban, yet formally rural settlements, and, vice versa, formally urban towns lacking urban layout and sufficient density (cf. fig. 1.2); there are also formally urban agrarian towns as well as formally rural settlements with virtually no employment in the agricultural sector (Sokołowski 2002). Deviations from the assumed criteria are conditioned by topographical, social, economic, genetical, and sometimes even *particular* circumstances (Drobek 2005a: 53). For example, Siemiński (2000: 20) alludes that some restitutions have been granted beyond substantive consideration, i.e. by means of political lobbying, like that to Lipsk in 1983, the birthplace of a prominent politician at the time[40]. According to Sokołowski (2002: 16), inconsistencies within the Polish urban system stem largely from following three factors:

– Complexity. Urbanity is a complex concept made of many features.
– The historical factor contributes to maintaining some questionable towns as formally urban due to current reluctance of deploying unpleasant degradations.
– The human factor. Lack of unambiguous criteria cannot rule out the possibility of human mistakes within evaluations.

In the next section, I will examine how exactly the decisions were made in regard to the assumed 'criteria'.

3.8.2. Scrutiny of evaluation practices 2005-2010

Despite the alleged latitude of action, the evaluation process remains strictly formalized and bureaucratized (cf. Drobek 1999: 124). In order to verify how these 'criteria' apply in reality, I have scrutinized six annual motivations to

[39] This number is an old standard, influenced by the International Statistical Congress of 1887 (Drobek 2005a: 53).
[40] Siemiński erroneously identifies the politician as prime minister Piotr Jaroszewicz who was actually born in Nieśwież (also, at the time of Lipsk's restitution Jaroszewicz was a member of parliament, not the prime minister), whereas the politician in question was in fact the militia general Mirosław Milewski.

verdicts regarding applications for urban status (positive and negative) as issued by the Polish Ministry of the Interior and Administration (MSWiA 2005; 2006; 2007; 2008; 2009; 2010)[41].

As the compilation in tab. 3.3 shows, there were all in all ten criteria that were investigated: (1) supra-local institutions, (2) infrastructure development, (3) urban morphology, (4) adequate delimitation of the proposed town, (5) past urban traditions, (6) share of non-agrarian employment, (7) local consent in initial consultations (both in regard to attendance and results), (8) opinion of the voivode – the regional governor, (9) opinion of the municipal council, and, finally, (10) concordance with the administrative system[42]. All in all, 30 decisions have been issued between 2005 and 2010, whereof nine rule-outs; moreover three towns have applied twice (Bnin, Przecław and Wolbórz). From this study of current formal urbanization procedures, following trends could be observed:

Decision	Applicant	Criteria									
		Institutions	Infrastructure	Morphology	Delimitation	Traditions	Population	Non-agriculture	Local consent	Voivode's opinion	Adm. concordance
2010											
✓	Czyżew	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	Gościno	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓
✓	Nowe Brzesko	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓
✓	Pruchnik	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	Wolbórz	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2009											
✓	Kołaczyce	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓
✓	Łaszczów	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	Przecław	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓
✓	Radłów	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓
✓	Szepietowo	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓
✓	Tychowo	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓
✗	Wolbórz	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
2008											
✓	Bobowa	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	Brzostek	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✗	Gardeja	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓
✓	Krynki	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	Michałowo	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓
✗	Przecław	✓	✓	✓	✗	✓	✗	✓	✓	✓	✓
✗	Pszczew	✓	✓	✓	✓	✓	✗	✓	✗	✓	✓
✓	Szczucin	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2007											
✓	Boguchwała	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✗	Końskowola	✓	✓	✓	✗	✓	✓	✓	✗	✗	✓
2006											
✗	Biskupiec	✗	✓	✗	✓	✓	✗	✓	✗	✓	✓
✗	Bnin	✓	✓	✓	✓	✓	✓	✓	✗	✓	✗
✓	Daleszyce	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	Wojnicz	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2005											
✗	Bnin	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗
✗	Dobre	✗	✗	✗	✓	✓	✗	✓	✗	✓	✓
✓	Rzgów	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	Zakliczyn	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓

- 2 towns lacked appropriate institutions; both resulted in refusals
- 1 town lacked sufficient infrastructure; resulting in a refusal
- 2 towns lacked sufficient urban morphology; both resulted in refusals
- 3 towns had drawn the boundaries to include typically rural areas within the projected town; all three resulted in refusals. However, two of them applied again the next year and received approval
- 5 towns had never had civic rights before; all were approved
- 8 towns (9 applications) lacked sufficient population, i.e. 2000 inhabitants; half of them resulting in refusals and half in approvals
- No town was remarked for insufficient employment within the non-agricultural sectors
- 5 towns lacked sufficient local consent (or, more accurately, had a low attendance in initial consultations, as low as 1% for Bnin[43]); all resulted in refusals
- In only one case had the voivode issued a negative opinion, which resulted in a refusal
- Administrative discordance occurred and was subject to a refusal twice for the same town (Bnin). It was due to the intent of Bnin's excorporation from Kórnik which would entail an unprecedented case of one commune with two towns in it.

Tab. 3.3. Results from governmental evaluations on applications for urban status 2005-2010. *Check signs* indicate positive decision and/or fulfillment of a specific criterion; *cross signs* indicate negative decision and/or lack of fulfillment of a specific criterion. Source: My compilation from MSWiA (2005; 2006: 2007; 2008; 2009; 2010).

Succinctly, following conclusions can be drawn. Lack of local consent and administrative concordance will *most likely* result in a refusal while lack of urban morphology, institutions, infrastructure as well as a negative opinion of the voivode, will *probably* result in a refusal. Unrealistic delimitation will result in a refusal; however, such a problem is easily corrected, given that the renewed delimitation fulfills other criteria. Historicity seems to be of help for an ap-

[41] Prior to 2005 such motivations were not made official, and in 2011 no application had reached MSWiA before the application period expired (no new civic rights bestowals were made on 1 January 2012).

[42] Concordance with the administrative system means that the applicant town should preferably be a communal seat, and, more importantly, *cannot* be located within a commune where there already is a formal town. There is a slight possibility of forming a separate commune, either urban (consisting of the town only) or urban-rural (with additional hinterland); cf. chap. 3.9.3.

[43] These extremely low attendance figures resulted most likely from the special case of Bnin, where an excorporation was about to take place. Voting is not measured for the population of the projected town only, but for the whole commune; in the case of Bnin, the population of the five times larger Kórnik to which Bnin belongs were taken into account, and that population was probably either not interested in the problem or did not want to facilitate such excorporation. Still, even if only Bnin's population were taken into account, the attendance would not surpass 5%.

proval; however, lack of urban traditions does not result in a refusal, provided that the town boasts strong centrality. Population numbers seem to be more of a gamble, where an approval or a refusal is dependent on the output from the remaining criteria. The lowest permitted number of inhabitants was around 1.300 for Kołaczyce (note that this was also the least populous applicant town during the examined period, and, as such, a lower population number could theoretically be accepted). No prediction can be made about the employment structure because no one town displayed insufficient figures. All approved towns do however possess sufficient urban morphology, which could be interpreted as a prerequisite for urbanity.

3.9. Secondary factors affecting current restitutions

3.9.1. Introduction

Spontaneously, one could think that an administrative system that defines its urban areas according to a set of official requirements would, accordingly, determine the outcome of such designation practices. Nevertheless, current restitutions have been largely determined by factors not pertaining to the settlements' level of urbanity of per se, all of which will be elaborated next. These are: (1) spontaneous spatial factors – diffusion of innovations and agglomeration proximity; (2) imposed factors – territorial-administrative barriers; and (3) subjective factors – ignorance, suspicion and the power of habit.

3.9.2. Spontaneous spatial factors: diffusion of innovations and agglomeration proximity

In the last 32 years (1980-2012) Poland has seen an addition of 106 new towns. However, the urbanization process was not spatially uniform, markedly characterized by distinct aggregations of towns (fig. 3.5). In his study on the mechanisms of such concentrations, Krzysztofik (2006) has linked the irregular creations of new towns in Poland to two factors: (1) proximity to the country's largest cities, and (2) location within specific regions where the diffusion of the idea of urban restitution is incumbent. Krzysztofik refers to these two types of zones as privileged zones (p. 22).

The recurring theme of geography is change, and in regard to human behavior change is induced by acculturation, innovation and diffusion. While acculturation refers to exchange of cultural features during continuous direct contact, innovation is change resulting from ideas that were created within a specific social group. Diffusion, on the other hand, is the process by which such innovation is transmitted to another group across space. There are several ways for an idea to spread; either by physical movement of people (relocation diffusion) or by non-physical transmission (expansion diffusion and stimulus diffusion[44]). In a computerized and 'internetized' world, non-physical diffusion is clearly more common. Expansion diffusion occurs when an idea gains merit by potential adopters; the process starts off slowly, then accelerates, until saturation occurs. The process may be influenced by distance decay, i.e. the idea is being delayed as distance from its point of origin increases (Fellmann *et al* 2007: 54-57). The principle of distance decay applies also within so-called urban influence zones, i.e. areas outside of a city that are still affected by it – the larger the distance from the city, the weaker the influence. According to Christaller's central place theory (1933), the impact of the *largest* cities is felt over the *widest* areas (ibid.: 382).

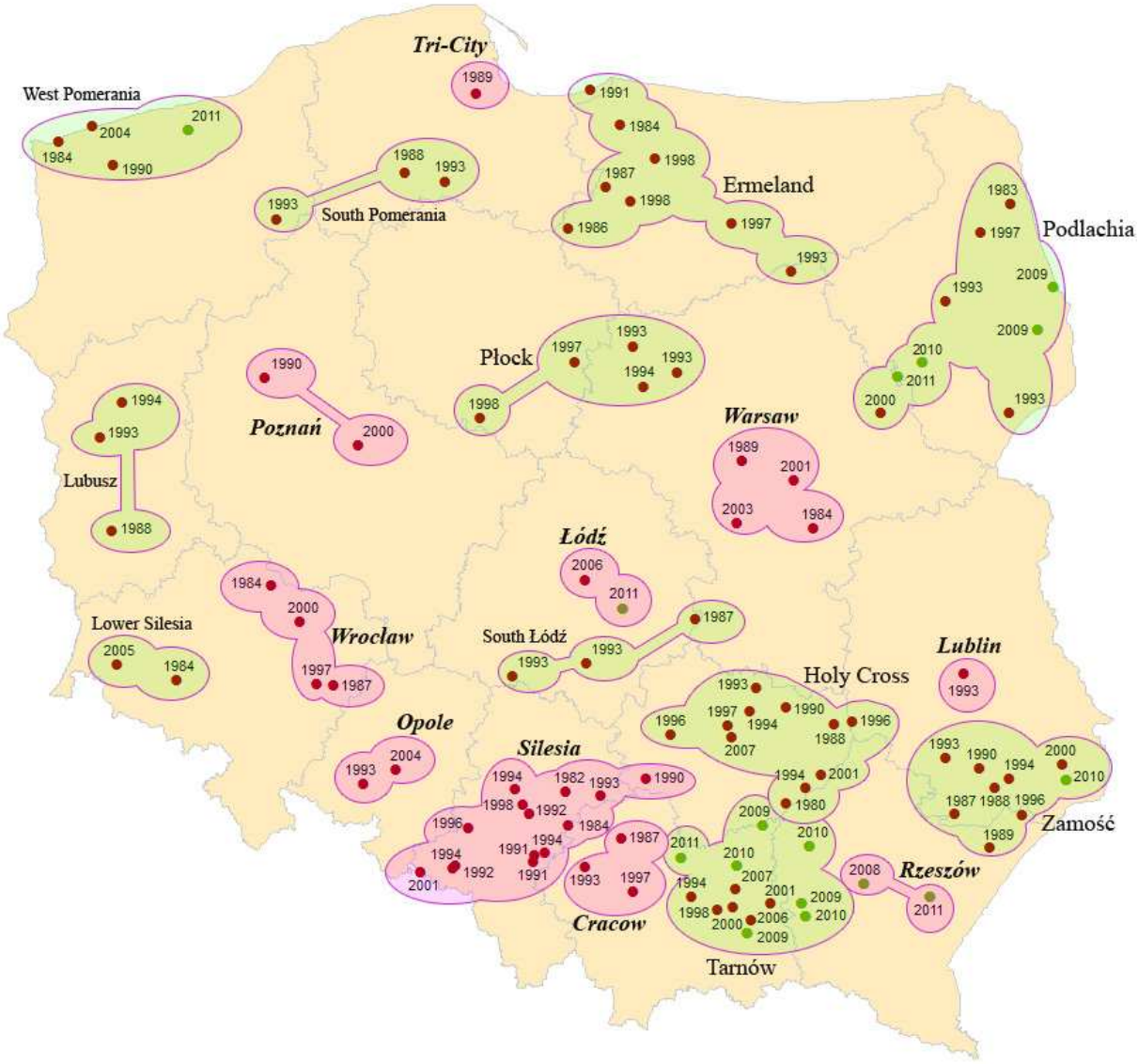
In regard to urban restitutions (as well as first-time civic rights bestowals) in Poland, the issues of innovation and expansion diffusion are of most significance. Krzysztofik (2006; departing from the ideas of Łoboda [1983]) has identified a four-step process within the priviliged zones pervaded by the diffusion of innovations: (1) penetration phase; (2) expansion phase; (3) consolidation phase; and (4) saturation phase (p. 10). The first phase denotes the pioneering of the restitution idea, be it top-down (pre-1989) or bottom-up (post-1989). The expansion phase denotes the proper diffusion of the idea to neighboring potential towns, which eventually consolidates, i.e. gains momentum. Saturation occurs when there are no more potential towns to be influenced. The notion of urban restitutions being subject to proximity to large agglomerations is more intricate. Krzysztofik (2006: 9-10) advances evidence for reciprocal couplings between core and periphery which lead to uniformation of both structures. He also points out that the most urbanized of the peripheral settlements – he refers to them as 'the niches of urbanization' – are the most susceptible to this process due to their halfway location between the metropolis and its hinterland. Additionally, creation of new towns may also be the result of excorporations of previously independent towns that were earlier incorporated into larger neighboring cities (cf. chap. 5.2). This was the case with the 11 Silesian towns that were disengaged from their respective conglomerates during the 1990s.

The map in fig. 3.5 depicts spatial concentrations of towns in Poland created or restituted between 1980 and 2012, as identified by Krzysztofik (2006). Light green areas (labelled in roman typeface) denote diffusion zones and pink areas (labelled in italics) refer to urban influence zones. I have added the 17 new towns created after the publishing of

[44] Expansion diffusion refers to the spread of a specific idea, while stimulus diffusion refers to the spread of a fundamental idea, though not its specific trait (Fellmann et al 2007: 55).

Krzysztofik's work (marked by green spots) which necessitated some modification of Krzysztofik's zones[45] as well as adding new ones (South Łódź, Lower Silesia, Rzeszów). It is important for me to mention that the exact delineation, or even the sheer identification of the priviliged zones is highly arbitrary and barrelled towards a pliable taxonomy, especially within 'regions' of few units (in penetration phase), pending further development. Also, the sheer issue of distance may not be sufficient for the diffusion of an idea to take place if the area in question cuts across cultural and/or practical zones[46]. Another critique I would like to raise is the model's simplification of the temporal factor; I see diffusion of innovations as a contiguous process, therefore zones with large temporal intervals between restitutions (e.g. West Pomerania, Warsaw) may not be diffusional but incidental. Finally, the theory of agglomeration proximity conflicts with the phenomenon called 'shadow of the big city'. Sokołowski (1999: 205) contends that a big city interacts usually in a negative way with other towns in its vicinity, and that the influence of regional centers on proximal settlements is generally very low and often unnoticeable.

Fig. 3.5. Map of Poland showing concentrations of new towns in Poland, created or restituted between 1980 and 2012. Light green areas (in roman typeface) denote diffusion zones and pink areas (in italics) refer to zones of agglomeration proximity.



Source: My adaptation (adjustments and updates) of the idea of Krzysztofik (2006)

[45] I have also modified zonal allocation of a few pre-2007 towns, which I saw more appropriate.

[46] For example, Krzysztofik (2006: 28-29) identifies restitution of Oleszyce's urban status in 1989 as an effect of idea diffusion from the nearby Tarnogród's restitution in 1987. Situated on both sides of the perpetuated former partional (Russian-Austrian) border, the two towns have no practical linkages and even the sheer knowledge of their mutual existence is very limited (I say this as a former resident of Tarnogród). Therefore, such cross-cultural 'diffusion' may in fact have been incidental.

Nevertheless, some regions are undisputably products of diffusional and influential forces (Tarnów, Holy Cross, Zamość, Silesia, Podlachia, Ermeland), a fact supported by recent additions (2008-2012) of new towns to some of them, particularly in Podlachia and the now nearly saturated Tarnów region. This concludes that the Polish urbanization process *sensu stricto* occurs in spatial clusters, and, considering the large patches of unurbanized territory, its outcome (though not necessarily its causality) may be debated.

3.9.3. Imposed factors: territorial-administrative barriers

Within the restitution process, spatial disproportions are not the only potential source of conflict. There are also external factors that shape Polish urbanization, factors that could be regarded as unfavorable or possibly 'unfair' to certain types of settlements. In this subchapter, I will delineate the role of the administrative context and its impact on granting urban status.

Since 1999, Poland is divided into three types of territorial units: voivodeships, counties and communes. As of 1 January 2012, there were 16 voivodeships, 379 counties (also called *powiats*) and 2479 communes (also known as *gminas* or municipalities). Communes in Poland come in three types: urban (made of only one town; 307 units), urban-rural (made of one town and several villages; 588 units) and rural (made of one or several villages, 1584 units). The important characteristic is that an urban and an urban-rural commune can only comprise one town, whereas the number of villages in an urban-rural and a rural commune can be unlimited. This characteristic is a strictly synthetic construction departing from the concept that the seat of a commune – where applicable – should be located *in the town* (therefore, there cannot be two or more towns within one commune).

In regard to degraded towns, this implies that the only unproblematic restitution pertains to settlements that are already seats of communes (the commune simply changes status from rural to urban or to urban-rural). Contrarily, this practice is highly disadvantageous to rural, yet *de facto* urban settlements, where certain administrative barriers impede the realization of an accomplished urbanization process of a specific settlement (fig. 3.6). This pertains to settlements located:

a) within rural communes which they are not seat of;
b) within urban communes, as part of another town, into which they have been incorporated earlier;
c) within urban-rural communes, i.e. those that already comprise a town.

The first scenario (A) is probably the most lenient as the administrative seat can fairly easily be translocated from one settlement to another, without altering the communal boundaries. This was the case when Borne Sulinowo (in 1993) and Siechnice (in 1997) were granted urban status without being communal seats; only some time later (in 1994 and 2010 respectively) were the seats moved from the villages of Silnowo and Święta Katarzyna to the new towns. The main barrier here is the possibility of obstruction from the villagers of the original seats who do not wish to lose their seat status; this was evident in Święta Katarzyna, where the seat was moved to Siechnice first 13 years later, and only as a result of a close referendum, won due to Siechnice being more populous. Although exceptions are obviously permissible (the seat of the urban-rural commune of Nowe Skalmierzyce is located in the village of Skalmierzyce rather than in the town of Nowe Skalmierzyce), this type of obstruction scenario inevitably affects the restitution process, as, for instance, in Srebrna Góra, whose struggle to regain urban status is impeded due to the seat of the commune being located in village of Stoszowice (which is actually less populous). Although much rarer, a new commune can also be created; however, in the last three decades, this has only happened twice (in 1991 and 1993, when Krynica Morska and Czarna Woda ceded from the rural communes of Sztutowo and Kaliska, forming new urban communes).

Scenarios B and C are more intricate as they necessitate a change of communal boundaries. Since degradation of the 'obstructing' town is out of the question, a new commune (either urban or urban-rural) must be created. However, in order to form a separate urban commune, the candidate town must display sufficient size and independence potential. This was the case with the nine large and previously (prior to the 1970s) separate Silesian towns, that were excorporated from their much larger 'host-cities' in the 1990s[47] (scenario B). For lesser settlements, such maneuver is virtually impossible, and not only dependent of their size and degree of independence; an excorporation also needs the support of the whole commune (including the population of the town proper from which the new town is being excorporated). This is not likely to happen as residents of small 'twin-towns' are not willing to abstain from their allocated resources due to communal splitting (the larger the town, the greater the budget). The most famous example of this is the degraded town of Bnin, whose excorporation from Kórnik – although sufficiently urban (cf. Dymitrow [2010] 2012) – is impeded by this type of administrative barrier. Bnin's residents are even willing to waive the privilege of forming a separate commune as long as Bnin regains its urban status; however, such procedure is not allowed within the current

[47] 1991: Lędziny and Bieruń (from Tychy); 1992: Wojkowice (from Będzin) and Rydułtowy (from Wodzisław Slaski); 1994: Pszów (from Wodzisław Śląski), Miasteczko Śląskie (from Tarnowskie Góry) and Imielin (from Mysłowice); 1997: Radlin (from Wodzisław Śląski); 1998: Radzionków (from Bytom).

Polish administrative system (MSWiA 2005; 2006). On the other hand, the system allows oddities like the rural commune of Głusk, whose seat (a degraded town) is actually part of the city of Lublin and *not* part of the Głusk commune[48].

Scenario C is mostly pertinent to towns that are too small or possibly to weak in some sense to carry the tasks of a separate urban commune, and need backup from the rural hinterland. In this case, although the problems associated with an excorporation are not an issue (as in scenario B), there is the necessity of gaining approval from the surrounding villages to form a new urban-rural commune along with the seceding new town. This may not always be the case due to the villagers' reservation towards engaging in an experimental secession, or due to unfavorable spatial configuration of the villages for and against secession (contingency of exclave formation). A notable example is the case of the highly urban Komorów and the surrounding villages that wish to secede from the rural commune of Michałowice near Warsaw to form a new urban-rural unit. Despite Komorów being twice as populous as the seat Michałowice and the petition being signed by notable residents (celebrity scientists and artists), secession is not granted. Although exclaves are permitted elsewhere[49], in this particular case, territorial discontinuity is the principal objection (Błaszczak & Siemoniak 2009).

From these exemples following conclusion can be drawn. Despite its seemingly objective mode of granting urban status to *de facto* urban town-designates, the Polish administrative system actually discriminates or highly impedes certain settlements from achieving just that due to secondary factors. These secondary factors (i.e. factors not pertaining to the level of urbanity of a specific settlement) can be summarized as a set of artificially created barriers, where strictly administrative practices cannot accommodate the specifics of certain territorial configurations. The most arresting is the rule of 'one town per commune'; had it not applied, civic rights could be granted to *any* settlement on cultural or identity-related grounds, without the interference of administrative restrictions associated with the formality of urban status in Poland.

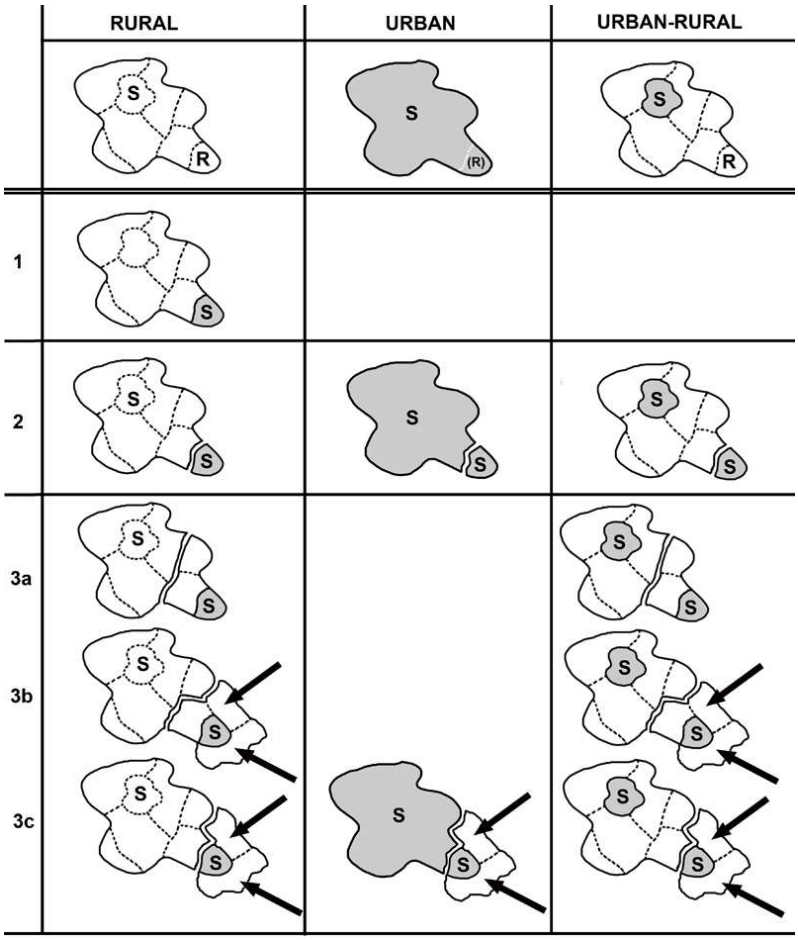


Fig. 3.6. Restitutions, territorial-administrative barriers and possible solutions.

Top row displays three possible territorial-administrative barrier scenarios *prior* to an urban restitution, where:
S = communal seat;
R = settlement being restituted.
Rural areas are marked in white and *urban areas* in gray color. *Communal boundaries* are depicted with continuous lines, and *intra-communal boundaries* (between villages or city parts) with dashed/dotted lines. The next three rows depict three different solutions to how an administrative barrier can be dealt with:
1) by relocating the communal seat to the restituted town;
2) by excorporation of the restituted town to form a separate urban commune;
3) by excorporation of the restituted town to form a new urban-rural commune; the latter can be done either by:
a) merger with rural areas from the primary commune;
b) merger with rural areas from the primary commune and secondary commune(s);
c) merger with rural areas from secondary commune(s).
Arrows denote areas from secondary commune(s); lack of illustration denotes unfeasible scenario. Note that these scenarios also pertain to first-time urban bestowals, not only restitutions.

Source: Own work

[48] An analogical situation (although not pertaining to a degraded town) is found in the commune of Nowosolna, whose seat is part of the city of Łódź.
[49] E.g. in the communes of Brwinów (Owczarnia, Żółwin and Terenia) and Fabianki (Lisek); they are also found on county level: Cracow (Igołomia-Wawrzeńczyce), Włocławek (Fabianki) and Będzin (Sławków).

3.9.4. Subjective factors: ignorance, suspicion and habit

Besides the outlined spontaneous, space-related factors as well as synthetc, imposed factors, many towns do not strive for restitution even though they fulfill the formal requirements and/or are located within privileged zones. As reflected by local consultations, the majority of residents are simply not always in favour of restitution (Borusewicz 1999). That, in turn, marks the presence of the local, rural voice. Borcz et al (2009: 60) found that (despite developmental incentives from urban-specific grants) many degraded towns do not strive for restitution, probably as a result of poor identification with the town's urban identity or due to the more favourable rural taxes. However, as outlined in chap. 3.5.2, urban status does not actually deprive the 'rural' town of any special privilege, provided that the town has less than 5000 inhabitants (maybe this is the reason behind 'villages' of some 10-12.000 inhabitants like Kozy and Pawłowice that remain formally rural). On the other hand, reluctance towards urban status is often associated with ignorance of what urban status means. Instead, the reluctance may be triggered by suspicion of careerism on behalf of the local governments (in terms of salary raise once the village head becomes a mayor) and by fear of drastic structural changes (although those 'drastic changes' are in fact limited to the replacement of road signs) (Dymitrow [2010] 2012: 67). One should neither underestimate the impact of habit and pure lack of care in societal developmental (cf. Dymitrow 2012), caused by, for instance, personal problems. There are in fact no documented substantial disadvantages with urban status (other than discordance from rural identity) if a town is *de facto* 'urban'. Nevertheless, taking into account the huge differentiation regarding current restitution practices, it would be fair to assume that factors such as ignorance, suspicion or power of habit contribute to the inertia within current restitution activity, even in cases where such restitution would objectively seem due.

3.10. The cultural, identity-laden dimension of urbanity (and rurality)

> Rural identities vastly differ from urban identities. Urban identities are fractured and heterogeneous (...). Unlike urban areas, rural communities firmly identify through their work (...). The nature of rural areas (...) allows for individuals to formulate a stronger rural identity. It is the government's responsibility to properly represent these identities (Makuch 2010)

Besides seemingly 'irrational' reasons for not wanting to pursue a restitution (such as ignorance or laziness), I also mentioned *rural identity* – a certain lifestyle based on belonging to a small social group in possession of a specific identity, appearance and conviction of living in the countryside (Bański 2010). This is something quite different. The opposite of rural identity, *urban identity*, in regard to formally rural units is equally problematic. In addition to what has been said in chap 3.3, 'urban' is not merely a physical entity, but also a quality (Pacione 2009: 21). Urbanity refers just as much to the 'social, psychological and behavioral characteristics of individuals (…) that supposedly distinguish urbanites from others' (Tittle & Grasmick 2001: 313-314). Such sense of urbanity can be acquired either directly or indirectly from exposure to distinct groups with common interests and shared histories, internalized beliefs, values and attitudes (ibidem: 318). In Poland, the picture of the country is largely determined by its past (cf. Gorlach & Foryś 2002; Sidorenko 2008), not the least in regard to urbanity, which is also interpreted as a cultural, identity-laden concept. Such understanding of urbanity is particularly important for many Polish degraded towns, whose rural status may conflict with the towns' physical traits and, consequently, the urban consciousness derived therefrom. Heritagization of degraded towns, for instance, is a new expression of discontent towards the Polish formal-cultural divide of urbanity, where the discourse of townscape heritage is used as a means of regaining urban status (cf. Dymitrow 2012).

Górak (1990: 5) has noted that small towns have their own specific character that is difficult to explain, unfolding an intriguing quote by Herbst (1951): 'Even a town lacking urban-specific economic character is a social phenomenon other than the neighboring village, which is expressed, if only, by the antagonism between farmers-burghers and peasants' (p. 55, my translation). Herbst's idea is particularly interesting, as it forgoes the widely acknowledged axiom that a town must perform urban functions. Indeed, the prevalence of so-called 'agricultural towns' is a curiosity that has caught some attention of researchers like Tłoczek (1955) and Krzysztofik (2007b); nevertheless, Herbst specifically stresses the *urban* identity of bourgeois farmers, even though their occupation does not differ from that of rural farmers. Having in mind Beaujeu-Garnier's & Chabot's (1971) assertion on residents' urban conviction being synonymous with urbanity, brings us to the question of what – if *not* the urban functions – evokes such sense of distinctness.

> By bringing forth requirements on how [public] space should be organized according to the widely understood concept of spatial order, we automatically expect [certain] distinct traits that would stringently couple [the applied] formal solutions with the effect that these solutions should produce. Within urban space, achieving a satisfactory level of order is dependent on its compatibility in terms of meaning, form and value. Today, it often implies searching for traits that define identity, i.e. identification of space with history and its meaning, but also as experiencing social integration within a given space (Maga-Jagielnicka 2009: 32).

Maga-Jagielnicka's interesting article on the role of spatial planning addresses the important aspect of reciprocity between effort and effect. In other words, alterations to public space should not be made *ad hoc*, but in relation to locally established spatial traits. Maga-Jagielnicka sees local identification as a derivative of such traits as reflected in the town's morphology (with focus on the market squares), whose meaning has been established historically. Most importantly, she sees it as a phenomenon affecting the *entire* settlement. Cullen (1971: 46) contends that in a town, seen as a lived-in place, 'the layout of the spaces in which the public moves is a matter having a direct impact on the emotions'. Such line of reasoning is highly applicable in regard to degraded towns. Despite their formally rural status, the preserved urban morphology – where applicable – is a trait of an urban past which is constantly present and keeps reminding the residents of their town's otherness.

Besides an urban appearance, a second major expression of urbanity of degraded towns are the nostalgic urban ambitions of their inhabitants, who – despite similar means of employment – try to distinguish themselves from their rural neighbors (Kwiatek 2006: 5). This sense of otherness can be found in various examples. Górak (1990: 5) recounts the tale of the tiny village of Boża Wola (population 128 in 2009) that has had civic rights for only 90 years and lost them as far back as in 1821; yet, the inhabitants still recollect Boża Wola's urban past. Another example is a vivid anecdote from Poland's least populous *formal* town, Wyśmierzyce (population 859 in 2009), according to which, the males of Wyśmierzyce wore neckties to distinguish themselves from their rural fellowmen (PAP 2008). Such expressions – synergies between the historic element and the contemporary notion of urbanity – should not be overlooked. Even more alarming is the fact that, despite efforts from various local cultural associations, the urban consciousness of residents of degraded towns is slowly deflating (cf. Siemiński 2000: 18). Taking into account the present-day dissipation of modernity and urbanism (includining loosening of family ties; cf. chap. 3.4.1), it could be assumed that on a local level urban identity of degraded towns survives mostly through the presence of urban morphology (cf. fig. 3.7). To find out where and to what degree such relationship might prevail would require a minute morphological investigation. This is one of the tasks of this study.

Fig. 3.7. Urbanity amidst rurality? Potential impact of morphology on local urban identity-building. Left to right, top-down: Market squares of a) Książ Wielki; b) Lelów; c) Łagów; d) Janów; e) Denków; f) Jedliński; g) Żarnowiec; h) Bogoria; i) Klimontów.

Photo: M. Dymitrow

4. Urban morphology in the context of small-town urbanity

4.1. Introduction

This thesis expatiates on *urban morphology* on two levels. Firstly, it brings forth the critical role of urban morphology in the formation of a collective urban consciousness within a formally rural environment, where such consciousness is seen as the main driver towards urban restitution today[1]. Secondly, urban morphology acts as subject matter for assembling and devising an appropriate methodology (i.e. one pertaining to urbanity in the context of 'small traditional towns') to evaluate current restitution practices in Poland in this particular aspect. The purpose of this chapter is consequently to: (1) discuss the role of urban morphology; and (2) provide a conceptual framework for the methodology elaborated in chapter six.

In 4.2, necessary terminology is introduced, followed by a discussion of urban morphology in terms of its functional and psychological connotations (4.3). Next, the meaning and definition of 'small traditional town' is elaborated in 4.4. The following three subchapters are dedicated to the three morphological features that form the basis for the morphological indices developed for the purpose of this study: the town plan (4.5), urban physiognomy (4.6) and the market square (4.7 and 4.8). The first two, being staple features of most morphological studies, are treated succinctly. Contrarily, the addition of the market square as a major determinant of small-town urbanity is a novel approach, constituting the original part of this study's methodology, and requires a broader theoretical and philosophical base. Lastly, 4.9 provides a brief outline of urban morphology from a dynamic perspective, focusing on the role of current revitalization projects in the enhancement of the towns' physical urbanity. This chapter draws upon a wide range of cross-cultural theories as well as observations of current trends and practices in urban design, in order to secure an informed methodological approach when applied onto the target arena – the degraded towns.

4.2. Terminology and basic concepts

The built environment is the result of socio-economic, political and technical factors which also interact and develop a particular space (Söderqvist 2005; Medda, *et al* 1998: 304). In terms of *urban* morphology, it denotes 'a combination of town plan, pattern of building forms, and pattern of urban land use' (Conzen 1960: 3). Nevertheless, Evans (2005: 16) has found that *urban morphology* is not a user-friendly term, nor is its definition easy. Generally, 'morphology' is a term that denotes the form, shape and appearance of a specific matter, which is used in a variety of academic disciplines, most notably linguistics and biology. In physical geography, it is applied to the study of landforms and the processes that shape them (*geomorphology*). In human geography, the term is particularly associated with settlement geography (rural and urban morphology), but appears also in other contexts, e.g. the *morphology of a nation* (cf. Rykiel 2006: 97-99). Furthermore, the expression 'urban morphology' is ambiguous because it may either refer to a certain character of morphology (*urban*, as opposed to rural) or to a distinct academic discipline, *urban morphology*, the study of urban form. To differentiate the two, Koter (1994: 24) suggests the usage of the term *urbomorphology* for the latter (in analogy to geomorphology). Furthermore, according to Słodczyk (2003: 208), geographers' definition of urban morphology differs from that of other researchers'; it is more similar to the term *anatomy of urban form* (cf. Sumień 1989: 5), which implies the structure of the city (i.e. its plan, appearance and shape), but also its contents (cf. chap. 4.3.2).

Another problem is that even the most basic terminology within the field of urbomorphology is interpreted differently by different researchers. The term *morphology* is sometimes reserved for planar (2-dimensional, or horizontal) features, as opposed to solid (3-dimensional, or vertical) features, which are termed *physiognomy* (e.g. Szymańska 2009: 195). Conzen (1960: 3), however, uses the term *physiognomy* synonymously with the term *townscape*, which denotes *all* aspects of urban form. To alleviate this confusion, Koter (1994), in his seminal article on morphological terms, formulated an apposite disambiguation. He proposes the term *physiognomy* be reserved for 3-dimensional objects, while for planar, spatial features he advances the term *morphography* (compare with:

[1] Cf. chap. 1.5, second point of departure.

geography)[2]. Morphography is also described as the *internal structure* of a town, while physiognomy as the town's *external* structure (ibid., p. 27). In a more general sense (as in the context of this study), physiognomy refers to the silhouette of a town which primarily consists of *buildings* while morphography refers to the *layout* of the town (the town plan). The term *morphology* on the other hand refers collectively to both. Please note, that Koter's terminology is applied throughout this thesis, save for the term *morphography*, where I opt for the more understandable terms *layout* or *town plan*.

Both physiognomy and layout constitute the field of urbomorphology which Koter (1994: 27) refers to as *morphology sensu stricto* (in a narrow sense), i.e. the concrete traits of a town. From an academic perspective, such field is primarily analytical, as opposed to the more synthetical *morphology sensu largo* (in a wider sence) which also includes *morphogenesis*, the historical study of urban form[3]. Since urban form and urban meaning are closely interconnected, morphology is also seen as a product of specific social groups, rather than as a symbol of a historical epoch (Pacione 2009: 160). It is therefore important to understand that morphology – like in this study – can also be approached from its status quo, i.e. as an indicator of development at a fixed date. Naturally, such approach *does* acknowledge the morphogenetical changes that have shaped the studied status quo, but, rather than being concerned with the changes themselves, it focuses on the effect of such changes on a given community and how they affect its position within a country's settlement hierarchy.

At this point, a few sentences are also required to understand how urban morphology is structured, as the staple terms 'town plan' and 'physiognomy' do not always suffice. Every urban settlement is made up of different elements from different times. According to Koter's classification (1994) the most basic morphological 'elements' are lines (streets), areas (lots), cubes (buildings) and points (e.g. monuments)[4]. These in turn make up the most elementary morphological 'unit – the *street block*. Uniform street blocks form in turn a *town quarter*, which, in morphological terms, constitutes a 'simple form unit'. On the other hand, a *town* – a conglomerate of non-uniform street blocks – constitutes a 'complex form unit'. An assembly of simple and complex forms makes up a 'manifoldly complex form unit', which corresponds to the structures of *large towns*. At the next level, large towns enter a hierarchy of *urban systems* and *urban system conglomerates* (named in turn: 'agglomeration', 'conurbation' and 'megalopolis') with the most complex morphological structure being an *entire urban network* (Koter 1994: 28-29)[5]. This thesis cuts across the whole range of morphological structures: from basic elements (on methodological level) to urban networks (on analytical level), with particular stress on the both extremes.

4.3. The role of urban morphology

4.3.1. Introduction

This study is concerned with urban morphology as a intrinsic attribute of urbanity. Nevertheless, urban morphology is not just 'something that happens to be there'. It is predominantly a reflection of a specific functional development reserved for settlements of an urban nature. Due to its prominent visuality, urban morphology is also a tell-tale of the abstract, culturally shaped concept of urbanity, which may linger despite the termination of the urban-functional liaison. In this subchapter, both the functional and the psychological aspects of urban morphology will be outlined, in order to elucidate the relation between degraded towns and their physical container.

4.3.2. Morphology and function

Morphology is not merely a collection of inanimate elements. There is also an interrelation between morphology and function, i.e. how urban form dictates evolution of certain functions, and how certain functions entail a specific urban form. Mugavin (1999: 99) stresses the need to extend systematic morphological description and analysis of town

[2] Note that, as with the term *geography*, the suffix '*–graphy*' in *morphography* does not solely denote the very process of describing and measuring morphological features but rather the whole subject matter. For the academic process, Koter (1994: 26) uses the term *morphometry*.

[3] Morphogenesis comprises such fields of study as *stratigraphy* (material, time geography), *developmental morphology* (forces, processes), *evolutionary morphology* (genesis) as well as *comparative morphology*. The latter, while constituting the very foundation for systematization and classification of urban form on the basis of findings from a large number of towns, is the least developed one (Koter 1994: 27). Furthermore, Sawicka & Pirveli (2005: chap. 2) advance an additional aspect of morphogenesis – the *logics* behind the changes that take place.

[4] Lynch (1960: 47-48) identified elements somewhat differently: as paths (channels), edges (barriers), districts (sections), landmarks (points of reference) and nodes (strategic spots).

[5] Also, the arrangement of settlements *within regions* is important; Korcelli *et al* (2008: 31-32) identify four types of settlement morphologies that can be found in Europe: (1) monocentric, (2) polycentric, (3) sprawl and (4) sparsely populated (lacking a center).

as a place to include everyday processes 'so that 'product' is understood through "production"'. This dimension of morphology is termed *morphophysiology* (Koter 1994: 26). Fellmann *et al* (2007: 374) write:

> Whatever their size, age, or location, urban settlements exist for the efficient perfomance of functions required by the society that creates them. They reflect the saving of time, energy, and money that the agglomeration of people and activities implies.

These implications may very well be dependent on efficient communications, such as public transport, but they are also derivative of a settlement's morphology. The more complex the town plan the better connectivity and therefore the more efficient the perfomance. Dziewoński has addressed the importance of tying up urban function with their material forms in a seminal paper from 1962 (retold by e.g. Miszewska 2007), bringing forth for the magnitude and the degree of complexity of a town's spatial pattern as a starting point for any morphological analysis (1962: 457). In a more recent context, i.e. in the light of green development where superfluous vehicle trips should be reduced, a well-developped street grid enables greater pedestrian movement as distances become shortened.

The balance between morphology and function is particularly important, because lack of urban functions in an otherwise urban environment may create an air of 'urban scenography' rather than of true urbanity, and not only in regard to ghost-towns. I have noticed this, for instance, in the market squares of the busy Polish cities of Kielce and Radom (population over 200.000). The morphologically splendid square of Kielce is a bustling urban place lined with numerous shops and restaurants and attracts many visitors; conversely, the equally splendid square of Radom is devoid of such facilities and remains a spooky, desolate place that almost has an artificial feel to it[6]. Furthermore, both squares display a very different state of technical maintenance (as of 2011), Kielce – excellent, Radom – poor, indicating that visitor frequency dictates the amount of resources being put into refurbishment. The morphology–function interrelation is highly topical in studies on degraded towns (many of which have been devoid of urban functions due to administrative inferiority), where morphological data should be complemented with functional data in order to give an accurate urbanity profile (cf. e.g Sokołowski 1999, Drobek 1999).

The relation between morphology and function is particularily visible within highly urbanized rural settlements which display high levels of economic diversification and infrastructure, but lack functional accessibility due to their rural morphology. A good exampel of this is the Polish village of Jeżowe (Subcarpathian voivodeship) with over 5.000 inhabitants, whose very high degree of urbanization sensu largo has emerged the initiative of applying for urban status. However, the morphology of Jeżowe is limited to merely two parallel roads, stretching for a challenging distance of more than 8 km, with no public transport and very few interconnecting links. This fact was observed by one of Jeżowe's residents and expressed on a local forum, amidst all thriving optimism:

> Civic rights for Jeżowe? You must be dreaming… We'll never get them (…). We'll just have to settle for what is best within the rural frame. Common sense and a a quick look is enough to see that Jeżowe is a typical village, well, maybe bigger than others, but still (Strider 2009; my translation).

4.3.3. Psychological dimension

> [T]he meaning and significance of elements, which are defined culturally, are important in subjective morphology (…). [U]rban design involves helping the largest number of people to achieve certain types of cognitive organizations, influencing use and behavior (Rapoport 1977: 176).

Most formal definitions of urbanity are of theoretical or applied nature and tend to omit the emotive role of the residents and how they identify themselves. In his study on how and to what extent the physical environment affects people, Rapoport (1977: 383) concludes that 'any findings about human preferences, perception, cognition, behavior, socio-cultural variables and so on will, in principle, have an impact on our understanding of urban form and through that will influence the way cities are organized (…)'. Therefore, a specific perception and understanding of the physical environment of a settlement will affect the way in which that settlement will evolve[7]. Similar statement can be found in Pacione (2009):

> [Urban] [a]rchitecture and urban design (…) aid the legitimation of existing economic and social relations by using the 'aura' of urban architecture to suggest the stability, permanence and 'naturalness' of the current urban environment (Pacione 2009: 158).

[6] The bustling center of Radom is translocated to the pedestrian Żeromski-street.
[7] In the context of this study it could be understood as either urban, rural or possibly something in between.

All communities, regardless of their character, possess certain physicality. That physicality, be it natural or cultural, in combination with the way it is maintained and perceived by humans, constitutes a specific *landscape*. However, the term 'landscape' has a diversity of contemporary meanings, whereof three prevail: landscape as morphology (physical form), landscape as scenery (perception by people in general) and landscape as polity (responsibility of elected authorities together with a participating population) (Jones & Stenseke 2011: 6; 9). To integrate these meanings, the European Landscape Convention has defined landscape as 'an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors' (ibidem: 9)[8].

Sumień (1989: 5) sees urban environment as the interface between creation and perception. Creation is the process of creating the actual *architectural form* in the privacy of architects' workshops, while perception is the process of seeing and experiencing that form, which becomes transformed in the mind of the residents, assuming a *perceived form*. All we see in the urban environment is therefore a visual transfer of information; however such transfer is intricate as it pertains to a pronounced level of abstractness (ibidem: 11). This implies that certain architectural features are associated with specific perceived impressions which in turn are imputed to specific values. Despite the individual uniqueness of the process, such as learning, motivation and personality, groups within the society do share common perceptual sets (Jadon 2007: 71). Such perceptual sets, when brought into play while interpreting perceived images constitute the context of urban form. Sumień (1989) defines such context as everything that exerts influence on urban form, determines it from the outside and results in the creation of its conditions. It is important to note that discrepancies between urban form and their contents may occur. Cetin (2010) has noted this in Arab cities, where rapid transformation to their morphology have created a breach between 'the physical container' and the social structure, i.e. the cities change their appearance and become fragmented and segregated, whereas the society remains united and synchronized. In regard to degraded towns in Poland, such discrepancies are manifested somewhat differently. Both the physical appearance of a town (shaped by the context of past architectural and urbanist standards) and the corresponding urban perception thereof may remain synchronized despite the formal urban label being lost. It therefore should not come as a surprise that local urban perception can in fact differ significantly from the settlements' imposed legal status, given that the urban morphology of that settlement has come relatively unscathed.

Johansson (2009) has studied the role of images when collective imaginations of a city are constructed. Images are associated with visuality, i.e. 'how we are able or made to see and the unseeing therein' (p. 259), depending on our individual and social position. Socially constructed outlooks are called *gazes* (cf. Urry 1990), which 'together with experiences, dreams, memories, mediated messages and "fore-sights" create mindscapes' (Johansson 2009: 260). Departing from the practice of looking in an urban context, visuality is met primarily with urban morphology, i.e. a set of features that coincide with the largest part of our visual field. Further aided by specific gazes (in this case the deeply rooted associations of an urban-morphological landscape with urbanity), the physicality of degraded towns can be said to create an urban-specific mindscape, even despite their formally rural status. A resident of the degraded town of Wielbark complies:

> To this day, the buildings of our settlement give evidence that this was a town. We never talk about Wielbark as a village (Kułakowska 2008).

In a field study on the visual impact of 55 degraded towns in the region of Greater Poland (Dymitrow [2010] 2012), the highest correlation was quite right between 'urban perception' and the variable *morphology* (0,691). This correlation was significantly stronger than that between perception and *demography* (0,389), and that between perception and *centrality* (0,304) (tab. 4.1)[9]. From the study it can be drawn that perception of a settlement as urban is most likely dependent on its morphological structure, and much less on its size or assortment of institutions and facilities.

Tab. 4.1. Correlation between indexed urban perception (as of 2009) and other indexed variables, calculated for 55 degraded towns in Greater Poland, with regard to former geopolitical zones (partitions). Source: (Dymitrow [2010] 2012: 58)

Relation between variables	**Correlation[10] for group of towns**		
	All towns	**In Russian zone (Congress Poland)**	**In Prussian / German zone**
Perception (V_{perc}) and demography (V_{dem})	0,389	0,236	0,485
Perception (V_{perc}) and centrality (V_{cof})	0,304	0,251	0,432
Perception (V_{perc}) and morphology (V_{morf})	**0,691**	**0,703**	**0,679**

[8] Note that in Poland, the term 'landscape' does not have a univocal legal meaning and there is no specific legislation oriented towards landscape and the ELC (Majchrowska 2011: 83).

[9] For towns in former Congress Poland the differences were even greater (0,703 for morhology, 0,236 for demograhy and 0,251 for centrality)

[10] Value for the correlation coefficient r^2.

The interface between morphology as inanimate matter and the *noösphere* (the sphere of human thought) is of particular importance (cf. Conzen 2004: 38-40). According to Rapoport (1977: 174-178), people have images, schemata and mental maps that are learned and constructed, and that these are both internal and external. While internal components involve socio-cultural and personal characteristics, the external are information and cues derived from the environment. Although there is evidence for the subjectivity of morphology, there is little evidence of its specifics, or how the physical design can affect it. Nevertheless, Rapoport draws that schemata of large areas are unclear and generalized, while those of local areas are very detailed. Furthermore, subjective morphology is dependent of the difference between *shared* symbols and *idiosyncratic* symbols, i.e. the degree if how well-known specific urban elements are. Rapoport also stresses the importance of congruence between subjective morphology and "objective" morphology: '[T]here is no question of relative validity but rather a question of how the designed elements can best be made to coincide with the specific cognitive structuring' (p. 176).

Although Rapoport's (and the other authors') thoughts refer primarily to urban planning, the same psychological underlay can be projected onto the residents' perception of a pre-existing built environment. By linking human cognition and visuality with the socio-cultural factors that shape both the creation and the perception of urban morphology, one can assume that 'urbanity' is also very much an intimate phenomenon, quite different from the governmentally set criteria, supposedly designed to define it (cf. Carr 1970 on phenomenology of the city). It could thus be assumed that a well-developed and preserved urban morphology automatically generates a higher sense of perceived urbanity than lack thereof. It could also be assumed that within a culturally and historically homogenous area perception derived from the morphological setting should be reasonably similar in impact. In regard to the object scope of this study, i.e. towns degraded during the reform of 1869-70 in Congress Poland, it would be fair to assume that a comparative morphological analysis would be justified and that findings derived therefrom could constitute a valid base for generalized conclusions.

4.4 'The small traditional town'

4.4.1. Introduction

In reference to the fourth point of departure outlined in chap. 1.5, this study seeks to assess the level of urbanity of 'small traditional towns', arguing that urbanity of such organisms should not be evaluated solely by methods aimed at towns of incompatible size and origin. It is therefore imperative to isolate the characteristics of what a 'small traditional town' in a Polish context means. The aim of such outline is to bring relevance into the comparative morphological analyses that will follow.

4.4.2. The *small* traditional town: size

As the name implies, grandeur is per definition not an asset of *small* towns, which, in the eyes of the Polish law, may nevertheless be urban. Another, cross-cultural, example of this is the Croatian town of Hum with only 20 inhabitants, the world's smallest urban area according to the Guinness Book of Records (James *et al* 2009: 179). Such form of urbanity, it is argued, cannot – and should not – be evaluated in the same way as towns of incompatible size. Having studied these qualitative differences, Violich (1983) defines 'a small urban place' as a derivative of following factors: distance (accessibilty on foot), people (high degree of interaction), urban form (intimacy, human scale, democracy) and regional relationships. In other words, the issue of urban smallness is closely related to aspects such as identity, uniqueness and 'sense of place' (Violich 1983: 41). It is also a matter of clarity and transparency, as a small town is 'easy to read' (Moughtin *et al* 2003: 49). Readability of small towns crystallizes, for instance, the the role of the market square, the gravitational force of a small town, whose power only grows stronger as the size of the town decreases (Kühnel 1918: 32). The scale of small towns also facilitates quick identification of various irregularities, and permits keeping the positive ones and counteracting the negative ones (Zaniewska & Barek 2005: 162).

Departing from the most common definitions of various researchers, as well as that of the Central Statistical Office, a small town in Poland corresponds to a settlement of about 2.000-5.000 inhabitants; sometimes the upper limit is drawn higher, at 10.000, 20.000 or even 50.000 inhabitants (Żebrowski 2005: 35). As these intervals pertain to a wide variety of underlying aspects, categorizing them *physically* is a totally different matter. According to Adamczewska-Wejchert & Wejchert (1986: 30-31), towns with a population of less than 5.000 share similar physical characteristics and are considered 'small' in a morphological context. This group includes both the smallest of towns and the so called 'dwarf urban settlements' (consisting practically only of a market square). In the same context, towns within the 5.000-10.000 compartment form the next category, while towns of 10.000 to 20.000 constitute the most developed form of any urban unit that can be regarded as morphologically small.

4.4.3. The small *traditional* town: origin

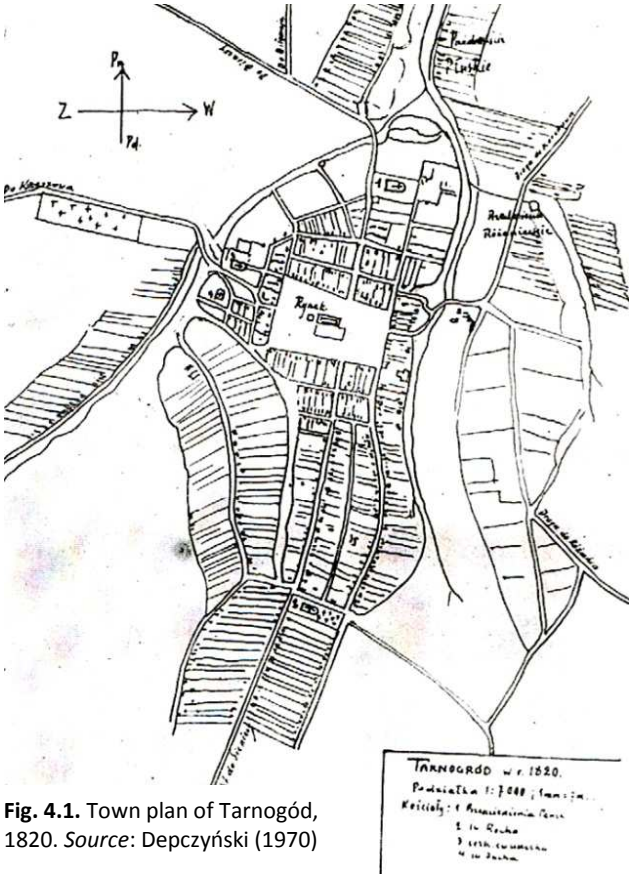


Fig. 4.1. Town plan of Tarnogód, 1820. *Source*: Depczyński (1970)

The town has been described as the most complicated form of any human settlement, both socially and physically (Bond 1990: 83). Given the durability of urban form, any morphological analysis must take into consideration the historical element that has shaped it (Zaniewska & Barek 2005: 161). Therefore, understanding the complexity of the regional structure and the morphological character of present-day townscapes requires a historico-geographically informed analysis (Conzen 2004: 53).

Despite the uniformity of European urbanism as one of the most significant cultural developments in world history, there is in fact internal regional differentiation (Conzen 2004: 197). The territory of present Poland – along with the Low Countries, Germany, Switzerland, Austria, Czechia & Slovakia, Baltic Countries and westernmost Russia – belongs to the *Central Europe epoch category* in terms of regional variations of style. This particular region shows marked differences in regional plan styles and plan elements such as streets and market places (ibid., p. 265). Despite the common belief that the first Polish towns were founded in the 13th and 14th centuries, the majority of them began earlier. The original pre-chartered town was a multifunctional settlement complex, consisting of the fortified seat of the local ruler, one or more artisan areas, and a trading area with a market place. Many of these towns were already quite large in the early Middle Ages (Koter & Kulesza 1999: 76-77).

The mediaeval European town model (to which most of this study's towns belong or are later derivatives of) are characterized by a composite plan, building fabric and land utilization; lack of ethnic quarters (save for Jewish ghettos) and a tendency of the Old Town to remain the business center even in modern times (Conzen 2004: 267). The smaller towns have a characteristic plan form centered upon a large, square-shaped market place, with a grid of streets focusing into its corners (sometimes angled into the corners), and regularly arranged lot patterns, occasionally enhanced by the addition of secondary market places (Slater 1989: 244-245). According to Drobek (2005a: 56-57), such towns are 'classic patterns of orderly space as well as condensed sets of sought-for symbols of urban life, with their (…) spatial exposition of semantic dominants'. The latter – named by Améen ([1973] 1985: 13) as the 'undividable trinity' – comprise the church, the town hall and the market square.

Having in mind that the great majority of the studied towns (86 %) have retained their smallness (below 5000 inhabitants), signifies that – given the durability of urban form – most of them have also retained their original morphological characteristics. Fig. 4.1 is an example of a morphology typical of towns classified in this context as 'traditional'; besides a compact yet moderately developed town plan as well as a dense physiognomy, the essence of the depicted town is clearly dominated by a central market square. Despite the many years that have passed, this formulaic triplicity – town plan, physiognomy and market square – still defines the morphological urbanity of 'small traditional towns'. Nevertheless, these features come in various degrees of maintenance and complexity (both in regard to the original state and as a result of subsequent alterations), consequently showing much differentiation in the level of physical urbanity they exert. Therefore, after presenting the urban-specific traits of these three features (town plan – 4.5, physiognomy – 4.6, market square – 4.7), chapter 4.9 will also provide a brief outline of the specifics of morphological change.

4.5. The town plan

One of the three morphological features studied in this thesis is the *town plan*. A town plan provides a framework, within which the town's functions are performed and where the town's everyday life takes place (Beaujeu-Garnier & Chabot 1971: 234). From a technical point of view, town plans can also be seen as a linear systems of streets (paths)

and inersections, whose complexity indicate the degree of development of a given settlement (Zagożdżon 1970: 335; 337). Although many earlier town plans evolved in a haphazard way to reflect the changing local needs (Laring 1961), later towns were planned or re-planned. According to Conzen (2004: 265), European towns in particular are characterized by 'exceptional dynamism of cultural, especially socio-economic development over a long sequence of historical epochs [that has led] to maximal morphological complexity and articulateness of [town] plans'. As such, town plans are a conscious product of development associated with a specific-type of governance – urban (note how the expression '*town* plan' does not fit semantically in the context of a village). Furthermore, the alleged dynamism of town plans implies that town plans adapt to reflect the characteristics of the settlements they frame. For instance, town plan evolution is largely regulated by the configuration of street-adjacent lots (the deeper the lots, the less compact the town plan) (Adamczewka-Wejchert & Wejchert 1986). In highly urbanized settlements where land value is high, deep lots are not very common, whereas in more rural settlements lot depth is desired to accommodate structures inherent to areal land use economy (barns, cowsheds, chicken coops, sties etc.). Therefore, a town plan is always a reflexion of socio-economic and functional aspects inherent to urbanity (cf. Gaczek 1979; Dziewoński 1962) and, consequently, an important tell-tale for assessing a settlement's level of urban character.

Three major types of town plans can be discerned: the chessboard plan, the concentric-radial plan and the linear plan, all being products of the topographic conditions and/or contemporary ideals (Beaujeu-Garnier & Chabot 1971; Kiełczewska-Zaleska 1972; Słodczyk 2003; Szymańska 2009; Szmytkie 2009). Departing from the socio-economic and functional connotations inherent to the formation of town plans, the chessboard model and the concentric-radial model can be seen as typically urban in that they are dense, provide varied and fast possibility of movement (cf. Moughtin *et al* 2003[11]) and exclude proximity to agricultural land. The linear model could be seen as the least urban in that it consciously mimics a rural spatial structure with dwellings grouped along a lengthy road, with direct access to arable fields; in the linear model, however, it is the *pleasure-laden* access to greenery (rather than functional) that propels its implementation (cf. Dahl 1955: 31; Beaujeu-Garnier & Chabot 1971: 239-240).

In traditionally rural settlements, there is a necessity of agricultural proximity, whereupon street complexity is not a desirable feature (cf. Singh 2006; Szymańska 2009: 123)[12]. A notable exception are extremely small towns whose street grid is not very well developed; in such towns, intrusion of agrarian fields directly into the town center is not uncommon (fig. 4.2, right)[13]. Within the Polish restitution practice, this phenomenon is evaluated negatively. For instance, the application for restitution of the degraded town of Dobre was rejected partially due to the visibility of agrarian fields directly from the town center (MSWiA 2005). Nevertheless, as fig. 4.2 shows, there are in fact formal towns that display just that.

Fig. 4.2. Two captions of the market square in Wyśmierzyce – Poland's smallest formal town. Left: dense and urban; right: intrusion of agrarian structures directly into the town center, revealing its smallness.

Photo: M. Dymitrow

[11] The street layout and the associated pattern of street blocks are a measure of permeability and accessibility, as well as flexibility which the user has in moving round the area (Moughtin *et al* 2003: 54-55).

[12] A village can be either compact or dispersed in terms of proximity between houses, but does not usually display high aerial density due to its lack of plan complexity.

[13] Note that this phenomenon is evaluated negatively within the restitution process. For instance, the application for restitution of Dobre was rejected partially due to the visibility of agrarian structures form the town center (MSWiA 2005). Nevertheless, as fig. 4.2 shows, there are formal towns that display just that.

Contrarily, in a settlement where agricultural proximity is not a functional priority, a spatial structure based on nodes, intersections and cycles could be seen as a better provider of accessibility to non-areal activities. Interestingly, even in so-called agricultural towns (with mixed urban and rural functions), farm buildings were located *outside* of the town, on special 'barn streets'[14] (Adamczewka-Wejchert & Wejchert 1986: 30-37). In conclusion, it could be argued that the more complex the town plan, the more urban is the town's functional underlay (cf. also Szmytkie 2009: 12).

4.6. Physiognomy

Seeing morphology as a synergy of spaces (voids) and buildings (objects), the latter is a feature much associated with visuality (cf. Miszewska 2011; Johansson 2009). Although the town plan defines urban morphology in a broader sense, in western culture, we tend to perceive the objects rather than the spaces between them (Hall 1976)[15], a fact speaking for the importance of examining building quality in studies of the urban landscape (cf. Cudny 2008). Likewise, the second morphological feature studied in this thesis is the town's *physiognomy* – the building structure of a town.

Physiognomy is a manifestation of spatial order with socio-economic and cultural connotations, and evidence of the quality of life of present and future generations (Zaniewska & Barek 2005: 162). The physiognomy of a town is mostly consistent with the town's buildings which often assume certain architectural characteristics. Urban architecture and urban design are on the other hand elements in the political economy of urbanization that are linked into the dynamics of urban change (Pacione 2009: 158). Pacione summarizes the role of urban architecture in three points: (1) it stimulates consumption by providing products for different market segments; (2) it promotes the circulation of capital through the creation of new architectural fashions; (3) it aids the legitimation of existing economic and social relations through its symbolic meaning. Furthermore, physiognomy influences greatly the inhabitants' standard of living and their attitude towards their home town; moreover, its appearance – along with the atmosphere it creates – is also important for a town to attract investors (Cudny 2008: 74).

According to Słodczyk's classification (2003: 141-146), urban housing comes generally in two types: *single-family* and *multiple-family* (excluding ephemeral housing forms such as slums and favelas, as well as non-housing forms inherent to homeless people). Single housing is often associated with suburban residential areas such as villa districts and is sometimes an expression of social status. Multiple-family housing comes in two major forms: tenement buildings and apartment blocks. Tenement buildings (or townhouses) are inherent to historic quarters, and, as such, can be described as classical forms of urban housing. Apartment blocks are a modern expression of urban housing, often associated with uniformity and monotony. They are usually located on the outskirts, but can occasionally be found in town centers (in Poland even in the middle of market squares). In former socialist countries, apartment blocks are a staple housing form, whereas in Western Europe they coincide with the poorest marginalized groups (Słodczyk 2003: 145-146). Social morphologies notwithstanding, the main difference between single-family and multiple-family buildings are their physical characteristics. According to Szmytkie (2003: 347), the main traits of urban physiognomy are density and building height (cf. also Maik 1992; Liszewski & Maik 2000). These properties are more inherent to multiple-family buildings as single-family buildings accommodate less people per m^2 and are freestanding, (i.e. detached from each other, taking up more space). The latter aspect stands in relation to the overall density of a settlement (in terms of lot structure) and configuration of the town plan (Słodczyk 2003: 143)[16].

In Poland, urban areas – in terms of housing characteristics – are very different from rural areas; in rural areas, single-family buildings prevail, while urban areas are typically saturated with multiple-family units (Dutt *et al* 1992: 159). Furthermore, Dutt *et al*'s study from 1992 shows that rural housing in Poland is often substandard[17]. Small Polish towns differ from larger towns in that they display both urban and rural characteristics, with the rural characteristic being the preponderance of single-family buildings, at around 70 %. Noteworthy is also that the standard of dwellings in towns up to 5.000 inhabitants is considerably lower than in larger towns (Zaniewska & Barek 2005: 162). Given that most houses in small towns are one-storied, they do not usually differ much from houses found in traditionally rural environments, save for the configuration of the lot structure (lack of agriculture-related outbuildings and density) (Adamczewka-Wejchert & Wejchert 1986: 37-41). Still, Szmytkie's study on population density as a physiognomic de-

[14] With the advent of de-agrarization of Poland, this phenomenon has widely disappeared (my postscript).
[15] As opposed to, e.g. Japan, where such spaces are perceived (Sumień 1989: 131).
[16] A special form of housing are so-called *row houses* – single-family buildings with physiognomic characteristics typical of multiple-family buildings.
[17] Rural housing is often made of white brick, brick or log walls with tin plate, sheet iron or asbestos roofing. Urban housing, often accompanied by subsidiary uses, is characterized by brick and concrete slab foundations, and tar board or metal plate roofing. Some elements, however, such as soundness of buildings, concrete element foundations and use of brick and tile roofing, are common in both urban and rural areas (Dutt *et al* 1992: 160).

terminant of urbanity (2003) showed that the density of degraded towns in Lower Silesia (4122/km^2) is only insignificantly lower than the density of formal historic towns in that same region (4742/km^2), with both groups fulfilling Szmytkie's calculated level of physiognomic urbanity (4000/km^2). This suggests that there are some significant regional differences. In fact, as Zaniewska & Barek (2005: 163) has noted, towns east of the Vistula River[18] have less urban structures with a large number of wooden houses, similar to those of rural areas (although these are being systematically replaced by brick houses). Furthermore, the gradual evanescing of agriculture – along with the associated socio-economic bonds – is currently changing the Polish housing structure. The return to the notion of 'sense of place' and tradition is affecting the image of small towns positively; the hitherto allowed architectural chaos is becoming more supervised, while new housing – mostly single-family villas – are being erected on small lots in *peripherally* located housing estates (hence not affecting the image of the town).

In terms of style, old (pre-WW2) buildings in Poland come mostly in two types, classified by the orientation of the roof: the ridge-oriented and the gable-oriented type[19]. Gable-oriented houses give a dynamic impression, accentuating the individuality of each building, while ridge-oriented houses are perceived as more monotonous. The also possible attic-style type (a variant of the gable type) is extremely rare in small towns (Adamczewka-Wejchert & Wejchert 1986: 27-28; 38-41) (fig. 4.3). Newer forms of architetcural styles include: 'the Polish cube' (a simple two-story construction with no artistic touch); 'the Polish manor' (a form of romantic pastiche), and the so-called 'post-order house' (Zaniewska & Barek 2005: 162). Multiple-family complexes in rural areas are rare and are usually owned by city-dwelling vacationers (Dutt *et al* 1992: 159) or belong to the 1970s and 1980s family of apartment blocks (often inherent to the PGRs – State Agricultural Farms, fig. 4.4), a major source of dissonance with both the historic and the new buildings (Zaniewska & Barek 2005: 163).

Fig. 4.3. Types of houses in terms of architectural style (left to right): ridge-oriented (Gielniów), gable-oriented (Oleśnica), and a modern interpretation of the attic-style (Olsztyn). *Photo*: M. Dymitrow

Fig. 4.4. Former PGRs (State Agricultural Farms) – a multiple-family building type found in rural settlements. Examples from Tarnogród (left) and Rybotycze (right). *Photo*: M. Dymitrow

Although different types of building style may affect the ambience of a town differently, it is important to note that the urban image of a particular town is *not* determined by its stylistic presentation, but is rather expressed through the ratio between the buildings' height and mass, along with the buildings' relation to the street. It happens because stylistic presentation of particular buildings disappears in the totality of the town's physiognomy (Adamczewka-

[18] The area of Congress Poland straddles the Vistula River, which cut it in the middle.

[19] Within the area of Congress Poland, gable-oriented houses along the market square are very rare; ridge-oriented are the most common type (my postscript based on field studies).

Wejchert & Wejchert 1986: 38-39). From this line of reasoning, it could be assumed that visual, in-person assessments of a town's level of physiognomic urbanity may prove difficult, as there is a risk of confusing urbanity with aesthethic and maintenance-related parameters. A remedy for this difficulty could be, for instance, a reductionist approach, reducing physiognomy to its geometry (remote sensing approach) or dwelling characteristics (statistical approach).

In conclusion, physiognomy is a manifestation of spatial order with socio-economic and cultural connotations; as such, it defines the character of a settlement, be it urban or rural. In Poland, there are big differences between urban and rural physiognomies, although these are gradually assimilating. Small towns (as most of the towns in this study are) display both urban and rural characteristics. As 'rural' (or, more correctly, 'not explicitly urban') are considered single-family buildings, whereas as explicitly urban are considered multiple-family buildings (inherent to historical quarters) or modern apartment blocks. Most houses in small towns are one-storied and do not differ much from houses found in traditionally rural environments; nevertheless, occurrences of multi-storied houses in small towns make them stand out all the more from rural settlements. A town's urban character is *not* determined directly by its architectural style, but through the height and mass of the buildings and their relation to the street. This suggests that physiognomic urbanity may very well be assessed by merely examining the technical properties of the built environment.

4.7. The market square

4.7.1. Introduction

The market square constitutes the third morphological feature studied in this thesis. Although technically a market square is both part of a town's layout and physiognomy, it is argued that – in the context of small traditional towns – it is a major determinant of urbanity. Modeling for the original part of this study's methodology, the market square requires a broader theoretical and philosophical base, as well as coverage of current trends and ideals in urban design and spatial planning. Subchapter 4.7.2 outlines the importance of market squares for small-town urbanity, followed by an attempt to pin down what qualities make a market square *urban* (4.7.3).

4.7.2. The importance of market squares for small-town urbanity

> Granting of urban status to candidate town Zakliczyn: For a positive verdict to this application speak the following arguments and considerations: (...) Zakliczyn has a classic market square and a clearly defined town center with compact small-town physiognomy (MSWiA 2005).
>
> Granting of urban status to candidate town Biskupiec: For a negative verdict to this application speak the following arguments and considerations: (...) The built environment of Biskupiec is characterized by considerable fragmentation and lacks a clearly defined town center (MSWiA 2006).

The introductory quotes are excerpts from two verdicts to applications for restitution, issued by the Polish Ministry of Interior and Administration. The first was evaluated positively, the second negatively, with the only difference being possession (or lack of) a clearly developed town center. The town center is indeed the most important part of every town due to its specific, historically founded, function. The town center has the highest concentration of various services, work places and other activities, and, as such, it exerts its influence on the rest of the town. Due to its often strategic position, it is also a communications center. Morphologically, a town center is the most intensively built part of the whole town (Maliszowa 1974: 13-20; Nowakowski 1990: 8). Despite its relatively small area, a town center is identified by the local community as a place where the most important processes of the public life are played out (Słodczyk 2003: 112). Given all these qualities, a town center is consequently the part of the town that displays the highest level of urbanization (Bitner 2010: 167).

However, the magnitude of the town center varies greatly depending on the town's absolute size. The general characteristic of early mediaeval towns was their limited size as a result of the surrounding curtain walls. As towns expanded, so did the size of their centers; however, the towns also developed new extramural sub-centers in order to unburden the historic core. In towns that have not grown significantly since, the historic town center – along with its impact on the rest of the settlement – has remained virtually unaltered (Wejchert 2008: 52; Miszewska 2009: 67). Given their morphogenetical background and often retained smallness, the centers of most towns studied in this thesis still coincide with their market squares (cf. Borcz *et al* 2009: 61; Conzen 2004: 267). Market squares are still associated with, and identified as the symbol of the town, as shown by the centuries-long attachment of residents and various institutions (Mordwa 2003: 50). Furthemore, in small and middle-sized towns the market square is the town's base and oftentimes its only social space (Wejchert 2008: 52) (fig. 4.5).

Fig. 4.5. Market squares in eight degraded towns showing social relations and people making use of the area. Left-right, top-down: Magnuszew, Skrzynno, Gielniów, Klimontów, Waśniów, Raków, Pacanów and Łagów.

Photo: M. Dymitrow

Market squares date back to mediaeval times. Emergence of trade and handcraft – the two factors that shaped towns – created the need for a public space where exchange of goods could take place (Miszewska 2009: 69). Despite subsequent changes in function, the symbolic role of the market square as the apex of urbanity was retained long past the Middle Ages. An example of this from Congress Poland is the the small town of Rawa, whose residents fought from 1819 to 1834 to retain the town's urban status against the feudal owners' will. Since no documental proof of Rawa's civic rights could be found, the town lost the battle and the owners ostentatiously marked this event by *ploughing up* the market square (Mazurkiewicz 1967: 217) – a poignant example of how eradication of the market square also meant the end of urbanity. As times went by, even the function of market squares changed. Daily gossip was supplanted by information exchange via newspaper, telephone and telegraph. Due to constant squalor, unbearable stench and sanitary problems (from decomposing food, litter, human urine and animal faeces on market days), even the market element – trade – was gradually translocated to areas outside of the town (Kühnel 1918: 35). Now, although these original functions have disappeared, the market square is still the most important part of a small town. Why?

> The great importance of the market square and its surrounding blocks within the town plan, its role as the center of commercial, social, cultural and even recreational activities, its accommodation of houses belonging to the town's greatest citizens, that were eagerly modelled upon by other inhabitants, and, finally, its preponderance of urban-shaped stone houses – all this adds up to *the town's whole architectural expression being dependent on the appearance of the market square* (Adamczewka-Wejchert & Wejchert 1986: 30; my translation and emphasis).

> *The public square is probably still the most important element in city design*; it is the chief method by which a town or a city is both decorated and given distinction. It is the natural setting for the most important civic and religious buildings, a place for fine sculptures, fountains and lighting and, above all else, a place where people meet and socialize. When such public places or designed according to some fairly basic principles and are imbued with a sense of place, they take on an added symbolic meaning (Moughtin & Mertens 2003: 123; my emphasis).

As the quoted excerpts indicate, the retained crucial role of market squares pertains to a variety of levels; yet, the interface between the social and the physical element is of particular importance. This is true because urban morphology and urban lifestyle are historically interconnected. Maga-Jagielnicka (2009: 27) notes that a town, seen as a socio-spatial structure, should be able to ensure fulfillment of varying personal needs of its residents, both on an individual and a collective level; however, such development is shaped differently (ranging from satisfaction to disappointment) depending on the varying sets of spatial form that make up a town. According to Maga-Jagielnicka, a special role in the described process should be attributed to market squares, which she sees as a bridge linking the mentioned urban socio-spatial duality. A centrally located market square expresses a state of 'social appropriation' (Kachniarz 1993) that exerts an emotive assessment of its space as urban, and therefore assumes the role of the most important urbogenic feature (Drobek 1999: 86). The market square has long been a place for people 'to gossip, transact business, shop, watch performances, make political speeches, and hold military parades', but also a scene for floggings, stonings and executions of heretics (Baker 2012); it was here citizens learned the principles of social life and civic culture (Wilk 2010). Adequately, the market square is still described as the *heart* (Ziębik 2008), the *soul* (Baker 2012), the *salon* (Nadolny 2009: 117) and the *business card* of the city (Górak 1990: 9; Wilk 2010), or as 'a powerful means of transforming communities' (Kent *et al* 2005). The market square, seen as the epitome of a public space, is the primary site for 'public culture' and 'creation of citizenship' (Zukin 1995). Most sightseeing tours depart from the main square (Dydyński 2002), making it the most exposed part of the town. Market squares are junctions, and such require heightened attention from people who often make decisions at junctions (Lynch 1960: 72-73). A market square crystallizes the town plan (Borcz *et al* 2009: 61; Wejchert 2008: 52); it is one of the most important semantic dominants of small towns and, likewise, it influences the perception of the whole settlement as urban (Drobek 1999: 86). Some Polish towns display an urban character only in the vicinity of the market square, and there are even some entities, like, for instance, Złotniki Lubańskie, that are made *entirely* of a single market square (cf. Adamczewska-Wejchert & Wejchert 1986:22). Although not urban in any other sense, the square's impressive two- and three-storey urban houses along with the central town hall emanate an unambigous air of urbanity[20] (fig. 4.6).

The market square is a semiotic device used to identify urbanity (Sonesson 2003). This is particularly crucial – and strikingly visible – when creating totally new towns, i.e. towns lacking an urban past. A good example is the industrial city of Tychy in southern Poland, created in the 1950s according to Communist planning policies by conjoining multiple distant settlements dispersed around a core made mostly of concrete apartment blocks (Szmytkie 2009). In order to add 'urbanity' to this amorphous single-city-agglomeration, a market square-like place was created, along with a church, and sundry service facilities, located in the arcades of the surrounding apartment buildings (Wejchert 2008: 10). Such reaching back for 'urban traditions' is an indication that certain architectural traits prevail, even in the most ag-

[20] For street-view resolution of this spectacular creation visit: *http://us.fotolia.com/id/33135990* (access: 2011-08-25)

gressive top-down planning policies. A more recent example of an 'urban imitation' can be found in the new town of Radłów (civic rights granted first in 2010), now boasting a fine 'market square' instituted at a road junction amidst an otherwise rural town plan. Nowadays, urban features can also be found in settlements completely devoid of an urban context, like in the de-agrarizing village of Łopuszno, unmistakably equipped with a market square amidst a 'town plan' reminiscent of a radial-concentric model. The importance of market squares (or, more accurately, central open places) can even be traced to un-planned, spontaneously formed urban areas such as Kianda in Kenya (part of Kibera, the world's second largest slum), a dense melting pot of improvised dwellings (Marras 2008).

Fig. 4.6. Złotniki Lubańskie – a town made up mostly of a single market square.

Source: www.lesna.pl (left)[21]; maps.geoportal.gov.pl (right)

Adding market squares is not merely a matter of manipulating urbanity; it is also very much associated with contemporary trends and ideals that appeal to our likes in the pleasure-laden terms of aesthetics and comfort. The search for small-scale urbanity has been articulated through movements such as New Urbanism and sense of place. *New Urbanism*, currently a leading movement within urban design, advocates 'a return to small-town urban forms: human-scale, pedestrian-friendly streets, a reinvigoration of cities, and a stop to suburban sprawl' (Haas 2008). New Urbanism is therefore in line with the social and ecological sustainability paradigm in that it reduces car dependency and encourages walking, which in turn leads to greater sociability. Market squares can also be added in order to subdue architectural brutality inherent to industrial cities, like that of Detroit (USA), where the addition of Campus Martius was embraced by the city within one year only (Kent *et al* 2005). Retooling the old market squre – understood as a place with a high level of social value – is today at the center of the quest when developing successful shopping facilities around the world (Baker 2012). The sought-for value of market squares is also compatible with current urban design trends that stress the importance of the classical street block structure. A Swedish example includes the ambitious plans to reconstruct the eradicated Gamlestadstorget (Swe. *Old Town Market Place)* in Gothenburg, by demolishing viaducts, digging tunnels, adding frontages and transforming a disrupted piece of land into an enclosed urban space (Göteborgs Stad 2011). An even more ambitious example, also from Sweden, is the housing estate of Jakriborg, built in the late 1990s with the intent to emulate both the intimacy and the historicity of a traditional mediaveal town. Quite accurately, it is centered around a prominent market square (fig. 4.7).

Fig. 4.7. An example of New Urbanism: Jakriborg in southern Sweden, a 1990s pastiche of a small mediaeval town.

Photo: M. Dymitrow

[21]http://www.lesna.pl/asp/pl_start.asp?typ=14&sub=21&menu=27&strona=1

The second movement, *sense of place* developed as a response to significant features found in the local physical landscape. Much associated with the term *genius loci* ('spirit of place'), sense of place focuses on unique characteristics derived from the physical environment and activities that occur there (Beidler 2007: 11). Moughtin & Mertens (2003: 105) note that '[u]nderstanding and appreciating the context for development, the genius loci, is a lost art and fundamental to great city building'. Ziębik (2008: 315) contends that '[i]n the face of changing users' needs, it is indispensable to introduce new functions, and at the same time to respect the identity of the place. Such activity, together with the preservation of the genius loci of the historical market squares influences the effigy of the city in a positive way'.

4.7.3. What makes a market square urban?

When market squares are elaborated, the focus is usually on their aesthetic and social dimension; much less has been written about what exactly makes a market square *urban*; perhaps because a market square is per definition considered an urban feature. Nevertheless, when analyzing a market square in the capacity of a denominator of urbanity, its essence must be deconstructed and operationalized.

From a technical point of view, a square is a type of node (Shalabi 1998: 64). According to Mordwa (2003: 50), market squares in Poland correspond to Lynch's definition of an urban node:

> Nodes are points, the strategic spots in a city into which an observer can enter, and which are intensive foci to and from which he is traveling. They may be (…) concentrations, which gain their importance from being the condensation of some use or physical character, as a street-corner hangout or an enclosed square. Some of these concentration nodes are the focus and epitome of a district, over which the influence radiates and of which they stand as a symbol. They may be called cores (Lynch, 1960: 47-48).

According to Moughtin & Mertens (2003: 87), there are two main methods of categorizing squares – by *function* and by *form*. Although function is more associated with human activity in terms of economy and sociability rather than morphology per se, the latter could be said to stimulate the former. Moughtin & Mertens contend that the single most important function of an urban element is the symbolic meaning attached to it, and therefore when the activity associated with it ceases, the market square becomes a sterilized 'no-go' area (cf. the last part in chap. 4.8.3 named 'Cohesion vs. economy'). Squares come in a variety of functional purposes, ranging from large gathering areas to gardens and course yards (Shalabi 1998: 64). Björk *et al* (2008: 38) argue that besides the common purposes of commerce and representation, some market squares also function as communication hubs. Moughtin & Mertens (2003) conclude that the most successful city squares are those that sustain activity through the diversity of uses (p. 87). In order for such diversity to be accommodated, the market square must supply a specific morphological base. Such morphological base is made of both the surrounding buildings (housing of shops, cafés, galleries etc.) and the market square's interior (its adaptation to pedestrianized sociability, relaxation, casual retail etc.). Therefore, the urban essence of a market square – its function and form – is contained within the physical, morphological element. However, there are numerous examples of recent plaza design where one or other of these two equally important criteria has been neglected:

> The empty windswept place[22] surrounded by under-utilized buildings is all too common in the modern city, while its opposite or counterpart, the busy traffic island or faceless car park around which are scattered collections of non-related buildings, is also endemic in the urban scene (Moughtin & Mertens 2003: 87) .

> [*On Exchange Square in Manchester*] Over-designed, inflexible, and dominated by rows of awkward sitwalls that impede pedestrian flow and gathering, this square should be exchanged for a place that displays a rudimentary understanding of how people use public space (PPS 2005b).

If we depart from the psychological underlay of urbanity, i.e the formation of 'urban identity' based on premises in the surrounding morphological landscape (cf. chap. 4.3.3 on the psychological dimension), it could be assumed that such an identity is formed differently depending on the quality of that landscape. In regard to degraded towns, whose formal urbanity was lost 143 years ago, it would be fair to assume that any contingent *urban* identity must be – at least partially – vested in the historical element. According to Myczkowski (2009: 158-159), the level of such identity of a place can be evaluated by considerering the following six measures:

- *Structure* – relates to the unambiguity of the perceived feature
- *Style* - relates to occurrence of Zeitgeist[23] in regard to the epoch represented by a certain feature

[22] Fortunately, the human eye increases object height manifold with decreasing apparent distance; without this mechanism even the smallest of market squares would seem as desolate spaces, incidentally lined with a few low houses (Adamczewka-Wejchert & Wejchert 1986: 29).

- *Regionalism* – relates to a set of 'self-born' traits that are characteristic to a specific region
- *Traditionalism* – relates to the degree of cultural continuity
- *Exposition* – relates to the degree of overtness and visibility
- *Historic layering* – relates to the degree of preservation of a feature's historical *substance*, *form* and *content*

Myczkowski's scheme is of particular value for the assessment of contexual urbanity of small towns, as it provides an operationalized approach to a very subjective matter. Market squares, seen as manifestions of both *regionalism* and *traditionalism* (cf. 4.4.3) fall into Myczkowski's scheme. Assessment of market square quality is also dependent of the *historic layering*, i.e the interface between history and modernity, and how well these dimensions interact. Myczkowski gives examples of this continuum, ranging from unspoiled cultural heritage, via pauperized and banal, yet non-aggressive architecture, to totally alien elements like bus depots, shopping pavilions, fire stations, health centers etc. (p. 158). All of these could be advanced as an antithesis of regionalism, traditionalism and historical conformity. The on-going revitalization of degraded town centers in Poland can in this context be seen as a remedy for market squares displaying the lowest levels of historic layering (more on this in chap. 4.8.3 on revitalization). The measures *structure*, *exposition* and *style* are on the other hand instructive on a more concrete level when assessing urban qualities of market squares. I see them as equivalents to the concepts *enclosure* and *legibility* (which will be elaborated later in this chapter). According to Myczkowski (2009), the *structure* of a feature can either be concrete (unambiguous), objective (arrived at by abductive reasoning) or subjective (felt). As an objective structure, Myczkowski actually advances the example of the liquidated market square of Lutowiska (a degraded town), whose contour can still be discerned. Contrarily, a subjective structure is one that cannot be seen, although differences in the surrounding topography indicate its past presence. Levels of *exposition* range from unobstructed vistas and partially obstructed, yet familiar, instantly recognizeable panoramas, to dense thickets with high undergrowth, prohibiting any visibility. As examples of *style*, Myczkowski brings forth the market squares of Zamość and Jarosław that uncontestedly still convey the Zeitgeist of the the time of their creation (pp. 158-159).

In his study on evaluation of urban quality of small towns, Violich (1983) arrived at some qualities that could act as criteria of physical urban smallness (pp. 58-60): readability, freedom of choice, contrasting urban form, sociability vs. privacy, history and heritage, and regional ties. Most of them can apply to small-town market squares (cf. chap. 4.8.3 on legibility). Readability is crucial for a market square to be perceived as one. Freedom of choice could denote a minimum of designated areas (like pathways) and absence of non-pedestrian spaces within market squares (thoroughfares). Contrast could refer to the distinctness between space (interior) and physiognomy (frontages). Sociability, as an intrinsic part of the market square, requires an environment that facilitates and encourages human meetings, i.e. one that feels safe and is available to anybody; this would imply a sufficient amount of overtness and total absence of obscurity. The heritage factor denotes fulfilment of the historical element, i.e lack of elements that would disharmonize with the traditional role of the market square. Finally, regional ties could refer to stylistic conformity. As we can see, Violich's criteria largely overlap with Myczkowski's scheme.

In a study conducted in 2005, PPS (Project for Public Spaces) has selected 16 of the world's best squares. The top rank was given to *Rynek Główny* (Grand Square) in Cracow, Poland:

> The largest square in Europe[24] also happens to be the best. Rynek Główny is so dynamic, it pulls you in from anywhere in the city. All roads in Kraków lead you here, and the closer you get, the livelier the street life becomes. There is so much going on in this square – at least twenty different attractions at any given time (…) (PPS 2005a).

When choosing Cracow's square, following four criteria were taken into consideration: access and linkages, comfort and image, uses and activities, and sociability. All criteria pertain to human convenience and pleasure, and address primarily function rather than form: location and accessibility (exogenous linkages), safety, equipment, maintenance, venues, events, etc. Nevertheless, all these qualities have a morphological underlay that renders the square a good-quality *urban* place, a fact so obvious that PPS does not even question it. So, what makes it work?

With 756.000 inhabitants (Poland's second largest), an ancestry dating back to 1257, and World Heritage Site status that makes it a huge tourist attraction, Cracow is inevitably a *city*. However, it is possible that the urban association may very well stem from its sheer size, age and fame, rather than its morphology. If we go back to the role of market squares as idenifiers of urbanity, this would imply that the occurrence of a market square would automatically equal with the perception of such place as urban (cf. Stewart 2007: 113). Nevertheless, since market

[23] *Zeitgeist*, 'the spirit of the times' or 'the spirit of the age', is a concept that goes back to Hegel's philosophy of history, and denotes the general cultural, intellectual, ethical, spiritual, or political climate within a nation or even specific groups.

[24] Cracow's Main Square with a size of 4 ha is widely, yet erroneously, considered as Europe's biggest. For instance one degraded town in this study, Latowicz, has an area of 4,3 ha (!), while another, Tarnogród (also in this study, although restituted), has an area of 3,98 ha; not to mention Warsaw's Parade Square of 24 ha.

squares come in a variety of architectural styles[25] and technical states, it would be treacherous to assume that (cf. fig. 4.15). Therefore, the analysis must be brought to a more fundamental level. The fundamentality of such analysis lies therefore in the establishment of whether a market square actually is a market square and to what extent it succeeds or fails being it.

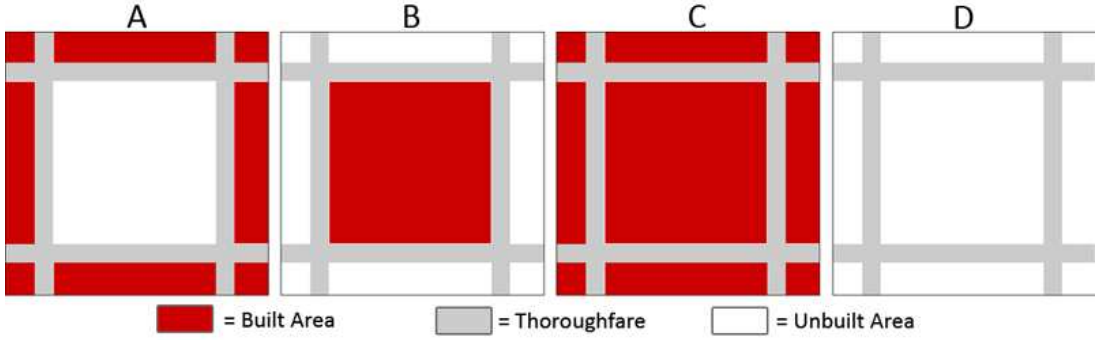
4.8. Assessing morphological urbanity of market squares – the properties

4.8.1. Introduction

This subchapter provides a broader, more practical deconstruction of the different properties of a market square (enclosure and legibility), where the four variables forming the base for the morphological index (integrity, compaction, composition and cohesion) are introduced and discussed. A succinct conclusion is formulated in 4.8.4.

In order to isolate what makes a market square urban it is necessary to deconstruct it. In the most general sense, a market square is a place enclosed by walls of buildings (frontages) which define its space (interior). An important observation is that perception of that space is actually limited to the plane of the surrounding walls, while 'space' is merely a perceived phenomenon of depth (Sumień 1989: 166). Therefore, in the context of a market square, space corresponds to an inner unbuilt area (interior) surrounded by a built area (frontages), save for the apertures created by the entering streets (fig. 4.8, A).

Tab. 4.8. Proportions between built and unbuilt area of market squares; different scenarios.



Source: Own work

However, if we would reverse these conditions, the market square would become a housing bloc (B). Furthermore, should we reinstate the surrounding frontages, the 'market square' – or what is now left of it – would be confined to the space of the street channels (C). On the other hand, if we removed the built areas completely, we would come down with an empty field (D). Since a market square is neither a field, nor a street channel, and most definitely not a housing bloc, while assessing the semantics of a market square we should strive for a maximum of unbuilt inner space and a minimum of unbuilt outer space – or, conversely, a minimum of built inner space and a maximum of built outer space. Therefore, in order to sustain the market square's function and form, the aspects of *spatial legibility* and *physical enclosure* must be dealt with collectively.

In the next subchapters, I will delineate some themes that will impregnate this study, particularly its methodology. The proposed methodologies will revolve around four variables (for each variable a separate index will be constructed

[25] Wejchert, in his detailed study on the morphology of the smallest of Polish towns (Adamczewka-Wejchert & Wejchert 1986: 11-76) has found certain characteristics. Following summary is a synthesis of his main findings regarding market squares. The squares of Polish historic towns are mostly rectangular (86.5 %); sometimes irregular (4.4 %) or triangular (2 %), and some towns lack a square altogether (2 %). Most of them are oriented north-south ('twelve o'clock'), while the lengthwise relation between frontages of rectangular squares comes often in ratios 1:1 or 5:4. The length of square frontages ranges from 40 m to 225 m, with the most common square size being 80 x 90 m. In regard to location of main thoroughfares within market squares, the most common types are: (1) two corner-wise roads crossing in the middle; (2) two roads running along two adjacent frontages; or (3) one corner-wise road passing diagonally. The most common number of streets/roads entering the square is eight The most prevalent market square-adjacent lot type in small towns has a width of 9-10 m, a depth of 38-48 m and an area of 300-500m^2. Such lots are usually rectangular, most often parallel (40.6%), less often non-parallel (34.3 %) or oblique (40.6 %). The most recurring lot type is one with a front-oriented main building that is compacted against the building in the adjacent lot, alternatively with a narrow passage on one side leading to an empty backyard (no outbuildings). The placement of the main building is always along the front line (not at some distance further back). The most important element of a square-adjacent lot is its front, making an imprint on the architectural expression of the square, the town's main urban feature.

in chapter six), which were found to be of greatest importance for such an assessment (cf. Dymitrow [2010] 2012) and will be elaborated in more detail in the following subchapters. The examined variables (and their definitions) are:

- *Integrity* – denotes completeness of the frontages
- *Compaction* – denotes lack of fragmentation of buildings that make up the frontages
- *Cohesion* – denotes lack of disruptive elements within the square's interior
- *Composition* – denotes the most favorable customization of the square's interior

Table 4.2 shows how these variables are structured and related to each other. The first two are of a physiognomic character, because they deal with the built part of the square; this refers specifically to the surrounding frontages which mark the square's *enclosure*. The latter two are spatial themes, as they define the structure of the market square's interior and, as such, its *legibility*. Enclosure and legibility are, in turn, indispensable for a market square to remain an effigy of urbanity, i.e. a physical manifestation of an abstract concept. A methodological approach must also deal with the interrelations of these two pairs of aspects; for instance, compaction is not possible if there is no integrity, therefore integrity defines compaction and compaction is a derivative of integrity. Summarily, interrelations dictate the order and the hierarchy of how urbanity is achieved and perceived accordingly.

Tab. 4.2. Market square variables studied in this thesis, along with their properties and interrelations

Studied variable	Morphological theme	Qualitative attribute	Interrelation
Integrity	Physiognomic	Enclosure	Defining
Compaction			Derivative
Cohesion	Spatial	Legibility	Defining
Composition			Derivative

4.8.2. Enclosure

Market squares come in a variety of different styles. Zucker (1959) distinguishes five types: the *closed square* (self-contained); the *dominated square* (directed towards a main building); the *nuclear square* (formed around a center), the *grouped square* (combinations of spatial units that form a larger composition); and the *amorphous square* (unlimited space). Moughtin & Mertens (2003: 123) argue that in any case, the most important physical quality of a public square is *enclosure*, a quality that leads to a feeling of being enclosed. Indeed, removing the enclosing frontages would reduce the square's essence to that of a void. It is therefore similar to Myczkowski's (2009) concept of *structure*, introduced earlier in chap. 4.7.3. Lynch has found that when the space within a node has a distinct form, directional quality and stands out in sharp contrast to the general character of the city, it becomes memorable. For example, even though ordinary street intersections are nodes in theory, they lack the prominence of nodes and are only perceived as incidental crossings of paths. This is also true to the fact that an urban image cannot carry too many nodal centers[26] (1960: 76-78).

One important question a researcher might ask is whether perceived urbanity of market squares is dependent on their dimensions in terms of size, shape and height. In 15 BC, Vitruvius observed that 'a square should be proportionate to the number of inhabitants, so that it may not be too small a space to be useful, nor like a desert waste for lack of population' (in: Moughtin & Mertens 2003: 87). This old contention still seems to be poignant. In Poland, for instance, all kinds of size variants can be found. Disregarding the squares in big cities, whose urban significance is starkly reduced in any other sense but symbolic, some larger (and undoubtedly urban) of small towns have squares that are rather unimpressive; for example, Iłża with 5.400 inhabitants has an insubstantial square of roughly 0.30 ha (17.200 inh./ha). Contrarily, some minuscule degraded – and questionably urban – towns like Gliniany with 300 inhabitants boast an impressive square that is more then eleven times larger (3.17 ha; 125 inh./ha). Departing from these extremes, it could be drawn that urbanity of Iłża is hardly derived from its strictly nominal market square, while the huge square of Gliniany – using Collins' & Collins' (1986: 183) words – 'yawn[s] emptiness and oppressive ennui'. Moughtin & Mertens (2003: 100-101) suggest that such squares should be converted into parklands edged by three-dimensional buildings, and this is exactly what Gliniany's square has been transformed into. Square size is a variable dating back to the towns' origins; in Gliniany's case, the square was made so big because of the enormous economic importance of locating real estate *within* the square (Adamczewka-Wejchert & Wejchert 1986: 22). Today, when Gliniany is just a little village, its square is virtually unnoticeable in the field because its grandeur is both unanticipated (contextually alien for such a small unit) and unperceivable (too large to grasp visually; furthermore its enclosure is not visible because of the trees)[27]. One can therefore assume that few cities could carry extremely large squares and these cities must also be

[26] Note that this is very much in line with the morphological structure of most small towns, where there is, for similar reasons, only one market square.

[27] Based on my own recollections from field studies (2011).

considerably large. Furthermore, the *absolute* size of the square has a bearing on its resulting degree of enclosure. According to Sitte (1901), the maximum permissible size of a square is 137 m; also at around this threshold (135 m) falls the the upper limit where body gestures can be discerned (Moughtin & Mertens 2003: 101). According to Kühnel's classification (1918: 41, 85), large squares are those exceeding 200 m in length, while small ones are those shorter than 75 m.

Ziębik (2008: 316) claims that the more geometrical the shape of the market square, the more enclosed it seems[28]. In small towns, whose morphological urbanity is largely dependent on their market squares, the square's ratios may be of importance, as overly oblong squares assume the spatial characteristics of widened streets, and a consecutive 'loss' of the square notion. Sitte, although he did not find any evidence indicating preferred length-to-width ratios, noted that 'overly long plazas in which the ratio of length to width is more than three to one already begin to lose charm' (Collins & Collins 1986: 183); this is also true to the ideas of P.D. Spreiregen (1965: 19). Vitruvius' (15 BC) ideal ratio was 3:2 and Alberti's (1452) 2:1. Some defiantly narrow – yet great – plazas like that of Piazza Navona (ratio 1:5) can also be mentioned (Moughtin & Mertens 2003: 107); however, I would argue that Piazza Navona is one of *many* squares in Rome and not the single dominant space of a small degraded Polish town, whose urbanity probably cannot accommodate such architectural idiosyncrasies.

Borcz *et al* (2009: 61) contend that the sense of enclosure is also dependent on how good a view of the whole square one can obtain from any point within its interior. The perception of a square as such is also determined by the height of the enclosing buildings. According to most theorists, 27^{o} is the maximum angle at which a building can be seen clearly, i.e. at a distance that equals about twice its height. For an appreciation of a full frontage, the distance-height ratio should be 3:1, while a full viewing of the whole square (by rotating from its central point) would require a width-to-height ratio of 6:1 (Moughtin & Mertens 2003: 101). Since squares of most degraded towns in Poland are enclosed by low (one- or two-storey) buildings viewed at a $10\text{-}14^{o}$ angle, this problem is seldom applicable; on the contrary, sense of enclosure may be lost due to insignificant building height, and even enhanced if the square's size should be excessively large (cf. Adamczewka-Wejchert & Wejchert 1986: 27-28). In the same vein, large squares such as the Red Square in Moscow, although framed by tall buildings on all sides, lack in fact perceived enclosure, and do not fall within the classification of a town square (cf. Moughtin & Mertens 2003: 101).

Since a public square presupposes a high degree of physical enclosure, the next question should be how such enclosure is manifested. I would argue it all breaks down to the basic aspects of *integrity* (existence of buildings) and – in the context of this study[29] – *compaction* (horizontal configuration of these buildings).

Integrity

The concept *enclosure* implies presence of a series of physical objects that encircle a space. Conversely, lack of buildings as a result of demolition disintegrates the square's walls (Ziębik 2008: 316)[30]. A market square without full frontages could be likened to an architectural phenomenon described by Cullen (1971: 73) as 'noticeable absence'. Cullen gives the example of a 'crucifix' where the cross has been removed, thus leaving only the figure of Jesus Christ in a crucified position. Although still identifiable, the omission of additional elements (for instance, a reposition of the extended arms) would most likely distort the perception of such sculpture as a crucifix[31], given that its basic element – the cross – has already been eliminated. Therefore, it is fair to assume that the more identifying element is removed, the less likely will the perception of such feature be congruent with its intended purpose. The *integrity* of any object – be it of a crucifix or a market square – is consequently an indispensable property for that object to be identified as such.

Compaction

Although integrity marks the general enclosure of a market square, compaction is a variable defining its quality. According to Moughtin & Mertens (2003), an enclosed square should be two-dimensional. In that sense, the authors bring forth the issue of horizontal configuration of the buildings that make up the square's enclosure:

[28] According to Ziębik (2008: 316), enclosure is also stronger when the buildings present an architectural unity and if the square's corners are emphasized by differing form, height, color and facture.

[29] By context I refer to: (1) the methodological approach (remote sensing) which eliminates study of building height as a contributing factor to enclosure; (2) the morphogenetical structure of the examined town squares, whose building height is limited to relatively low buildings (one- or two-storied), and whose enclosure is determined by horizontal rather than vertical configuration of the buildings (cf. the next section on *compaction*).

[30] In rare cases one of the walls may be purposely substituted by a vista. For instance, many hill towns of southern Italy or Sicily have public squares where one of the four surrounding side is a view of the countryside (Moughtin & Mertens 2003: 108-109). Such arrangement is not particularly common in Poland; however Horodło is a good example of a hill-fronted southern frontage, while the eastern side of the square in Uniejów faces a park.

[31] Latin: '*fixed to a cross'.*

> The closer the walls of the square or plaza resemble the two-dimensional quality of the internal room, the greater will be the feeling of enclosure. The greater the three-dimensional modelling of the surrounding buildings, the greater will be the reduction in this sense of enclosure in the public space. Enclosure is lost, for example, if the sides of the space are designed as three-dimensional individual villas standing in isolation as three-dimensional pieces of architectural sculpture (…). The buildngs around an enclosed space should form a continuous surface and to present to the viewer an architectural unity. The effect of the mass of individual buildings has to be reduced in order to preserve continuity (Moughtin & Mertens 2003: 101).

Enclosure is not only achieved by lack of fragmentation within the enclosing frontages. Also important are aspects such as the location, number and width of the entering streets, as well as the type and height of the enclosing buildings, and their relation to the absolute size of the square. The importance of frontage compaction is heightened within (1) squares of big dimensions; (2) squares with low, one-storied physiognomy; and (3) squares with a large number of street gaps (Adamczewka-Wejchert & Wejchert 1986: 27-29). Given that Polish small-town squares usually display qualities 2 and 3, and often also 1 (cf. footnote in chap. 4.8.1.), it is fair to assume that the impact of compaction on the sense of enclosure in such squares is of particular importance.

I would argue that compaction can be analyzed on two levels: objectively (either enclosed or not, as depicted above) or subjectively, i.e. in regard to what compaction really stands for (association of enclosure with a specific mindscape). In my opinion, this is so, because compaction is closely associated with a specific – urban – building type. While traditionally rural physiognomy seldom involves compaction as a result of areal land use economy, urban physiognomy is often compacted due to the specific function of an urban area that is expressed in territorial density and higher land prices (cf. Pacione 2009: 158-160 on patterns of consumption). In order to accommodate a maximum of people in a minimum of area, the latter is also associated with a multi-storey architectural style, which is not substantial in a rural context. Therefore, a fully integral yet loosely compacted market square is unmistakenly a market square; however, a market square that is both full and compact is perceivably more urban as it is composed of strictly non-rural physiognomy.

4.8.3. Legibility

Besides enclosure, the other very important aspect of a market square is the *legibility* of its elements, including the relations between them, and their quality (Ziębik 2008: 316). Furthermore, an understanding of the image of a place through its legibility is fundamental for most urban developments (Moughtin *et al* 2003: 202). Although a market square's legibility is certainly dependent on its degree of physical enclosure (the quality of its frontages), in this context, I treat frontages as a *prerequisite* for a market square to be even classified as such. Instead, I see the quality of the square's interior as the determinant of the square's degree of legibility. In other words, the square's prerequisite – enclosure – should be clearly perceivable both in regard to the frontages and the interior itself. Such understanding is similar to Violich's (1983) and Myczkowski's (2009) concepts of *readability* and *exposition*, introduced earlier in chap. 4.7.3. Although mostly pertinent in terms of visibility, legibility is also indirectly connected with land use (function) and quality (clarity and maintenance). Fig. 4.9 shows two extremes, the fully legible square of Pilica, and the highly illegible square of Końskie; in the latter, you cannot tell whether the environment is urban or rural, because trees and bushes may appear in both contexts.

Fig. 4.9. The degree of legibility of two market squares: Pilica (left) and Końskie (right).

Photo: M. Dymitrow

Composition

Composition in this context should be understood as the most favorable customization of the square's interior in terms of historically shaped spatio-functional adaptation. According to Moughtin & Mertens (2003: 90), 'in any composition there is a need to emphasize some parts and subordinate others; this is the art of design'. Now, which parts should be emphasized and which subordinated? Let us start with table 4.3 which shows a selection of Poland's arguably most famous historic town squares, along with their spatial properties; it becomes clear that *open space* is the most desirable feature. The same trend can also be observed within current ideals in spatial planning of market squares, emphasizing a maximum of open space that is accompanied by a limited use of punctual trees, minor lawns and sundry decorative features (fig. 4.10). Contrarily, fig. 4.11 shows that the reality may be quite different, as many of the less known and 'untrendy' squares of degraded towns seem to defy every law of urban design. Here we find a full range of land uses, starting from barren overtness, moving on through cluttering buildings, parking lots, dangerous road junctions, high-vegetation parks and wild-grown lawns, finally ending with inaccessible jungle-like thickets. How is one to assess which is 'urban' and which is not?

Tab. 4.3. A selection of some of Poland's arguably most famous historic town squares and their spatial properties.

Town *Square name*	Town population	Square area (ha)	% of the total square area			
			Open public spaces	Restricted public space	Penetrable real property	Impenetrable real property
Cracow *(Rynek Główny)*	756.000	3,80	87	0	0	13
Gdańsk *(Długi Targ)*	457.000	0,66	100	0	0	0
Kazimierz Dolny *(Rynek)*	3.750	0,35	100	0	0	0
Lipnica Murowana (*Rynek)*	720	0,38	84	0	16	0
Jelenia Góra *(Plac Ratuszowy)*	86.200	0,82	44	0	40	16
Poznań *(Stary Rynek)*	548.200	1,90	70	0	0	30
Sandomierz *(Rynek)*	25.740	1,00	95 (37[32])	0	0 (58[32])	5
Warsaw *(Rynek Starego Miasta)*	1.678.000	0,65	100	0	0	0
Wrocław *(Rynek)*	622.500	3,60	69	0	0	31
Zakliczyn *(Rynek)*	1.500	1,75	47	7	42	4
Zamość *(Rynek Wielki)*	66.200	1,00	97	0	0	3

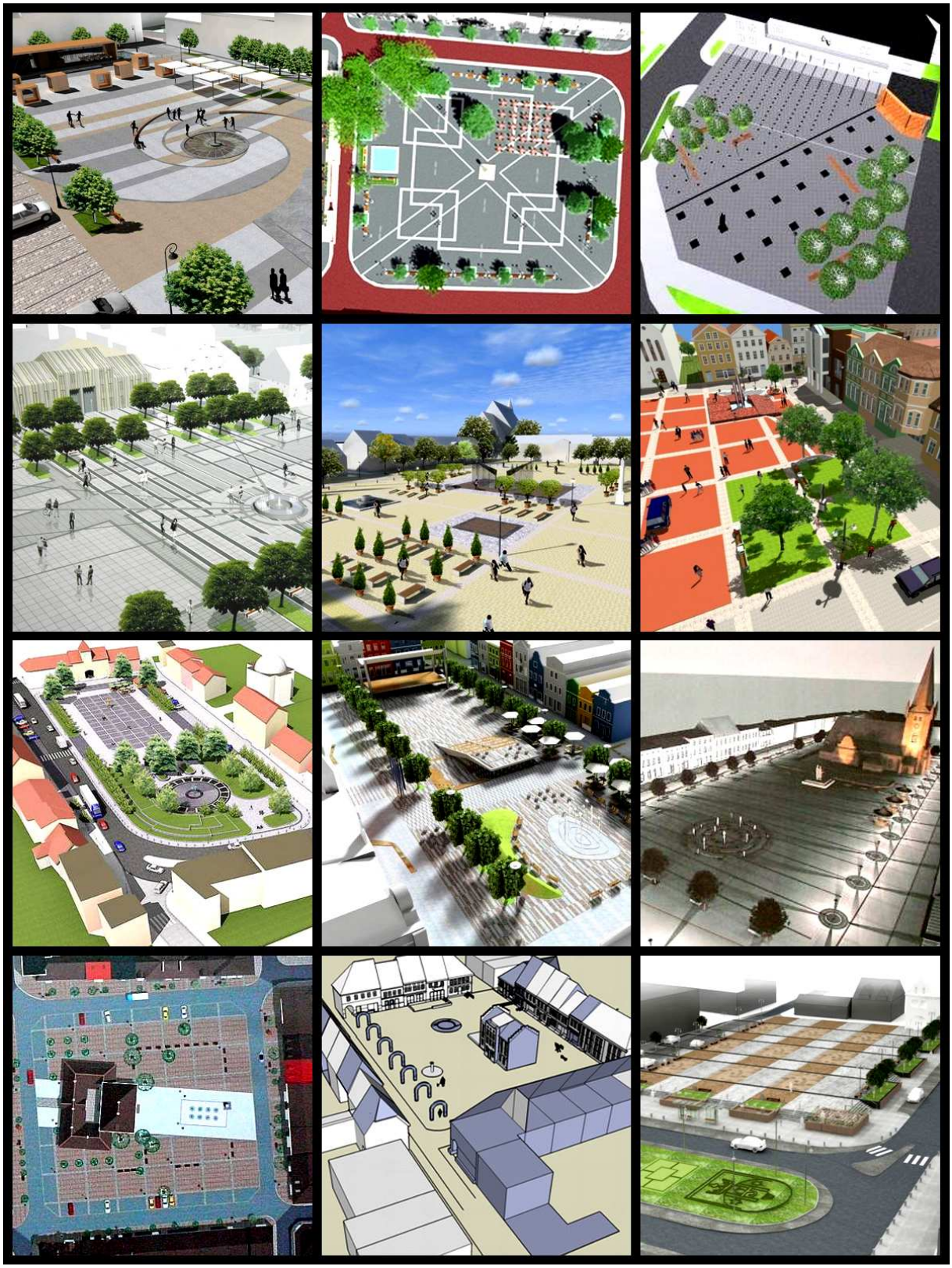
Source: Own morphometric calculations based on satellite imagery. Demographics from GUS (2009).

According to Cullen (1971: 46), the layout of the spaces in which the public moves is a matter having a direct impact on the emotions. In the context of this study, let us assume that these emotions pertain to the level of perceived urbanity as derived from certain traits found in market squares. The interior of the market square comprises the square's 'floor', whose attractiveness is dependent on the proper composition of its elements (Ziębik 2008: 316). In order to analyze the composition of market squares, Moughtin *et al* (2003: 25-59) introduce a variety of basic (often overlapping) urban design concepts such as order, balance, symmetry, scale, proportion, rhythm, contrast and harmony. All these tools, however, are aimed primarily at the aesthetic qualities of urban form, whose role – in the context of this study – is subordinate. It is therefore more important to determine which features (or lack thereof) of the square's spatial composition are likely to evoke urban associations. In order to arrive at that, it is crucial to recall what a square is in terms of form and function. In terms of function, there are a number of analytical methods designed to qualify different types of land uses as either town-center-specific or not (cf. Parysek *et al* 1995). Seeing market squares as synonymous with town centers in small towns, such land use analyses may be instructive. Principal town-center-specific features include retail, services and administration, while auxiliary town-center-specific features are communications, green areas and economic areas. It gives a total of six features that can be calculated to produce a set of indices, where different values/intervals indicate whether the analyzed area has the specifics of a town center or not (Słodczyk 2003: 115).

In terms of form, the discussion must be brought to a more abstract level. The role of urban design is to bring some sort of order out of chaos. Having in mind preferential differences stemming from the individualities of architects, as well as occurrences of haphazard collections of architectural elements, it is important that the basics of urban design subscribe to some form of unity. The concept of unity leads to a study of the characteristics of unified composition, where the aim of the elements is to form a coherent visual statement. This is achieved through the use of proportion, i.e. by giving due weight to compositional elements. Unity is therefore 'the first and most important of the basic design concepts in the grammar of formal architectural composition' (Moughtin & Mertens 2003: 30-31; 33). Now, what does unity mean in terms of visual coherence when applied to market squares?

[32] Until 1 May 2007 when a total traffic ban was enforced

Fig. 4.10. Current ideals in spatial planning employed in market squares in Poland emphasize a maximum of open space, and limited use of punctual trees, minor lawns and small architecture. Examples from (left to right, top-down): Sieradz, Brzesko, Tarnogród, Węgrów, Olkusz, Bytów, Kruszwica, Puck, Czarnków, Przasnysz, Pyskowice and Olsztyn (by Częstochowa).



Source: These low-resolution reproductions of copyrighted material are enclosed on a fair use basis in order to convey the ideas of some prominent contemporary architects. The sources for the plans used in this collage are listed on p. *xi* in the prefatory section.

Fig. 4.11. Different types (extremes) of market square composition (left to right, top-down): Kazimierz Dolny – the epitome of a perfect Polish small-town square; Koszyce – full overtness, possibly too barren to be functional; Tarnogród – a clutter of centrally located buildings; Nowa Słupia – mostly a parking lot; Książ Wielki – a dangerous road junction; Ryczywół – a tall-vegetation park; Dębno – unpaved area and wild-grown lawn, wasted central space; Gliniany – inaccessible jungle-like thicket.

Photo: M. Dymitrow

Departing from the perspective that urban life entails the coming together of strangers, public space should be open (Pacione 2009: 159), while lack of open space deprives the square of such function (Błeszyńska-Koclęga 2005). According to Shalabi (1998: 64), the underlying feature of a square is that it is composed of terrain and contains very few buildings. This is much in line with the outline in the introduction that, from a technical point of view, a square should comprise a maximum of built outer space and a minimum of built inner space. However, given the wide range of architectural and functional designs employed in different market squares around the world, such division would seem overly simplistic. After having examined a study listing the worse sixteen squares in the world (PPS 2005b), I were able to discern following main objections that were raised against them: balance, symmetry, scale, proportion, rhythm, contrast and harmony. Most of these tools are however primarily aimed at the aesthetic qualities of urban form, which, in the context of this study, play a subordinate role. It is therefore more important to determine which features (or lack thereof) of the square's spatial composition are likely to evoke urban associations. In order to arrive at that, it is crucial to recall what a square is in terms of form and function.

In terms of function, lack of accommodation to pedestrian use was often mentioned, such as vehicle dominance within the square, but also the square's single-use adaptation (few options) and inflexibility (control over people's actions). The latter objections are closely associated with functional barriers such as various impediments to pedestrian flow, discontinuity (fragmentation of space) and isolation by massive roads; but also the opposite – desolation resulting from lack of accessibility. Lack of proportions was another frequently addressed issue, particularly the over-dominance of centrally located structures, as well as the square's oversize (lack of reputation to match its size), giving the impression of a void. Occurrence of contextually alien elements, such as parks (found to keep people away) and structures inherent to 'fortress mentality' was also subject to refutation. Finally, lack of stylistic congruence was often advanced as a negative factor, expressed in dissonances between history and modernity, and in squares that were more design statements than functional places.

Disregarding the latter, purely aesthetic, aspect, all others are conditioned morphologically. Summarily, the desired openness associated with pedestrian utilization can be said to have been disrupted, in one way or another, by following three main elements of spatial composition: greenery, centrally placed buildings and thoroughfares. Fig. 4.11 shows a selection of Polish, compositionally different, market squares, and how extreme imposition of certain elements affects their entire look. In the next subchapters, these elements will be examined in more detail in order to determine their impact on the overall urban perception of market squares.

Greenery

> [*On Market Square in Houston*] They need to get back to the more basic idea of "place" (…).But we were told that Market Square was a "park," and as such, no commercial activity could take place there. Decision makers chose a silly design that did nothing but continue to keep people away (PPS 2005b).

> [*On Plac Narutowicza in Bełchatów*] Cut off from the rest of the city by busy streets, this downtown quarter does feel repulsive. (…) [t]he square is a hybrid of a sloppy parking lot and a green belt. Although this is the heart of the city, in the park, you might get hit in the face (…) (Polak 2010).

According to Ziębik (2008: 316), various kinds of trees and bushes within the square's interior can be used to achieve positive diversity. However, even though a square should not be barren, it cannot be turned into a park – as the initial quotes indicate. In Poland, for instance, many market squares lost their function of urban spaces during the Interbellum and the Communist era. After relocation of trade to distant areas, many squares were transformed into lawns or parks (Kühnel 1918: 38), some of which evolved into disheveled, inaccessible tracts or into dark thickets serving as dens for alcoholics. Following account is the case of the degraded town of Radoszyce:

> Until the 1960s, the square was covered with cobblestone and had the function of a market place. In the 1970s many trees were planted here, mostly limes. The trees had no botanical value in terms of species or size. There was one lighting pylon in the middle of the plot, all covered with trees. By night, the square was submerged in darkness and was a dangerous place for the residents. Nightly drinking bouts and fights often took place here. Groups of gallivant youths vandalized the benches and threw garbage out of the litter bins. In the public interest, in order to change [improve] the image of the town, it was necessary to change the composition of the square (…). It was important to once again show off the historic town plan, which, without the removal of some of the trees, would not have been possible (Radoszyce UG 2010, my translation).

Morphological alterations automatically imply a change of function, and such change entails consequences; not only for delinquents and addicts, but also for diligent citizens who find themselves exposed in a previously sheltered environment. However, many residents' objections towards removal of too much vegetation from the square have been countered by Pelc (2010) and Błeszyńska-Koclęga (2005), architects in charge of square revitalization in Tarnogród and Pyskowice, respectively:

> The market square was [traditionally] a big urban market place and never a lawn or a park (Pelc 2010).

> The interior of the market square has unfortunately taken on the character of a district park. The composition of greenery does not express any particular idea; it only splits the space into [different] areas. The overly high and disordered composition of greens blocks the view of individual important elements of the market square (Błeszyńska-Koclęga 2005).

It could therefore be assumed, that with the advent of the idea of returning to historical values of market squares, such places should neither be parks[33], nor oases from bustling city life, but most importantly, they should not serve as rampantly grown hideaways for marginalized people. Such reasoning could be rationalized by pointing out that there are real parks, out-of-town natural resorts and social shelters for such purposes. Moreover, we must not forget that a square is per definition the most central and most frequented part of a small town. As such, it is synonymous with exposition, even if it may take some time to become accustomed to it. Beside these socio-functional aspects, tall greenery (parks) is also the main reason for concealing a market square's urban ambience, while low greenery (lawns) could be regarded as a waste of valuable central land. Therefore, while utilizing greenery as a stylistic means within squares, it is important to remember about the right proportions. This assumption is also true to most current revitalization plans (fig. 4.10).

Centrally located buildings

Departing from the assumption advanced in the section on greenery, buildings placed centrally within market squares may also contribute to the obscuring of the square's enclosure, probably even more so, due to their lack of translucence. However, whereas greenery within market squares was traditionally an alien element, some types of central buildings are nevertheless historically inherent to town squares. This is mostly true to town halls and cloth halls[34].

There are two main ways in which buildings can be arranged in space. In the first, buildings are seen as three-dimensional, positive objects standing as figures in a spatial composition where space is synonymous with ground. In the other, advocated by Sitte (1901), the space is seen as a figure, whereas the buildings act as a background (Moughtin & Mertens 2003: 84). I would say that in the case of centrally placed town halls or cloth halls – some of which may assume quite impressive dimensions – a conflict between the two concepts is bound to arise. Such buildings are indisputably three-dimensional units that dominate the space, whereas the main feature of a square's interior should be its spatial volume to which the enclosing frontages act as a stage setting (cf. chap. 4.8.1).

Kühnel (1918: 41, 85) argues that in large squares (200 x 200 m or more) a sizeable central edifice is justified in that it counteracts the sense of emptiness. Contrarily, he stresses that town halls situated in the middle of *small squares* (75 x 75 m or lesser) should be removed, elsewise the place will lose the character of an urban square and become a secondary feature. Removal of such buildings, regardless of their function, is even more expedient should they be devoid of architectural or historic values. Indeed, town halls are sometimes found fixed in one of the frontages, like in Oleśnica, Dobrzyca or Stawiszyn, but more often than not, they are free-standing structures (fig. 4.12)[35].

Town halls are not the only (potential) problem. For instance, in Communist Poland, market squares were seen as pieces of empty space that could be economized accordingly to existing needs; not seldom could this involve cramming the interior with bland industrial or commerical buildings. According to Kühnel (1918: 41), the only permissible central buildings are those belonging to the public administration (town halls), much less commerce (cloth halls), and *never* private houses. He also argues that local authorities should firmly prohibit stuffing the square with sheds and kiosks, a conduct permitted in order to collect impositions from marketers (pp. 38-39). Ziębik (2008) addresses this worldwide phenomenon from a current perspective, by discussing the role of outdoor cafés and beer gardens:

> In a way, they invite people, but very often they occupy the floor space and their form is unaesthetic. The right relations between the commercial and free square surface should be preserved. In other way, the market square is no longer a public space (Ziębik 2008: 316).

Although impervious to the square's functional aesthetics, temporary installations such as beer gardens as well as other permanent furnishings belonging to the group 'small architecture' (benches, street lamps, fountains, gazebos, wells etc.) are small enough, and actually urban-specific enough not to obscure, but rather to *add* to the urbanity of

[33] A noticeable exception to this rule is the famous spa Busko-Zdrój, whose square (*Plac Zwycięstwa*) is part of a three-part curative park system (*Park Zdrojowy*) designed by Enrico Marconi in the 19th century (the other parts being the Baths Garden and the avenue *Aleja Mickiewicza* (Ośrodek Działań Ekologicznych "Źródła" 2010).

[34] Cloth halls, despite the name, were not only intended for retail of textiles.

[35] Most town halls, especially in small and degraded towns, have been destroyed or liquidated (cf. Drobek 1999). Nevertheless, the problem with oversized buildings remains in form of later constructions.

market squares. It would therefore seem that the issue of central structures pertains specifically to those of excessive height and cubature. As with greenery, it all breaks downs to the right proportions between the size of the central building and the size of the square. As tab. 4.3 shows, the share of central buildings in some of Poland's most famous squares differs a lot. If a square is large enough it might get away with up to 30 % of built space, like in Poznań and Wrocław (which I personally find too crowded). The area of Cracow's Main Square taken up by buildings (most notably its trademark Cloth Hall) accounts for circa 13 %. Being the ideal example of a famous market square – arguably the largest and one of the best in Europe – one could assume that a level of some 10-15 % is the most appropriate share, provided that the town square is not too small.

Fig. 4.12. Different types of town halls located within market squares. The first four are fixed into one of the frontages ('two-dimensional'); the remaining nine are free-standing structures in the square's center ('three-dimensional'). Left to right, top-down: Dorzyca, Oleśnica (near Staszów), Stawiszyn, Kaźmierz, Bnin (part of Kórnik), Szydłów, Rychtal, Władysławów, Kamionna, Baranów (near Kępno), Sarnowa (part of Rawicz), Białaczów and Rostarzewo.

Photo: M. Dymitrow

Thoroughfares

Market squares are historical features that were established long before the introduction of motor vehicles, while the roads leading to them were originally designed to carry pedestrian and horse-and-cart traffic. Market squares were often unpaved, and, due to lack of separation, both forms of traffic were intertwined. With the advent of motor traffic

the squares had to adapt to accommodate this new alien element. Depending on the size of the square and the spatial structure of the streets entering it, such adaptation has come with different degrees of success (cf. Kühnel 1918: 42-48; Kazimierski 1994: 27-28). Thoroughfares within squares, are therefore an evolved, yet intrinsic part of such places, and must be considered an urban feature. As modern urban features, thoroughfares are also a matter of non-morphological concerns such as personal safety (traffic restrictions) and comfort (limitations to exhaust gases, noise etc.). Main streets within squares have today a dual function; they provide access to the area and at the same time they carry superfluous transit traffic, while subsidiary streets and sundry access roads – frequently used as temporary parking places – disrupt the legibility of a square (Błeszyńska-Koclęga 2005). The last observation shows that spatial configuration of thoroughfares is not only a matter of convenience. A disrupted market square may actually distort the perceived shape of its actual area, even if its enclosure is fairly intact. Consider the following example from Knyszyn, a town in northeastern Poland (fig. 4.13):

Fig. 4.13. Different ways of perceiving the outline of a market square due to disruptions in legibility created by thoroughfares. Example form Knyszyn, Poland.

Source: My adaptation of imagery from geoportal.gov.pl[36]

If we regard the square from a bird's perspective (A), some of us may discern its area thematically, i.e. in regard to the dominating, most uniform land use form – the park (B). After a closer inspection it becomes apparent that the market square actually extends northwards and that the distracting large building posing as its northern frontage is actually a centrally located feature (C). Only after some time do we finally notice that a big chunk equaling approximately 1/3 of the market square has been missed out; most probably due to the detachment of the eastern section by a major road, as well as the section's further disjointedness by a complex system of subsidiary roads and walkways. Since the eastern section lacks the spatial characteristic of a market square in terms of unobstructed pedestrian usability, it creates the impression of a much smaller area. I believe that we humans are constantly looking for some kind of order (cf. Jadon 2007); we categorize the space around us as allowable or not, agreeable or not, penetrable or not; in other words, we look for legibility. Therefore, elements disturbing the conformity and legibility of the market square (which is beforehand associated with a certain standard) may easily be disregarded. Given the fine physiognomic integrity of Knyszyn's square and the seemingly unnecessary subdivision of its eastern section, the imposed lack of legibility is hereby unfortunate.

Despite disturbances to legibility, the spatial configuration of thoroughfares within a market square is also a premise for the quality of a square's overall composition. In Knox's study on environmental quality in urban areas (1976), full separation of pedestrian and residential traffic is seen as an amenity, whereas intrusion of through traffic and other unsuitable traffic results in penalty points (p. 103). In enclosed spaces such as town squares, vehicle dominance is much more severe:

> Nowhere can you find so vast an expanse of vehicle-dominated space that is less necessary than Place de la Concorde [in Paris]. The vehicular space could be reduced by 80 % and there would still be a smooth flow of traffic. Instead of an enormous void, this could be the central point in all of Paris – a historic destination, a gateway/transition space, and a great event center (PPS 2005b).

For instance, a market square consisting of 20 % vehicle area that would, hypothetically, be accumulated in one of the square's corners, would leave an 80 % monolithic area that could be composed in a way that would ensure an adequate form and function. On the contrary, if that same area would be spread around the whole square (frontage-parallel streets, crossroads, roundabouts, connectors), it would leave the remaining 80 % totally fragmented, with no rational way to sustain the form and function inherent to a town square. Pedestrian areas would be confined to small islands amidst heavy traffic, with low attractivity and, most probably, low frequency as a consequence (cf. PPS 2005b on *inflex-*

[36] *http://maps.geoportal.gov.pl/webclient/default.aspx?crs=EPSG%3A2180&bbox=760596.9573990909,612046.9384516729,761744.6136490909,612612.5634516729&variant=ORTO (2011-06-19)*

ibility; Violich 1983 on *freedom of choice*). In a square of full integrity and satisfactory compaction, a fragmented square would most likely *not* be perceived as less enclosed and therefore as less *urban* per se (thoroughfares are planar, non-obscuring features), but it would certainly foreclose any urban-specific functional development of such square (fig. 4.14, left). A non-functional, *morphologically* urban square could coincide more with the concept of an urban dummy with dubitable outcome on its urban perception. Also, a fragmented square does not prohibit the isolated islands to be filled with obscuring elements like trees and buildings (fig. 4.14, right) as such a space cannot be used pliably for purely pedestrian purposes. Therefore, given the durability of town plans, thoroughfares are not only *elements* of a square's spatial composition, but also *determinants* of the quality of its overall layout. In that sense, thoroughfares determine the square's level of spatial cohesion, a conceptually different variable that will be elaborated next.

Fig. 4.14. Two examples of unfavorable market square cohesion. *Jędrzejów* (left): a wasted square in terms of both cohesion and composition. Despite full integrity and compaction, the interior consists of a heavily trafficked roundabout with an inaccessible, de-pedestrianized central island. The whole square lacks pedestrian space (save for some narrow sidewalks); even the frontages are beset by parking lots. *Rostarzewo* (right): Extreme example of bad square cohesion resulting in poor composition and – because of the sizeable dimensions of the town hall – disturbances to enclosure.

Photo: M. Dymitrow

Cohesion

> There are active parts of the [Dupont] Circle [in Washington, D.C.], but they are not connected. The Farmers Market is separate from the inner circle and from the active part of Massachusetts Avenue. The road around the Circle is two lanes too wide, and the connections from the interior park to the edges could be dramatically improved (PPS 2005b).

Cohesion refers to the spatial configuration of a square's interior in terms of position of disruptive elements. Full cohesion denotes lack of fragmentation, with the objective of a maximum of conjoint area – a premise for an optimal economization of the square's interior. Although mostly pertinent to thoroughfares, cohesion may sometimes refer to waterways[37].

The layout of a market square is determined by existing topographical features as well as solutions to different problems, including road constructions (Moughtin & Mertens 2003: 97)**.** The cohesion of a market square is largely dependent on the size and position of the roads and streets within it. Since street layout is one morphological feature that is most resistant to change (cf. chap. 4.9.2), problems with undesirable street position that were observable some 100 years ago, are still persistent today. Kühnel (1918: 42-45) divides roads within market squares as either *main* or *subsidiary*. Main roads are major arteries which were, before the development of the railway system, the town's only link with the outside world. Usually, only one such road traverses the market square; however, occurrences of intersections and furcations are not unheard of. Understandably, main roads are of major concern for the market square's cohesion. Kühnel contends that there are only two right ways of leading a road through a market square: either along a frontage or, if the thoroughfare bends, along *two* frontages at a 90° angle. All kinds of traversal roads are impermissi-

[37] Although, practically never found within small-town squares, this is true to larger cities such as, for instance, Gothenburg and Malmö, where one of the frontages of Gustaf Adolfs torg and Slussplan respectively, is detached by the city canal.

ble; they divide the market square into two, more or less unequal parts that are difficult to customize[38]. For the sake of the market square and the road itself, Kühnel maintains that such arteries should unconditionally be either shifted within the market square to a position as described above, *or* diverted to the market square via other streets, *or* totally removed from it. Modern solutions could also include reduction in traffic volume by traffic management, or the expensive and complex task of carrying the traffic below ground level (Moughtin & Mertens 2003: 122)**.**

An extreme example of bad market square cohesion due to unfavorable relationship between road position and the built interior can be found in Rostarzewo in western Poland (fig. 4.14, right). A heavily trafficked national road is led straight across the market square, conflicting directly with a splendid town hall from 1768. Instead of diverting the road, the engineers opted for dual road channeling by *encircling* the town hall, which now remains inaccessibly stranded on a small island; a preposterous solution combining mockery of cultural heritage with a frightening experience for the unsuspecting motorist. According to Moughtin & Mertens (2003: 122), squares whose primary function is reduced to efficient movement of traffic are *squares in name only*. That said, transforming market squares into busy traffic junctions deprives the squares of their specific function (cf. chap. 4.7.2) and, as such, abates the reason for their inclusion in the category *public space*. Given that a market square, seen as a public space, is the most important feature of a town, it could be argued that a town loses a piece of its urbanity when its market square loses its essence.

Cohesion vs. economy

When disparaging the role of thoroughfares within market squares, it is also important to consider the consequences of retrenchments to traffic flow. In Poland, for instance, there were several attempts to remove traversing roads from the market squares (e.g. Siewierz and Grodzisk Mazowiecki) or to impose traffic bans within the squares' interior (e.g. Sandomierz and Wodzisław Śląski) in order to make them more cohesive (cf. tab. 4.3). Still, many smaller towns persist with the *old notion* (cf. Kühnel 1918: 43) that removing thoroughfares from the market square will inevitably have economic implications. To some extent this is still true. In the Silesian city of Wodzisław Śląski, the 2010 ban on vehicle traffic has caused severe damage to the city's economy. Transactions from businesses within the market square have plummeted with 25 % since 2009, and profits are at least 30 % lower. By dusk, the market square 'dies'; there is no outdoor life and, because of the low profits, shops stay closed on week-ends. Business owners link the disinclination toward vehicle-free trips to the town center to people having become accustomed to the comfort of their cars, but also to the competition from the easily accessible supermarkets and shopping malls (tuWodzisław.pl 2011).

Given such an example, it is of no surprise that instead of bypasses or detours many towns opt for regulation of the traffic flow. For instance, in Tarnogród, a big crossroad in the middle of the market square was transformed into a roundabout; the roads were narrowed, bicycle lanes were established, and pedestrian crossings have become more facilitated. This is a conscious prioritization of economic sustainability before ecological and social sustainability, and is dependent of the economic situation of the town in question. Small towns with low diversity, few investments and moderate or inexistent tourist attractions may see their geographic location along major roads as a booster for the economy. This is perhaps why removal of traversing roads is more incumbent upon a stable economy, which in turn is typically associated with larger towns. Still, economy notwithstanding, salvaged market square cohesion contributes to the retention of the town's physical urbanity. This, on the other hand, conflicts with the social aspect of urbanity; a 'dead' town center will most likely not contribute to the urban local consciousness (cf. chap. 4.3.1). A conclusion to this line of reasoning would be that some form of vehicular traffic should be retained within the market square, although its impact on the cohesion of the public space should be minimized.

4.8.4. Conclusion

A market square is the most important feature of a small town, often synonymous with its morphological and functional urbanity. The quality of a market square can be assessed by examinining its level of enclosure and legibility. Frontage integrity defines a market square in terms of enclosure, while frontage compaction heightens that definition, but also adds to the urbanity of a square, in that compacted buildings are also associated with a non-rural physiognomy. Although, less important than enclosure, a market square's legibility is largely dependent on the spatial composition of its interior. A maximum of open space is desirable, as tall and larges structures (such as vegetation and buildings) obscure the enclosure provided by the frontages, but it also facilitates maintaining the square's main function, which is pedestrian usability. An adequate composition is, on the other hand, dependent on a favorable cohesion of the square's interior, i.e. a maximum of conjoint area and lack of disruptive elements, particularly thoroughfares.

[38] An acceptable exception is when a road traverses a rectangular market square in the middle along the longer side, rendering two equal and fairly large surfaces.

Two market squares – a comparison

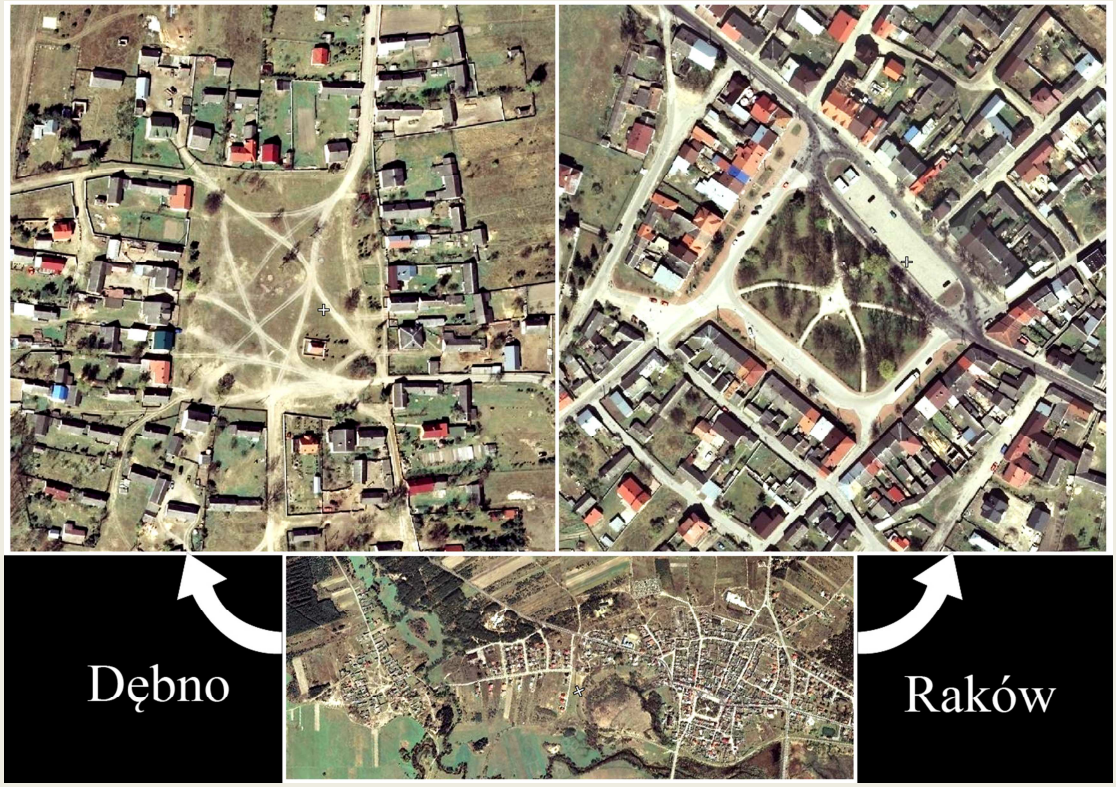


Fig 4.15. Morphological comparison of the market squares in Dębno and Raków. *Source*: geoportal.gov.pl

Consider the following comparison of the degraded towns of **Dębno** and **Raków**, only 1.5 km apart. Dębno was one of those towns degraded before the reform of 1869-70 (in 1827), while Raków was subject to reformatory degradation.

The frontages of **Dębno's** square have no compaction; all but one lack full integrity. The inner space has been ploughed up; it is entirely covered with dirt and grass. Since there are no traffic-roads (although the multiple vehicle ruts in all directions indicate autarchy) the square has full cohesion. However, that cohesion is wasted as the interior is not adapted to pedestrian use. It is admittedly fully overt, but it is too large and too desolate for such a small village (80 inhabitants). The dirt most likely turns into mud in early spring or whenever it rains and makes the space impassable. Spatial composition is virtually nonexistent; there is no sign of spatial planning, no embellishments and no small architecture save for an ad-libbed shed (chapel) and a few scattered trees. The geometry of the market square seems oddly misplaced in a rural context and the whole entity has an air of being left to its fate. Conversely, the larger **Raków** (1200 inhabitants) demonstrates a perfect example of a set of fully integral and compact square frontages. There is a clearly defined interior aimed at pedestrians – a park with alleys and an oblong overt area designated for social gatherings and casual retail (the proportions between the two should however been inversed). The streets are aligned with the frontages, thus resulting in satisfactory cohesion save for the unfortunate major road along the northern frontage. Splitting that road into two one-way traffic lanes by a stop-over island has on the one hand facilitated permeability but on the other it has truncated the overall pedestrian area and the cohesion of the interior. Howbeit, the square is visibly planned and flawlessly maintained with neatly kept walkways, lawns and vegetation, leaving an unmistakingly urban impression.

Even here we can see that the morphological resistance rules apply. The historical layout of both towns is well-preserved, whereas the physiognomy of Dębno has suffered more damage than that of Raków. On the other hand, differences in change within the land-use pattern are much more striking, with Dębno having lost its urban character altogether and Raków remaining virtually unaffected.

4.9. Morphology as a dynamic phenomenon

4.9.1. Introduction

Hitherto, I have treated morphology mainly as a static condition, an approach largely consistent with the aim of this study. However, morphology is also dynamic, although the mechanisms of its dynamics vary largely in terms of speed, intent and results. When assessing morphological urbanity, it is important to bear in mind morphology's susceptibility to change and how that change may affect the findings of an investigation. This subchapter draws a brief outline of some important themes on the subject.

4.9.2. Morphological change and resistance

When studying urban morphology, it is important to become accustomed with the rates at which different morphological elements change, and how that change affects urbanity. A town can be seen as 'a continuously changing container having inside complex mechanisms that affect the container as well' (Medda *et al* 1998: 304). The two standard morphological features – town plan and physiognomy – are considered permanent features of a town, particularly of the town center (Słodczyk 2003: 119). However, this permanence differs. Quoting MRG Conzen's seminal work on morphogenesis (1960), Pacione (2009: 137) lists three main elements of the urban landscape, each reacting differently to alteration. Land use is most susceptible to change. Buildings change at a slower rate, partly because of their capital investment value and partly due to their adaptability to alternative uses (without physical replacement)**.** The town plan, on the other hand, is a feature that is most resistant to change. Knowledge about the different paces of morphological change gain importance in studies on degraded towns, whose sometimes residual urbanity is still easily detectable in the resistant spatial configuration (cf. chap. 1.9.2). At the same time, land use changes due to the ongoing revitalization scheme (elaborated in the next subchapter) may enhance or even conjure the towns' perceived urbanity practically overnight.

Słodczyk (2003: 202) accounts for three types of mechanisms that alter the appearance of a town: the process of *filling-in* means adding new elements to existing units, thus changing their horizontal and vertical intensity. The process of *completion* means adding new units next to existing units, while the process of *transformation* is about restructuring existing units to meet desired functional and aesthetical needs. All three processes can reduce or enhance perceived urbanity of a degraded town; an extra storey (filling-in) makes a house look more urban, an extra house in an empty lot by the market square (completion) creates more urban-specific enclosure, while stylistic historization of a bland Communist-era building (transformation) makes it more uniform and less disruptive with the contextual urbanity of small towns. Morphological change and resistance to change is also a matter of preservation of cultural heritage. In regard to degraded towns in Poland, lack of formal urbanity – and thus interest in urban-specific governance – may neglect or deprioritize conservation of urban buildings and urban space. Also time is a crucial factor; for example, towns degraded prior to the urban reform of 1869-70 have a much less defined urban morphology, which is often residual or untraceable (cf. fig. 4.15). Such development stresses the crucial role of technical maintenance and confirms that the more time elapses since degradation the greater is the probability of forfeiting morphological urbanity, be it on an identity-defining or a heritage-laden level. Nevertheless, times are changing. The Communist era and its economically oriented agenda that made degraded towns a zero-priority issue is finally over. The postmodernity of the 2010s is more in line with sustainable development, where human well-being is considered to include subtleties like identity and belonging derived from tradition. This line of reasoning has not omitted the degraded towns, and particularly their morphological structure – the main remnant of their past urbanity. In the next two subchapters, the role of revitalization – a current movement aimed at restoring the towns' former glory – will be discussed, along with its impact on the towns' physical urbanity.

4.9.3. Revitalization – enhancing urbanity by stylization

For small towns with few elements that make up their physical urbanity, loss or deterioration of these elements may actually lower or erase their entire urban character. In regard to degraded towns, the long-lived formal rurality may have inhibited or stymied actions aimed at urban-specific development, resulting in physical degradation of the urban landscape. Przesmycka (2001) defines degradation as 'the result of the decrease in old traditional buildings and the emergence of new ones, departing from local traditions in terms of scale and form; often being sited without relevance to the preexisting street grid and with no concern for the consequences on the landscape' (chap. 3, my translation). Przesmycka (2001) and Sumień (1989: 146-147) also criticize the disrespect of the third dimension as a result of uncontrolled and unplanned modernizations. A similar contention can be found in Larkham (2005):

> Some of our most significant urban problems of the last century have arisen in cases where new urban and architectural forms have been developed at speed and to a large scale, but with little or no reference to existing urban form and context (Larkham 2005: 24).

Physical degradation is also a matter of maintenance. Skała (2000) has eloquently captured this in the case of Chełmsko Śląskie, a degraded town in Lower Silesia:

> If Chełmsko [were] not so terribly run-down, it would be lovely. Presently it gives an impression of a town being about to fall apart. If only given a chance it would show its beauty and rich history hidden underneath dampness, falling-off plaster and broken windows (translation by Murzyn & Gwosdz 2003).

Advanced deterioration to the physical landscape cannot be effectively reversed by haphazard renovations; instead, a holistic, far-reaching approach is needed. That is where the concept of *revitalization* comes in – a way of preserving the towns' material and spiritual heritage and a factor of sustainable development (Domański & Zbiorowski 2010).

> The planning of heritage should include rehabilitation, revitalization and renovation of certain areas. The point of departure for shaping the environment should be striving for a holistic, sustainable recognition of socio-economic, cultural, spatio-technical and ecological aspects of lives of communities that inhabit that environment. Sustainable development is unthinkable without concern about cultural identity and sense of community, nor without responsibility for the environment on a local level (Przesmycka 2001, my translation).

The concept of revitalization pioneered between 1990 and 2004 and gained momentum around 2004-2006 (cf. Skalski 2010: 3-11). The primary targets were crisis areas of larger towns, such as post-industrial and post-military plants, historical quarters and tower block neighborhoods (the latter two in terms of living conditions) (ibid: 2-3; cf. also Larkham 2005: 24). Revitalization of degraded towns was introduced much later (c. 2009-2010) and for other reasons, mainly to avert depopulation, social-economic stagnation and the huge spatial disproportions (Siemiński 2000: 22). Despite its late start, it has seen a rapid spread ever since, partially due to diffusion of innovations (cf. chap. 3.9.2) and partially due to the vested interest of local authorities to present their towns in their most favourable light (cf. Pacione: 2009: 160). However, revitalization is a costly project, and communes with limited budgets may not choose to prioritize such actions. This is particularly true to those degraded towns that do not perform administrative (representative) functions (see fig. 4.17, none of the villages are administrative seats; cf. chap. 3.9.3).

Revitalization in Poland is contemporarily understood as granting the place its lost values, which, to be effective, must go hand in hand with the intellectual process of restoring memory (Batko 2010: 97). A successful project should therefore adhere to some basic, historically shaped, design principles that are capable of capturing the effigy of the townscape being redressed[39]. It would require both careful morphogenetical townscape analyses (cf. Conzen 1960) and subsequent adaptations to a modern context (cf. Ashworth 1991; Jeżak 2001). Accordingly, revitalization includes various forms of renovations (restoration to a state prior to exploitation), modernizations (introduction of additional elements of comfort) and revalorizations (value-restoring actions aimed at monumental features) (Skalski 2010: 3). Revitalization entails a fundamental departure from quantitative approaches in favor of qualitative ones, such as the search for and organization of new, attractive and more intimate public spaces, that are more adpated to the needs of the residents (Jeżak 2001).

> The most important feature of a town's face is its market square with the surrounding streets, determining the architectural and social expression of a given settlement; therefore, revitalization should begin at the square and the adjoining blocks (Adamczewka-Wejchert & Wejchert 1986: 22, my translation).

Indeed, by looking at the current trends in spatial planning of small towns, revitalization is predominantly confined to the market square area (cf. collage fig. 4.10). Many Polish public places have been destroyed or gravely deteriorated by years of neglect and misuse by the Communist authorities. Market squares were often seen a empty land that could be customized accordingly to existing needs; it could involve cramming the interior with contextually alien buildings[40] and demolishing pieces of frontages in order to replace them with equally tasteless hulky edifices[41] (cf. Kraszewska 2004) (fig. 4.16). A grotesque example of architectural sprees of the People's Republic of Poland is the town of Lubin, whose war-damaged market square was filled-in by ersatz frontages of Soviet-style apartment blocks. The mid-square baroque town hall, now looking desperately anachronistic, came to resemble a prey encircled by a horde of hyenas (for striking images, follow the link in footnote[42]). Due to the revitalization hype, the long-awaited change is now finally underway. A string of retro-style tenement houses has already been erected and a decision to demolish the remaining

[39] "Best defined as the art of shaping the built environment, urban design seeks to understand and analyze the variety of forces – social, economic, cultural, legal, ecological, and aesthetic – that affect how we live" (Haas 2008).
[40] Like in Michów, Rejowiec, Tarnogród, Gowarczów, Głowaczów, Ostrów Lubelski and many other.
[41] Like in Janów Podlaski, Krzeszów, Mrzygłód, Rychtal, Koźminek and many other.
[42] *http://www.skyscrapercity.com/showthread.php?t=276879* (access 2011-07-04)

Soviet monstrosities has been made; an ambitious and exhaustive revitalization agenda, going as far as to include resettlement of residents (elubin.pl 2011).

Fig. 4.16. Contextually alien buildings inherent to the Communist era within some historical market squares of Polish degraded towns: a) Mrzygłód; b) Krzeszów; c) Goszczyn; d) Łaszczów (restituted); e) Waśniów; f) Koźminek.

Photo: M. Dymitrow

Fig. 4.17. Overgrown, dilapidated and inaccessible interiors of some historical market squares of Polish towns: a) Skrzynno; b) Dębno; c) Piotrkowice; d) Grabowiec by Lipsko; e) Przybyszew; f) Gliniany.

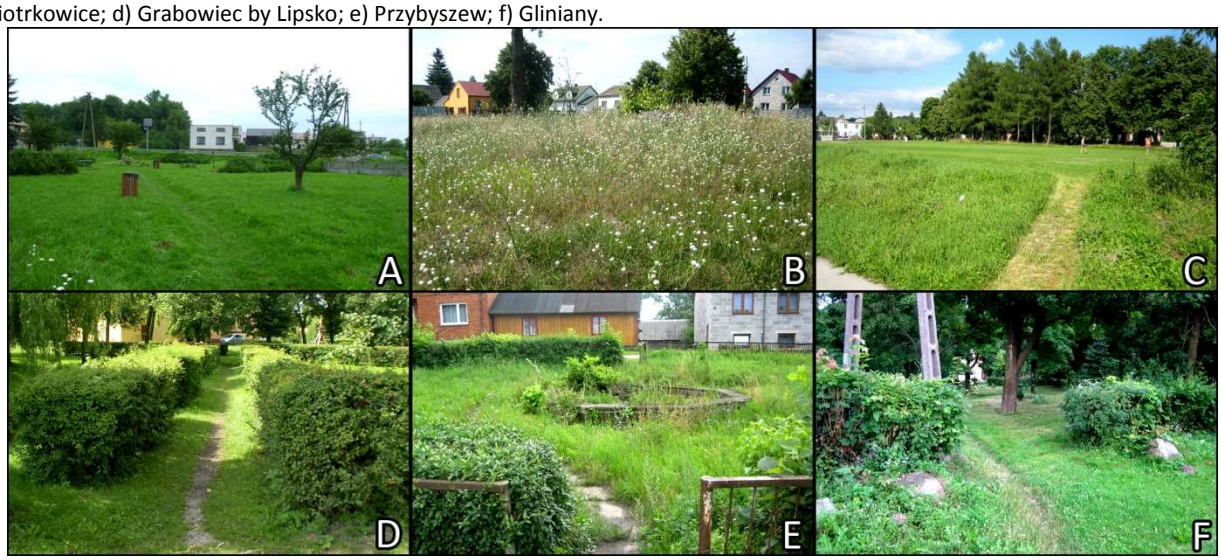


Photo: M. Dymitrow

Another trait of this era (sometimes even dating back to the interwar period; cf. Kühnel 1918: 38) was the tranformation of open square space into lawns or parks, some of which gradually evolved into disheveled, inaccessible tracts or dark thickets, often serving as dens for alcoholics (fig. 4.17) (cf. Radoszyce 2010). Following chain of somewhat comical, yet poignant user comments added to a web article describing an intended transformation of the central park (bosket) in Kurów into what it used to be – a market square, says it all (Moje Miasto Puławy 2011, my translation):

> – I only hope they [the authorities] will get rid of the drunks from the bosket. Otherwise they [the alcoholics] will only interpret it as a renovation of their [personal] seatings [by user 5h9, 2011-07-06, 7:35]
>
> – Yes, yes, may this nightmarish, drunken, live exhibition disappear from the center. I hope that exposure to sunlight will throw out these gargoyles from the center. May the change of image of this place also bring about a transfer of this illegal pump room for local drunkards [by user Gotek, 2011-07-06, 19:55]
>
> – But where will they go, as there isn't even one single place where you can have a beer; and when someone tries to open a pub, it only meets with thousands of problems (…) [by user Piterq2, 2011-07-06, 20:59]

> – A pub requires some level of behavior and has higher prices. They [the alcoholics] need a *żulernia*[43]; they are too frugal and too lazy to go to a pub. In the bosket, they are at the center of events – they feel like in an outdoor cinema; there, they can also act out their drunken ingenuity. During the kermesse [a church festivity], one intoxicated 30-year-old threw firecrackers around the bosket while watching the reactions of passers-by. Loaded fellows yelled "Not at the people!" In this way he [the 30-year-old] cleared the ground and marked his territory. It was a sweep-out. Who would have let him do that in a pub? [by user W Kurowie, 2011-07-06, 21:18]

Since alcoholism is one of the main social plagues in Poland, and with the number of local health care institutions still being insufficient (Michej n.d.; Wojciechowski 2009), the abovementioned discussion addresses the social (or rather anti-social) aspects of revitalization.

4.9.4. Heritagization – achieving urbanity by recourse to the past

The social impact of revitalization is not merely a question of habit, but also one of identity and belonging. Unlike deteriorated post-war cities or city parts, whose revitalization is mainly concerned with improvements in terms of comfort and aesthetics, revitalization of degraded historic towns is closely associated with heritagization (creation of heritage). Heritagisation of townscapes is a global process driven by a societal urge for nostalgia (Ashworth & Tunbridge 2004; Viken & Nyseth 2009), where townscape is the entity, heritage the method and identity the goal (Ashworth 2007). Heritagisation covers human settlements of all sizes and contexts, from bustling exotic Havana to Croatian Hum, the world's smallest town of only 20 inhabitants, but it is also pertinent to rurality (cf. Munkejord 2009). In Europe it is campaigned by, for instance, ECOVAST (European Council for the Village and the Small Town), operating in 20 countries. In Poland, heritagization of urbanity is similar to that of other places; however, it is problematic in that its close association with town privileges is affected by administrative constraints. Nevertheless, due to its nostalgic character, revitalization is a process that actually parallels the identity-laden desire for restitution of urban status, which would imply that both can be analyzed in tandem.

Both current restitution trends and revitalisation trends are geographically clustered as a result of a diffusion of innovations, and both may influence each other. A return to urban status may spawn a revitalisation procedure in order to 'live up' to the regained honors. Conversely, revitalization may visually enhance the perceived urbanity of the *de jure* rural degraded town, its appearance may then become imbued with a new meaning (urban identity), which in turn may spawn a course of action towards restitution of urban status (cf. fig. 4.18). In other words, since urban meaning is created, it *can* be manipulated (Pacione: 2009: 160). I discuss the role of heritagization in the light of regaining urban status in the article *Degraded towns in Poland as cultural heritage* (Dymitrow 2012).

Fig. 4.18. Market square in Koszyce (833 inhabitants) revitalized by means of urban symbology.

Photo: M. Dymitrow

[43] *Żulernia* is Polish slang for an outdoor area used for alcoholic libations.

5. Characteristics of the studied towns

5.1. Introduction

This chapter provides a presentation of the 336 towns studied in this thesis in respect to some chosen aspects. The focus is on frequencies and shares of towns regarding their: administrative status (5.2), geographic location (5.3), size and age (5.4). There are also two maps depicting the towns' distribution at the time of their degradation *and* in regard to their current administrative status. A detailed alphabetical list of all towns (tab. 5.6) and their basic properties relevant to this thesis completes this chapter.

5.2. Administrative status

This study covers all 336 towns deprived of their civic rights during the Russian reform of 1869-70, as listed in the 20 seriatim decisions in the Journal of Law of the Kingdom of Poland (1869; 1870) (cf. tab. 3.1)[1]. The towns are currently located in Poland (324 towns or 96.4 %), Lithuania (11 towns or 3.3 %) and Belarus (1 town or 0,3 %). For the sake of consistency, the study does not include the two towns degraded following a later correction of the reform (Góra Kalwaria in 1883 and Zawichost in 1888)[2]. Out of the 336 studied towns, 141 units (42 %) can be regarded as urban, while 195 units (58 %) can be regarded as rural in a formal, administrative sense, i.e. pertaining to the laws of the country within which the units concerned are located (Poland, Lithuania and Belarus respectively). In regard to Poland only, this study encompasses 324 units, 132 of which (40.7 %) are urban and 192 (59.3 %) are rural (as of 1 January 2012). Among the rural units there are three double-degraded towns, i.e. towns that were restituted after the reform only to lose their urban status again at a later date[3] (tab. 5.1, fig. 5.1, fig. 5.2).

Tab. 5.1. Studied towns in regard to administrative status, independence and geographical location.
PL = Poland; LT = Lithuania; BR = Belarus.

TOTAL OF UNITS **336** 100 %	FORMALLY URBAN **141** 42,0 %				FORMALLY RURAL **195** 58,0 %			
INDEPENDENT **324** 96,4 %	CITIES **125** 37,2 %		SEMI-URBAN UNITS* **7** 2,1 %		ADM. VILLAGES **165** 49,1 %		NON-ADM. VILLAGES **27** 8,0 %	
	PL	LT	BR	LT	PL	LT	PL	LT
	122	**3**	**1**	**6**	**164**	**1**	**27**	**0**
INCORPORATED/ (RE)INTEGRATED **12** 3,6 %	PARTS OF CITIES **11** 3,3 %		PARTS OF SEMI-URBAN UNITS **0** 0 %		PARTS OF ADM. VILLAGES **1** 0,3 %		PARTS OF NON-ADM. VILLAGES **0** 0 %	
	PL	LT	BR	LT	PL	LT	PL	LT
	10	**1**	**0**	**0**	**1**	**0**	**0**	**0**

*) In Lithuania – 'towns', in Belaus – 'urban-type settlements'. This unit form does not occur in Poland.

[1] This primary source does *not* include the towns of Fałków, Kossów, Oksa and Odrowąż, which some publications list as being degraded in 1869 (e.g. Krzysztofik 2007a).

[2] Some publications (Krzysztofik 2007a: 42; Szmytkie 2009:33) additionally name Kraśnik as such a town (being deprived of civic rights 1878-1919), although this could not be supported by primary sources.

[3] Double-degradations, although possible, are very rare. Within the studied group only Władysławów, Janów Podlaski and Sokoły have regained their town status (in 1919) only to lose it again during the administrative corrections of 1934 (Dz.U. 1934 nr 47 poz. 403), in 1945 (after WW2 destruction) and in 1951 (Dz.U. 1950 nr 51 poz. 472) respectively. The former border town (in Congress Poland) Dobrzyń nad Drwęcą regained its city status in 1919 during the Polish independence; however it was merged with the nearby, formerly Prussian city of Golub in 1951 to form a new urban organism named Golub-Dobrzyń (Dz.U. 1951 nr 27 poz. 200). Since Dobrzyń's urban continuity has been upheld (and being territorially and demographically significantly larger than Golub), one cannot speak here of a double-degradation.

This study also includes seven units which could be regarded as semi-urban – six towns in Lithuania (Lith. *miestelis*) and one so-called 'urban-type settlement' in Belarus (Bel. *Гарадскія пасёлкі*). Such urban forms do not exist in Poland, although they previously have[4]. Most units in this study (86 %) perform administrative functions, including all cities and 84 % of the rural units (Liw is the only village lending its name to a commune without being an administrative seat; the latter is in Węgrów). Moreover, 324 settlements (96 %) are separate units of the countries' territorial-administrative division (independent units).

There are also 11 incorporated/merged former units, i.e. towns absorbed into another town or village. *Incorporation* means inclusion of one unit into another, losing at the same time its administrative independence, and perhaps also its identity. *Mergers*, on the other hand, denote an integration of several, most often two, equally sized towns or villages (twin cities) into one organism. The latter is often accompanied by preservation of both towns' identities and is expressed by a hyphened double-name, often in alphabetical order[5]. A conspicuous exception to this rule is Wierzbnik, which is actually a host-town that had lost its identity; it is both an unusual case of incorporation and a special, emotive form of degradation[6]. Dobrzyń nad Drwęcą (part of Golub-Dobrzyń) and Ciechanowiec-Nowe Miasto are two examples of border towns, the first with its own history, the other subject to coerced excorporation and subsequent re-incorporation[7]. Orchówek is this study's sole example of an unsuccessful incorporation, while Głusk is a potential candidate[8]. Grocholice is a special case of a degraded town incorporated into a former degraded town (Bełchatów), while Granica is a degraded town incorporated into a non-restituted degraded town (a village) – Gniewoszów. Granica, as well as Wieniawa, are two examples of total spatial absorption into the incorporating unit, where differences between the two are unperceivable in the field. The remaining towns (Denków, Kromołów, Modrzejów and Mrzygłód), although spatially non-integrated, are classical examples of small-town-into-big-town incorporations. Finally, the Lithuanian Panemunė is a former village, whose limited period of urbanity was conditioned by a special configuration of the political borders. Tab. 5.2 shows the historical and geographical characteristics of these towns, based on satellite imagery and historical documents. In terms of demographics, I were able to retrieve current population figures for the historical cores of the incorporated towns by means of street-by-street population counts, and sometimes even by street num-

[4] Towns (Pol. *miasteczka*) did not exist in Congress Poland, only in Galicia (southern Poland) and in 'Kresy' (eastern frontiers). This type of semi-urban status was eventually abandoned during the reform of 1934. Urban-type settlements (Pol. *osiedla typu miejskiego*), based on the Soviet model, were introduced during the reform of 1954 and consequently abandoned in 1973. However, seven of the degraded towns in this study (Ćmielów, Izbica Kujawska, Karczew, Łaskarzew, Ogrodzieniec, Siewierz and Sompolno) assumed this semi-urban status when it was operable. Eventually, all of them have regained proper city rights.

[5] However, intricacies of reality cannot fit into this general outline; in Poland, there are in fact merged, double-named towns of strikingly unequal sizes, such as Boguszów-Gorce (Gorce is half the size of Boguszów), Kędzierzyn-Koźle (the population of Koźle is ¼ that of Kędzierzyn) and, most strikingly, this study's Golub-Dobrzyń (Golub is six times smaller than Dobrzyń). Furthermore, these mergers often include additional merged units, sometimes urban and sizeable, which nonetheless are not displayed in the name of the new town (e.g. Kuźnice Świdnickie in Boguszów-Gorce, a former *urban-type settlement* or Kłodnica and Sławęcice in Kędzierzyn-Koźle, two former towns; there are many more examples). On the other hand, there are also *one-name towns* that include an incorporated entity, which is actually larger than then the "host-town" itself, most notably Krapkowice (including the 25% larger Otmęt) and Nowa Ruda (including the slightly larger former town of Słupiec). The reason for such an unfair name designation was probably the longevity of urban traditions of the host-towns, while the incorporated entities were newer, less attractive and mostly of industrial origin. Note that the proportions pitted here denote current population figures (2004-2011); at the time of the incorporation the proportions might have been different.

[6] Wierzbnik regained its civic rights in 1916, during WW1 (Gawryszewski 2005). In 1939, a large nearby industrial settlement – Starachowice Fabryczne – was incorporated into Wierzbnik, and the city's name was changed to the dual form *Starachowice-Wierzbnik*. After the war, Starachowice's growth and industrial importance completely overshadowed the historic town of Wierzbnik and the name of the entire urban organism was ultimately changed to *Starachowice* in 1949. In regard to such development, Wierzbnik has undeniably maintained its urban continuity since 1916; however, this is just a technicality. The historic core of Wierzbnik (population 1.400 in 2011) constitutes today a tiny enclave amidst the sprawling modern post-industrial city of Starachowice (population 53.200 in 2010), which also has deprived Wierzbnik of its name.

[7] After the Partitions of Poland, both became riverside border settlements; however, unlike Dobrzyń, which had its own, separate history, Ciechanowiec-Nowe Miasto (*New City of Ciechanowiec*) was prior to the partitions an integral part of the larger city of Ciechanowiec, straddling both sides of the river Nurzec, and only became a separate city once the new frontier was drawn. Smaller and less prosperous than its older counterpart (now belonging to the Russian Empire proper), it lost its city status in 1869-70. It remained administratively separated from the Old Town of Ciechanowiec well past the transition into Polish reign (the reunification took place first in 1938). In conclusion, the case of Ciechanowiec is more a matter of *reversal of a coerced excorporation* or a *re-incorporation* rather than a true incorporation.

[8] Orchówek was incorporated into the nearby city of Włodawa in 1973, only to become excorporated 19 years later, in 1992. In a similar vein, secession has been discussed in Głusk (incorporated into Lublin in 1989 as one of the last non-democratic incorporations of the centralized socialist era), whose extremely peripheral location within Lublin is associated with bad communications, lack of investments and a general negligence from the local authorities (although the secession plans became somewhat subdued when more money – including revitalization plans – were aimed at Głusk) (Domagała 2009).

bers[9], conducted on my behalf with the kind assistance of the clerks in the concerned City Councils (Bruzda 2011; Gniewoszów UG 2011; Golik 2011; Kita 2011; Łyszczarz 2011; Myszków UM 2011; Nowogrodzka 2011; Rusinek 2011; Stajek & Góra 2011; Tarchuł 2011).

Tab. 5.2. Characteristics of the merged and incorporated towns of this study.

Non-independent unit	**Part of city**	**Since**	**Pop. 2011**	**% of total popul.**	**Type of administrative configuration**[10]	**Spatial integration with host city**
Ciechanowiec- N.M.	Ciechanowiec	1938	1.680	33,1	twin city	**Yes**, bottlenecked
Denków	Ostrowiec Św.	1954	2.226	2,9	conglomerate	No
Dobrzyń nad Drwęcą	Golub-Dobrzyń	1951	10.722	82,2	twin city	**Yes**, bottlenecked
Głusk	Lublin	1989	2.025	0,6	agglomeration	No
Granica	Gniewoszów (village)	*1965*[11]	247	39,0	absorption	**Yes**
Grocholice	Bełchatów	1977	1.497	2,4	conglomerate	No
Kromołów	Zawiercie	1977	2.581	4,8	conglomerate	No
Modrzejów	Sosnowiec	1915	1.061	0,5	agglomeration	No
Mrzygłód	Myszków	1983	1.460	4,4	conglomerate	No
Poniemoń (Lithuania)	Kaunas	1931	*9.900*	*3,1*	twin city	**Yes**, bottlenecked
Wieniawa	Lublin	1916	13.676	3,9	absorption	**Yes**
Wierzbnik[12]	Starachowice	1939[12]	1.366	2,5	conglomerate[12]	No

Source: My adaptation based on satellite imagery, historical documents and information from the concerned City Councils (see list of sources at the top of this page). *Data in italics* denote approximations.

Tab. 5.3. Spatial distribution of the studied towns in regard to administrative units (voivodeships).

Administrative division (voivodeship)	**Number of units**	**%**	**Urban** (number of units)			**Rural** (number of units)		
			CITIES	SEMI-URBAN*	PARTS OF CITIES	ADM. VILLAGES	NON-ADM. VILLAGES	PARTS OF ADM. VILLAGES
Greater Poland	**26**	7,7	12	–	–	11	3	–
Holy Cross	**41**	12,2	14	–	2	21	4	–
Kuyavia-Pomerania	**14**	4,2	8	–	1	4	1	–
Lesser Poland	**7**	2,1	5	–	–	2	–	–
Łódź	**46**	13,7	21	–	1	21	3	–
Lublin	**65**	19,3	15	–	2	41	7	–
Masovia	**81**	24,1	27	–	–	44	9	1
Opole	**1**	0,3	1	–	–	–	–	–
Podlachia	**19**	5,6	8	–	1	10	–	–
Silesia	**21**	6,2	11	–	3	7	–	–
Subcarpathia	**2**	0,6	–	–	–	2	–	–
Warmia-Masuria	**1**	0,3	–	–	–	1	–	–
Lithuania	**11**	3,3	3	6	1	1	–	–
Belarus	**1**	0,3	–	1	–	–	–	–
TOTAL	**336**	**100**	**125**	**7**	**11**	**165**	**27**	**1**
– whereof in Poland:	*324*	*96,4*	*122*	*–*	*10*	*164*	*27*	*1*

Source: My adaptation. *) This kind of unit does not occur in Poland.

[9] Whenever the historical town did not form a separate administrative auxiliary unit, which more often than not was the case.

[10] Based on classification used by Beaujeu-Garnier & Chabot (1971, chap. 3) and Szmytkie (2009, pp. 24-25).

[11] The year of Granica's incorporation into Gniewoszów is hard to retrieve, as it took place during the period of *gromadas* (1954-72), when territorial changes on *gromada*-level were not published in the Journal of Laws of the Republic of Poland (widely available on-line), but in the journals of particular voivodeships. As of 2011, these journals were not yet available on-line. The last note on Granica's independence I were able to find was in Pazyra (1965, vol. I: 507), i.e. as of 1965.

[12] Wierzbnik is not an incorporated town per se, but the historical nucleus of the much larger Starachowice which were incorporated into Wierzbnik in 1939. More information can be found earlier in this section.

5.3. Geographic distribution

The territory of former Congress Poland covers an area of 128 500 km², whereof c. 119 000 km² is within Poland's current territory. The remaining part is located mainly in Lithuania, with a smaller wedge nested in Belarus, and a shred of land with the village of *Пісочне* situated in the Ukraine (Lviv Oblast). The Polish part covers roughly 38 % of Poland's current territory (312 679 km²), including the voivodeships of Masovia, Łódź, Holy Cross and Lublin (entirely or almost entirely), thereto significant portions of the Podlachian, Silesian, Greater Polish, Lesser Polish and Kuyavian-Pomeranian voivodeships, as well as small bits of the voivodeships of Opole, Warmia-Masuria and Subcarpathia (13 of 16 voivodeships) (**tab. 5.3).** The Lithuanian part covers the counties of Marijampolė (entirely), Alytus and Kaunas (partially), while the Belarusian wedge belongs to the Grodno Region.

5.4. Size and age

In terms of size, the studied towns display huge variations, ranging from 85 inhabitants in Sudargas to nearly 70.000 in Alytus (incidentally, both in Lithuania). The lower groups (below 5.000 inhabitants) are over-represented (85 %), with the most sizeable group being that of 1.000-1.499 inhabitants (73 units). Urban units cover mostly the middle and middle-upper sectors while rural cover the middle-lower and lower sectors, thus mimicking the structure of an urban-rural continuum (tab. 5.4). In terms of demographics dynamics, tab. 5.6 shows that the majority of towns display a specific demographic trajectory: from insignificant population in the early 19th century to multiple increases towards the early 20th century, and finally, a distinguishable drop in the early 21st century (although not as dramatic as the population boom in the first analyzed century). Note that the increase was most prominent *after* the degradations. Towns restituted during the 20th century and uplifted to district capital status experienced due growth in the last century and display somewhat different trajectories. As we can see, there are also infrequent exceptions to these trends, but these are more of a particular nature.

Tab. 5.4. Demographical distribution of the studied towns. Source: GUS (2009)

Population class (inhabitants)	Number of units	%	Urban (number of units)			Rural (number of units)		
			CITIES	SEMI-URBAN*	PARTS OF CITIES	ADM. VILLAGES	NON-ADM. VILLAGES	PARTS OF ADM. VILLAGES
0-499	**17**	5,1	–	1	–	8	7	1
500-999	**59**	17,6	1	2	–	41	15	–
1.000-1.499	**73**	21,7	2	4	4	59	4	–
1.500-1.999	**45**	13,4	12	–	1	32	–	–
2.000-2.999	**47**	14,0	26	–	3	17	1	–
3.000-3.999	**30**	8,9	25	–	–	5	–	–
4.000-4.999	**17**	5,1	14	–	–	3	–	–
5.000-9.999	**30**	8,9	29	–	1	–	–	–
10.000-24.999	**12**	3,6	10	–	2	–	–	–
25.000-49.999	**4**	1,2	4	–	–	–	–	–
50.000 >	**2**	0,6	2	–	–	–	–	–
TOTAL	**336**	**100**	**125**	**7**	**11**	**165**	**27**	**1**

Tab. 5.5. Urban age of the studied towns counted from their first-time civic rights bestowal.

Time of the first civic rights bestowal	Number of units	%	Urban (number of units)			Rural (number of units)		
			CITIES	SEMI-URBAN*	PARTS OF CITIES	ADM. VILLAGES	NON-ADM. VILLAGES	PARTS OF ADM. VILLAGES
1200-1299	**28**	8,3	16	–	–	10	2	–
1300-1399	**81**	24,1	32	–	1	43	5	–
1400-1499	**90**	26,8	34	–	2	44	10	–
1500-1599	**84**	25,0	27	6	2	40	9	–
1600-1699	**17**	5,1	3	–	3	10	1	–
1700-1799	**29**	8,6	11	1	3	13	–	1
1800-1830	**7**	2,1	2	–	–	5	–	–
TOTAL	**336**	**100**	**125**	**7**	**11**	**165**	**27**	**1**

Source: Krzysztofik (2007, *Lokacje…*), Pazyra (1965) and Górak (1990).

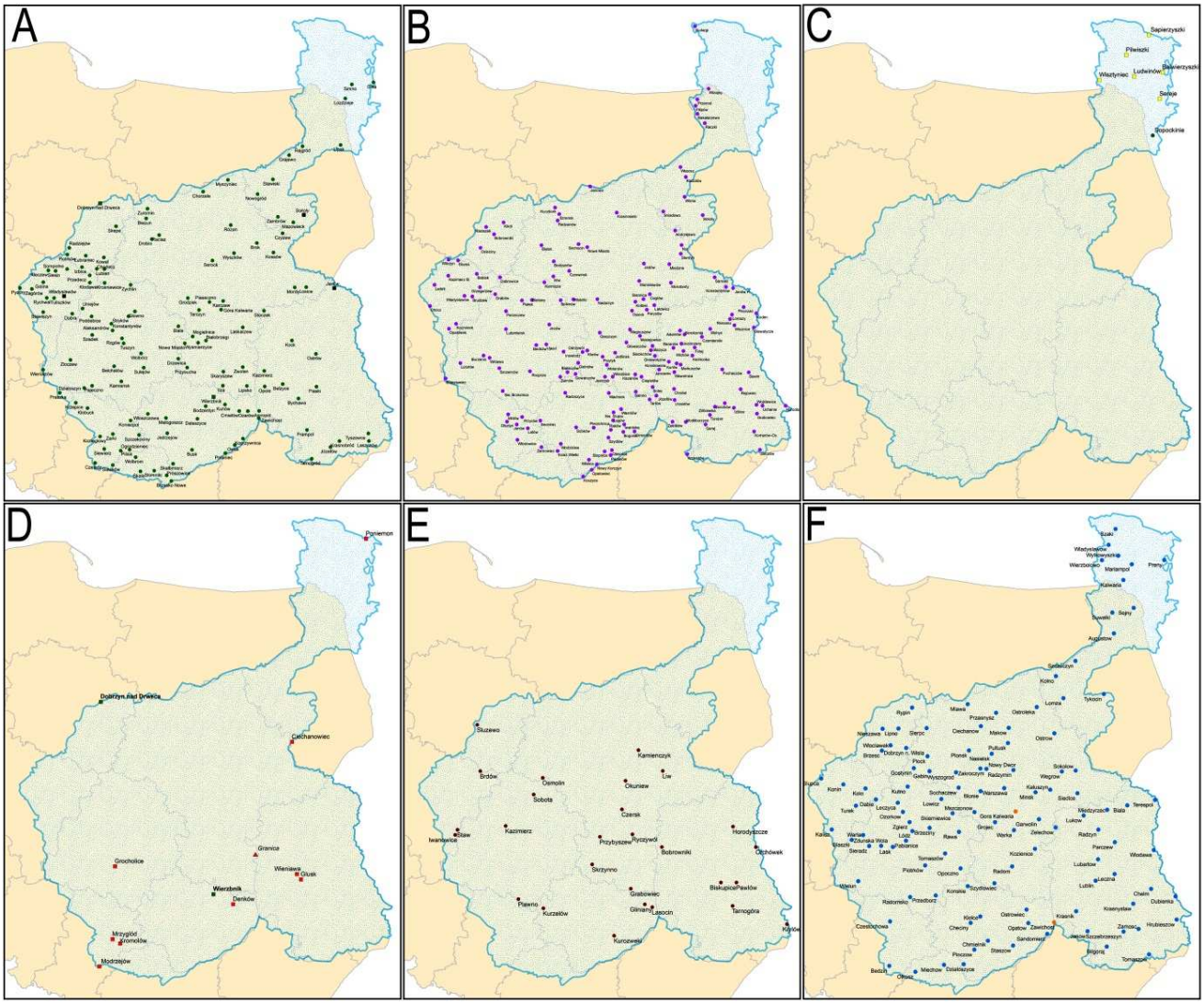
In terms of urban ages of the studied towns (counted from the first-time civic rights bestowal), there is much less differentiation. As tab. 5.5 indicates, most of the studied towns are of mediaeval heritage. ¾ of them were founded between year 1300 and year 1599, approximately ¼ per each century (14th, 15th, 16th). 8 % are towns even older, founded in the 13th century. Only the remaining 16 % are younger towns, established between year 1600 and 1830, most of them originating in the 18th century. The oldest town in this compilation is Radziejów (1252)[13] and the youngest is Konstantynów Łódzki (1830).

Fig. 5.1. Congress Poland – 336 towns degraded during the reform of 1869-70.

Source: Own work

[13] If we also acknowledge the first unsuccessful urban location, then the oldest town is Lądek (1250). Its successful location took place slightly later – in 1269 (Krzysztofik, 2007, *Lokacje…*)

Fig. 5.2. Congress Poland – distribution of the 336 towns degraded during the reform of 1869-70 (maps **A-E**) according to their current administrative status: **A**) restituted cities; **B**) administrative villages; **C**) semi-urban settlements in Lithuania and Belarus; D) non-independent settlements, parts of towns/villages ; **E**) non-administrative villages;. Additionally, map **F** shows the 116 cities that did not lose their urban status during the reform. Source: own adaptation.



Source: Own work

Tab. 5.6 (next five pages): Basic information about the 336 studied towns, including population numbers for early 19th, 20th and 21st centuries, geographical location (current county and voivodeship [Voiv.], and former governorate – *gubernya* [Gub.]), years of civic rights possession (degradation during the reform of 1869-70 excluded, in parentheses year of merger or incorporation) and current administrative status: 11 = city (restituted); 12 = town in Lithuania; 13 = urban-type settlement in Belarus; 21 = administrative village; 22 = non-administrative village; 31 = city part, merged or incorporated unit; 32 = part of a village. Urban units are displayed in white; rural units are marked in gray. **Abbreviations:** [Contemporary administrative units = Voiv.**] Poland** *(voivodeships)*: KP = Kuyavia-Pomerania; LB = Lublin; ŁD = Łódź; MP = Lesser Poland; MZ = Masovia; PK= Subcarpathia, PL = Podlachia; OP = Opole; ŚL= Silesia; ŚW = Holy Cross; WM = Warmia-Masuria; WP = Greater Poland; **Lithuania** (*counties*[14]): LT-K = Kaunas; LT-M = Marijampolė; LT-O = Alytus; **Belarus** (*regions*): BR-G = Grodno. **[**Historic administrative units as of 1869-70 = Gub.] KA = Kalisz; KC = Kielce; LB = Lublin; ŁM = Łomża; PŁ = Płock; PT = Piotrków (Trybunalski); RD = Radom; SD = Siedlce; SU = Suwałki; WW = Warsaw.

*Sources***:** Politowski (1816); Journal of Law (1869; 1870); Sulimirski *et al* (1880-1902); Verdmon-Jacques (1902); GUS (1921; 1924a; 1924b; 1925a; 1925b; 1925c); Gajewski (1964); Pazyra (1965); Krzysztofik (2007a); Najgrakowski (2009); GUS (2009); Bruzda (2011); Gniewoszów UG (2011); Golik (2011); Kita (2011); Łyszczarz (2011); Myszków UM (2011); Nowogrodzka (2011); Rusinek (2011); Stajek & Góra (2011); Tarchuł (2011). *For non-Polish units***:** Lithuanian census (2001), Population of the Republic of Belarus (2010).

[14] Note that 'counties' in Lithuania correspond to *voivodeships* in Poland (regional level), while Polish 'counties' (sub-regional level) correspond to district municipalities in Lithuania.

No.	Town	2009	1911	1813	County	Voiv.	Gub.	Civic rights	St.
1	Adamów	2191	1671	489	łukowski	LB	SD	1539	21
2	Aleksandrów Łódzki	21014	11464		zgierski	ŁD	PT	1822, 1924	11
3	Andrzejewo	937	2405	661	ostrowski	MZ	ŁM	1528	21
4	Annopol	2720	2451	431	kraśnicki	LB	LB	1724, 1996	11
5	Babiak	1877	1108		kolski	WP	KA	1816	21
6	Bakałarzewo	812	1155		suwalski	PL	SU	1558	21
7	Balwierzyszki (*Balbieriškis*)	1180	1496		Prienai	LT-K	SU	1520	12
8	Baranów	1684	3089	865	puławski	LB	LB	1544	21
9	Będków	629	898	369	tomaszowski	ŁD	PT	1453	21
10	Bełchatów	62898	5695	177	bełchatowski	ŁD	PT	1737, 1925	11
11	Bełżyce	7030	4700	1366	lubelski	LB	LB	1417, 1958	11
12	Biała Rawska	3406	2398	467	rawski	ŁD	PT	1472, 1925	11
13	Białaczów	1254	2102	766	opoczyński	ŁD	RD	1450	21
14	Białobrzegi	7521	5624	390	białobrzeski	MZ	RD	1540, 1958	11
15	Bielawy	604	1220	508	łowicki	ŁD	WW	1403	21
16	Bielsk	2571	1857	492	płocki	MZ	PŁ	1373	21
17	Bieżuń	1956	4334	1312	żuromiński	MZ	PŁ	1406, 1993	11
18	Biskupice	883	2868	581	świdnicki	LB	LB	1450	22
19	Bobrowniki *by* Lipno	1152	859	541	lipnowski	KP	PŁ	1403	21
20	Bobrowniki *by* Ryki	580	2087	573	rycki	LB	LB	1485	22
21	Bodzanów	1254	1287	297	płocki	MZ	PŁ	1351	21
22	Bodzentyn	2349	3865	996	kielecki	ŚW	KC	1355, 1994	11
23	Bogoria	1053	1870	516	staszowski	ŚW	RD	1616	21
24	Bolesławiec	1218	1951	788	wieruszowski	ŁD	KA	1266	21
25	Bolimów	937	2342	656	skierniewicki	ŁD	WW	1370	21
26	Brdów	837	919	605	kolski	WP	KA	1525	22
27	Brok	1963	2564	777	ostrowski	MZ	ŁM	1501, 1922	11
28	Brudzew	1636	1459	364	turecki	WP	KA	1458	21
29	Burzenin	1027	1444	372	sieradzki	ŁD	KA	1378	21
30	Busko-Zdrój	17715	2465	657	buski	ŚW	KC	1287, 1916	11
31	Bychawa	5467	3551	508	lubelski	LB	LB	1537	11
32	Cegłów	2183	1034	289	miński	MZ	WW	1621	21
33	Chocz	1812	1981	912	pleszewski	WP	KA	1382	21
34	Chodecz	1970	1420	345	włocławski	KP	WW	1442-1800, 1822, 1921	11
35	Chodel	1495	2357	412	opolski	LB	LB	1517-1825, 1838	21
36	Chorzele	3000	5071	1002	przasnyski	MZ	PŁ	1542	11
37	Ciechanowiec-Nowe Miasto	1680	5094	373	wysokomazowiecki	PL	ŁM	*(1580)* 1815, *(1938)*	31
38	Ciepielów	804	1815	625	lipski	MZ	RD	1548	21
39	Ćmielów	3270	2315	1033	ostrowiecki	ŚW	RD	1509, 1962	11
40	Czeladź	34646	8188	1079	będziński	ŚL	PT	1325, 1919	11
41	Czemierniki	1465	2856	966	radzyński	LB	LB	1509	21
42	Czersk	737	866	409	piaseczyński	MZ	WW	1350	22
43	Czerwińsk nad Wisłą	1134	1811	393	płoński	MZ	PŁ	1373	21
44	Czyżew	2295	2043	622	wysokomazowiecki	PL	ŁM	1713, 2011	11
45	Dąbrowice	924	3213	1309	kutnowski	ŁD	WW	1455	21
46	Daleszyce	2992	3631	1153	kielecki	ŚW	KC	1569, 2007	11
47	Denków	2266	1193	606	ostrowiecki	ŚW	RD	1564, *(1954)*	31
48	Dobra	1558	3893	1050	turecki	WP	KA	1392, 1919	11
49	Dobrzyń nad Drwecą	10722	7316		golub.-dobrzyński	KP	PŁ	1789, 1919*(-1951)*	31
50	Drobin	3014	4200	733	płocki	MZ	PŁ	1511, 1994	11
51	Drzewica	4185	2393	446	opoczyński	ŁD	RD	1429, 1987	11
52	Działoszyn	6535	7431	1636	pajęczański	ŁD	KA	1452, 1993	11
53	Filipów	2264	2266		suwalski	PL	SU	1570	21
54	Firlej	1132	1996	675	lubartowski	LB	LB	1557	21
55	Frampol	1506	3467	563	biłgorajski	LB	LB	1736, 1993	11
56	Gielniów	916	1366	507	przysuski	MZ	RD	1455	21
57	Gliniany	303	977	260	opatowski	ŚW	RD	1586	22
58	Głowaczów	851	2258	323	kozienicki	MZ	RD	1445	21
59	Głowno	15306	3893	663	zgierski	ŁD	PT	1688, 1925	11
60	Głusk	2025	1136	508	Lublin (city)	LB	LB	1688, *(1989)*	31
61	Gniewoszów	634	2241	255	kozienicki	MZ	RD	1693	21
62	Golina	4558	3028	714	koniński	WP	KA	1300, 1921	11
63	Goraj	1014	3222	1298	biłgorajski	LB	LB	1373	21
64	Gorzków-Osada	253	1192	272	krasnostawski	LB	LB	1689	21
65	Goszczyn	858	1476	650	grójecki	MZ	WW	1386	21
66	Gowarczów	1435	2701	653	konecki	ŚW	RD	1430	21
67	Grabów	1174	1500	418	łęczycki	ŁD	KA	1372	21
68	Grabowiec *by* Lipsko	470	637	391	lipski	MZ	RD	1601	22

No.	Town	2009	1911	1813	County	Voiv.	Gub.	Civic rights	St.
69	Grabowiec *by* Zamość	928	4734	1277	zamojski	LB	LB	1388	21
70	Grajewo	22858	8558	695	grajewski	PL	ŁM	1540, 1919	11
71	Granica	247	2904	294	kozienicki	MZ	RD	1739	32
72	Grocholice	1497	1023	550	bełchatowski	ŁD	PT	1420, *(1977)*	31
73	Grodzisk Mazowiecki	28454	3542	426	grodziski	MZ	WW	1522, 1919	11
74	Grzegorzew	1952	2351	737	kolski	WP	KA	1339	21
75	Horodło	1108	4168	1371	hrubieszowski	LB	LB	1454	21
76	Horodyszcze	818	1095	699	bialski	LB	SD	1558	22
77	Iłów	756	708	265	sochaczewski	MZ	WW	1506	21
78	Iłża	5400	5910	1119	radomski	MZ	RD	1310, 1925	11
79	Inowłódz	879	2192	586	tomaszowski	ŁD	PT	1370	21
80	Iwaniska	1327	3641	818	opatowski	ŚW	RD	1403	21
81	Iwanowice	683	1182	630	kaliski	WP	KA	1460	22
82	Izbica	1902	4451	173	krasnostawski	LB	LB	1750	21
83	Izbica Kujawska	2852	3230	855	włocławski	KP	KA	1394, 1973	11
84	Jadów	1070	1960		wołomiński	MZ	WW	1823	21
85	Janów	945	1649	594	częstochowski	ŚL	PT	1696	21
86	Janów Podlaski	2729	6365	1191	bialski	LB	SD	1465, 1919-1942	21
87	Janowiec	1027	1430	662	puławski	LB	RD	1537	21
88	Janowo	1047	2782	1033	nidzicki	WM	PŁ	1421	21
89	Jarczów	381	477	447	tomaszowski	LB	LB	1775	21
90	Jastrząb	1156	1219	411	szydłowiecki	MZ	RD	1421	21
91	Jedlińsk	1694	2137	546	radomski	MZ	RD	1736	21
92	Jędrzejów	16843	6793	1263	jędrzejowski	ŚW	KC	1271, 1916	11
93	Jeziorzany (prev. *Łysobyki*)	821	1963	640	lubartowski	LB	SD	1498	21
94	Jeżów	1322	2673	651	brzeziński	ŁD	PT	1334	21
95	Józefów	2653	1804	615	biłgorajski	LB	LB	1725, 1988	11
96	Józefów nad Wisłą	1008	5662	787	opolski	LB	LB	1688	21
97	Kamieńczyk	634	1698	506	wyszkowski	MZ	SD	1428	22
98	Kamieńsk	2870	3027	577	radomszczański	ŁD	PT	1374, 1993	11
99	Kamionka	1925	3266	1001	lubartowski	LB	LB	1469	21
100	Karczew	10260	2512	953	otwocki	MZ	WW	1548, 1959	11
101	Kazanów	428	1241	416	zwoleński	MZ	RD	1556	21
102	Kazimierz	748	784	376	pabianicki	ŁD	PT	1288	22
103	Kazimierz Biskupi	4419	2816	777	koniński	WP	KA	1287	21
104	Kazimierz Dolny	3750	5415	2216	puławski	LB	LB	1370, 1927	11
105	Kiernozia	935	387	299	łowicki	ŁD	WW	1348	21
106	Kikół	2275	692	321	lipnowski	KP	PŁ	1745	21
107	Kleczew	4245	3557	947	koniński	WP	KA	1366, 1919	11
108	Klimontów	2046	4830	892	sandomierski	ŚW	RD	1604	21
109	Kłobuck	13430	3778	1065	kłobucki	ŚL	PT	1339, 1919	11
110	Kłodawa	7036	4878	1554	kolski	WP	KA	1383, 1925	11
111	Klwów	432	2288	651	przysuski	MZ	RD	1416	21
112	Kock	3619	6436	1382	lubartowski	LB	SD	1417, 1919	11
113	Kodeń	1852	3984	1577	bialski	LB	SD	1511	21
114	Kołbiel	1890	3013	240	otwocki	MZ	WW	1532	21
115	Komarów-Osada	949	4456	1012	zamojski	LB	LB	1748	21
116	Koniecpol	6535	2880	1287	częstochowski	ŚL	PT	1403, 1927	11
117	Końskowola	2210	4865	1259	puławski	LB	LB	1532	21
118	Konstantynów	1438	2392	537	bialski	LB	SD	1729	21
119	Konstantynów Łódzki	17758	8649		pabianicki	ŁD	PT	1830, 1924	11
120	Koprzywnica	2640	3476	974	sandomierski	ŚW	RD	1268, 2001	11
121	Kosów Lacki	2224	1757	222	sokołowski	MZ	SD	1723, 2000	11
122	Koszyce	833	1039	526	proszowicki	MP	KC	1361	21
123	Kowal	3565	6335	1573	włocławski	KP	WW	1370, 1919	11
124	Koziegłowy	2479	3157	1805	myszkowski	ŚL	PT	1402, 1950	11
125	Koźminek	1995	2615	737	kaliski	WP	KA	1369	21
126	Krasnobród	3151	3370	780	zamojski	LB	LB	1576, 1994	11
127	Krasnosielc	1202	2782		makowski	MZ	ŁM	1824	21
128	Kromołów	2581	3464	913	zawierciański	ŚL	KC	1388, *(1977)*	31
129	Krośniewice	4696	2761	506	kutnowski	ŁD	WW	1452, 1926	11
130	Kryłów	357	3937	887	hrubieszowski	LB	LB	1520	22
131	Krzepice	4551	4589	1131	kłobucki	ŚL	PT	1357, 1919	11
132	Krzeszów	729	2645	1150	niżański	PK	LB	1640	21
133	Książ Wielki	899	2839	585	miechowski	MP	KC	1370	21
134	Kuczbork-Osada	280	969	215	żuromiński	MZ	PŁ	1384	21
135	Kunów	3303	2073	835	ostrowiecki	ŚW	RD	1412, 1990	11
136	Kurów	2753	5818	1361	staszowski	LB	LB	1442	21

No.	Town	2009	1911	1813	County	Voiv.	Gub.	Civic rights	St.
137	Kurozwęki	767	1251	657	puławski	ŚW	KC	1400	22
138	Kurzelów	1184	1419	736	włoszczowski	ŚW	KC	1285	22
139	Lądek	848	1208	426	słupecki	WP	KA	1269	21
140	Łagów	1588	3606	1078	kielecki	ŚW	RD	1253	21
141	Łaskarzew	4994	3626	605	garwoliński	MZ	SD	1418, 1969	11
142	Lasocin	327	724	513	opatowski	ŚW	RD	1547	22
143	Łaszczów	2211	1810	862	tomaszowski	LB	LB	1549, 2010	11
144	Latowicz	1436	2461	1094	miński	MZ	WW	1423	21
145	Lelów	1120	1866	669	częstochowski	ŚL	KC	1354	21
146	Lipsk	2643	1806	970	augustowski	PL	SU	1580, 1983	11
147	Lipsko	6189	2947	1027	lipski	MZ	RD	1589, 1958	11
148	Liw	877	1931	747	węgrowski	MZ	SD	1421	22
149	Łomazy	1729	5202	1436	bialski	LB	SD	1568	21
150	Łosice	7547	5451	997	łosicki	MZ	SD	1505, 1919	11
151	Łoździeje (*Lazdijai*)	5027	3940		Lazdijai	LT-O	SU	1597	11
152	Lubień Kujawski	1411	1617	437	włocławski	KP	WW	1489, 1919	11
153	Lubraniec	3338	2242	1173	włocławski	KP	WW	1509, 1919	11
154	Ludwinów (*Liudvinavas*)	1055	3100	890	Marijampolė	LT-M	SU	1719	12
155	Lutomiersk	1559	3007	1136	pabianicki	ŁD	PT	1274	21
156	Lututów	2264	2168		wieruszowski	ŁD	KA	1406-1714, 1843	21
157	Maciejowice	1476	2950	692	garwoliński	MZ	SD	1507	21
158	Magnuszew	976	1570	825	kozienicki	MZ	RD	1377	21
159	Małogoszcz	4094	2764	842	jędrzejowski	ŚW	KC	1333, 1996	11
160	Markuszów	1273	1566	709	puławski	LB	LB	1550	21
161	Michów	1723	3669	680	lubartowski	LB	LB	1531	21
162	Miedzna	1332	1618	639	węgrowski	MZ	SD	1470	21
163	Modliborzyce	1382	2196	746	janowski	LB	LB	1642	21
164	Modrzejów	1061	3300	188	Sosnowiec (city)	ŚL	PT	1706, *(1915)*	31
165	Mogielnica	2568	6191	1039	grójecki	MZ	WW	1350, 1919	11
166	Mokobody	1732	2373	881	siedlecki	MZ	SD	1496	21
167	Mordy	1879	4047	1015	siedlecki	MZ	SD	1488, 1919	11
168	Mrzygłód	1460	1970	832	myszkowski	ŚL	PT	1475, *(1983)*	31
169	Mstów	1758	2743	785	częstochowski	ŚL	PT	1425	21
170	Myszyniec	3106	3689	905	ostrołęcki	MZ	ŁM	1791, 1993	11
171	Nadarzyn	3855	2532	521	pruszkowski	MZ	WW	1453	21
172	Nowa Brzeźnica	732	1866	800	pajęczański	ŁD	PT	1287	21
173	Nowa Słupia	1428	2052	606	kielecki	ŚW	RD	1351	21
174	Nowe Brzesko	1651	1557	840	proszowicki	MP	KC	1279, 2011	11
175	Nowe Miasto	1631	2335	595	płoński	MZ	PŁ	1420	21
176	Nowe Miasto nad Pilicą	4065	4979	1108	grójecki	MZ	PT	1400, 1916	11
177	Nowogród	2189	3433	1097	łomżyński	PL	ŁM	1427, 1927	11
178	Nowy Korczyn	1068	5478	1628	buski	ŚW	KC	1258	21
179	Nur	703	1563	435	ostrowski	MZ	ŁM	1425	21
180	Odrzywół	1123	1507	292	przysuski	MZ	RD	1418	21
181	Ogrodzieniec	4529	2709	518	zawierciański	ŚL	KC	1409, 1973	11
182	Okuniew	2018	1415	580	miński	MZ	WW	1538	22
183	Oleśnica	1962	1814	801	staszowski	ŚW	KC	1546	21
184	Olita (*Alytus*)	69481	960	179	Alytus (city)	LT-O	SU	1581	11
185	Olsztyn	2687	1028	386	częstochowski	ŚL	PT	1442	21
186	Opatówek	4077	1990	406	kaliski	WP	KA	1338	21
187	Opatowiec	349	1183	623	kazimierski	ŚW	KC	1271	21
188	Opole Lubelskie	9255	7835	1580	opolski	LB	LB	1450, 1957	11
189	Orchówek	1053	754	501	włodawski	LB	SD	1506, *(1973-1992)*	22
190	Osięciny	3017	1081		radziejowski	KP	WW	1824	21
191	Osieck	938	1144	770	otwocki	MZ	SD	1558	21
192	Osiek	2013	1645	675	staszowski	ŚW	RD	1363, 1994	11
193	Osmolin	422	618	355	gostyniński	MZ	WW	1462	22
194	Ostrów Lubelski	2241	7754	1655	lubartowski	LB	SD	1548, 1919	11
195	Ożarów	5001	5170	833	opatowski	ŚW	RD	1569, 1988	11
196	Pacanów	1142	3165	1103	buski	ŚW	KC	1265	21
197	Pajęczno	6905	2712	810	pajęczański	ŁD	PT	1276, 1958	11
198	Parysów	1104	3943	550	garwoliński	MZ	SD	1538	21
199	Parzęczew	914	1218	742	zgierski	ŁD	KA	1421	21
200	Pawłów	834	1178	611	chełmski	LB	LB	1479	22
201	Piaseczno	37567	3758	735	piaseczyński	MZ	WW	1429, 1916	11
202	Piaski	2695	4507	703	świdnicki	LB	LB	1456, 1993	11
203	Piątek	2026	3379	981	łęczycki	ŁD	KA	1339	21
204	Pierzchnica	1071	1494	533	kielecki	ŚW	KC	1359	21

No.	Town	2009	1911	1813	County	Voiv.	Gub.	Civic rights	St.
205	Pilica	1959	7515	1644	zawierciański	ŚL	KC	1394, 1993	11
206	Pilwiszki (*Pilviškiai*)	1493	2300		Vilkaviškis	LT-M	SU	1536	12
207	Piotrków Kujawski	4590	1299	318	radziejowski	KP	WW	1738, 1998	11
208	Piszczac	3114	2658	1136	bialski	LB	SD	1530	21
209	Pławno	1191	3591	608	radomszczański	ŁD	PT	1544	22
210	Poddębice	7974	2834		poddębicki	ŁD	KA	1400-1794, 1822, 1934	11
211	Połaniec	8718	4411	1473	staszowski	ŚW	RD	1370, 1980	11
212	Poniemoń (*Panemunė*)	9900	2080		Kaunas (city)	LT-K	SU	1763-1825, 1836 *(1931)*	31
213	Praszka	8493	5262	1219	oleski	OP	KA	1392, 1919	11
214	Proszowice	6270	3461	967	proszowicki	MP	KC	1358, 1923	11
215	Przedecz	1840	2776	822	kolski	WP	WW	1363, 1919	11
216	Przerośl	834	2427		suwalski	PL	SU	1562	21
217	Przybyszew	684	1711	739	białobrzeski	MZ	WW	1396	22
218	Przyrów	1222	4330	1099	częstochowski	ŚL	PT	1369	21
219	Przysucha	6666	3892	1219	przysuski	MZ	RD	1745, 1958	11
220	Przytyk	989	4288	681	radomski	MZ	RD	1488	21
221	Puchaczów	691	1755	558	łęczyński	LB	LB	1527	21
222	Pyzdry	3310	5703	2335	wrzesiński	WP	KA	1257, 1919	11
223	Raciąż	4805	4663	990	płoński	MZ	PŁ	1425, 1922	11
224	Raciążek	1704	1562	346	aleksandrowski	KP	WW	1317	21
225	Raczki	2351	2751	885	suwalski	PL	SU	1558	21
226	Radoszyce	3345	5035	1399	konecki	ŚW	RD	1370	21
227	Radzanów	898	1050	666	mławski	MZ	PŁ	1400	21
228	Radziejów	6221	2782	690	radziejowski	KP	WW	1252, 1919	11
229	Radziłów	1196	2796	581	grajewski	PL	ŁM	1466	21
230	Rajgród	1775	4260	1140	grajewski	PL	ŁM	1568, 1924	11
231	Raków	1172	3134	824	kielecki	ŚW	RD	1567	21
232	Rejowiec	2149	3562	448	chełmski	LB	LB	1547	21
233	Rossosz	1082	2969	1052	bialski	LB	SD	1551	21
234	Różan	2827	4435	582	makowski	MZ	ŁM	1378, 1919	11
235	Rozprza	1638	1430	156	piotrkowski	ŁD	PT	1272	21
236	Rychwał	2401	1563	383	koniński	WP	KA	1458, 1921	11
237	Ryczywół	696	1813	528	kozienicki	MZ	RD	1370	22
238	Rzgów	3349	2091	607	łódzki wschodni	ŁD	PT	1502, 2006	11
239	Sapieżyszki (*Zapyškis*)	254	602		Kaunas	LT-K	SU	1825	12
240	Sarnaki	1162	2046	480	łosicki	MZ	SD	1754	21
241	Sawin	2178	2073	463	chełmski	LB	LB	1456	21
242	Secemin	1325	1784	726	włoszczowski	ŚW	KC	1370	21
243	Sereje(*Seirijai*)	933	3250		Lazdijai	LT-O	SU	1511	12
244	Serock	3817	5166	756	legionowski	MZ	ŁM	1417, 1923	11
245	Serokomla	1070	1721	406	łukowski	LB	SD	1537	21
246	Sieciechów	602	1091	523	kozienicki	MZ	RD	1370	21
247	Siennica	1993	1256	354	miński	MZ	WW	1526	21
248	Sienno	955	3725	651	lipski	MZ	RD	1421	21
249	Siewierz	5501	2985	1282	będziński	ŚL	PT	1276, 1962	11
250	Simno (*Simnas*)	1940	1960	770	Alytus	LT-O	SU	1626	11
251	Skała	3677	3831	628	krakowski	MP	KC	1267, 1987	11
252	Skalbmierz	1370	1605	563	kazimierski	ŚW	KC	1342, 1927	11
253	Skaryszew	4156	2884	721	radomski	MZ	RD	1264, 1922	11
254	Skępe	3666	1616	750	lipnowski	KP	PŁ	1445, 1997	11
255	Skrzynno	278	703	446	przysuski	MZ	RD	1308	22
256	Skulsk	1513	1572	126	koniński	WP	KA	1409	21
257	Sławatycze	1140	4553	1068	bialski	LB	SD	1577	21
258	Sławków	7057	6410	1485	będziński	ŚL	KC	1286, 1958	11
259	Ślesin	3146	1702	655	koniński	WP	KA	1358, 1921	11
260	Słomniki	4404	4760	1243	krakowski	MP	KC	1358, 1917	11
261	Służewo	1261	1846	865	aleksandrowski	KP	WW	1489	22
262	Śniadowo	1209	2016	801	łomżyński	PL	ŁM	1775	21
263	Sobków	991	1293	759	jędrzejowski	ŚW	KC	1563	21
264	Sobota	498	1356	347	łowicki	ŁD	WW	1393	22
265	Sochocin	1987	2077	319	płoński	MZ	PŁ	1385	21
266	Sokoły	1511	4219	246	wysokomazowiecki	PL	ŁM	1827, 1919-1951	21
267	Solec nad Wisłą	1006	4808	1496	lipski	MZ	RD	1333	21
268	Sompolno	3725	4179	707	koniński	WP	KA	1477, 1973	11
269	Sopoćkinie (*Сапоцкін*)	1400	4563	603	Hrodna	BR-G	SU	1560	13
270	Stanisławów	1602	2391	735	miński	MZ	WW	1523	21
271	Staw	569	940	374	kaliski	WP	KA	1405	22
272	Stawiski	2526	4639	1211	kolneński	PL	ŁM	1702, 1919	11

No.	Town	2009	1911	1813	County	Voiv.	Gub.	Civic rights	St.
273	Stawiszyn	1594	3729	1054	kaliski	WP	KA	1291, 1919	11
274	Sterdyń	784	1192	408	sokołowski	MZ	SD	1737	21
275	Stężyca	1953	2195	938	rycki	LB	SD	1370	21
276	Stoczek Łukowski	2806	2532	522	łukowski	LB	SD	1546, 1919	11
277	Stopnica	1322	5048	942	buski	ŚW	KC	1362	21
278	Stryków	3650	4174	1645	zgierski	ŁD	PT	1394, 1923	11
279	Sudargi (*Sudargas*)	85	1040		Šakiai	LT-M	SU	1724	21
280	Sulejów	6415	5284	880	piotrkowski	ŁD	PT	1292, 1927	11
281	Szadek	2071	3246	1149	zduńskowolski	ŁD	KA	1295, 1919	11
282	Szczekociny	3980	4107	1037	zawierciański	ŚL	KC	1443, 1923	11
283	Szczerców	2932	4514	805	bełchatowski	ŁD	PT	1364	21
284	Szreńsk	1203	3579	1114	mławski	MZ	PŁ	1383	21
285	Szydłów	1093	2491	1193	staszowski	ŚW	KC	1329	21
286	Tarczyn	3997	3078	482	piaseczyński	MZ	WW	1355, 2003	11
287	Tarłów	941	3248	898	opatowski	ŚW	RD	1550	21
288	Tarnogóra	936	1900	752	krasnostawski	LB	LB	1548	22
289	Tarnogród	3557	6574	3391	biłgorajski	LB	LB	1567, 1987	11
290	Tuliszków	3461	2753	648	turecki	WP	KA	1458, 1919	11
291	Turobin	1037	5350	1963	biłgorajski	LB	LB	1399	21
292	Tuszyn	7307	3813	559	łódzki wschodni	ŁD	PT	1416, 1924	11
293	Tyszowce	2291	7620	1704	tomaszowski	LB	LB	1419, 2000	11
294	Uchanie	677	3345	870	hrubieszowski	LB	LB	1484	21
295	Ujazd	1730	2291	649	tomaszowski	ŁD	PT	1428	21
296	Uniejów	3073	3378	736	poddębicki	ŁD	KA	1290, 1919	11
297	Urzędów	1083	5386	455	kraśnicki	LB	LB	1405	21
298	Wąchock	2890	3347	766	starachowicki	ŚW	RD	1454, 1994	11
299	Waśniów	446	980	228	ostrowiecki	ŚW	RD	1467	21
300	Wąsosz	1401	1628	856	grajewski	PL	ŁM	1436	21
301	Wąwolnica	1120	3370	837	puławski	LB	LB	1567	21
302	Widawa	1321	4480	942	łaski	ŁD	PT	1388	21
303	Wieniawa	13676	4239	215	Lublin (city)	LB	LB	1768, *(1916)*	31
304	Wieruszów	8977	8086	1190	wieruszowski	ŁD	KA	1368, 1919	11
305	Wierzbica	4223	2281	877	radomski	MZ	RD	1469	21
306	Wierzbnik	1366	2606	274	starachowicki	ŚW	RD	1624, 1916*(-1939)*	31
307	Wilczyn	1235	956	271	koniński	WP	KA	1458	21
308	Wiskitki	1387	4372	763	żyrardowski	MZ	WW	1349	21
309	Wiślica	542	3305	786	buski	ŚW	KC	1345	21
310	Wisznice	1542	3010	541	bialski	LB	SD	1579	21
311	Wisztyniec (*Vištytis*)	566	4100	1962	Vilkaviškis	LT-M	SU	1570	12
312	Wiżajny	931	1867		suwalski	PL	SU	1620	21
313	Wizna	1529	3095	1326	łomżyński	PL	ŁM	1400	21
314	Władysławów	1707	1606	615	turecki	WP	KA	1727, 1919-1934	21
315	Włodowice	1223	2095	881	zawierciański	ŚL	PT	1399	21
316	Włoszczowa	11037	7656	724	włoszczowski	ŚW	KC	1539, 1916	11
317	Wodzisław	1224	6620	1270	jędrzejowski	ŚW	KC	1522	21
318	Wohyń	2065	3877	1324	radzyński	LB	SD	1519	21
319	Wojsławice	1658	4289	1037	chełmski	LB	LB	1445	21
320	Wolanów	1092	289	236	radomski	MZ	RD	1773	21
321	Wolbórz	2407	2534	554	piotrkowski	ŁD	PT	1272, 2011	11
322	Wolbrom	9199	6563	1359	olkuski	MP	KC	1349, 1930	11
323	Wyśmierzyce	928	1518	690	białobrzeski	MZ	RD	1338, 1922	11
324	Wysokie Mazowieckie	9729	2894	872	wysokomazowiecki	PL	ŁM	1503, 1919	11
325	Wyszków	27627	6298	653	wyszkowski	MZ	ŁM	1501, 1919	11
326	Zagórów	2995	4543	962	słupecki	WP	KA	1407, 1919	11
327	Zaklików	3043	4043	621	stalowowolski	PK	LB	1585	21
328	Zambrów	23485	4465	632	zambrowski	PL	ŁM	1430, 1919	11
329	Żarki	4471	5427	919	myszkowski	ŚL	PT	1382, 1949	11
330	Żarnów	1192	3740	507	opoczyński	ŁD	RD	1360	21
331	Żarnowiec	701	3665	919	zawierciański	ŚL	KC	1340	21
332	Złoczew	3470	3158	724	sieradzki	ŁD	KA	1606, 1919	11
333	Żółkiewka	825	2778	409	krasnostawski	LB	LB	1702	21
334	Żuromin	9135	5910	719	żuromiński	MZ	PŁ	1767, 1925	11
335	Zwoleń	8456	6252	1149	zwoleński	MZ	RD	1425, 1925	11
336	Żychlin	9179	5901	820	kutnowski	ŁD	WW	1397, 1924	11

6. Methodology

6.1. Introduction

This chapter is dedicated to the methodology and the methods that will be used to assess the level of morphological urbanity of the towns studied in this thesis. The general task is to construct a summative morphological index capable of capturing, in the possibly most adequate way, the level of morphological urbanity of each of the studied towns. The parameters (variables) that will constitute this summative index must be constructed in a way that would facilitate their further application. One way of doing it is by encapsulating each variable within a specified interval (Sokołowski 1999; Drobek 1999). In this study I have opted for the interval of 0-100, where 100 denotes the most developed level of a specific feature and 0 denotes lack of such feature.

As pointed out in chapter 1.9, the methodology of this study encompasses three morphological aspects:

a) the complexity of the town plan ('the skeleton of the town')
b) the character of the town's housing structure ('the body of the town').
c) the quality of the market square ('the heart of the town')

Tab. 6.1. Outline of the methodology used in this thesis.

Morph. feature	Parameter	Method		Unit	Source of data
1. **TOWN PLAN** 'the skeleton'	Complexity of the street grid **= SPATIAL URBANITY**	Graph method (*network analysis*)		Streets and nodes (*calculation*)	Cartography
2. **HOUSING STRUCTURE** 'the body'	Prevailing building type **= PHYSIOGNOMIC URBANITY**	Szmytkie's index		Dwellings and residential buildings (*calculation*)	Statistical data (GUS)
3. **MARKET SQUARE** 'the heart'	*1. Integrity*	*ORIGINAL METHODOLOGY*	a) Morphometry	Missing buildings	• Remote sensing data • Cadastral survey
			b) Indexation	*Calculation*	Morphometry results
	2. Compaction		a) Morphometry	Gaps between buildings	• Remote sensing data • Cadastral survey
			b) Indexation	*Calculation*	Results from morphometry
	3. Composition		a) Morphometry	Land-use elements	• Remote sensing data • Cadastral survey
			b) Point evaluation	Class codes	• Theoretical framework • Trend studies in urban design
			c) Indexation	*Calculation*	Results from morphometry and point evaluation
	4. Cohesion		a) Visual analysis	Streets /Roads	• Digital cartography • Remote sensing data
			b) Point evaluation	Class codes	• Theoretical framework
			c) Indexation	*Calculation*	Results from morphometry and point evaluation
	(1-4) **= CONTEXTUAL URBANITY** (in regard to 'small traditional towns')		a) Indexation	*Calculation*	Results from methods regarding parameters 1-4
			b) Visual analysis (validation)	Class codes (perceived urbanity)	Field observations in 69 degraded towns
1-3 above: **OVERALL MORPH. STRUCTURE**	**= SUMMATIVE MORPHOLOGICAL URBANITY**		Indexation	*Calculation*	Results from indexation of morph. features 1, 2 and 3

The first two features correspond to the most important morphological parameters of urbanity of any town – *town plan* (spatial configuration of streets) and *physiognomy* (the prevailing building type). The third feature – the market square – is an important contextual parameter of urbanity of the small mediaeval town (cf. chap. 4.4) – a town type pertinent to most towns in this study. The town plan and physiognomy (housing structure) are examined by using eclectic methods, which in turn require morphometry (for the town plan – cf. 6.2) and processing of statistical data (for physiognomy – cf. 6.3); the achieved indices are then transformed into a 0-100 scale in 6.4. Assessment of market squares, on the other hand, constitutes a novel approach, for which new methodology has been developed, drawing upon theoretical framework introduced in chap. 4 (regarding general reading of urban design *and* its reflection in a Polish context) and executed through subsequent morphometry derived from remote sensing (6.5 and 6.6). The merit of this novel approach is then verified by correlating the outcome of the proposed methodology with results obtained from extensive field observations conducted in 69 towns (6.7). Lastly, the summative morphological index is assembled in 6.9. The structure and the characteristics of the chosen methodological approach is shown in tab. 6.1.

Additionally, in order to designate towns with the greatest realistic chances of restitution due to exogenous processes (cf. chap. 3.9.2), the scope of this study has been extended towards the spatiality of current restitution trends, for which a special calculation has been devised in 6.9.

6.2. Assessing town plan complexity with the graph method

To assess the level of urbanity of the towns' spatial layout I have used the *graph method*. First proposed by Zagożdżon (1970), the method has proved useful when charting layouts of town plans and has been employed e.g. by Heffner (1987), Parysek *et al* (1995), Drobek (1999), Szmytkie (2009) McDonough *et al* (2010), and in many other geographical studies (cf. Miszewska 2005; Rodgers 2005). The method has also been used in studies on different types of networks, e.g. television (Łoboda 1973) and railway systems (Bagińska 2007).

A graph is an abstraction used to model a system that contains discrete, interconnected elements. The elements are represented by *nodes* (also called *vertices*) and the interconnections are represented by *edges*. In this context, nodes represent street and road intersections within the built-up area of a town as well as the ends of such areas ('city limits'), while edges denote built-up streets and roads. The base for the method is mapping all nodes and edges within each settlement (in GIS, departing from digital maps and satellite imagery, see fig. 6.1), counting them, and processing the data through a mathematical operation. Such procedure enables determining the degree of complexity of the graph, which in turn represents the degree of complexity of the town plan (fig. 6.1). The premise is that the higher the degree, the more complex the layout of the town plan, the latter a characteristic of urban areas (cf. chap. 4.5). The specific formula applied in this study is Szmytkie's (2009) adaptation of Zagożdżon's (1970) ideas, and represents this study's *unprocessed* (raw) graph index, V_{grfx} (adapting it to the specifics of this study is done in 6.5):

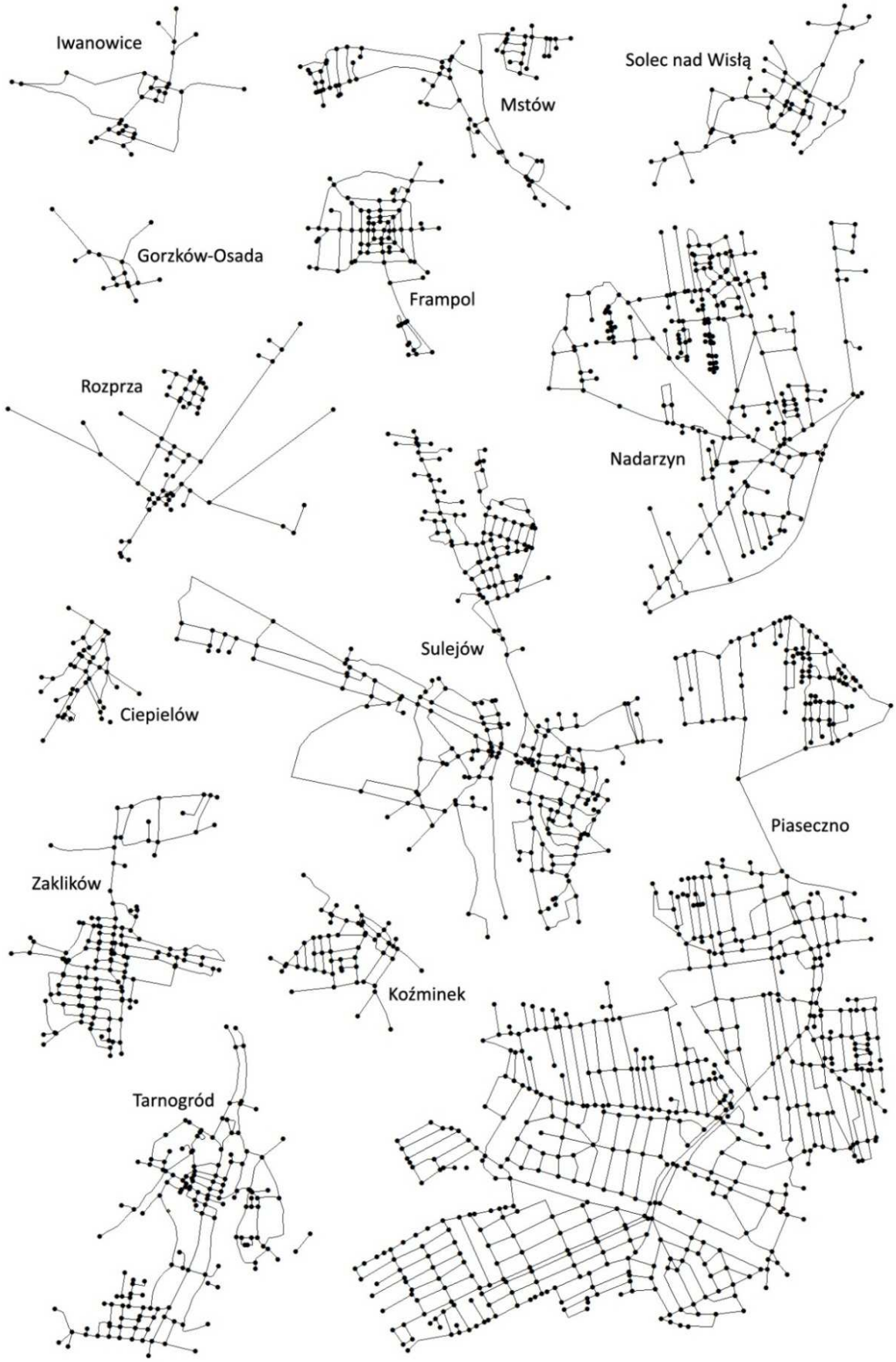
$$V_{grfx} = \frac{k(n^2 - n)}{2n^2} \qquad (1)$$

where: k= number of edges; n = number of nodes (vertices)

The mapping of nodes and edges should only be done for built-up areas; therefore an appropriate delimitation of such areas is crucial (cf. Bitner 2010). Due to the large number of graphs (336) that had to be created, I have speeded up the process by using pre-constructed delimitations of built-up areas derived from *www.pkt.pl*, *www.viamichelin.com* and *www.arcgis.com*. However, all delimitations were always screened optically against a layer of satellite imagery, and – when erroneous – corrected before digitalizing the graph. Although there are automatic methods available for detecting street grids, these are highly susceptible to mistakes (e.g. lot boundaries are often interpreted as streets). I have therefore chosen to digitalize the graphs manually. Sometimes, there were problems with drawing boundaries between two adjoining settlements that have coalesced over time[1]. In those cases, cadaster registers were used for disambiguation, as lot numbering usually changes drastically at boundary points between two adjoining settlements.

[1] E.g. Mrzygłód and Mrzygłódka; Lutomiersk and Wrząca; Sokoły and Kruszewo-Głąby, Żółkiewka and Średnia Wieś; Turobin and Przedmieście Szczebrzeszyńskie; Sterdyń and Lebiedzie; Goraj and Zastawie, Władysławów and Russocice, Janów and Ponik, Nadarzyn and Rusiec/Kajetany, Mstów and Wancerzów, Wisznice and Wygoda, Rozprza and Bazar/Kęszyn, Grocholice and Mazury, Kazanów and Miechów, Janów Podlaski and Stary Pawłów, Konstantynów and Zakanale, Jedlińsk and Wola Gutowska, Markuszów and Łany, Kuczbork-Osada and Kuczbork-Wieś, Wilczyn and Wilczogóra, Sienno and Trzemcha Dolna, Wierzbica and Szczepanówka, Balbieriškis (Balwierzyszki) and Nešeikiai, Odrzywół and Wysokin, Klwów and Klwowska Wola, Szadek and Szadkowice, and *particularly* Przytyk and Podgajek (Podgajek is divided into two enclaves Przytyk Zachodni and Przytyk Wschodni on *both* sides of Przytyk, sharing a number of streets; on the other hand, Przytyk has incorporated a much more distant village Piaski (absurdum).

Fig. 6.1. Examples of different town layouts achieved by the graph method (scale 1:20 000).



6.3. Assessing the character of a town's housing structure

6.3.1. Physiognomic index

In order to determine the physiognomic character of each of the studied settlements, I have used an approach focusing on the most prevalent building type in terms of urban/non-urban characteristics (cf. chap. 4.6). For reasons outlined in. chap. 1.9, neither remote sensing nor field investigation was an optimal method to acquire data on the settlement's housing structure. Instead, I chose a statistical approach suggested by Robert Szmytkie (2009: 12), adequately conveying the essence of each settlement's physiognomic character. As Adamczewka-Wejchert & Wejchert (1986: 38-39) have noted, the image of a settlement is determined by the relationship between the buildings' height and mass in relation to the street. Likewise, the premise for the index here introduced is such that an urban physiognomy differs from rural physiognomy due to the specific function of an urban area, which is expressed in territorial density and higher land prices. This, in turn, results in a greater number of multiple-family buildings (often multi-storey townhouses), whereas rural physiognomy in Poland (here understood as linked to areal land-use economy) is generally not associated with such housing.

Dividing the number of dwellings by the number of residential buildings (by means of secondary data retrieved from GUS) renders an index (V_{phyx}) of the town's housing structure. By housing structure should be understood the relation between single-family and multiple-family buildings. A lower index is an indication that single-family housing predominates, while a higher index suggests a greater presence of multiple-family buildings, and, as such, a more pronounced urban physiognomy.

$$V_{phyx} = \frac{d}{b} \qquad (2)$$

where: d= number of dwellings; b = number of residential buildings

6.3.2. Methodological considerations

Limitations and advantages

Although a settlement's housing structure does correlate with a specific building type (Zaniewska & Barek 2005: 162), it is noteworthy that Szmytkie's index does not discriminate between one-family villas (typical to both urban and rural areas) and one-family farms (typical only to rural areas). The index is therefore not an indicator of the actual function of the buildings (whether residence only or residence-cum-sustenance); it merely emphasizes occurrences of buildings atypical of traditionally rural environments (multiple-family). Nevertheless, the progressive urbanization of the rural landscape as well as urban sprawl (typical to cities) result in gradual homogenization of both urban and rural physiognomies, most often expressed in single-family housing. This means that urban areas lacking multiple-family housing become morphologically more similar to current 'rural' standards, while those boasting a substantial share of multiple-family buildings distinguish themselves all the more from rural areas. This would speak for the poignancy of the index.

One major exception are the now liquidated Polish PGRs (State Agricultural Farms) created in 1949, whose residential buildings were sometimes two- or three-storey, multiple-family concrete buildings located near agricultural land. However, PGRs were instituted *both* in rural areas and on the outskirts of small formal towns; therefore their impact on the index should be fairly equal regardless of the towns' administrative status. One other observation is that the number of PGR-related residential buildings was often very limited (one to two blocks). Also, after the liquidation of PGRs in 1991, those multiple-family buildings lost their agricultural (rural) association, and today can be seen as an architectural type that actually stands out from the traditionally rural one-family physiognomy (i.e. adding 'urbanity').

Opting out of using density as a physiognomic factor

I have consciously opted out of taking into account density as a factor for following reasons. Departing from the fact that people live in homes (not accounting for homeless people), a measure of physiognomic density is also a measure of population density, which – although an urban denominator per se – is not directly a *morphological* aspect as such figures are derived from data regarding area and population numbers. For instance, Sokołowski (1999: 43; 204) treats density and morphology as two separate attributes of urbanity, the latter ascribed qualitative properties derived from architectural traits. For instance, shantytowns, although highly densely populated, are in fact devoid of urban morphology.

There are also other problems, which speak for not using density as a measure when studying physiognomy, Firstly, the administrative area of a town is often not synonymous with urbanized area (cf. chap. 3.3.1 on overbounding),

including forests, agricultural land, lakes, beaches etc. Using such data as a point of departure would produce unrealistic results, as the density would appear overly low[2]. For instance, by using this approach, only one town (of 908) in Poland – Świętochłowice – would (barely) meet Szmytkie's (2003) suggested level of urban density (4000 people/km^2), while the town of Krynica Morska with 12 people/km^2 would stand out as a parody of urbanity. In reality, both Świętochłowice and Krynica Morska have a dense urban core which is sufficient to sustain an urban character. In order to arrive at meaningful measures, one would instead have to take into account only urbanized/residential area – a second option. Indeed, outlining such area is relatively easy by remote sensing; however, by doing that, we would exclude all residents living outside of the dense urbanized core, whereupon using the original population data would no longer be possible. A third scenario, outlining *all* residential areas of a specific town would create excessive fragmentation, with multiple, detached residential enclaves amidst non-residential land, which, in result, would no longer be a meaningful measure of *density*. Another aspect of this flaw is the geometry of a settlement. For instance, two *equally dense* settlements, one shaped like a circle and one like an X, would still differ in terms of urban character (layout). Many villages have the shape of long strings of houses located close to one another, which, if only the residential area were measured, would produce a relatively high density. Nevertheless, settlements shaped in such way lack urban character, because urban-specific density (at least in a Polish context) seems to be related to a more cohesive area with much larger internal connectivity. That said, it would seem that accounting for urban physiognomy by means of density is highly treacherous, difficult to perform and involves much subjectivity in terms of delineation. In Sweden, for example, urban areas (*tätorter*) are designated by a density criterion of maximum 200 m between houses[3]. It makes you wonder; are settlements striated with gaps up to 200 m really dense?

Assessment of a town's housing structure, on the other hand, seems like a more adequate way to convey the physiognomic (morphological) character of a settlement. Since the procedure only relates to the buildings, it is much less dependent on the spatial delineation[4]. This aspect is also more precise, as multiple-family buildings automatically produce higher population density than the same amount of single-family buildings within an area of equal proportions. This happens because multiple-family buildings usually contain more people per volume/space than single-family buildings due to their multi-storied structure or/and greater compaction between dwellings. This could be (I speculate) why Szmytkie himself actually eschewed from his own approach proposed in 2003 (density as a physiognomic criterion) in a later study (2009), where he instead opted for a housing structure approach.

One last observation is in place. Although density *is* a denominator of urbanity – in fact, it actually defines urbanity *sensu stricto* (Sokołowski 1999: 43; 204) – it is important to bear in mind that the object scope of this study are degraded *towns*. Since degraded towns are *morphogenetically* urban, and, as such, they (implicitly) have an inherited morphological density typical of towns, the level of their urban character is instead determined by the dominant building type (along, of course, other variables such as town plan complexity and market square quality), and not the density per se.

6.4. Transforming graph index and physiognomic index into a 0-100 scale

For reasons of comparability, the results from the physiognomy and graph calculations were recalculated into a 0-100 scale. Having in mind the contextual significance of town size (the small town, cf. chap. 4.4.2), the value 100 could not be assigned to the largest settlement in the analyzed group (Bełchatów with 62.898 inhabitants). By doing so, the great majority of settlements would due to their small size be crammed at the bottom of the scale, showing little differentiation. In order to achieve better differentiation as well as a meaningful semantic top marker (where 100 would equal the characteristics of the most urban town in terms of small size and mediaeval origin, cf. chap. 4.6), the 100-value would have to be set significantly lower. Departing from the theoretical framework, this hypothetical value would equal the characteristics of a formal town of c. 5000 inhabitants (in this group – Ożarów with 5001 inhabitants). However, choosing only one town would be treacherous, as there is a pronounced morphological differentiation among towns in the same population bracket. Therefore all *formal*[5] towns in this study with a population between 4000 and

[2] Moreover, for rural units (including degraded towns) data regarding 'urban area' are for obvious reasons not available (only urban units have a delimited administrative area). Instead, rural communes are divided into *sołectwa* (civil parishes) that include both settlements and agricultural land.

[3] They also must be inhabited by at least 200 inhabitants.

[4] There are some minor area-related contingencies, such as buildings located outside of the urbanized core most likely being one-family houses; on the other hand, in Poland, multiple-family PGR:s also occur outside of the urbanized core, thus balancing this imperfection.

[5] Here, it is the formal (restituted) towns that form the matrix for a subsequent analysis of how urbanity is valued in Poland. The non-restituted towns were therefore excluded, as their inclusion would contaminate the point of reference. All the same, there was only one non- restituted town (Wierzbica) within this population bracket.

6000 (a 1000-inhabitants margin either way) were analyzed (18 altogether[6]), and mean values[7] for this group were translated to the hypothetical value of 100. In order to remove outliers, the highest and lowest values were excluded (16 towns were finally analyzed) (tab. 6.2)

Tab. 6.2. Frequencies for the 18 formal towns in this study with population of 4000-6000.

	Lowest excluded value	**Lowest included value**	**Highest included value**	Highest excluded value	**Mean** (=index 100)	*(Median)*
Physiognomy	1,11	**1,18**	**3,27**	3,69	**1,8950**	*(1,88)*
Graph (layout)	43,4	**64,4**	**138,8**	183,8	**87,3234**	*(81,1)*

Transformation of values into a 0-100 scale was made using following formulas:

a) Physiognomic index (V_{phy})

$$V_{phy} = \frac{\sqrt{(V_{phyx} - 1)}}{\sqrt{V_{\overline{phyx}}}} \times 100 \quad (3)$$

where:
V_{phyx} = raw version of the physiognomy index
$V_{\overline{phyx}}$ = mean value for the raw version of the physiognomy index, calculated for 16 formal towns between 4000 and 6000 inhabitants (1,8950)

b) Graph index (V_{grf})

$$V_{grf} = \frac{\sqrt{V_{grfx}}}{\sqrt{V_{\overline{grfx}}}} \times 100 \quad (4)$$

where:
V_{grfx} = raw version of the graph index
$V_{\overline{grfx}}$ = mean value for the raw version of the graph index, calculated for 16 formal towns between 4000 and 6000 inhabitants (87,3234)

Since the results of the physiognomic calculation (V_{phyx}) begin with 1.00 (not at 0.0), the values had to be reduced by 1 (hence "– 1" in the formula). The square root of the mean value (1,8950) was 0,946044396421225. Now, values of 1.00 (reduced to 0.00) equal index value 0,0, while values of 1,895 (reduced to 0,895) equal value 100.0. Graph analysis results start at 0.00 and did not have to be altered. The square root of the mean value is 9,344699032071605. Now, values of 0.00 in the graph analysis equal index 0, while values of 87,3234 equal index value 100.0.

Note that all values higher than 1,895 (physiognomy) and 87,3234 (graph) receive index values higher than 100.0. These, can in this context be regarded as 'implicitly urban', or as displaying morphological characteristics falling outside of the contextual scope of this study ('the small mediaeval town', cf. chap. 4.4). Analogically, the index value 0 corresponds to data with value 0, i.e. no urban characteristics.

6.5. Market square – composite indices

6.5.1. Introduction

While assessing the morphological, urbanity-defining quality of market squares, a set of variables was investigated. Only variables that could be measured from a *horizontal view* by means of remote sensing were chosen. Therefore, variables requiring vertical inspection, such as building height or building ornamentation, were excluded. Following four variables were surveyed, based on theoretical framework and current trend analyses described in chap. 4.8:

1. Physiognomic variables – denote the structure of the square's *frontages* ("walls"), with the sought-for aspect being *enclosure:*

a) *Integrity* – denotes the level of completeness of the frontages (in full integrity, the amount of buildings making up a frontage should be unreduced; "no buildings missing")
b) *Compaction* – denotes the level of density of the buildings that make up the frontages (the continuity of buildings making up the frontages should be unbroken; "no gaps between buildings")

2. Spatial variables – denote the structure of the square's *internal area* with the sought-for aspects being *legibility* and *function:*

[6] Siewierz, Bychawa, Iłża, Ożarów, Łaskarzew, Raciąż, Krośniewice, Piotrków Kujawski, Golina, Krzepice, Ogrodzieniec, Żarki, Słomniki, Kleczew, Drzewica, Skaryszew, Małogoszcz and Nowe Miasto nad Pilicą.

[7] Mean values were chosen rather than median values, due to the small selection of towns, which does neither include mediaeval towns in the same population bracket that were never degraded, nor those outside of the area of Congress Poland. As such, the selection of 18 towns does not cover the whole range of morphological manifestations for this population group, whereupon a median would not be representative. However, both values (especially for physiognomy) are similar.

c) *Cohesion* – denotes lack of disruptive elements, mainly roads, with the objective being a maximum of conjoint area – a premise for optimal customization of the square's space ("no fragmentation of space")
d) *Composition* – denotes the most favorable economization of the square's space in terms of pedestrian adaptation; the focus is on *overtness* and – accordingly – a minimum of obstructive elements

6.5.2. Integrity index (V_{int})

The first examined variable was the market square's integrity. Integrity denotes the degree of completeness of the frontages. Within full integrity, the amount of buildings making up a frontage should be unreduced (no buildings should be missing). The base for calculation of the integrity index (V_{int}) comprises dividing the number of buildings by the number of lots individually for each frontage, and then multiplying each quotient by the share (percentage) of that frontage's length in relation to the market square's circumference (circumference = sum of all frontages' length):

$$V_{int} = \frac{x_1}{y_1} z_1 + \frac{x_2}{y_2} z_2 + \frac{x}{y_3} z_3 + \frac{x_4}{y_4} z_4 \qquad (5)$$

where:
x = number of buildings in a frontage of a market square
y = number of lots in a frontage of a market square
z = a frontage's length share (%) of the market square's circumference
$_{1,2,3,4}$ – denotes the market square's four frontages (northern, eastern, southern, western)

Such approach (1) reveals the relation between the missing buildings to the amount of expected buildings (level of integrity); and 2) preserves the architectural individuality of respective frontages, which is of help in abnormal situations, as illustrated in the footnote[8] [9].

Interpretation of data – general concerns

A few technical notes should be added on the practical assessment of integrity. This section explains how some special situations have been dealt with and must not be read for an overall understanding.

(1) Alignment of houses within lots*.* While assessing the integrity of the frontages, the idea was not to pursue a historical set of frontages and, as such, the integrity of the original make-up of the square. Instead the focus was on the physical integrity of the frontages, irrespective of the age (authenticity) of their buildings. For instance if a whole set of historical houses would for some reason be demolished and replaced by either replicas or a totally different set of modern buildings, then the integrity of the square's frontages would still be the same. The variable 'integrity' pertains therefore solely to the enclosure of a market square, and not to its architectural character[10]. Nevertheless, although the architectural quality of the houses was not respected, the depth-relative position of the buildings (within lots) was, as some buildings (almost always new ones) are erected in the back of the lot, not in line with the adjacent houses. Hous-

[8] When all frontages are weighted accordingly to their length in relation to the circumference of the market square, asymmetrical variations in frontage length are taken into account, thus presenting a more realistic image of the market square as opposed to if all frontages would be weighted equally. In other words, overly short sides are not oversized and overly long sides are not undersized within the integrity and compaction indices. Also, the sheer separation of frontages is of help in abnormal situations, as opposed to if the examined features of all market square's frontages would be directly added together. Consider following hypothetical scenario of a market square consisting of four very differently configured frontages: (1) The northern frontage consists of small lots and a dense, cohesive body of houses; (2) The eastern frontage consists of only one big lot belonging to the church, with the church itself occupying only a part of the lot and the rest of it being covered with trees or housing a cemetery (note that integrity of such frontage would be intact per definition); (3) The southern frontage consists of larger lots containing loosely placed villas, with enough space between them (across the lot borders) to contain equally sizeable villas; (4) The western frontage consists of only one yet very long Soviet-style concrete bloc that takes up the whole frontage; yet it is made of only one single lot (obviously created by merging several lots before its construction). If all features (lots and buildings respectively) of such a market square would be added together the sum would be highly unnatural; a concoction of different elements, breaking the foundations of architecture, spatial planning and morphological change. By keeping all four sides apart while evaluating the percentage of integrity (and compaction) of each frontage, the individual character of the latter could be preserved, only to be weight-adjusted lengthwise at a later phase (for the integrity index). Although mixed lot types and/or mixed building types within the same frontages do occur, this was dealt with in a manner as described in the section 'Interpretation of data – general concerns'. In conclusion, as there are many examples of market squares displaying frontages of different qualities, keeping the frontages apart helps maintaining their structural specificity.

[9] Note, that the following pros and cons denote both the variable integrity and the variable *compaction*, elaborated in 6.5.3

[10] Measuring architectural quality of urban buildings (e.g. storeys, style etc.) is a totally different methodical approach, not doable by remote sensing; I have utilized this method in my evaluation of degraded towns in Greater Poland in an earlier study (cf. Dymitrow [2010] 2012).

es positioned in this way tend to distort the overall perception of the integrity of a frontage, and inclusion of these would produce misconceived results. Furthermore, such indentations are also extraneous from a historical perspective. In conclusion, whenever a building was not aligned with the majority of the remaining houses in that same frontage (with disregard to minor lateral dislocations due to architectural freedom) it was regarded as a missing unit.

(2) Large single lots and merged lots. Sometimes a frontage comprises only of one single – often large – lot, not intended for dwelling (mainly cemeteries). In those cases the number of lots was accounted for (1), but the amount of houses was set to null (0). Such conduct might defy the historical context; however, a frontage free of buildings still distorts the perceived overall integrity of a market square. Churches were exempted from such treatment, simply because of their grandeur capable of filling out a building-free frontage, but also due to their historical role as urban dominants. Therefore, churches taking up only part of a lot were counted as 'one lot – one house'. One restriction was, however, that the *whole* church should front the market square, not just lie in some other part of the lot. On the other hand, there were instances of two or more lots being merged into one single lot. This was popular in the Communist era when commercial structures (often concrete slabs) were erected directly by the square in place of war-inherent ruins, or appropriated houses that were demolished for different purposes. In order to give a more realistic picture of the square's integrity, lots with buildings that did not fill their full length (i.e. leaving room for at least one more house of some contiguous 250 m^2) were divided into two lots, or, more exactly, one extra lot per extra house space.

(3) Subdivided lots. A scenario reversed to that of merged lots could also be observed, i.e. when single lots (with single houses) were divided into two are more lots. Such process was clearly detectable through very narrow lot widths (an extreme example is Bełżyce, with its southern frontage of only 148 m divided into 30 lots). Since lot fragmentations were almost never executed within *empty* lots, these were not a methodical problem. All in all, the number of subdivided lots almost always matched the number of "buildings", i.e. *sections* of houses.

(4) Apertures. Quite many market squares have their frontages perforated by miniscule alleys and arched passages, linking the square with parallel hind-streets. Although numbered in the cadaster as lots, these links were regarded as part of the town's infrastructure (similar to those of streets) and, as such, were not regarded as missing houses. They were however regarded as gaps (see 6.5.3), save for annexes and arched passages (fig. 6.2), which are technically an integral part of a house. Alleys and passages were identified by their extremely narrow lot shapes and permeable character, i.e. exiting into a hind-street.

Fig. 6.2. Annexes and arched passages – two types of gaps between buildings not treated as gaps when indexing market square compaction. Left. Gąsawa; right: Rostarzewo. *Photo*: M. Dymitrow

(5) Triangular market squares. Some problems occurred with triangular squares. Those, shaped as isosceles triangles, had their steep-angled vertex coinciding with a street exiting the market square (e.g. in Opole Lubelskie), and, as such, they did not really border a lot from that side. Even if some part of a neighboring lot did protrude onto the market square, such area was technically not suitable for a building. Had such lots been accounted for (with the amount of buildings set to zero), then the calculation of such a 'frontage' would equal total disintegration and produce unrealistic results. Instead, in such scenarios *both* the sum of lots and the sum of building were set to 1 (not to null – for arithmetical reasons). Also, such space was not regarded as a gap when measuring compaction.

(6) Problems with overly short sides. A major problem regarded the arithmetical weight of *short sides* in oblong, trapezoidal and triangular squares in terms of impact on the overall integrity index. Consider the following scenario: An oblong square measuring 200 m (20 houses), 20 m (2 houses), 200 m (20 houses) and 20 m (20 houses) with all its sides intact would produce an integrity index equaling 100 (100 %). However, if the long sides were half-disintegrated (10 + 10 houses), the integrity of such square would equal 75 % ((50 + 100 + 50 +100) / 4). In comparison to the actual num-

ber of missing houses – all in all 20 out of 44 – such loss would equal c. 45 %; in other words, the actual integrity of the square in question would be 55 % (100 – 45). That said, the indexed integrity would be 20 % higher than the de facto constitution, because of the exaggerated weighting of short sides. As opposed to the similar problem encountered with measurement of compaction, weighting of integrity could not be altered by arithmetical manipulation. Since *full integrity* means *no lack of houses,* then the values of intact sides – even if considerably shorter – could not be reduced. In order to circumvent this impasse, a compromise solution had to be found; one that mitigated the impact of short sides without altering the values. I found that the arithmetical significance of extremely short sides could be moderated by conjoining them and then dividing the values of all frontages by 3 rather than by 4, thus 'transforming' an oblong square into a triangular one. In this fictitious example of an extremely oblong square, even the proposed alteration would not have sufficiently moderated the outcome. Fortunately, squares of such dimensional extremes do not exist (in this study, the square of Brudzew has the highest discrepancy between its long and short sides, measuring c. 295 x 60 m. Conjoining the short sides was thus executed in those oblong squares, where the length of both short sides equaled more than half the length of the long side(s).

(7) Cadaster register vs. merged and split lots. Another problem arose from blind following the cadaster register. In most cases, the method proved satisfactory; however, instances of extensive merging and/or splitting of lots in some squares produced distorted results. Imagine a frontage made up of 4 lots, one of which is a large one as result of a merger of 3 standard-size lots, the other 3 frontages left intact. Now, such a frontage would produce an integrity percentage of 75 (4 lots = 100%; 1 lot = 25%; 100 – 25 (1 empty lot) = 75). In reality the integrity of such frontage would only be 50 % (6 *de facto* lots – 3 *de facto* missing buildings). Although having refrained from altering minor variations, whenever the mergers were too extensive, I have adjusted the method by counting *de facto* lots (the width of lots were adjusted to the width of the majority of lots). The same problem occurred with overly split lots (e.g. when a real estate were subdivided into small shops), producing an enhanced amount of lots which would soft-pedal the weight of some missing standard-size lots. A square frontage consisting of 6 *de facto* lots, with 3 houses missing and the other three being split into 3 lots each (3 + 3 + 3 = 9) would produce a total of 12 lots. 3 missing houses would produce an integrity percentage of 75 (12 lots = 100 %; 3 lots = 25 %; 100 – 25 = 75), while in reality half of the houses (50 %) would be missing. In such instances I have disrespected the splitting of lots, counting only full-size houses and/or standard-width lots. It is important to mention that this problem was incumbent only when gaps occurred; when the frontages were intact, only the amounts of lots were distorted but not the percentage figures, which were the basis for the index calculation. It is important to stress that since lot allocations have been modified, the database is no longer a valid account of the actual lot distribution along the squares. This is however not a contextual problem; the aim of this method was not to *reproduce* the cadaster register, only to use it for creation of a new body of information.

6.5.3. Compaction index (V_{cpc})

The second examined variable was the market square's compaction. *Compaction* denotes the level of adhesion between the buildings that make up the frontages. In squares of full compaction the adhesive continuity of buildings making up the frontages should be unbroken (there should be no gaps between buildings). In order to produce the exact numbers one would have to measure all individual houses and subtract the sum from the length of each frontage. In order to facilitate measurements, I decided only to count the gaps (mid-frontage street outlets included, corner street outlets excluded) (fig. 6.3, A). The base for calculation of the compaction index (V_{cpc}) comprises dividing the number of joints between buildings by the number of buildings for each frontage, and then multiplying each quotient by the share (percentage) of that frontage's length in relation to the market square's circumference (circumference = sum of all frontages' length):

$$V_{cpc} = \frac{q_1}{x_1} z_1 + \frac{q_2}{x_2} z_2 + \frac{q_3}{x_3} z_3 + \frac{q_4}{x} z_4 \qquad (6)$$

where:
x = number of buildings in a frontage of a market square
q = number of joints between buildings in a frontage of a market square
z = a frontage's length share (%) of the market square's circumference
$_{1,2,3,4}$ – denotes the market square's four frontages (northern, eastern, southern, western)

Such approach 1) reveals the degree of non-adhesive buildings in relation to the actual number of buildings (level of compaction); and 2) preserves the architectural individuality of respective frontages, which is of help in abnormal situations (cf. the footnote in the section on integrity). Also, by keeping frontages apart, streets exiting from the square's corners were not treated as compaction gaps (only as edges of individual frontages), whereas this would have been the case, had all frontages been treated as a uniform entity (i.e. if the spaces between *all* buildings of a market square were treated as gaps, including corner street exits).

Since lack of compaction denotes lack of adhesion, then this particular lack should correspond to the actual (perceived) amount of gaps, not the mathematical amount of gaps:

a) Three adjoining missing house were assumed to form one gap not two;
b) For gaps adjoining a side street (corner gaps) it was assumed that these may not be perceived as gaps but as an extension of the street's space, and were consequently not counted
c) Due to their detachment from the market square proper, lots with buildings placed extensively backwards within a lot were also considered as gaps[11]
d) Within frontages made up of only one house, compaction is not relevant; setting the number of joints to zero would contaminate the method, and was instead altered to 'one' (full compaction). For similar reasons, a frontage whose only house did not cover its whole length were set to 0,5 (rather than to 0 or 1). However, total lack of buildings was set to 0.

Fig. 6.3. Morphometry of a market square's **(A)** compaction; **(B)** composition. Example from Tarnogród**.** *Source*: geoportal.gov.pl

A: Green lines denote joints, red squares denote gaps, while yellow lines denote edges not subject to compaction assessment.
B: Purple color denotes parks, green – lawns, yellow - thoroughfares and red – buildings; there is no open space in this square[12].

6.5.4. Composition index (V_{cps})

In the context of this study, *composition* denotes the most favorable customization of the market square's interior in terms of adaptation to pedestrian use, with focus on overtness and – accordingly – a minimum of obstructive elements. Due to its complexity, composition is also the most difficult variable to assess. In order to arrive at a meaningful evaluation, it was necessary to conduct considerable deconstruction and processing. The assessment of the quality of a square's composition was executed in five steps:

1. Identifying and classifying the land-use elements of a square's spatial composition
2. Measuring the area of the classified land-use elements for each square
3. Assigning each land-use element a specific weight value in terms of urban character
4. Assigning each land-use element a specific weight value in regard to the square's size
5. Constructing an index based on data from point 2 and results from point 3 and 4

Identifying features of a square's spatial composition

Departing from the assumptions presented in chap. 4.8.3, while assessing the compositional quality of a square we should strive for a maximum of unbuilt inner space and a minimum of unbuilt outer space. Trivial as it may sound, such conditions are not self-evident, and in reality squares may assume very different configurations as a result of various morphological changes. Furthermore, a division of a square's elements into built and unbuilt areas is overly simplistic and should be complemented with concepts of purpose and restriction. The *purpose* of an element of a square denotes its assigned function (cf. chap. 4.7.2), while *restriction* denotes the impedance in performing such function, or

[11] Confer 'Alignment of houses within lots' in the previous section on integrity,
[12] However, the lawn area directly northeast of the roundabout was transformed into open space in 2011, and has been assessed as such during morphometry.

possibly, the inability to function because of a vague functional definition (my classification)[13]. Bearing this in mind, and having studied a large amount of Polish squares (336+), I have identified five major types of land-use elements that largely correspond to the themes described in chap. 4.8. Following list shows how different elements of a square's spatial composition were categorized and what exactly each category came to comprise (the terms within brackets refer to short forms used throughout this thesis):

1. Open pedestrian spaces ('*open space'*) – unobstructed pedestrian areas (covered with cobblestone, flagstone, stone slab or asphalt) including permanent lesser elements of convenience or ornamentation (benches, small kiosks, fountains, wells, monuments, flowerbeds, phone booths etc.). Temporary constructions such as market stalls, outdoor cafés and beer gardens are also part of an open public space.

2. Semi-restricted pedestrian spaces ('*parks'*) – partially obstructed pedestrian areas, where movement is impeded by outlined walks, footways and vegetation. The category includes mainly high-vegetation parks and gardens, including pedestrian walks within such areas, which would be too narrow to be classified as open space.

3. Restricted undefined spaces ('*lawns'*) – spaces not aimed directly at pedestrians, but neither at vehicles. This includes mainly lawns and low-vegetation botanical areas that are free of walks and footways. Also included are fenced semi-public areas such as church yards and hospital yards.

4. Thoroughfares (or simply '*roads'*) – all kinds of penetrable real property aimed at motorized traffic. This includes roads, highways and railways, but also all kinds of car-parks, including unofficial but generally accepted parking areas. In order to facilitate measurements, road-parallel sidewalks and segregated bicycle facilities have also been included into the vehicle space category; narrow and oblong, such pedestrian/cyclist spaces are clearly intended for transportation only and cannot be used in any other way.

5. Impenetrable real property ('*buildings'*) – all kinds of physically impenetrable material, mostly centrally located buildings with adjacent (private or non-public) lots and access roads. Larger bodies of water (bridge-free canals, rivers and lakes) and crossing-free stretches of railway tracks are also part of this category. The latter, although physically penetrable (by swimming/boating, trespassing), seen in the light of law and feasibility, such features were deemed as *formally* impenetrable[14].

Measuring the area of the identified features for each square

The next step involved measuring all land-use elements belonging to the abovementioned five categories for each of the 336 squares of the studied towns. Morphometry (measurements) was performed in GIS, using cadaster maps and aerial photography/satellite imagery layers derived from different sources, mainly *geoportal.gov.pl* and *GoogleEarth*. The area of each element was measured individually, and elements belonging to the same categories were added together (fig. 6.3, B). Finally, the total inner area of the square was measured, and the figures for each land-use category were calculated into percentage shares of the total market square area, and stored in a database (e.g. the aggregated park area measuring 0.28 ha of a square of 3,98 ha would equal roughly 7%; the aggregated open space area measuring 0,18 ha would equal roughly 4,5%, and so forth).

Assigning weight values for different land-use elements

The third step involved construction of a value matrix, by assigning each land-use category (open space, parks, buildings, lawns and thoroughfares) a weighed value in terms of its relative impact on the square's urban character, the latter expressed through form (enclosure and legibility) and function (contemporary and historic). *Form* is the primary morphological feature, while *function*, although non-morphological, is strongly associated with and conditioned by form. Different land-use elements making up the composition of a square have different impact on its sense of enclosure and legibility. The magnitude of such impact is conditioned primarily by the visibility of the surrounding frontages but also of the interior. Function in regard to market squares has both a contemporary meaning (whether the utilization of a square is urban-specific or not), but is also extended towards historicity, i.e. whether such utilization should occur within a market square or elsewhere. It is important to stress that function refers to the *public* use of the square (not to the use by some isolated groups), with focus on pedestrian movement and sociability.

The values were assigned through point allocation (cf. Knox 1976) based on following four pieces of theoretical (presented in chap. 4.8.3) and empirical framework:

[13] For example, a lawn is an open, yet penetrable area with varying function (depending on whether it is enclosed or not), while a gallery is a built, yet penetrable area; on the other hand, the function of a clay-filled enclosure may not be obvious, while its passability (lack of restriction) may be a matter of opinion.

[14] The difference between a spatial barrier and a border is that a spatial barrier is a phenomenon associated with permeability whereas a border – with formalization (Rykiel 2006: 129-130)

• The *significance of different elements* within the context of a market square was determined through studies of classic and contemporary literature, mostly from the fields of urban design and engineering. The goal was to identify general sought-for values associated with urban squares, only to couple the identified values with particular land-use elements.

• *Historic ideals* were arrived at by studying the composition of the most famous Polish squares, widely regarded as the epitomes of urban spaces (tab 4.3), but also by analyzing the structure of some other fine examples from Europe.

• *Contemporary ideals* were identified by analyzing the ongoing (2009-11) revitalization projects employed in Polish market squares (fig. 4.10) and, to a lesser degree, in some other European examples, mostly Sweden. This step was also partly empirical.

• *Contextual analysis* involved a general analysis of the median values for the whole set of the 336 studied towns in order to adapt the designed method to reflect the reality of the studied towns[15]. This step was entirely empirical, and used sparsely, mostly to set the top, bottom and middle markers.

The assessment was done by asking the following questions and the answers were graded 1 to 5, where 5 equaled a positive assessment and 1 – a negative one.

a) How does feature X affect the square's form in terms of frontage visibility?
b) How does feature X affect the square's form in terms of legibility of the interior?
c) How does feature X fit into the contemporary context of a square's function?
d) How does feature X fit into the historic context of a square's function?

Open space was found to be a positive feature regarding all criteria; it permits visibility of both the frontages and the interior and is pertinent to both the contemporary and the historical context (grade '5' only). *Parks* were assessed generally negatively due to their obstructive and historically alien character (grade '1'). In terms of contemporary use, although parks are primarily functional urban features (cf. Stewart 2007: 113), the term "park" in the context of degraded towns can be misleading, as many such parks are in fact overgrown, neglected thickets with very restricted usability (grade '3')[16]. Centrally located *buildings* obstruct enclosure (grade '1'), but do have a historical presence in limited numbers, such as town halls and cloth halls (hence grade '3'). Contemporarily, depending on their function, buildings can either be limited to a small group of people, such as employers in administration (town halls), or available to the whole community (shops, bus depots, information desks). As such their function is widely indeterminable in a generalized sense (grade '3'). *Lawns*, although non-obstructive (grade '5'), are alien to pedestrian function in both temporal contexts (grade '1'). *Thoroughfares* generally do not obstruct enclosure (grade '5') but may disrupt the legibility of the interior due to secondary items such as road signs, road illumination and so forth (grade '4'). Due to lack of motor traffic, roads are mostly positive features from a historical perspective (grade '4'); today they are both a pedestrian nuisance and a necessity in terms of accessibility and local economy (grade '3') (tab. 6.4).

However, the technical point of departure for this approach was to only consider open space as a desirable element of a square's spatial composition, while all remaining elements would result in deduction of points, although to various degrees. In order to arrive at meaningful degrees of point deduction, it was imperative to assess the impact of each element (how strongly an element affects the square's urban character), rather than its quality (positively or negatively). Therefore, the grades had to be recoded into *impact values* (illustrated in tab. 6.3), where strong influences (positive and negative) were given the highest values (3), moderate influences (mostly positive and mostly negative) were given intermediate values (2), while weak or indeterminable influences were given the lowest value (1).

Tab. 6.3. Scale for assessment of market squares' land-use elements. Top row shows qualitative grading, while bottom row shows their recoded equivalents in terms of impact on the square's character.

Quality assessment (grading)	5 (positive)	4 (mostly positive)	3 (indeterminable)	2 (mostly negative	1 (negative)
Impact value (recoded value)	3 (crucial)	2 (significant)	1 (insignificant)	2 (significant)	3 (crucial)

Table 6.4 shows the outcome of the asked questions, along with their recoded impact values, including a mean value (the sum of all four impact values was divided by 4). The mean impact value denotes how strong an impact each element exerts on the composition of the market square.

[15] For instance, an 'ideal' market square would not contain elements of parks; however, in a Polish context, many small towns do contain parks. Therefore, instead of completely sanctioning occurrences of parks, I have applied lesser weighting, resulting in a deduction of points (cf. Knox 1976).

[16] Depending on their density, these differences may not be seen on satellite imagery.

Tab. 6.4. Assessment of market squares' different land-use elements, i.e. how accurately these features pertain to form and function of a square. Recoded impact values are displayed within brackets.

Element	FORM		FUNCTION		Mean impact value
	A ENCLOSURE (frontage visibility)	**B** LEGIBILITY (interior visibility)	**C** CONTEMPORARY CONTEXT	**D** HISTORIC CONTEXT	
	IMPACT ON URBAN PERCEPTION: grade 1-5* (recoded impact value **1-3**, see table 6.3)				
Open space	Positive 5 **(3)**	Positive 5 **(3)**	Positive 5 **(3)**	Positive 5 **(3)**	**(3)**
Parks	Negative 1 **(3)**	Negative 1 **(3)**	Indeterminable 3 **(1)**	Negative 1 **(3)**	**(2.5)**
Buildings	Mostly negative 2 **(2)**	Negative 1 **(3)**	Indeterminable 3 **(1)**	Indeterminable 3 **(1)**	**(1,75)**
Lawns	Positive 5 **(3)**	Positive 5 **(3)**	Mostly negative 2 **(2)**	Negative 1 **(3)**	**(2.75)**
Thoroughfares	Positive 5 **(3)**	Mostly positive 4 **(2)**	Indeterminable 3 **(1)**	Mostly positive 4 **(2)**	**(2)**

***) Scale Grading**: 5 – Positive ; 4 –Mostly positive; 3 – Indeterminable; 2 – Mostly negative; 1 – Negative.

Assigning weight values for different land-use elements in regard to square size

Due to the very large variances in square sizes among the studied squares (ranging from 0,27 ha in Janowiec and Czerwińsk nad Wisłą to 4,35 ha in Latowicz), it was assumed that the impact of each land-use element would differ depending on the square's absolute size. The first step involved establishing different square size categories, as illustrated in tab. 6.5:

Tab. 6.5. Classification of squares according to their size.

<= 0,75 ha	0,75-1,374 ha	1,375-1,999 ha	2-2,624 ha	>=2,625 ha
Tiny	**Small**	**Medium**	**Large**	**Huge**

Source: Own classification based on Kühnel (1918) and distribution analysis of the 336 studied towns.

Next, a weight-assigning procedure analogous to that in the preceding section was implemented, although with a difference purpose: How desirable is element X within a square of X size? All land-use elements were graded accordingly to their level of desirability, departing from the theoretical and empirical framework introduced earlier. 'Desirable' should be understood as 'the more the better' (grade '5'), while its antithesis 'prohibited' (grade '1') corresponds to the notion of 'the less the better'. Both grade 1 and 5 are extremes and were therefore given the high impact value of 3. The intermediate impact value of 2 was given to occurrences graded as '4' or 'limited' (understood as 'a limited amount is desirable'), and to those graded as '2' or 'undesirable' (understood as 'generally prohibited, although a limited amount may be acceptable). The low impact value 1 was given to occurrences graded as '3' and labeled as 'acceptable', i.e. exerting neither negative nor positive influence on the square's urban character (tab. 6.6).

Tab. 6.6. Scale for assessment of market squares' land-use elements within squares of different sizes. Top row displays qualitative grading, bottom row their recoded equivalents in terms of impact on the square's character.

Quality assessment (grading)	5 (desirable)	4 (limited)	3 (acceptable)	2 (undesirable)	1 (prohibited)
Impact value (recoded value)	3 (crucial)	2 (significant)	1 (insignificant)	2 (significant)	3 (crucial)

Open space was considered a desirable feature of squares up to medium size, whereas its occurrence should be somewhat limited in larger squares in order to avoid the sense of void and emptiness. Parks, as obscuring features, were found undesirable in the middle size categories, with extensions at either end towards 'prohibited' (within tiny squares) and 'acceptable' (within huge squares). For similar reasons, buildings were treated alike, with 'prohibition' also being extended towards small squares (cf. Kühnel 1918). Lawns, seen as unobstructable yet non-functional elements within market squares of *all* sizes, were graded as acceptable. Due to their necessity, thoroughfares were regarded as acceptable within squares up to medium size, and extended towards 'limited' for the larger squares, where additional space provides more room for extra roads, making the squares more manageable for the towns' residents (tab. 6.7).

Tab. 6.7. Assessment of market squares' different land-use elements and their level of desirability within squares of different sizes. Impact values (explained above) are displayed within brackets.

	SQUARE SIZE CATEGORY grade 1-5* (recoded impact value **1-3**, see table 6.6. above)				
LAND-USE FEATURE	**Tiny** <= 0,75 ha	**Small** 0,75-1,374 ha	**Medium** 1,375-1,999 ha	**Large** 2-2,624 ha	**Huge** >=2,625 ha
Open space	Desirable 5 **(3)**	Desirable 5 **(3)**	Desirable 5 **(3)**	Limited 4 **(2)**	Limited 4 **(2)**
Parks	Prohibited 1 **(3)**	Undesirable 2 **(2)**	Undesirable 2 **(2)**	Undesirable 2 **(2)**	Acceptable 3 **(1)**
Buildings	Prohibited 1 **(3)**	Prohibited 1 **(3)**	Undesirable 2 **(2)**	Undesirable 2 **(2)**	Acceptable 3 **(1)**
Lawns	Acceptable 3 **(1)**	Acceptable 3 **(1)**	Acceptable 3 **(1)**	Acceptable 3 **(1)**	Acceptable 3 **(1)**
Thoroughfares	Acceptable 3 **(1)**	Acceptable 3 **(1)**	Acceptable 3 **(1)**	Limited 4 **(2)**	Limited 4 **(2)**

***) Scale Grading**: 5 – Desirable; 4 – Limited; 3 – Acceptable; 2 – Undesirable; – 1 Prohibited.

Constructing the final composition index

The final assembly of the composition index was done by adding the achieved two impact values: a) the impact value for different land-use elements; b) the impact value for different land-use elements in regard to square size (tab. 6.8, row B). The sum achieved in this way ('integrated weight') is both an indicator of how crucial each land-use element is in the context of a market square (either in a positive or negative sense) and how its impact changes with different market square sizes (tab. 6.8, row C).

Tab. 6.8. Calculation of an integrated weight for each land-use element and its impact in regard to square size.

Land-use element and its impact value (D)		*	**Square size**				
			Tiny <= 0,75 ha	**Small** 0,75-1,374 ha	**Medium** 1,375-1,999 ha	**Large** 2-2,624 ha	**Huge** >=2,625 ha
Open space	3	A	3	3	3	2	2
		B	3 + 3 = 6	3 + 3 = 6	3 + 3 =6	2 + 3 = 5	2 + 3 = 5
		C	**6**	**6**	**6**	**5**	**5**
Parks	2.5	A	3	2	2	2	1
		B	3 + 2.5 = 5.5	2 + 2.5 = 4.5	2 + 2.5 = 4.5	2 + 2.5 = 4.5	1 + 2.5 = 3.5
		C	**5.5**	**4.5**	**4.5**	**4.5**	**3.5**
Buildings	1.75	A	3	3	2	2	1
		B	3 + 1.75 = 4.75	3 + 1.75 = 4.75	2 + 1.75 = 3.75	2 + 1.75 = 3.75	1 + 1,75 = 2.75
		C	**4.75**	**4.75**	**3.75**	**3.75**	**2.75**
Lawns	2.75	A	1	1	1	1	1
		B	1 + 2.75 = 3.75	1 + 2.75 = 3.75	1 + 2.75 = 3.75	1 + 2.75 = 3.75	1 + 2.75 = 3.75
		C	**3.75**	**3.75**	**3.75**	**3.75**	**3.75**
Thorough-fares	2	A	1	1	1	2	2
		B	1 + 2 = 3	1 + 2 = 3	1 + 2 = 3	2 + 2 = 4	2 + 2 = 4
		C	**3**	**3**	**3**	**4**	**4**

*) **A =** impact value for different land-use elements in regard to square size; **B** = addition of the latter (impact value A) and the impact value for each land-use element (marked as D); **C** = integrated weight for each land-use element.

The integrated weight is to be further multiplied by the amount of each measured land-use element (or, more accurately, its percentage of the total market square area) to achieve an estimate of the market square's compositional quality. However, remembering that only open space was – from a technical point of view – regarded as a desirable element ('the more the better'), the remaining land-use elements (parks, buildings, lawns and roads) had to first be subtracted from 100 (100 %), and only at a later phase moderated through the different weights against which they would be multiplied. For example, a square containing 80 % park produces a value of 20 (100 – 80 = 20), and a square of 20 % lawns produces a value of 80 (100 – 20 = 80). Open space is the only element that does not undergo subtraction. The recalculated values for percentages of each of the five land-use elements are then multiplied by its corresponding weight value (tab. 6.8, C), the products are then added together and the sum is finally divided by 5. The achieved mean value is the raw version of the index of the square's composition (V_{cpsx}).

In order to make the index comparable to the indices constructed for integrity and compaction, the last step of this long procedure was to enclose the results within an interval of 0-100. To do this, I have used a model proposed by Bălţătescu (2002) that tranforms the highest value in the raw (original) scale to 100 and the lowest to 0. However, such transformation would in this case become overly stretched, as the values provided by the raw scale (205 to 460) were not extremely differentiated. To circumvent this impasse, I have calculated the mean value for the raw scale (257), which in the new scale would represent the mid-value (50). In order to set the bottom marker, following calculation was made: a) 460 – 257 = 203; b) 257 – 203 = 54. The value 54 would now correspond to the rationalized 'lowest' value in the raw scale and would be transformed to value 0 in the new scale. Such adaptation to the top score and the mean score of the raw scale, prevented overstretching of the new scale, producing more realistic results. This final composition index (V_{cps}) was calculated according to the following formula:

$$V_{cps} = \frac{V_{cpsx} - V_{cpsx\,(min)}}{V_{cpsx(max)} - V_{cpsx\,(min)}} \times 100 \qquad (7)$$

where:
V_{cpsx} = raw version of the composition index
$V_{cpsx\,(max)}$ = maximum value in the raw version of the composition index
$V_{cpsx\,(min)}$ = *rationalized* minimum value in the raw version of the composition index (cf. explanation in the text above)

Example of calculating the composition index:

• The example is a square with an area of 1.6 ha ('medium') that is composed of: 20 % open space, 25 % park, 5 % buildings, 10 % lawns and 40 % thoroughfares.

• The percentage shares are first transformed (except for open space) by subtraction from 100: Open space = **20**, Park = 100 - 25 = **75**, Buildings = 100 – 5 = **95**, Lawns = 100 – 10 = **90**, Thoroughfares = 100 – 40 =**60**

• The new values are then multiplied separately by the integrated weights in tab. 6.8 (row C), in the column for medium sized market squares: Open space = 20 * 6 = **120**, Parks = 75 * 4.5 = **337.5**, Buildings = 95 * 3.75 = **356.25**, Lawns = 90 * 3.75 = **337.5**, Thoroughfares = 60* 3 = **180**.

• Next, the new values are added together: 120 + 337.5 + 356.25 + 337.5 + 180 = **1331.25**, and then divided by 5. 1331.25 / 5 = **266.25**.

• Finally, the value **266.25** is recalculated to fit into a 0-100 scale (cf. formula 7 above; the maximum value in the set is *460* and the lowest rationalized value is *54*). Hence: (266.25 – 54) / (460 – 54) * 100 = 212.25 / 406 * 100 = **52.2**

• The value **52.2** signifies a square of medium urban composition. The positive traits are: its relatively low share of thoroughfares (for the 336 towns in this study it ranges between 40 and 60 %), an appropriate share of buildings (neither cluttering nor obscuring) and very few lawns. However, the amount of open pedestrian area, although acceptable, could optimally be much larger, with the other significant drawback being the excessive amount of obscuring park, hence the lowered score.

Lastly, it is important to mention that the composition index only provides information about the relative combination of different land-use elements. It does not say anything about the spatial distribution of these elements, whose configuration could range from conjoint (favorable) to fragmented (unusable), and therefore should be compared to the square's cohesion index, which will be elaborated next.

6.5.5. Cohesion index (V_{coh})

In the context of this study, *cohesion* denotes the spatial layout of disruptive elements within the square, mainly thoroughfares, with the ideal being a maximum of conjoint area ('full cohesion'). Cohesion will be expressed through the cohesion index, estimating the impact of thoroughfares on a square in relation to two factors:

- *Pedestrian passability*; the enabling of free movement by pedestrians within the square – or lack thereof.
- *Compliance to sound spatial planning;* tractability of the square's interior to achieve the most rewarding square-specific organization of its spatial elements – or lack thereof.

While constructing the index, I have taken into account both the *size* and the *position* of the thoroughfares:

Size of thoroughfares

In this context, 'size' refers primarily to the traffic capacity of a thoroughfare, rather than its spatial expansion and, as such, is mainly of concern for the square's pedestrian passability. Arterial (high-capacity) roads, be it traffic light-assisted or tracked with zebra crossings, impede pedestrian movement to a much greater extent than low-speed or lesser trafficked local roads, and especially so within small settlements, where many passing drivers seem to fail following the assigned speed limits. In Poland, roads are divided into *classes* and *categories*. Class denotes the technical

condition of a road while category denotes its function. Thus, a class can span over as many as four different categories and is not an indicator of traffic flow. Categories, on the other hand, inform us about the road's functional role within the Polish transport network and tell us how heavily it is utilized. In this context, it is the traffic flow that is of interest, and, subsequently, its impact on pedestrian passability and the overall cohesion of the square. Thus, the indexation of the square's cohesion has been mostly based on the following hierarchy of four categories[17]:

- national roads (*drogi krajowe*) – main national and international trunk roads (highways)
- voivodeship roads (*drogi wojewódzkie*) – auxiliary regional trunk roads
- county roads (*drogi powiatowe*) – local roads connecting the county seat with the communal seats
- communal roads (*drogi gminne*) – other local roads

I have made some modifications to this categorization in order to more suitably reflect the intended purpose. National roads (1) and voivodeship roads (2) were left untouched. As for county and communal roads, due to their similar function within communities, I have chosen to integrate county roads with those communal roads that link different settlements into one category (3). Those communal roads that do *not* directly link different settlements (e.g. streets within a settlement) were integrated into a separate category (4). In this way I were able to discern roads carrying the more intense *en route* traffic from streets used only for reaching specific addresses within a community and thus carrying the least traffic. The first two types were regarded as *major roads*, the latter two as *minor roads*. Data for categorization were derived from *viamichelin.com*.

Position of thoroughfares

Position in this context refers to the relative position of thoroughfares within a market square. Departing from the theoretical framework presented in chap. 4.8.3 and my own field- and cartographic studies, I have developed a classification system suitable for the purpose of this procedure. Road positions can be roughly divided into 'conform' and 'divergent'. The first refers to roads running perpendicularly to the square's frontages, thus conforming to the square's pedestrian character. Divergent roads are roads assuming all other positions, all of which involve passing the square's interior at different *angles* and in different *places*. Consequently, the severity of the square's cohesion is largely dependent on these two factors. Roads passing the square near its middle point were called 'splitters', and could either be 'traversal' or 'diagonal', depending on their point of origin (mid-frontage or corners). Roads that did not pass near the square's middle point were called 'slicers', and could either be 'parallel' (paralleling the frontages) or 'truncating' (running at an oblique angle in relation to the frontages). Note that…

- …the difference between a parallel slicer and a traversal splitter is the location. A slicer must be located within a belt equaling maximum 1/3 of the square's width in distance from the nearest frontage, while a splitter must be located within the central 1/3 the square's width.
- … the difference between a truncating slicer and a diagonal splitter is the point of origin in relation to the point of exit. A slicer exits to a frontage adjoining the frontage through which it entered, while a splitter exits to a frontage (or a corner) located vis-á-vis the frontage (or the corner) through which it entered.

Indexation

The index is based on a 0-100 scale, where the maximum of 100 points is awarded to the rarely found type of a road-free square that provides unhindered pedestrian movement and full freedom of spatial customization. Every thoroughfare within the square's space implies a deduction of penalty points (cf. Knox 1976), depending on its size and position**.** Since *every* road results in deduction of points, then the *number* of thoroughfares will also affect the index. Roads in Poland do not always retain their direction and type for the whole stretches within the square; they may bend, curve, enter a junction or a dead-end, or even transcend into a hierarchically different category (low-speed to high-speed and vice versa). Departing from my empirical research, I have found that most of such changes (where applicable) occur roughly midways of stretches of roads that pass the market square. I have thus formulated an assessment procedure based on *halves* of the roads – which I call *impact units* – rather than on whole stretches of roads (fig. 6.4). It is believed that such a division will provide a more realistic picture of the square's cohesion. Naturally, whenever a road did not change its direction or type, the roads were treated as 'wholes' (two halves).

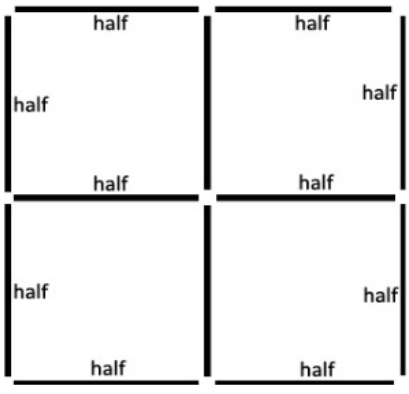


Fig. 6.4. Outline of a hypothetical market square divided into road halves in different locations of the square. These halves denote impact units for measurements of the square's cohesion.

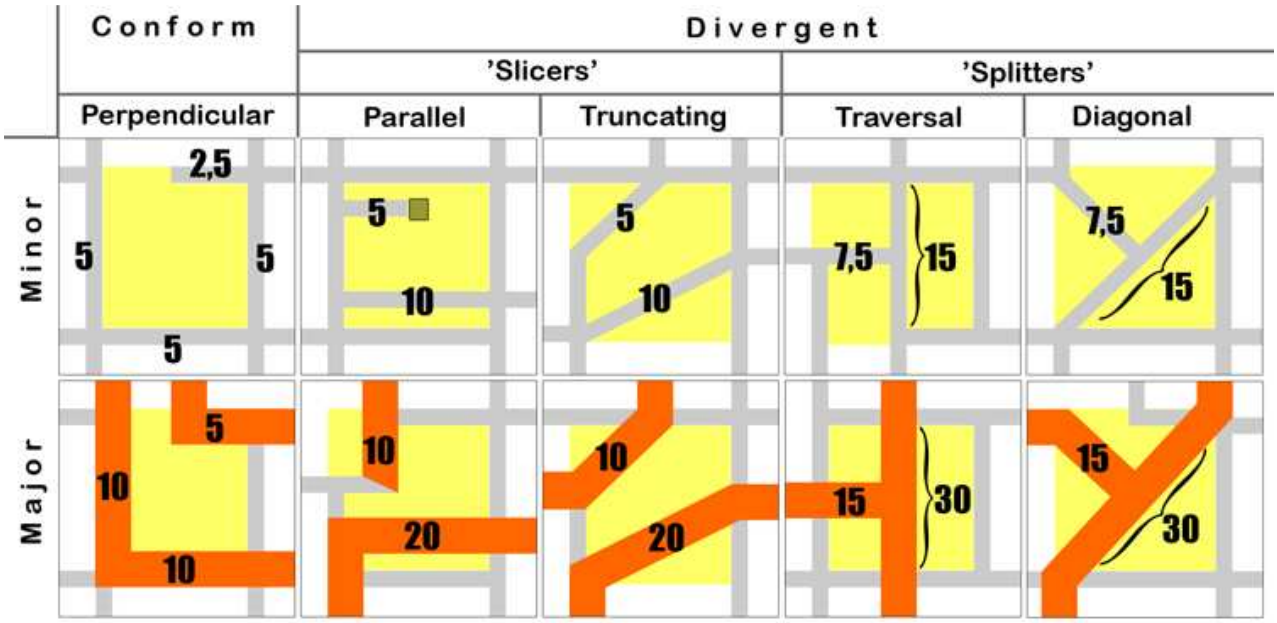
[17] According to the Polish act on public roads from the 21 of March 1985 (Dz. U. z 2007 r. Nr 19, poz. 115).

Tab. 6.9 shows how each stretch of road within the market square was assessed in regard to its size and position. The numbers denote deduction points, meaning that when all stretches of roads were assigned their corresponding values, the values were added together and then subtracted from 100. The number achieved in this way is the square's cohesion index. Due to their disturbing and disruptive character, major roads and splitters resulted in most deduction points. Slicers were assessed more benignly, while minor roads and conform roads – producing the most favorable square cohesion – resulted in the least amount of deduction points. Fig. 6.5 shows different scenarios of road configuration within market squares and how they would be assessed based on the deduction point scheme presented in tab. 6.9.

Tab. 6.9. Assessment of the impact of roads on the market square's cohesion in terms of size and position. Numbers denote deduction points to be subtracted from 100 (full cohesion).

Road type in terms of size (functional category)		**Road type in terms of position**					
		Conform		**Divergent**			
		Perpendicular		**Slicers (parallel and truncating)**		**Splitters (traversal and diagonal)**	
		Half	**Whole**	**Half**	**Whole**	**Half**	**Whole**
Major	**National roads**	**5**	**10**	**10**	**20**	**15**	**30**
	Voivodeship roads	3,75	7,5	7,5	15	11,25	22,5
Minor	**Local roads**	**2,5**	**5**	**5**	**10**	**7,5**	**15**
	Interior streets	1,25	2,5	2,5	5	3,75	7,5

Fig. 6.5. Assessment of the impact of roads on the market square's cohesion in terms of size and position. Numbers denote deduction points to be subtracted from 100 (full cohesion).



Note: The portrayed placement of roads is at random. In reality the roads could appear anywhere within the square, yet falling within some of the depicted categories in regard to size and position. The depicted 'major' roads represent national roads while 'minor' roads denote local streets; for details confer tab. 6.9. *Source*: own work

The envisagement of a cohesively inferior square would equal 0 points, i.e. a situation when all roads would be major and consisted of four perpendicular roads (eight impact units) and two traversal/diagonal roads (four impact units), that is 4 x 10 points (or 8 x 5 points) + 2 x 30 points (or 4 x 15 points), equaling 100 deduction points (cf. table 6.9). One could argue that additional slicers could also occur, thus exceeding the assumed limit of 100 points. Indeed, that could be true; however the described scenario of all perpendicular and crossing/diagonal roads being major is virtually unfeasible. At least some of these roads would most certainly be of a lower rank, thus reducing the total amount of deduction points, making the additional points superinduced by the 'slicers' still fall within the 100 points interval.

Oblong squares

Most Polish market squares have a rectangular shape. This implies that the asymmetry between length and width is not random but a desired feature. However, this asymmetry should be contained within a certain range. As pointed out in chap. 4.8.2, Alberti's ideal ratio between length and width was 2:1 while Vitruvius' 3:2; furthermore, Sitte has noted that squares with a ratio of more than 3:1 "begin to lose their charm". This aspect has inevitably implications on the indexation of a square's cohesion, as this variable is dependent of the length of the roads and streets within the square. Unlike calculation of integrity and compaction (chap. 6.5.2-3) which pertains to a normalized number of frontages (four), the amount and configuration of roads within a square may be indefinite and cannot be moderated by a simple percentage calculation. Therefore, another solution had to be invented to deal with this problem.

My point of departure for assessment of square cohesion was a hypothetical square-shaped market square whose sides could be divided into equal parts ('halves' or impact units). However, such a model is bound to degenerate if the proportions of a square become overly stretched. In order to respect the aforementioned asymmetric ideal and the individual impact of each side regardless of its length, I have chosen to refrain from mathematical treatment of road length in the indexation process (rectangular market squares where indexed as if they were square-shaped). However, an overly oblong square loses its sense of enclosure (cf. chap. 4.8.2) and the *roads along the long* sides take on the role of an undesired spatial dominant. Moreover, if the excessive oblongivity is not accompanied by an increase in the square's size (which often is the case), the short sides lose their impact altogether, as they become reduced to nearly the width of the streets along the long sides. In order to produce more realistic and meaningful results, I have adjusted the impact of overly long and overly short sides by altering their impact in the proposed hypothetical model. To remedy this problem, I have added a third impact unit to roads along sides taking up more than 37.5 % of the square's circumference (i.e. the share amount exceeding the maximum allowable ratio of 3:1 as proposed by Sitte, in a model acknowledging a four-sided market square). Similarly, I have subtracted one impact unit from sides shorter than 12.5 % of the square's circumference (ratio 1:3)[18]. Tab. 6.10 and fig. 6.6 show how the proportions were arrived at and how they were assessed[19].

Tab. 6.10. Identifying overly oblong squares while assessing market square cohesion.

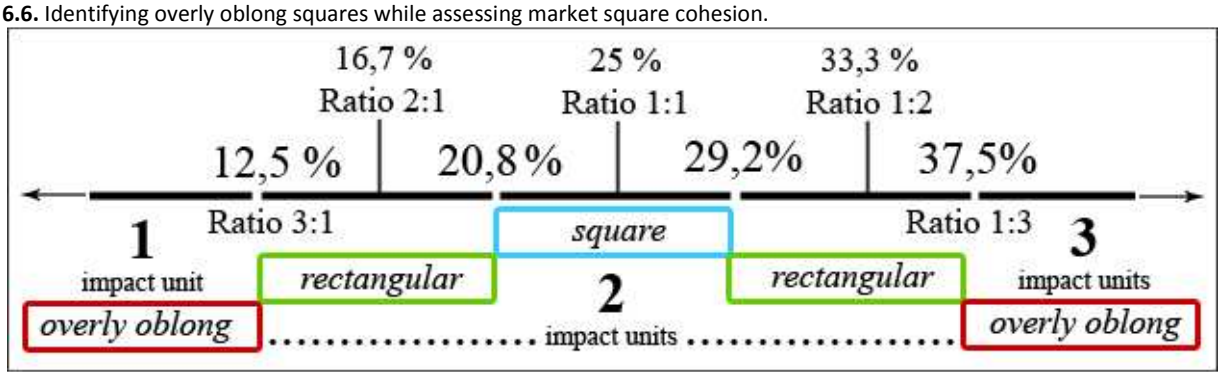
Shape of the market square	Ratio	A side's lengthwise percentage of the circumference of a four-frontaged, right-angled market square			Amount of assigned impact units[20]
		Exact	Adjusted (intermediate ranges between shapes)	Aggregated range	
Square-shaped				12,5 % – 37,5 %	**2**
-all sides	1:1	25 %	20,83 – 29,16 %		
'Rectangular' (i.e. elongated)					
-long side	1:2	33,3 %	29,16 – 37,5 %		
-short side	2:1	16,7 %	12,5 – 20,83 %		
Overly oblong					
-long side	1:3	37,5 %	more than 37,5 %	higher than 37,5 %	**3**
-short side	3:1	12,5 %	less than 12,5 %	lower than 12,5 %	**1**

[18] In a square with a ratio of 3:1, the two long sides equal 37,5 % *each* and the two short sides equal 12,5 % *each* of the circumference of a square equaling 4 sides (100%): 37,5 + 37,5 +12,5 + 12,5 = 100.

[19] It is important to note that such alteration was not exclusive to perpendicular roads; also traversal and diagonal 'splitters', as well as parallel 'slicers' were treated in this way, i.e. in relation to their position within a square (viz. a traversal slicer parallel to a short side would only have the impact of one impact unit, while a slicer parallel to a long side would equal three impact units). Truncating slicers were more intricate since they could truncate a square at a wide range of angles. In this case, I have made an exception and assessed their impact values mathematically, i.e. the length of a truncating slicer was measured and put in relation to the square's circumference (E.g. if the long sides of a square equaled 42% (50 m) each and the short sides 8 % (10 m) each (42 + 42 + 8 + 8 = 100), while the length of a truncating slicer was 30 m (corresponding to 25 % of the square's circumference: 50m +50m +10m +10m = 120m; 120 / 30 = 4 = 25 %), then its impact value would be regular two impact units, since '25' is within the 'allowable' interval between 12,5 and 37,5.). Finally, the proportions of trapezoidal and triangular squares were assessed similarly, with the distinction that only *one* side was altered during the indexation of trapezoidal squares, while one side was removed when indexing triangular market squares.

[20] I.e. the amount of indexed parts making up a full length of a perpendicular road in relation to the aggregated range.

Fig. 6.6. Identifying overly oblong squares while assessing market square cohesion.



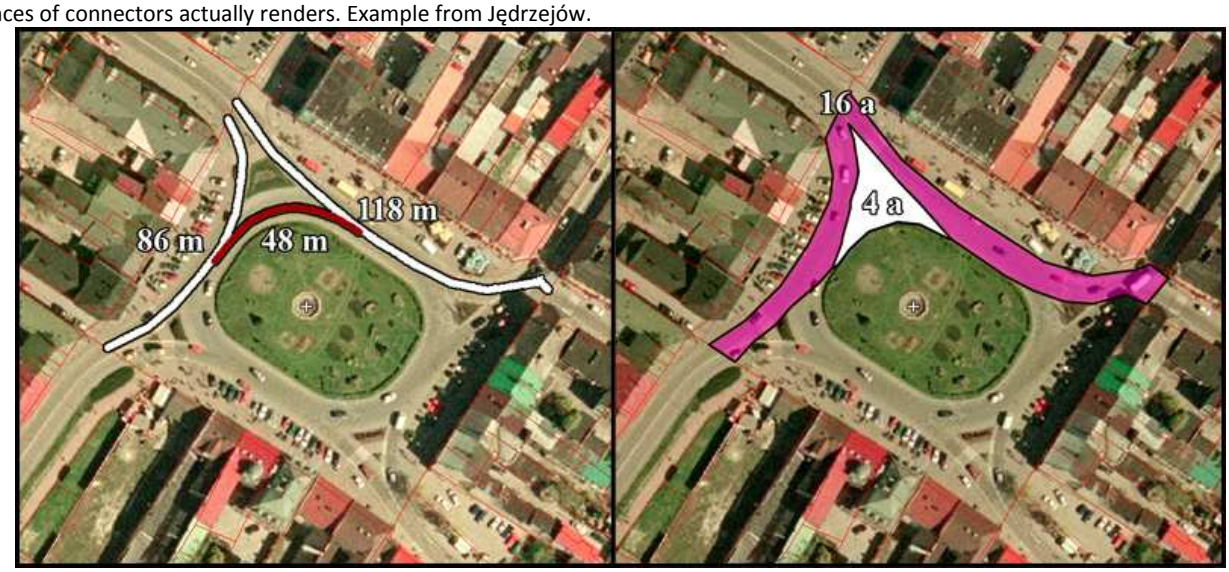
Explanation: The axis shows variances in length of a *market square side* within a four-frontaged, right-angled market square. Percentages denote the side's share of the square's circumference and are juxtaposed the different ratios (between the long side and the short side) the varying percentages would create. The information under the axis shows how specific percentage intervals were interpreted – as 'square(-shaped)', 'rectangular' (elongated) and 'overly oblong' – and how many impact units these intervals were assigned during the assessment of cohesion.

Problems with indexation

This section explains how some special situations (occurrences of roundabout connectors and street separators) were dealt with, and must not be read for an overall understanding.

The first problem regards the role of roundabout connectors, i.e. sectors of circulatory roadways added to curved, perpendicular roads in order to facilitate smoother traffic flow. At a first glance, such connectors do not seem to take up enough space to be qualified as slicers (or, more correctly, halves of slicers). If we measure a connector along its centerline between the widest sections of the two roads it interconnects, we will notice that it amounts to approximately half the length of one perpendicular road. However, if we measure the total area expropriated from the potential pedestrian space as a result of the connector (including the traffic island), it will amount to approximately ¼ of the area taken up by two perpendicular roads (see fig. 6.7). This implies that even a seemingly innocuous connector has a significant impact on the composition of the square; not only because of the connector itself, but also due the necessity of space-consuming curving of the pre-existing roads and the creation of an unusable traffic island. Naturally, there are local variations as to size and angle of the connectors, so, in order to facilitate the assessment process, I have decided to regard as halves-of-slicers all connectors rendering a traffic island. The magnitude of such an index was assigned in accordance to the road category which it represents (as described in the former section). 'Connectors' *not* rendering a traffic island (thus requiring less curvature and consuming less pedestrian space) were instead interpreted as widened street intersections and were consequently disregarded from indexation.

Fig. 6.7. Impact of roundabouts on a market square's cohesion. The left image shows the lengths of two perpendicular roads in a roundabout situation and the length of linking connector. The right image shows how much area in ares (100 ares = 1 hectare) occurrences of connectors actually renders. Example from Jędrzejów.



Source: My adaptation of imagery from geoportal.gov.pl (access: 2011-05-24)

Fig. 6.8. Example of a street separator (A), dividing a four-lane road (B) that equals more than double the width of a standard-size road (C). Example from the market square in Grajewo.

Source: My adaptation of imagery from: **Main image**: http://www.grajewo.pl/web/wirtualny_spacer/index.html (access: 2011-05-24); **Inset image**: http://www.grajewo.pl/web/aktualnosc-1554-Burmistrz_zmienia_centrum_Grajewa.html# (access: 2011-05-24)

It is also important to clarify that in this particular context, a *traffic island* is an elevated, curbed platform, rather than physically unobstructed no-go zones, the so called *painted islands*. Painted islands are indicatory surface markings used when traffic flow is limited, while elevated platforms are used to channelize heavy traffic and prohibit traversability. This distinction is thus a contextual reflection of the indexation of roundabout connectors. Special kinds of traffic islands are *separators*, i.e. elongated platforms running in the middle of four-lane major streets, mostly heavy-trafficked national roads (fig. 6.8, A). Although not very frequent, separators are used when roads are extra wide (fig. 6.8, B), often equaling the width of two or even more standard-size roads, such as in Grajewo (fig. 6.8, C). In such instances, the impact on the cohesion of the square is even greater. I have thus applied double indexation whenever a stretch of a road was divided by an elevated separator.

6.6. Overall index for market square morphology

The idea of dividing market squares into four subscale analytical variables emerged in a previous study of mine (Dymitrow [2010] 2012: 48) but was never operationalized any further than as a tool for deconstructive visual assessment of market square urbanity. In this study, after having constructed specific indices for integrity (V_{int}), compaction (V_{cpc}), composition (V_{cms}) and cohesion (V_{coh}), the final step was to create an overall index for market square morphology, i.e. a composite score of the market square's urban character (V_{msm}). Calibrating the right proportions between the subscale indices was a long, reiterative process based on heuristics[21], theoretical framework and prior extensive field observations conducted in degraded towns and small formal towns in Poland. The philosophical assumptions that underlie the construction of an overall index are as follows.

Starting backwards, despite the initial assumption, cohesion was found to have no impact on the square's urbanity when tested empirically. Even in the most disrupted squares (see fig. 4.14 left; fig. 6.7) the perceived level of urbanity (or lack thereof) proved unaltered by cohesion, provided that the square had sufficient enclosure and legibility. Instead, cohesion was found to have an immense bearing on the square's composition, significantly regulating its configuration, and the square's attractiveness. Still, this is an aspect with recourse to comfort and agreeability[22], rather than to urbanity and, as such, had to be excluded from the overall index. However, the cohesion index (due to its empirically verified validity[23]) may prove valuable in other contexts, e.g. for identifying market squares in need of revitalization (cf. the applicative objective of this study[24]).

On the other hand, the composition of a square's interior, although also important in the pleasure-laden terms of aesthetics and comfort, was found to be a factor strengthening or loosening the square's level of urbanity produced by enclosure. Since any land-use element of a market square's composition (open space, parks, lawns, buildings, thoroughfares) can be found outside the context of a market square, then these cannot produce urbanity by themselves. However, an inappropriate composition may significantly damage a square's pre-existing urbanity, e.g. by obscuring the frontages by tall vegetation or oversized buildings. The problem is not merely a question of visibility; both open space

[21] Experience-based techniques used to speed up the process of finding a satisfactory solution when exhaustive search is impractical (e.g. rule of thumb, educated guess, intuitive judgment, common sense).

[22] While performing the field verification, there was a strong correlation between perceived cohesion and perceived 'livability '(0.448 at the 0.01 level), i.e. the degree of desirability to live by the surveyed square (the higher the cohesion the higher the livability).

[23] See next subchapter.

[24] Ad: "[T]he collected data also provide (…) guidelines for identifying towns with valuable morphological potential that might have been inadequately harbored, and thus being in most need of an investment program".

and lawns (but also thoroughfares) are non-obscuring features, yet only open space produces an 'urban look', as a result of the pre-constructed mindscape of how an urban square looks like (with recourse to history) that we have adopted at an earlier stage of our cognitive development. Furthermore, a market square is not merely a morphological structure (static perspective); it is also conditioned by function, primarily sociability (dynamic perspective). If it cannot be used as a social place because of flawed composition, it will most likely lose its urbogenic significance, despite its urban appearance. Summarily, the composition of a market square's interior was found to be a factor *enabling* and *accentuating* (or, conversely, *disabling* and *masking*) the urbanity of a square mediated by its enclosure, and, as such, its bearing on the square's perceived urbanity was evaluated as intermediate. It may also be added that composition, a variable associated with land-use, is a feature of low morphological stability, which – if unflattering – can fairly easily be rectified, e.g. by revitalization.

With the impact of composition reduced to an intermediate level, the most important physical quality of a market square seems to be *enclosure* (cf. Moughtin & Mertens 2003: 123). However, it is the contention here that the variables making up a square's enclosure – integrity and compaction – affect urbanity on different levels. Although compaction is per definition not possible without integrity (there cannot be a joint if there are no houses to form such joint), it was found that even one single preserved frontage of full compaction (i.e. displaying a non-rural physiognomy) could exude more urban character than a full set of frontages made up of loosely scattered three-dimensional buildings. Integrity and compaction work indisputably in pairs; however, the contention is that integrity alone cannot produce urbanity; it only *defines* a square-like place of undefinable character. This is clearly seen in extremely rural settlements like Dębno (80 inhabitants) and Janików (180 inhabitants) whose squares – albeit full – are unable to create a sense of urbanity. Instead, compaction was found to be the most important urbanity-shaping variable of a market square. Naturally, compaction – although an urban characteristic per se – cannot produce a *market square* without sufficient amount of enclosure (a compact wall of houses can also be part of a *street*), a quality provided by the variable integrity. Summarily:

- compaction provides a market square its *urban character* in three ways:
  - compaction is an indicator of non-rural physiognomy as a result of towns' non-areal economy and higher land prices
  - compaction represents an architectural type associated with an urban mindscape (classical block structure)
  - compaction physically enhances enclosure by eliminating gaps
- composition significantly *strengthens* the square's urban character by:
  - determining the square's legibility provided by enclosure (enabling or disabling an urban reading)
  - increasing or decreasing the sense of urbanity in terms of adherence to a specific mindscape (that of an overt, historic market square)
  - conditioning the square's urban-specific function (or lack thereof)
- integrity *produces* a market square by providing a frame for enclosure; however, it does not determine the quality of such square (either urban or non-urban)
- cohesion dictates distribution of a square's compositional elements and affects the square in terms of comfort, but does not interfere with the square's perceived urbanity

An even more succinct summary could read: compaction *determines* a market square's urbanity (the most important factor), composition *crystallizes* that urbanity (intermediate factor), while integrity is merely a *prerequiste* for the urban reading to be one of a market square, rather than of some other feature (the least important factor). Cohesion does not take part in an urban reading.

In order to arrive at a quantitative approach to this line of reasoning, I have tried various combinations. I found that an incremental diminishing of the impact of each variable (in the given order) by approximately 25 % produced an index that seemed to quite accurately relate the outcome of urban readings derived from field observations (tab. 6.11).

Tab. 6.11. Arriving at the proportions for assembling the overall index for market square morphology (V_{mrf}).

Variable	**Reduction in impact**	**Recalculation of impact**
Compaction (V_{cpc})	100	100 out of **225** = 44,4 %
Composition (V_{cms})	75 (100 - 25)	75 out of **225** = 33,3 %
Integrity (V_{int})	50 (75 - 25)	50 out of **225** = 22,2 %
TOTAL	100 + 75 + 50 = **225**	225 out of **225** = 100 %

The final calculation of the overall index for market square morphology (V_{msm}) was subsequently notated as follows:

$$V_{msm} = (V_{cpc} \times 0{,}444) + (V_{cms} \times 0{,}333) + (V_{int} \times 0{,}222) \qquad (8)$$

Its validity was tested in the field, as described in the next section.

6.7. Field verification of the proposed market square methodology

6.7.1. Objectives of the field study

The methodology described in the preceding subchapters (6.5 – 6.6) was designed to assess the level of urbanity of market squares by means of remote sensing and subsequent indexation of the four subscale market square variables (integrity, compaction, cohesion and composition) and the overall morphological index constructed upon these variables. The novel character of the proposed methodology called for a field verification in order to determine its accuracy. The conducted field study had two main objectives:

(1) The main objective was to assess the perceived level of urbanity of a market square in order to verify how accurately it corresponds to the proposed model based on remote sensing and indexation. The verification had the character of a pilot study based on outsider perspective, where the limited number of observers (2 + the author) was compensated by a relatively large amount of objects of study (69 towns)

(2) Since morphological assessments are often done by means of visual in-person visits, the second objective was to verify how accurately the human eye is able to record different morphological features when compared with assessments based on remote sensing (cf. Taylor *et al* 2011)[25].

The quality of morphological field studies based on visual analysis

In his morphological study on assessing environmental quality, Knox (1976) utilizes the point evaluation technique (also called point bonitation, cf. Plit 2007). The method involves 'the allocation of points to dwellings or groups of dwellings according to the presence or absence of environmental defects of various sorts. These points are subsequently summed up to give an overall index score for the location' (p. 101). Knox suggests that such a technique can prove valuable to studies on urban morphology and studies on urban residential structure, but also prove 'a useful addition to the stock of field study techniques available to geographers' (ibid.). Indeed, the method has been used for instance in geographical studies on assessing morphological quality of Polish towns (Drobek 1999; Cudny 2008; Borcz *et al* 2009; Dymitrow [2010] 2012). Depending on the context, the method has been used for analyzing the towns' urbanity level, the degree of rural-urban transformations, physiognomic changes, environmental quality and cultural landscaping. An array of similar methods and techniques (epitomized as *townscape analysis*) has also been proposed by Moughtin, Cuesta, Sarris & Signoretta (2003, chap. 3). However, the method is not risk-free.

> It would be fallacious to assume that assessment techniques carry any real degree of objectivity, since the categories and their weightings are always dependent upon the subjectivity of those who design the schedule. We therefore have to rely to a great extent on the experience and expertise of planners and academics "who know best" about measuring environmental quality, and their decisions will always be debatable (Knox 1976: 107).

In order to minimize the impact of subjectivity, Knox proposes the use of only very short scales of measurement that have to be quite fully described within the schedule, thus 'enabling consistent results to be achieved by different investigators without any specialized training' (p. 102).

Another important issue is the role of the observer. In scientific morphological studies, the field-based assessment is usually made by the researcher him/herself (cf. chap. 2.4 for a list of studies). Such approach entails an outside perspective, which cannot substitute for the way the towns' residents perceive the urbanity of their home town, i.e. from the inside perspective (and which is not the approach of this study). If it does mimic anything, it would be more the (outer) perspective of the (non-resident) officials evaluating the morphological predispositions of a candidate town subject to restitution (which is neither the direct approach of this study, although it does challenge such evaluation methods, cf. chap. 1.5, 3rd point of departure). 'Perceived urbanity', as the name suggests, is a very individual and, as such, subjective attribute which could be contested as too personal in the light of a general analysis of urbanity of degraded towns. Naturally, a large amount of observers would be desirable; unfortunately, it was an ambition that could not be realized within the scope of this study. Nevertheless, I have dealt with this problem in three ways:

(1) My personal bias was subdued by extending the observations to two more observers, producing altogether three visual analyses per studied town. The observers were amateurs of qualities of the small traditional town; they were also laymen (non-geographers) acting as antipoles to my own, contextually informed, point of view. Their results were analyzed separately from mine and would be integrated only if a clear trend could be distinguished. Such proceeding, I believe, produces more reliable results than if it were conducted by the researcher only (which often is the case).

[25] All studied market squares were minutely photographed; in those instances where perceived urbanity would not match the main index aspects, this supplementary information would provide an additional source for analysis.

(2) Studies on people's opinions (e.g. 'How do you perceive the level of urbanity of this town?') are usually based on many respondents about few research units. In this case, where the number of observers was small, the number of research units had to be increased to include a significantly large number of degraded towns (see next section). Such compensation assumed therefore the character of a quantitative survey in terms of limited amount of information on a large set of study units (cf. Halvorsen 2006: 82). It could therefore be regarded as highly personal but simulaneously also as highly thorough and consistent one.

(3) Laymanship as well as the small number of observers may have resulted in limited reliability; nevertheless, according to the principle 'same observer–same conceptual framework–same way of execution–short period of time', such error should therefore be consistent, withouth affecting the correlation with the synthetic non-field-based index negatively. Consider the following:

> (…) [S]ince the proceeding was conducted by one person; any possible faulty decisions are the same throughout the whole processed material (Mordwa 2003: 107).

Also, according to Knox's (1976: 102) prescriptions, in order to minimize the impact of subjectivity and inconsistency, the assessment scales of measurement were kept very short (1 to 5) and fully described (cf. also Knez & Thorsson 2006: 261-262), so to provide the best possible results from non-specialized observers.

6.7.2. Observer preparation

Prior to the field study, the appointed observers were given a theoretical debriefing about what the studied variables meant. However, in order to avoid tinted results, they were not told the effect of these variables on the perceived urbanity. The observers were also explained the importance of the scale, i.e. that the studied towns should be compared to one another and not to some other, larger or smaller settlements. Before the trip, the observers were asked to survey 17 market squares in their town of residence (Malmö, Sweden[26]) for the sake of their own practice, but also for the author to control whether the variables were understood correctly. Once the results were satisfactory, a special field matrix was constructed, wherein each variable was to be graded 1 to 5 (i.e. from the least to the most intensified incidence of the studied feature) with 'pluses' and 'minuses' allowed for reasons of nuance. The field matrix was accompanied by a quick reference guide on what which mark really meant, or, conversely, what level of intensification of the surveyed variable the square should meet in order to receive such a mark (cf. Knox 1976). The reference guide was supplied in order to enhance the analytical conformity between the three observers, but also to act as a constant reminder in instances of atypical squares or simply whenever routine was about to take over. Both the field matrix and the reference guide can be found in Annex 1.

A notable shortcoming in comparative field observations is the lack of knowledge of 'what is to be expected next' before the overall picture of a studied feature is established. Here, the urbanity of a town could have been assessed all too generously, before discovering other more urban settlements some time later (please confer the paragraph on *orientation markers* in the next subchapter). Due to the lack of such reference during the initial phase of the field survey, the observers were asked to revise and correct their evaluations as they gained more proficiency with each new town that was surveyed. Once the context of the study was grasped, such revisions became less necessary and were eventually refrained from.

6.7.3. Spatial delimitation and choice of objects of study

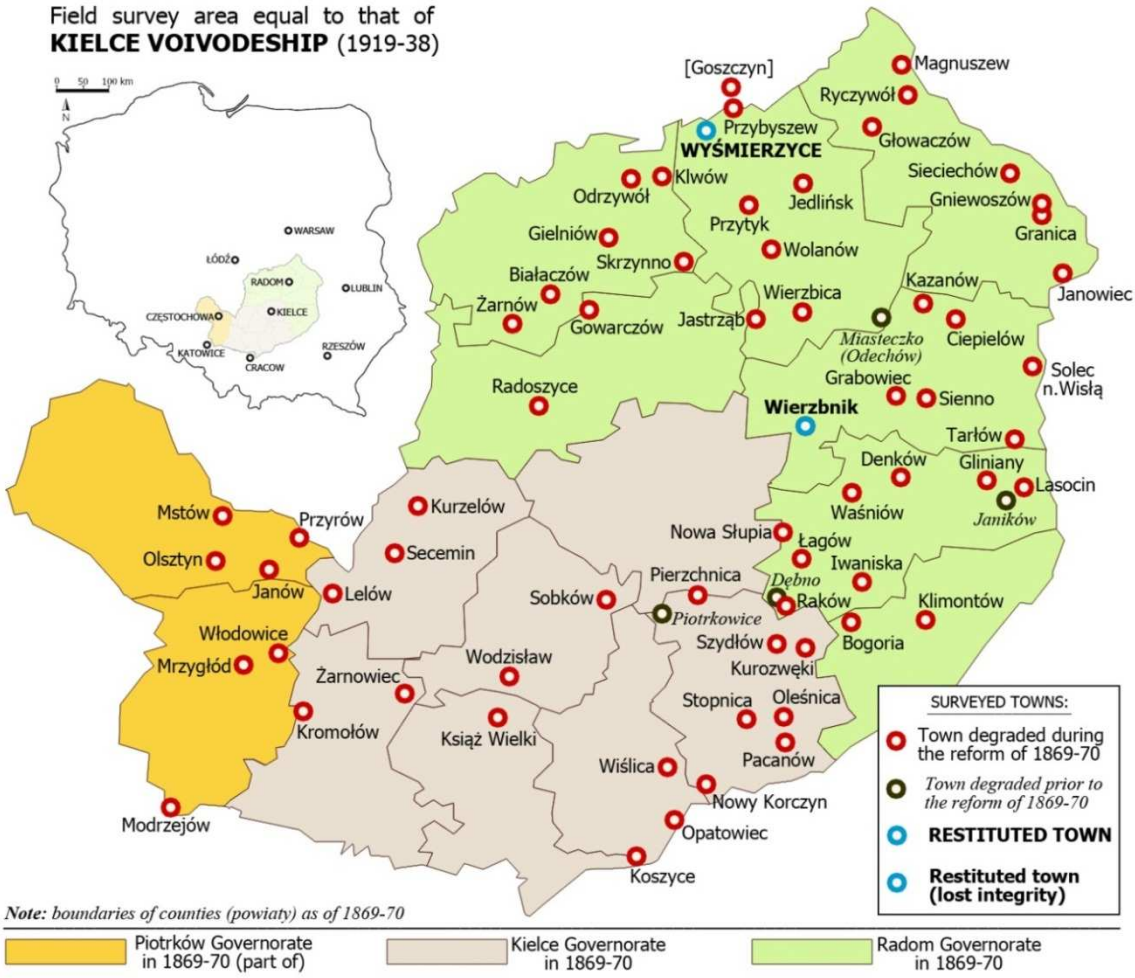
The scope of this study would not allow field-testing the model in all 336 towns, so a geographical delimitation had to be made. An analysis of the spatial distribution of degraded towns within the former Congress Poland emerged the territory corresponding to the borders of the former Kielce voivodeship (as of 1919-38) as the most suitable delimitation in terms of historical coherence, sufficient number of degraded towns and their spatial concentration (practicality of execution). At the time of the 1869-70 reform, this territory belonged to the governorates of Radom (northern portion) and Kielce (southern portion), while the two westernmost districts (Będzin and Częstochowa) were part of the Piotrków Governorate[27]. Today, this area covers roughly the whole of Holy Cross voivodeship, the southern part of

[26] Since Malmö is a fairly large city (circa 300.000 inhabitants), the variable "urbanity" was for obvious reasons extraneous.

[27] The governorates of Radom, Kielce and Piotrków were created in 1866 following a territorial reform. Prior to the reform the first two were part of one large Radom Governorate, while the latter belonged to the governorate of Warsaw. Prior to 1844, the towns within the two studied districts of the Piotrków governorate (save for Mstów and Przyrów which belonged to governorate of Kalisz) constituted – along with the territory of the post-1866 Kielce Governorate – one large Kraków Governorate. This implies that despite numerous administrative changes that took place during the 19th century the historical coherence between the chosen survey towns has been retained, thus justifying the historical inconsistency of a *Polish*, post-occupational administrative unit (the Kielce voivodeship) being chosen for the spatial delimitation of the field survey. Historical coherence notwithstanding, the more pragmatic reason for such a choice of area was the viable number of the degraded towns within it (along with their relative spatial distribution), which – if contemporaneous (1869-70) administrative units were adhered to – would either be too small, too large or too dispersed.

Masovian voivodeship and the north-eastern part of Silesian voivodeship, along with fragments of Lesser Poland, Łódź and Lublin voivodeships. Considering the limited number of towns that could be visited and the study's main focus on *degraded* towns, consequently, all *restituted towns* were exempted from the survey. After this exemption, there were 64 towns[28] – including all incorporated towns *and* Wierzbnik (cf. chap. 5.2 on the special status of Wierzbnik) – within the established limits to be examined. To this set, the town of Wyśmierzyce was also added; being currently the smallest *formal* town in Poland, its inclusion would act as an analytical middle marker between those degraded towns scoring "better" than this least permissible manifestation of urbanity in Poland, and those scoring "worse" (which assumptively *should* be the case). Furthermore, four more former towns were added – Dębno, Janików, Miasteczko (Odechów) and Piotrkowice – all of them degraded prior to the 1869-70 reform and thus displaying a heavily deteriorated, residual urban morphology. The reason for this inclusion was to set the bottom marker for the least developed form of urban morphology during the verification, but also to monitor whether the observers responded accordingly[29]. In order to set the contextual top marker (so that the respondents would not detract the urban impact of the studied towns by comparing them to cities significantly larger) two additional *formal* towns within the same population bracket were visited and explored – Kazimierz Dolny and Pilica. These two were treated as 'contextual ideals' (equivalents of the highest grades in the field matrix) and were therefore not assessed[30]. It should be noted that none of the observers had prior visited any of the studied towns.

Fig. 6.9. Map displaying the towns examined in field, along with their administrative status and location. *Source*: own work



[28] Within the borders of the former Radom Governorate there are actually 63 degraded towns, however, this amount was by reasons of proximity extended with the town of Goszczyn, previously in the southernmost Warsaw Governorate, right on the border.

[29] The observers were not notified about the circumstances surrounding the inclusion of Wyśmierzyce and the four additional pre-reform towns in order to avoid conscious manipulations of assessment.

[30] Kazimierz Dolny is widely regarded as the town boasting Poland's arguably best market square – 'the symbol of the Polish small town' (Adamczewka-Wejchert & Wejchert 1986: 349), while Pilica was subject to one of those few recent restitutions where the demographic criterion of 2.000 inhabitants was unmet, presumably due to Pilica's impeccable urban morphology (cf. Górnisiewicz 1989; Sokołowski 1999: 173-174).

Altogether, 69 settlements were examined (1 formal restituted reform-town and 68 non-restituted towns, whereof 64 reform-towns). The map in fig. 6.9 shows their distribution. Considering only the reform-towns (65), their number accounts for approximately 1/5 of the total of 336 towns in this study, or as many as 1/3 of the total of the non-restituted towns. Given the more pivotal role of the latter subgroup in the context of this study, such share could be regarded as fairly large and largely representative (cf. Chalmers 1999; Plit 2007).

6.7.4. Survey procedure

The field survey was conducted in July 2011. Since only the market squares were subject to investigation, the observers were urged to disregard from other parts of the studied settlement, such as neighboring streets, the complexity of the town plan or the town's overall size. While assessing the urbanity of a square, the observers were reminded to limit themselves to its morphology and try to ignore other aspects and items, such as services, communications, people, animals etc. In cases of uncertainty, the observers were allowed to ask questions regarding the methodology but not to discuss the grading of the studied variables, in order to prevent tinting of the results. Each square was given approximately 30-60 minutes depending on its size and morphological complexity. The inventory commenced with an initial orientation round (sometimes by car whenever a square was too large for a clear overlook), followed by a thorough examination of the studied morphological variables (always on foot). At all times, the square was photographed and the inventory ended with the grading of the variables in the field matrix. The results from the survey as well as aerial and street-view photography of all surveyed squares are found in Annex 3–5.

6.7.5. Correlation between the perceived level of market square urbanity and its components

The first objective of the field survey was to verify how the perceived overall level of urbanity of market squares correlated to its components (integrity, compaction, cohesion and composition) in order to validate the proposed methodological model. The observers were asked to assess the four variables individually in terms of their level of urbanity, but also to assess the urbanity of the market squares *generally*, i.e. without respect to any particular trait. In order to deflect the observers from drawing certain conclusions, they were also asked to assess the market squares in terms of aesthetics, technical maintenance and livability, i.e. three variables that were *not* part of this investigation.

Tab. 6.12 below shows the results from the correlations. There is a significant correlation between generally perceived urbanity of the squares and the perceived level of urbanity of its subscale components (save for cohesion, where there is no relationship). There is a clear trend that can be observed between all three observers; the value for integrity is markedly lower (0,357) than that of composition (0,597) and compaction (0,824), the latter being exceptionally strong. Only observer 2 has perceived composition as a weaker indicator of urbanity than the others. However, the proportions are the same between all three observers. Compaction is the strongest indicator of urbanity, next composition, and finally integrity, the least strong factor. There is no correlation between urbanity and cohesion. Furthermore, the proportions between the mean values for all three observers (bottom row in tab. 6.12) mimic the proportions between variables in the proposed overall index for market square urbanity. This would suggest that the proposed index is a reflection of how urbanity of market squares is perceived in field, and whose reliability can only be improved by further observations.

Tab 6.12. Basic statistical relationships between perceived overall urbanity and other separately perceived variables as assessed by 3 observers (including author) in 69 surveyed towns. Data presented in different constellations.

Observed by	**Correlation and level of significance**	**Between perceived overall urbanity and…**			
		Perceived integrity	**Perceived compaction**	**Perceived cohesion**	**Perceived composition**
Observer 1	***r***	**0,281***	**0,762**	*[-0,031]*	**0,604**
	α	0,019	0,000	*[0,799]*	0,000
Observer 2	***r***	**0,273***	**0,822**	*[-0,032]*	**0,388**
	α	0,023	0,000	*[0,796]*	0,001
Observers 1+2	***r***	**0,315**	**0,815**	*[-0,040]*	**0,539**
	α	0,008	0,000	*[0,743]*	0,000
Observer 3 (Author)	***r***	**0,379**	**0,760**	*[0,025]*	**0,599**
	α	0,008	0,000	*[0,743]*	0,000
All 3 observers	***r***	**0,357**	**0,830**	*[-0,027]*	**0,597**
	α	0,003	0,000	*[0,824]*	0,000

Explanation: r – value of correlation coefficient (Pearson's); α = significance at 0.01 level (unmarked) or at 0.05 level (starred)

6.7.6. Substituting in-person visits with non-field-based methodology

The second objective of the field verification was to find how accurately the human eye is able to record different morphological features when compared with assessments based on remote sensing. The results are shown in tab. 6.13. The first important finding is that the results obtained from the two observers and myself were very similar (save for cohesion where there was slightly more discrepancy) which means that all three observations can be treated uniformly. All correlations are significant (0.000 at 0.01 level) and high. The highest correlation is between perceived and calculated compaction (0.864), which mean that in-person assessment of compaction can easily be substituted by remote sensing.

The correlation for integrity (0.722) and cohesion (0.662) are somewhat lower. The first may be so because integrity is a more complex variable than compaction. Compaction denotes only one property (either conjoint or not), whilst when assessing integrity, it may sometimes be difficult to tell whether unbuilt space is actually an integrity failure or just a large gap. Cohesion, being a planar feature, may be more difficult to assess because of the incapability of the human eye to grasp the characteristics of large *horizontal* areas (cf. Adamczewka-Wejchert & Wejchert, 1986: 24). The lower correlation for composition (0.484) can be explained by the highly subjective nature of this variable. The multitude of different combinations of land-use elements this variable can assume (also in relation to different square sizes), renders the construction of a universally valid composition index practically impossible. Nevertheless, the high correlation is a sign that the composition index is on the right track. Lastly, the correlation between the overall perception of the square's urbanity and its corresponding calculated index was very high (0.845)[31], suggesting that assessing the character of market squares can be substituted by non-field-based methodology. It also suggests that there is merit in the proposed methodology which can be elaborated further and tested with a larger number of observers.

Tab. 6.13. Basic statistical relationships between perceived variables of urbanity and the corresponding variables (indices) as assessed by the proposed methodology (e.g. the correlation between perceived compaction and assessed compaction). Data regarding the perceived variables are provided by 3 observers (including author) from surveys in 69 towns.

Observed by	Correlation and level of significance	Between perceived variable X and the corresponding calculated variable				
		Integrity	Compaction	Cohesion	Composition	TOTAL URBANITY
Observer 1	*r*	**0.627**	**0.853**	**0.606**	**0.433**	**0.790**
	α	0.000	0.000	0.000	0.000	0.000
Observer 2	*r*	**0.655**	**0.846**	**0.573**	**0.469**	**0.778**
	α	0.000	0.000	0.000	0.000	0.000
Observers 1+2	*r*	**0.676**	**0.854**	**0.610**	**0.475**	**0.806**
	α	0.000	0.000	0.000	0.000	0.000
Observer 3 (Author)	*r*	**0.693**	**0.843**	**0.693**	**0.454**	**0.824**
	α	0.000	0.000	0.000	0.000	0.000
All 3 observers	*r*	**0.722**	**0.864**	**0.662**	**0.484**	**0.845**
	α	0.000	0.000	0.000	0.000	0.000

Explanation: r – value of correlation coefficient (Pearson's); α = significance at 0.01 level

6.7.7. Summary

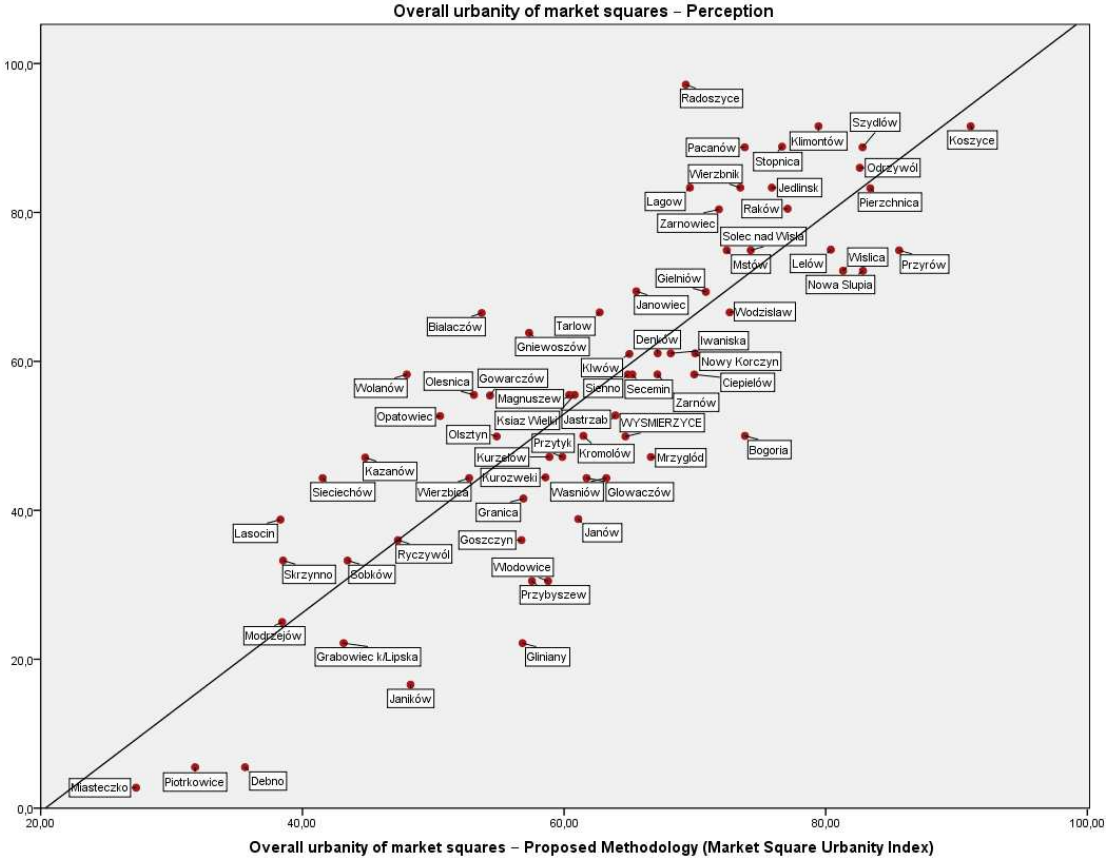
Summarily, the field survey conducted in the 69 of the 336 studied towns has positively verified the proposed methodological model for assessing urbanity of market squares. It verifies that the highest impact of a square's perceived urbanity is attributed to compaction, in a lesser degree to composition and the lowest to integrity. No correlation between urbanity and cohesion could be noted. Also, the field survey shows that all market square variables (including cohesion) can be satisfactorily substituted by non-field-based methodology. A somewhat lower correlation was noted for the variable composition, most likely due to its highly complex and subjective nature. The most important finding is the very high correlation (0.845) between perceived overall urbanity of a square and the corresponding index achieved by the proposed methodology. Since this correlation was consistently high for all three observers (0.790, 0.778, 0.824 respectively), it can be assumed that the proposed market square index can be applied on the remaining market squares in this study.

[31] According to Rogerson (2010), an r value of 0.7 or 0.8 is often taken as a rule-of-thumb value for important and significant correlations.

6.7.8. Limitations – evaluation of the proposed methodology

The linear regression in fig. 6.10 shows how particular towns 'scored' in perceived market square urbanity in relation to their corresponding index achieved by non-field methodology. With minor variations, the cases fall along a straight line (the R-square for the linear equation is 0.714), indicating a fairly accurate representation of the proposed model. There are some notable departures from the line though. Dots above the line indicate cases that were assessed as more urban than their corresponding index while cases below the line were assessed as less urban than the index. The most striking discrepancies are discussed below.

Fig 6.10. Perceived urbanity vs. calculated urbanity; linear regression bases on 69 towns observed in field (r^2 = 0.714)



Lesser accuracy in extremely non-urban morphologies

As we can see, the discrepancies between index and perception are most pronounced at the bottom bracket, especially when applied on extremely (physically) degraded towns. The reason for this is the urban-specific nature of the proposed methodology, i.e. it is designed to work on squares with an *urban* morphology. Therefore, the accuracy of this approach decreases with the diminishing urban character of a square. For instance, the heavily degraded squares of Dębno, Janików, Piotrkowice (added to the field survey for verificatory reasons, cf. chap. 6.7.3) and Gliniany were all perceived as less urban by the observers (most likely accurately) than their corresponding index values (since both approaches do place them at the bottom of the scale it is merely a minor problem). The two main mechanisms influencing such discrepancies are as follows. Firstly, squares of small towns often lack *compaction* (which the index retails correctly), but in an extremely rural context such lack of compaction is much greater; the gaps are wider and consist of backyards or orchards, the width of which can equal that of a single house or even two. Due to the contextual adaptation, the integrity of a 'rural square' may remain at 100%, whereas its perceived enclosure may be virtually nonexistent because of the exaggerated lack of compaction, resulting in the square being assessed as non-urban. Secondly, an extremely 'rural square' (e.g. Dębno, cf. fig. 4.15) that consists of a monolithic grass lot (thus displaying an inferior *composition* which the index retails correctly), automatically lacks thoroughfares and other physical barriers. This in turn generates a *cohesion* equaling 100%, which in concentrations that high becomes undesirable. Lack of roads and pathways impedes movement within the square and makes it unusable for pedestrians; the square loses its urban-specific character and – as such – its urbanity, a loss that is inevitably recorded by perception. In conclusion, the proposed approach should not be applied to morphologically non-urban settlements, or, in the case of heavily degraded towns, the variable 'integrity' (but also 'cohesion', even though it is stricken from the index) should be treated with caution.

Immeasurability of architectural traits

One of the aims of this study was to devise a non-field-based methodology. Such an approach undermines per definition the impact of architectural qualities on perceived urbanity. The field study – although largely consistent with the proposed model – showed certain discrepancies that could be ascribed to the architectural factor which, in turn, could not be assessed by remote sensing. The main aspect contributing to such discrepancies is the height of frontage buildings. Although multi-storey buildings often involve compaction (which is *per se* an urban trait), the additional height may enhance the urban impression. This is clearly seen in the regression, where squares of mainly multi-storey buildings were assessed as more urban than their corresponding index values, most notably Pacanów, Łagów, Klimontów, Stopnica, Wierzbnik and Żarnowiec, whereas squares of high compaction yet dominated by one-storey buildings, such as Pierzchnica and Gielniów, were assessed more in line with the index. A slightly different variant of this phenomenon are spatial dominants, particularly town halls – the 'alpha-males of urbanity' – whose occurrences enhance the urban look of a square, even if such square is not exceptionally urban. A notable example of this phenomenon is Białaczów with its splendid town hall dominating the square (cf. fig. 4.12), which, consequently, was assessed significantly higher. Examples can also be found at the other end, where wooden architecture is associated with rurality and assessed markedly lower; a good example of this is Przybyszew. In conclusion, although architectural style is not the predominant factor deciding upon a square's urban character (cf. chap. 4.6), it does play a role in visual assessments. This is one flaw that the proposed methodology cannot handle fully without a complementary visual analysis (for instance by means of street-view photography).

Market squares designed as 'urban theme parks'

Another potential source of misjudgment could be so-called 'urban theme parks', i.e. park-like areas interspersed with elements more typical of market squares than actual parks per se. Such parks, fairly frequent as a result of current revitalization projects (e.g. Radoszyce, fig. 6.11), are sparse and airy (the surrounding frontages are clearly visible), with a roughly equal amount of space divided between vegetation and pedestrian areas. Also, they are typically more aimed at social interaction (typical of squares) rather than recreation (typical of parks). However, satellite imagery recorded in the summer months resulted in tree crowns covering the whole arrangement, giving the misleading impression that the area in question is a regular (square-atypical) park. The regression in fig. 6.10 shows this clearly; the square of Radoszyce, for instance, was assessed as much more urban in the field than what the aerial-based analysis dictated.

Fig. 6.11. 'Urban theme park' in Radoszyce – a potential source of misjudgment. *Photo*: M. Dymitrow

Ground level differences

One last observation pertains to the issue of the slope aspect, which affects the cohesion index (V_{coh}). Although many squares are sloping, their surface remains planar (e.g. Wodzisław) and therefore does not affect the cohesion, as all parts of such square are easily accessible. However, some squares have significant level differences, often marked by a distinct threshold (Ożarów, Skrzynno) or an escarpment (Janowiec, Denków). In these cases the cohesion of a square is gravely deteriorated as such barriers prevent free movement, especially when the flights of stairs connecting the different levels are few and wide apart. The latter is not least an issue of inaccessibility for disabled persons (fig. 6.12). Still, these important differences may easily be missed out with remote sensing (i.e. if altitude is not monitored).

Fig. 6.12. Extreme ground level differences in the square of Denków; a cohesion failure that may be missed out by remote sensing. *Photo*: M. Dymitrow

6.8. Constructing the summative morphological index (V_{morf})

Constructing the final, summative morphological index may be hazardous. Firstly, such an index takes only into account the studied variables (town plan, physiognomy and market square) and is therefore not some finite measure of a settlement's morphological urbanity (for instance, it does not measure the emotional, sensual and aesthetic dimensions of urban morphology expressed through a specific architectural style). Therefore, the expression 'summative index' is a simplification. Secondly, the sheer assembly of such an index (weighting of the variables) is subjective as there is no meaningful way to find out how strong an impact each of these variables has on small-town urbanity (the variables are of very different quality). There are two main ways to circumvent this impasse. The first is to depart from a hypothetical 'model town' and a hypothetical 'village', the other is to focus on the sheer intensity of the studies variables. Sokołowski (1999: 59) implements the first approach, where he weights subscale indices by departing from the degree of statistical relationship between each subscale index and *formal* urbanity. Drobek (1999: 106) is skeptical to such an approach, claiming that defining model towns and model villages is extremely difficult if not impossible. Furthermore, formal urbanity in Poland is not a good point of reference as Polish formal towns do not represent a normal distribution of urban traits (cf. Plit 2008: 52), and neither are those in the studied set. This is also a major critique formulated in this thesis; therefore, constructing a summative index with formal urbanity as an ideal (a 'model town') would in this context generate skewed results. Sokołowski (1999: 44) himself notes that, although such an approach is acceptable when studying a large amount of units (whereof most are large traditional villages), it does not generally apply to towns degraded in the 19th/20th century (ibid: 44-45, footnote).

Therefore, an approach based on the intensity of the studies variables where all subscale indices are weighted equally (cf. Drobek 1999: 106) seemed more appropriate in the context of this study. Departing from the theoretical framework introduced earlier, an index based on town plan, physiognomy (morphological features of any town) and market square (denominator of urbanity amongst small traditional towns) does not seem controversial. However, since the epithet 'small town' does not apply to several towns in this study, the impact of the market square index had to be modified. It is the contention here that the larger the town, the smaller the impact of the market square on the town's overall urbanity (although not necessarily in terms of its symbolic value, cf. Mordwa 2005). It is also the contention that such a decrease of impact is not abrupt but gradual. The premise is therefore such that the relation between graph and physiognomy is always the same, however, their relative impact increases as the impact of the market square decreases with the increasing size of the town. I have therefore grouped the towns in six population classes according to the classification used in publications by the Central Statistical Office of Poland (GUS 2011). For the smallest towns, the proportions between graph, physiognomy and market square are equal (33,3% or 1/3 each). For each group of larger towns, it was assumed that the impact of the market square diminishes by (circa) 20 % of the initial share (i.e. of 33 %), whereas the excess percentages are distributed equally between graph and physiognomy. In towns of more than 40.000 inhabitants, the impact of the market square is retracted completely. Tab. 6.14. shows this procedure.

Tab. 6.14. Summative morphological index (V_{morf}) – arriving at the proportions between the composite subscale indices.

Class code	Population class	Share of graph index (V_{grf})	Share of physiognomic index (V_{phy})	Share of market square index (V_{msm}); changeable
A	1.000-2.499	33,3 %	33,3 %	33,3 % [100% of 33,3]
B	2.500-4.999	36,7 %	36,7 %	26,6 % [80% of 33,3]
C	5.000-9.999	40,05%	40,05%	19,9 % [60% of 33,3]
D	10.000-19.999	43,35 %	43,35 %	13,3 % [40% of 33,3]
E	20.000-39.000	46,7%	46,7%	6,6 % [20% of 33,3]
F	40.000 >	50 %	50 %	0 % [0% of 33,3]

Source: my classification according to (GUS 2011: 43)

It should be noted though that the changeability of proportions is dependent on the exact population numbers and may be somewhat misrepresentative for towns oscillating around the set population thresholds (still, the changes are small enough not to affect the results negatively[32]). It should also be noted, that a summative index is a one-dimensional measure, where the absolute impact of its composite index values is no longer detectable. For instance, a town with an exceptionally well-developed graph but an entirely rural physiognomy (and an average market square) would produce an average summative value; although such town could qualify for restitution based on its summative index value, the total absence of urban physiognomy would be misleading in this aspect. Therefore, although a summative index is a very practical measure, it should be treated with caution and always be accompanied by a second analysis of its composite parts.

[32] A few towns located very close to the set thresholds are: Koziegłowy (2479), Stawiski (2526), Mogielnica (2568), Bielsk (2571), Kromołów (2581), Łaskarzew (4994), Ożarów (5001), Łoździeje (5027), Poniemoń (9900), Karczew (10260).

6.9. Assessing probability of restitution by examining the spatiality of current restitutions

In order to determine the restitutional potential of the studied towns on the basis of the theories of diffusion of innovations and agglomeration proximity introduced in chapter 3.9.2, and at the same time eschewing optical analyses and delimitation of arbitrary zones (as suggested by Krzysztofik 2006), I have devised an alternative, more precise method. The method calculates the numbers of towns restituted during 1980-2011 located within a radial proximity field of 50 km[33] (Euclidean distance[34]) from the degraded town. In order to respect the temporal factor, the restituted towns were divided into three groups due to the time of their restitution and were given different impact values accordingly. In that way, towns restituted in the 1980s were given less impact than those restituted in the 2000s or 2010s, because – I assume – the diffusion mechanism is more likely to be active within the latter. The following matrix was used (tab. 6.15):

Tab. 6.15. Matrix for valuing occurrences of restituted towns in proximity to degraded towns in terms of time of their restitution.

Restitution year span	Value
1980-1989	**1**
1990-1999	**2**
2000-2011	**3**

For each degraded town, the number of towns within its 50 km proximity field was multiplied by the corresponding impact value. If towns belonging to different restitution periods were present, they were first multiplied by their respective values and then added together, e.g. (tab. 6.16):

Tab. 6.16. Example of a proximity scenario when assessing probability of restitution by examining spatial processes (cf. text above).

Hypothetical town	**Number of restituted towns** within a 50 km radial zone from degraded town X, according to their **time interval** of restitution:		
	1980-1989 (value **1**)	1990-1999 (value **2**)	2000-2011 (value **3**)
Degraded town A	2 towns	0 towns	4 towns
Degraded town B	4 towns	1 town	1 town

For degraded town A: (2 * **1**) + (0 * **2**) + (4 * **3**) = 2 + 0 + 12 = **14**
For degraded town B: (4 * **1**) + (1 * **2**) + (1 * **3**) = 4 + 2 + 3 = **9**

Both degraded towns (A and B) have the same number of restituted towns within their respective proximity fields (six each), but since there are more cases of *recent* restitutions within the field of town A, town A is more likely to be influenced by the diffusion of the restitution idea and, accordingly, is given a higher index value (14).

[33] Krzysztofik (2006: 31; 36) acknowledges Euclidean distances up to 60 km (Wąchock–Małogoszcz) and 70 km (Młynary–Kisielice) as valid diffusional distances, although most of them are much shorter. I have therefore assumed 50 km as an acceptable distance in this context, given that temporal stratification has been taken into account.
[34] Euclidean distance was chosen instead of road distance because diffusion of innovations is not directly associated with transport but is rather dependent on proximity in a more general sense.

7. Results and analysis

7.1. Introduction

The design of this chapter is such that it presents the findings achieved through the methodology introduced in chapter six, while at the same time analyzing and interpreting the results. Some results are also contextualized through findings from the field observations. Each line of thought is followed by a conclusive summary. The aim of this chapter is to create a base for answering research questions 2, 3 and 4. General conclusions are not drawn at this point; this is done instead in chapter eight, followed by a broader discussion on the concept of urbanity in Poland (the main objective of this thesis).

In terms of structure, this chapter is divided into three parts. The first part (7.2) analyzes the morphological differences between formally urban and rural units, but also in regard to the towns' size. It starts with an outline of the basic statistical relationships between the different morphological variables (indices) in terms of frequencies, descriptive statistics and correlations, and then goes on with separate, in-depth analyses of the three variables graph, physiognomy and market square. When relevant, the results are accompanied by excursuses to the ongoing revitalization of degraded towns in Poland. The second part (7.3) is dedicated to the issue of possible restitutions of the degraded towns and is approached both regionally and as a group. After arriving at specific threshold values for minimum urbanity, the morphological indices (both as summative V_{morf} values and as separate composite variables) are then analyzed in tandem with demographic data. This part takes also into account the secondary/exogenous themes affecting restitutions in Poland today that were introduced in chapter three: diffusion of innovations, agglomeration proximity, city deserts and disadvantaged units (non-communal and incorporated villages). Furthermore, the chapter includes a short comparative analysis of the twelve non-Polish towns in this study. A quick outline on how the morphological findings relate to *past* restitutions in Poland is also presented. The last part (7.4) attempts to contextualize morphology as *one* attribute of urbanity a bit further, by putting it into relation with other attributes of urbanity derived from previous research. A full list of all results – that may be used as a source of reference or as a point of departure for future studies – is found in 7.5.

7.2. Morphological differences between urban and rural units

7.2.1. Basic statistical relationships

In this subchapter, a general, introductory analysis of the statistical relationships between the morphological indices – graph, physiognomy and market square – is conducted, with respect to their relation to the towns' size and administrative status. Note that values of '100' for the morphological variables correspond to the mean values calculated for formal towns of between 4000 and 6000 inhabitants (i.e. of 'approximately 5000', the official limit for small towns), while the demographic index of '100' corresponds exactly to 5000 inhabitants. Values of '100' should therefore be interpreted as maximum scores for the category 'small towns', while values above '100' denote scores that exceed this category (comparison is contextually not meaningful).

Frequencies and descriptive statistics

Tab. 7.1 shows that mean values for urban units are significantly higher regarding graph (99.7) and especially physiognomy (93.7) than for rural units (60.7 and 44.2 respectively) suggesting that formally urban units generally have more complex town plans and more developed multiple-family housing structures than formally rural units. Also, the near-100-values for urban units suggest that urban units (restituted towns) meet the minimum morphological levels of small-town urbanity, whereas the mean values for rural units (non-restituted towns) are much lower, accounting for about half of the assumed levels. Conversely, for market squares, the differentiation is much smaller (67.6 for urban units vs. 58.1 for rural), which means that the quality of market squares is much less dependent of formal administrative status; the values are also markedly lower than 100.0 (a mean of 62.0 for all units), suggesting that the squares of the studied towns are largely moderate regarding urban character. However, both graph and physiognomy show high standard deviations, implying that the mean values are not very representative for the whole sets, and that the towns should be analyzed in regard to their actual populations for more meaningful results (this is done in 7.2.2 and 7.2.3). On the contrary, standard deviations for market squares are much smaller, implying greater homogeneity among towns.

Tab. 7.1. Descriptive statistics for morphological indices in regard to administrative status (all settlements).

Variable	Mean value			Std. Deviation			Number of units[1]		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Graph (V_{grf})	**77,1**	99,7	60,7	**32,8**	37,0	15,0	**336**	141	195
Physiognomy (V_{phy})	**63,2**	93,7	44,2	**41,5**	47,7	21,2	**313**	120	193
Market square (V_{msm})	**62,0**	67,6	58,1	**14,4**	13,0	14,0	**329**	134	195
Sum. morphology (V_{morf})	**69,4**	92,7	54,4	**29,6**	33,6	11,9	**314**	123	191

A quick analysis of the summative morphological index shows a distinct difference between urban and rural mean values (92.7 and 54.4 respectively). One reason for this is the occurrence of large towns (up to 70 000 inhabitants) within the urban group, where the impact of market squares – the only sphere where urban and rural units can actually 'compete' – is largely soft-pedaled or removed entirely (by design) from the index (cf. chap 6.8). This is also shown in the standard deviation for urban units – 33.6 (which also affects the deviation for the whole set – 29.6), whereas for rural units – with a more homogenous demographic make-up – the deviation remains relatively low (11.9). Therefore, although such analysis tells us that the restituted towns are much more urban than the non-restituted ones, it is not meaningful from a continuum perspective. It is so because large urban centers are not part of the continuum (and neither of the focus of this study); in order to 'decontaminate' the data, the analysis must be abridged to the scope of the rural-urban continuum, i.e. to settlements falling in the range between the least populous formal town (Wyśmierzyce with 873 inhabitants) and the contextual (morphological) top marker pertinent to 'small towns' (5 000 inhabitants). Such delineation makes the data more commensurable (tab. 7.2).

Tab. 7.2. Descriptive statistics for morphological indices in regard to administrative status (only independent Polish settlements between 873 and 5000 inhabitants, i.e. the range between the least populous formal town and the contextual top marker for 'small' towns).

Variable	Mean value			Std. Deviation			Number of units		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Graph (V_{grf})	**72,2**	84,9	65,0	**16,9**	14,2	13,9	**223**	80	143
Physiognomy (V_{phy})	**55,6**	71,7	46,5	**28,6**	33,8	20,3	**223**	80	143
Market square (V_{msm})	**62,9**	67,9	60,1	**13,8**	13,0	13,4	**223**	80	143
Sum. morphology (V_{morf})	**63,9**	75,6	57,3	**15,1**	14,7	10,8	**223**	80	143

Indeed, a comparison of units within the delineated continuum range shows more subdued yet still pronounced differences. Once the largest centers have been removed, urban mean values for graph, physiognomy and summative morphology are distinctly lower, whereas rural values are only slightly higher (highest in terms of graph) once the smallest villages were removed. Values for market squares remain virtually the same. On the whole, urban values regarding graph (84.9) and summative morphology (75.6) are just beneath 20 units higher than the rural values (65.0 and 57.3 respectively). Regarding physiognomy, urban values (71.7) are even more pronounced (a 25-unit difference); however, standard deviations for rural physiognomy are also much larger than for other variables. Urban market squares differ from this trend, being only insignificantly higher (67.9) than rural squares (60.1). Such outline suggests that restitutions of the reform towns have been largely satisfactory in regard to the assumed standard. Of course, one cannot tell whether specific towns were morphologically fit prior to restitution or whether they evolved as a result of the restitution itself. The analysis is also based on mean values and does not convey a full picture of the continuum structure; this can only be done by looking at particular values, something that will be done in the next subchapters. First, however, let us take a look at the relationships between the analyzed morphological variables.

Correlations

Tab. 7.3 shows how different morphological features correlate to one another, but also in regard to town size and current administrative status (urban and rural). Size and graph are very strongly correlated (0.927), which means that the bigger the town, the more complex its layout, (supporting the theories about the town plan's importance presented in chap. 4.5); only for rural units is the correlation slightly weaker (0.747). The correlation between size and physiognomy is strong for urban units (0.773), but much weaker for rural units (0.389); this supports the choice of methodology used in this study, departing from the fact that multiple-family housing is an urban characteristic. There is also a moderate correlation between graph and physiognomy suggesting that a growing town expands in both space and height/cubature. This is, however, only true to urban units (correlation 0,558); in rural units, a developing town plan is apparently accompanied by mostly one-family buildings (correlation 0,259).

[1] The numbers differ because statistical data regarding physiognomy for city parts and non-Polish settlements were not available; also some Lithuanian market squares could not be measured because of insufficient satellite image resolution.

Tab. 7.3. Correlations for morphological indices and demography in regard to administrative status.

Variable	Corr. and level of sign.	Graph (V_{grf})			Physiognomy (V_{phy})			Market square (V_{msm})			Demography		
		Tot	Urb	Rur	Tot	Urb	Rur	Tot	Urb	Rur	Tot	Urb	Rur
Graph (V_{grf})	***r***				**0.678**	**0.558**	**0.259**	**0.382**	**0.258**	**0.303**	**0.927**	**0.925**	**0.747**
	α				0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000
Physiognomy (V_{phy})	***r***	**0.678**	**0.558**	**0.259**				**0.348**	**0.208**	**0.175**	**0.773**	**0.706**	**0.389**
	α	0.000	0.000	0.000				0.000	0.023	0.015	0.000	0.000	0.000
Market square (V_{msm})	***r***	**0.382**	**0.258**	**0.303**	**0.348**	**0.208**	**0.175**				**0.315**	**0.196**	**0.214**
	α	0.000	0.003	0.000	0.000	0.023	0.015				0.000	0.023	0.003
Demography	***r***	**0.927**	**0.925**	**0.747**	**0.773**	**0.706**	**0.389**	**0.315**	**0.196**	**0.214**			
	α	0.000	0.141	0.000	0.000	0.120	0.000	0.000	0.134	0.003			

Explanation: r – value of correlation coefficient (Pearson's); α = significance at 0.01 level (unmarked) or at 0.05 level (underlined).

Correlations between market squares and the other morphological features are significant, yet weak (between 0.175 and 0.303), and slightly more pronounced for rural units. This supports the fact that the market square (seen as the spatial dominant of a small town) is a fairly stable morphological feature that does not change in tandem with the spatial expansion and the physiognomic transformation associated with an 'urbanizing' town. The weak correlation between demography and market square shows that the latter constitutes a variable independent of size. In practical terms, it could mean that poorly urban squares can be found in large towns, and, conversely, highly urban squares can be found in small rural settlements. This is an important observation in regard to the hypothesis (chap. 1.5, 2nd point) on morphology being able to spawn an urban consciousness; a perfectly urban square amidst a small and otherwise rural settlement (and not only in regard to its morphology) may in fact 'trick' people to believe that their town is more urban than it actually is. This could also partially explain some of the rejected applications for restitution. On the other hand, a perfectly urban market square could also boost a *moderately* urban settlement that only marginally qualifies for restitution (this has happened e.g. in the case of Zakliczyn, cf. MSWiA 2005). Since town plan and physiognomy are two variables mimicking a settlement's demographic development, then the addition of the independent variable 'market square' provides a new perspective to the morphological analysis of small towns.

7.2.2. Graph analysis

The first analysis of a particular morphological variable pertains to the town layout, or more exactly the graph index (V_{grf}). In order to make the comparison between rural and urban units possible from a Polish perspective, all non-Polish units were exempted[2]. Also, non-independent units (city parts) were removed; although formally urban, these are only urban as a result of incorporation, and not necessarily because they are urban themselves. Retention of those within the urban group would contaminate the analysis and they are instead examined separately in 7.3.8.

As table 7.4 shows, in all population classes where both urban and rural units are represented, the value for the least developed urban graph is surprisingly *always* lower than the most developed rural graph, often significantly so. This implies that in regard to town plan complexity, there is no consistency between formal urbanity and formal rurality when compared between towns of similar populations. Interestingly, the span between the lowest urban graph value and the highest rural graph value ('continuum span') is actually smallest within the lowest population class (500-999) – only 4,1 units. For the more populous classes, the span increases to 17.6 units (1000-1499), than to 32 units for both 1500-1999 and 2000-2999, reaches an incredible 51,2 units for 3000-3999 and ends with a span of 38 units for the highest population class (4000-4999). This means that the phenomenon is not incidental, but prevails consistently throughout the whole rural-urban continuum. Moreover, three rural units (Nadarzyn, Kazimierz Biskupi and Zaklików) surpass the 100-limit, falling outside the context of 'small traditional towns' (!).

If we instead examine the mean values for each population class where both urban and rural units are represented in significant amounts (underlined) we can see that – although the urban values are higher than the rural ones – the values are quite similar, between 68 and 78[3]. This occurs in the population span 1500-2999, i.e. around the population threshold at which restitutions are usually granted. Such assimilation between urban and rural units at this level also accentuates the presence of a graph-related rural-urban continuum.

[2] Moreover, the different international standards of assigning urban units would contaminate the results. In Lithuania, for instance, some very small settlements, like Sapieżyszki with 254 inhabitants are considered urban, a level unknown of in Poland.

[3] The values are also similar in higher population classes, but there are much fewer rural units to compare.

Tab. 7.4. Graph index (V_{grf}) – maximum, mean and minimum values for urban and rural units in regard to the same population classes.

POPULATION CLASS	Frequencies		URBAN UNITS					RURAL UNITS				
			Frequencies		Graph values (V_{grf})			Graph values (V_{grf})			Frequencies	
					Max	Mean	Min	Max	Mean	Min		
	n	%	n	%	Continuum Span						n	%
0-499	**14**	4,5	–	–	–	–	–	46,5	37,4	25,1	**14**	7,2
500-999	**57**	18,2	**1**	0,8	71,1	71,1	71,1	75,2	53,8	38,4	**56**	29,0
1.000-1.499	**65**	20,8	**2**	1,7	74,4	70,1	65,8	83,4	60,5	39,1	**63**	32,6
1.500-1.999	**43**	13,7	**11**	9,2	97,4	70,0	56,0	88,4	68,7	40,7	**32**	16,6
2.000-2.999	**44**	14,0	**26**	21,7	99,2	78,2	63,6	95,6	73,5	55,5	**18**	9,3
3.000-3.999	**30**	9,6	**25**	20,8	104,8	91,8	81,1	132,3	96,8	74,8	**5**	2,6
4.000-4.999	**17**	5,4	**14**	11,7	126,1	98,8	70,5	108,5	91,2	75,6	**3**	1,6
5.000-9.999	**28**	8,9	28	23,3	147,6	116,1	86,8	–	–	–	–	–
10.000-24.999	**10**	3,2	10	8,3	175,0	155,0	126,3	–	–	–	–	–
25.000-49.999	**4**	1,3	4	3,3	220,0	201,9	185,4	–	–	–	–	–
50.000 >	**1**	0,3	1	0,8	260,3	260,3	260,3	–	–	–	–	–
			120	**100**	**260,3**	**103,6**	**56,0**	**132,3**	**60,9**	**25,1**	**193**	**100**
TOTAL	**313**	**100**	**120**	**38,3**	**260,3**	Mean urban and rural = **77,3**				**25,1**	**193**	**61,7**

Tab. 7.5. Graph index – most developed rural graphs and least developed urban graphs in relation in relation to extreme values for the opposite administrative group in corresponding population classes as well as in relation to overall extreme values.

POPULATION CLASS	URBAN UNITS					RURAL UNITS				
	LEAST DEVELOPED GRAPHS					MOST DEVELOPED GRAPHS				
	Lower value than rural maximum within the same population class			Lower value than overall rural maximum (132,3)		Higher value than urban minimum within the same population class			Higher value than overall urban minimum (56,0)	
	Maximum rural value	n	%	n	%	Minimum urban value	n	%	n	%
500-999	**75,2**	1	100,0	1	100,0	**71,1**	2	3,6	20	35,7
1.000-1.499	**83,4**	2	100,0	2	100,0	**65,8**	16	25,4	42	66,7
1.500-1.999	**88,4**	10	90,9	11	100,0	**56,0**	31	96,9	31	96,9
2.000-2.999	**95,6**	25	96,2	26	100,0	**63,6**	15	83,3	17	94,4
3.000-3.999	**132,3**	25	100,0	25	100,0	**81,8**	4	80,0	5	100,0
4.000-4.999	**108,5**	10	71,4	14	100,0	**70,5**	3	100,0	3	100,0
5.000-9.999	**-**	-	-	22	78,6	**-**	-	-	-	-
10.000-24.999	**-**	-	-	1	10,0	**-**	-	-	-	-
TOTAL				**102**	**85,0**				**118**	**61,1**

Table 7.5 shows the number of rural towns boasting graphs that are more developed than some formal towns in the corresponding population class in regard to the minimum urban value. It also shows the opposite, i.e. the number of towns with less developed graphs than some rural towns of equal size. In every population class, there are 'rural graphs' that are more developed than the least developed 'urban graph' in the corresponding group; in the three middle groups (1.500-4.999) the shares range between incredible 80 and 100 %. For the urban graphs, between 90 and 100 % of towns have less developed graphs than rural units in the population span between 500 and 3.999, and even 71,4 % in the group 4000-4999. This means that there are both some highly developed town plans in the rural group and some very low developed town plans in the urban group.

Moreover, the table shows the number of rural towns with more developed graphs than the overall urban minimum value (56.0 for Przedecz) and the number of towns with less developed graphs than the overall rural maximum value (132,3 for Nadarzyn). These figures are even more alarming; 100 % of urban graphs within the population class 500-4999 (and as much as 78.6 % within the population class 5000-9999) have lower values than the most developed rural graph (Nadarzyn). Contrarily, between 94.4 and 100 % of the rural graphs within the population classes 1500-4999 (and as many as 66.7 % within the population classes 1000-1999) are more developed than the least developed urban graph (Przedecz). Even though these comparisons depart from extreme values, the discrepancies are present in virtual-

ly all population classes[4]. This indicates serious inconsistencies within the Polish rural-urban divide in this particular aspect. Given the expediency of town plan analysis in morphological studies (cf. Dziewoński 1962), such state is alarming. One possible explanation could be the permanence of town plans in regard to other morphological features (cf. chap. 4.9.2). Firstly, since all of the studied units were at one point formally urban, they have managed to retain their original town plans. Secondly, those restituted towns that for various reasons did not expand territorially after restitution, also retained their original town plan dimensions. Therefore, formal urban status does not necessarily have an impact on town plan development in regard to units with an urban past, as this analysis shows. However, this may have implications such as overly small degraded towns striving for restitution because their spatial layout appears more complex than that of a neighboring, formally urban, unit. Although such reasoning may be inevitable, the analysis shows that regarding spatial layout, both urban and rural towns in Poland are strongly intertwined. Departing from the significance of town plans on town's morphological urbanity, one could say that there is no order within the Polish rural-urban system (at least in respect to this particular aspect). However, morphology is more than a town plan, and, given the western cultural context, where *objects* are more likely to be perceived than the spaces between them (cf. Hall 1976; chap. 4.6), the analysis must be extended towards the buildings – the towns' physiognomic character, which is done in the next subchapter.

At this point, a quick glance at particular cases (tab. 7.6) shows that these mimick the high correlation between town plan complexity and demography presented earlier (0.747 for rural and 0.927 for urban units). Among the most developed rural graphs, we find mostly the *largest* degraded towns. The few *not* so populous towns are in fact those that had experienced a significant population loss during the last 100 years (Raków a drop of 62,6 %, Lutomiersk 48,2 %), leaving disproportionately developed town plans behind (cf. tab. 3.2). On the other end, the least developed rural graphs belong expectedly to tiny settlements which – despite similar depopulation – were *always* small, lacking the significance of 'real' towns save for their market function. In fact, the two towns at the bottom of the list (Gorzków-Osada and Kuczbork-Osada) have the suffix 'Osada' (literally *Settlement*) attached to their names to distinguish them from the adjoining, more populous villages with the same name, yet suffixed 'Wieś' (meaning *Village*)[5].

Tab. 7.6. Town plan extremes: rural units with most urban values and urban units with least urban values[6].

Rural units with the most complex town plan and those with the least complex			**Urban units with the least complex town plan and those with the most complex**		
1	2	3	1	2	3
Town	(V_{grf})	Inhabitants	Town	(V_{grf})	Inhabitants
Nadarzyn	132,3	3855	Sapieżyszki (LT)	18,5	254
Kazimierz Biskupi	108,5	4419	Przedecz	56,0	1840
Zaklików	102,2	3043	Wisztyniec (LT)	57,0	566
Końskowola	95,6	2210	Sereje (LT)	58,5	933
Olsztyn	90,4	2687	Stawiszyn	59,4	1594
Radoszyce	90,4	3345	Rajgród	59,5	1775
Bielsk	89,8	2571	Nowe Brzesko	60,0	1651
Opatówek	89,5	4077	Ludwinów (LT)	60,9	1055
Stężyca	88,5	1953	Dobra	61,9	1558
Lutomiersk	87,5	1559	Balwierzyszki (LT)	61,9	1180
Szczerców	86,5	2932	Łaszczów	63,6	2211
Nowe Miasto	84,2	1631	Daleszyce	63,7	2992
Osięciny	83,8	3017	Lubień Kujawski	65,9	1411
Raków	83,4	1172	Wąchock	65,9	2890
Kurów	81,4	2753	Simno (LT)	66,7	1940
Stanisławów	80,7	1602	Sopoćkinie (BLR)	66,8	1300
Kołbiel	80,0	1890	Wolbórz	68,8	2407
…			…		
Jarczów	36,1	381	Grodzisk Mazowiecki	198,9	28454
Sobota	33,8	498	Wyszków	203,4	27627
Osmolin	31,1	422	Olita (LT)	219,1	69481
Gorzków-Osada	30,1	253	Piaseczno	220,0	37567
Kuczbork-Osada	25,1	280	Bełchatów (with Grocholice)	260,3	62898

Source: own calculations based on morphometry.
Population data from GUS (2009), Lithuanian census (2001), Population of the Republic of Belarus (2010)

[4] The only exceptions are rural graphs for the tiniest settlements (500-999), where this does – understandably – not apply. Still, one third (35,7 %) of the rural units in this population class have graphs that are more developed than the least developed urban graph, which intuitively should not be the case.

[5] The suffix 'Osada' was added after the reform to differentiate the town from the village, which after degradation also became rural.

[6] Incorporated units are excluded. Although formally urban, these are in fact only parts of other cities, however, their graphs were measured separately. Incorporated units will be examined separately in chap. 7.3.8.

On the right hand side of table 7.6 we can also see that the least complex urban graphs belong to the smallest of formal towns. Interestingly, six of these are Lithuanian units along with the only Belarusian town; this could be explained by their 'intermediate' formal urban character (they have no full urban status, cf. chap. 5.2) and thus less prounounced urban characteristics. In fact, the least compex 'town plan' belongs to Sapieżyszki (Lith. *Zapyškis*), the third smallest unit studied in this thesis (254 inhabitants); its 'urbanity' is therefore highly dubious (follow link in footnote for pictures[7]). Among the Polish towns we find Nowe Brzesko and Wolbórz (restituted in 2011), Łaszczów (in 2010) and Daleszyce (in 2007), signifying that governmental evaluations within current restitutions are very much 'pushing the limit' towards nearly unprecedented levels (the graph for Nowe Brzesko has V_{grf} 60.0 while the least developed graph of Przedecz – restituted in 1919 – has a close value of 57,0). Analogously, the most developed graphs belong to the largest cities, although with no apparent intermutual order; for instance Olita (Lith. *Alytus*) with V_{grf} 219,1 has 69.481 inhabitants, while Piaseczno with V_{grf} 220,0 has 'only' 37.567 inhabitants. One possible explanation could be linked to the towns' physiognomic character; a town with a large number of modern villa estates produces a much larger number of streets and a significantly higher V_{grf} value, than a town of a pronounced apartment block structure, 'swallowing' the population of a whole villa estate within one single apartment block along *one* street.

Closely related to this matter is also the issue of spatial delimitation of the analyzed area. Some towns (both degraded and restituted) are spatial conglomerates of a minuscule historic nucleus and several detached and often distant units (e.g. Lelów with Zbyszyce and Pustkowie) or deformed settlements made of the historic nucleus and some very long *Vorstädte*[8] (e.g. Nowe Brzesko); Kazimierz Dolny is an extreme, incorporating both scenarios. Such configurations produce relatively high graph values, while the (historic) town proper has in fact characteristics of a much smaller settlement. Conversely, some towns are completely conjoint with neighboring villages with quite articulated plans (such as Janów and the village of Ponik), producing much lower graph values than what the *de facto* spatial configuration reveals. This is an intricacy that must be borne in mind when interpreting data, but it cannot be circumvented by measuring the *whole* built area. Restitutions in Poland are granted only to settlements within their administrative borders, which means that neighboring villages have their veto and cannot be merged by force to make the candidate town larger (both in terms of town plan and population). This is a major obstacle for, for instance, Turobin (cf. footnote on *Vorstädte*), Goraj or Modliborzyce, even if villagers sometimes do comply (like in the recent cases of Łaszczów or Czyżew). A reversed version of such a scenario is when a degraded town is nearly conjoint with a neighboring city and is 'in risk' of incorporation itself, like Raciążek (into Ciechocinek), Służewo (into Aleksandrów Kujawski) or Orchówek (into Włodawa) – the latter actually having been incorporated for a limited time. Restitution of these towns is neither likely for reasons of spatial balance within the country's urban network. Two adjoining towns are not a desired construct in terms of double administration costs and limitations in spatial planning, although urban independence in such configurations may be an important identity issue, e.g. Bnin vs. Kórnik.

Fig 7.1. Wierzbica: a de-pedestrianized market square, devoid of its main function (left) and the site of the main population concentration – a suburb assuming the role of the town center. *Photo*: M. Dymitrow

The case of Wierzbica, the most populous of all rural towns, is even more interesting, both in terms of layout and physiognomy. Wierzbica's incredibly high graph value (128.9) is conditioned by special circumstances. Most of its population is concentrated in a large distant suburb, a housing estate made entirely of multi-story Soviet-style apartment blocks,

[7] *http://www.flickr.com/photos/45560597@N05/4491995271/*

[8] A *Vorstadt* is a German term describing an area outside the historic center, but tightly connected to it. In a Polish small-town context, *Vorstädte* are oftentimes single streets stretching for several kilometers outside the town proper, sometimes too far from the town to be considered a de facto part of it. For instance, a *Vorstadt* of Turobin (Przedmieście Szczebrzeszyńskie) was eventually made a separate village due to its excessive length.

erected near a former 1950's cement mill[9], whereas its physiognomy around the historical market square is quite unimpressive (fig. 7.1). Its graph value is also intricate; the town plan of the old Wierzbica is extremely scarce, while the street grid around the housing estate is quite dense, raising Wierzbica's graph value to a relatively high level (75.6). However, the so-called 'street grid' consists virtually of small internal access streets which are in fact no real streets per se. This shows that blind readings of values retrieved by remote sensing may sometimes be misleading. Despite its high graph and physiognomic values, Wierzbica does not exude an urban ambience when visited in field. Another reason for this is the marginalized role of its 'market square' (due to the social life being translocated to the suburb), now sadly reduced to the role of an unpleasant traffic junction.

7.2.3. Physiognomic analysis

The second analysis regards the variable housing structure, expressed through the physiognomic index (V_{phy}). For the same reason as in the previous subchapter, all non-Polish and non-independent units were exempted, leaving altogether 313 units.

Tab. 7.7. Physiognomic index (V_{phy}) – maximum, mean and minimum values for urban and rural units in regard to the same population classes.

POPULATION CLASS	Frequencies		URBAN UNITS					RURAL UNITS				
			Frequencies		Physiognomic values (V_{phy})			Physiognomic values (V_{phy})			Frequencies	
					Max	**Mean**	**Min**	**Max**	**Mean**	**Min**		
	n	%	n	%	Continuum Span						n	%
0-499	**14**	4,5	–	–	–	–	–	52,7	28,6	0,0	**14**	7,2
500-999	**57**	18,2	**1**	0,8	31.7	31.7	31.7	95,0	39,4	0,0	**56**	29,0
1.000-1.499	**65**	20,8	**2**	1,7	81,2	61,6	42,0	105,7	44,0	19,0	**63**	32,6
1.500-1.999	**43**	13,7	**11**	9,2	83,7	60,4	22,4	59,8	41,8	21,0	**32**	16,6
2.000-2.999	**44**	14,0	**26**	21,7	141,0	64,1	16,8	128,9	64,3	32,3	**18**	9,3
3.000-3.999	**30**	9,6	**25**	20,8	150,3	72,9	33,0	69,6	42,4	30,1	**5**	2,6
4.000-4.999	**17**	5,4	**14**	11,7	159,3	89,7	34,6	128,9	104,6	90,6	**3**	1,6
5.000-9.999	**28**	8,9	28	23,3	221,2	124,3	44,6	–	–	–	–	–
10.000-24.999	**10**	3,2	10	8,3	231,1	144,6	88,9	–	–	–	–	–
25.000-49.999	**4**	1,3	4	3,3	226,5	167,7	145,2	–	–	–	–	–
50.000 >	**1**	0,3	1	0,8	216,2	216,2	216,2	–	–	–	–	–
			120	**100**	**231,1**	**93,3**	16,8	128,9	**44,0**	**0,0**	**193**	**100**
TOTAL	**313**	**100**	**120**	**38,3**	**231,1**	Mean urban and rural = **63,2**				**0,0**		**193**

Departing from table 7.7, one remarkable observation is occurrences of 0-values in the two lowest rural population classes, implying total lack of urban physiognomy. Interestingly, not a single formal town displays such low values, which signifies that restitutions have been granted to towns completely devoid of a rural physiognomic structure. It should be noted though that the rural values rise somewhat within the 1000-1499 class and continue to do so for each larger class[10]. In regard to maximum rural values, there is another peculiar trend. The values are highly differentiated between different classes in no hierarchical order, with seemingly random occurrences of some physiognomically highly urban units in some classes but not in others; for instance the maximum value for the 1500-1999 class is 59.8, while for the 1000-1499 class it is 105.7 (thus exceeding the 'small traditional town' context) . Within the urban group the maximums evolve hierarchically with each increasing population class, implying consistency between restitution and urban physiognomic character; for formal towns, the bigger the town the more multiple-family buildings does it generate. This would explain the less significant variations between urban and rural units in terms of town plan development; urban units seem to expand vertically rather than laterally, thus compensating for the less developed town plan with higher buildings. For rural units, such development is much less predictable, and probably conditioned by particular circumstances. On the whole, rural physiognomic values are on average lower than urban values in the lowest population classes, but become almost identical in the 2000-2999 class (64.3 vs. 64.1), thus assimilating to an expected rural-urban continuum model. However, in the two upper classes, there are some peculiar trends; for the rural population class 3000-3999 the mean value drops significantly to 42.4, then rises abruptly by 2.5 times for the uppermost class (4000-4999) to value 128.9. Indeed, in the former group, the populous and spatially complex degraded towns Piszczac, Radoszyce, Zaklików and Nadarzyn display in fact physiognomies that are largely non-urban; this in turn could possibly

[9] The mill was shut down in the late 90s causing economic degradation to the settlement. In 2008, plans to rebuild the plant arose, as the local marl deposits are among the largest in Poland.
[10] Classes 2000-2999 and 3000-3999 are slightly inversed.

explain why they to date have not been restituted. Contrarily, in the latter group (4000-4999) all towns display both urban physiognomies and graphs; here, lack of restitution is most likely persistent for secondary reasons. Additionally, the close proximity of these towns to the crucial 5000 inhabitants-limit marker (where restitution would entail loss of subsidies for teachers and farmers) may be an understandable reason.

Nevertheless, in all population classes where both urban and rural units are represented, the highest rural value is always significantly higher than the lowest urban value. Table 7.8 shows the number of rural towns boasting more urban physiognomies than some formal towns in the corresponding population class in regard to the minimum urban value. Also the opposite is shown, i.e. the number of formal towns with less urban physiognomies than some rural towns of equal size. Since urban minimums vary greatly for different population classes without any hierarchical structure, so do the shares of rural towns within each class. Within the most numerous rural classes (500-1999 inhabitants), between 46 and 96.9 % of rural towns excel the corresponding urban minimums. Analogously, between 52 and 96.2 % urban towns have less urban physiognomies than the corresponding rural maximums within the population class 2000-4999 inhabitants. The large spans up to circa 50 % are dependent on occurrences of extremes in particular population classes; however, both urban and rural groups show exactly the same characteristics, and these are evident in every population class. This confirms that a clear continuum structure is very much evident not only in regard to town plan complexity, but also in regard to physiognomic structure.

Table 7.8 shows also the number of rural towns with more urban physiognomies than the overall urban minimum value (16.8 for Koprzywnica) and the number of urban towns with less urban physiognomies than the overall rural maximum value (128.9 for Wierzbica *and* Rejowiec). The results are dismaying; 93.8 % of the rural towns boast a physiognomy that is more urban than the least urban of formal towns, and the number is actually 100 % beginning with towns of more than 1000 inhabitants. Even more interestingly, 87.5 % of the rural towns in the 500-999 population class, and, incredibly, 78.6 % of the tiny hamlets with less than 500 inhabitants do the same. As for the urban group, the results are equally dramatic; 100 % of towns up to 1999 inhabitants and as much as 96.2 % of towns between 2000 and 2999 inhabitants have less urban physiognomies than the most physiognomically urban yet formally rural towns. Beyond this group, the shares of such towns drop with increasing size, but discrepancies persist as far up as to the 10.000-24.999 class (40 % of towns). Among the most populous towns with less urban physiognomies than the rural maximum we find Głowno (population 15.600) but also eight (!) county capitals, including Kłobuck and Włoszczowa with more than 10.000 inhabitants. All in all, a total of 94 formally urban towns (78.3 %) have less urban physiognomies than the rural maximum.

Tab. 7.8. Physiognomic index ($V_{phy)}$ – rural units displaying most urban physiognomies and urban units displaying least urban physiognomies in relation to extreme values for the opposite administrative group in corresponding population classes as well as in relation to overall extreme values.

POPULATION CLASS	**URBAN UNITS**					**RURAL UNITS**				
	LEAST URBAN PHYSIOGNOMY ($V_{phy)}$					**MOST URBAN PHYSIOGNOMY** ($V_{phy)}$				
	Lower value than rural maximum within the same population class			Lower value than overall rural maximum (**128,9**)		Higher value than urban minimum within the same population class			Higher value than overall urban minimum (**16,8**)	
	Maximum rural value	n	**%**	n	**%**	Minimum urban value	n	**%**	n	**%**
0-499						**-**	-	-	11	78,6
500-999	**95,0**	1	100,0	1	100,0	**31,7**	34	60,7	49	87,5
1.000-1.499	**105,7**	2	100,0	2	100,0	**42,0**	29	46,0	63	100,0
1.500-1.999	**59,8**	6	54,5	11	100,0	**22,4**	31	96,9	32	100,0
2.000-2.999	**128,9**	25	96,2	26	100,0	**16,8**	18	100,0	18	100,0
3.000-3.999	**69,6**	13	52,0	24	96,0	**33,0**	4	80,0	5	100,0
4.000-4.999	**128,9**	11	78,6	11	78,6	**34,6**	3	100,0	3	100,0
5.000-9.999	**-**	-	-	15	53,6	**-**	-	-	-	-
10.000-24.999	**-**	-	-	4	40,0	**-**	-	-	-	-
TOTAL				**94**	**78,3**				**181**	**93,8**

This finding contrasts with the mean values for physiognomy introduced in chapter 7.2.1, which are significantly higher than mean rural values. One point is certain; in Poland there are extremes in both the urban and the rural group. As extremes, these values are not representative for the whole set; nevertheless, they indicate any of the following:

a) Non-urban physiognomies are acceptable within the restitution practice provided that the remaining morphological traits are in order. For instance, the 'embarrassingly' low urban V_{phy} value for Koprzywnica (16,8) is compensated by a highly developed graph (85,5) and a fairly urban market square (66,6).

b) Non-urban physiognomies are a trait inherent to the smallest of towns (cf. Zaniewska & Barek 2002 in chap. 4.6) and in the context of 'urban smallness' do not affect urbanity negatively
c) In regard to formal towns, urban physiognomies are a trait associated with size; only when a town grows does its physiognomy assume a 'typical' urban character (multiple-family buildings). This may be because it is cheaper to build and maintain multiple-family buildings (due to a larger population) than to expand towns territorially to accommodate a large number of single-family buildings. Another trait that speaks for such a scenario is the current trend to allocate newly built villas to designated dense housing estates, rather than along exit roads, thus averting urban sprawl due to health, environmental and economic reasons.

Lastly, a close look at particular cases (tab. 7.9) confirms that urban physiognomy in the context of *formal rurality* is not associated with the size of the settlement (r = 0,389). Among the most physiognomically urban yet non-restituted towns we find both the largest units (Wierzbica, Kazimierz Biskupi, Opatówek) but also, more surprisingly, small villages like Ryczywół and Kurozwęki, none of which even performs an administrative function. However, Ryczywół's placement on the list can be attributed to the nearby thermal power station Kozienice (second largest in Poland, swallowing manpower), while Kurozwęki is a major tourist attraction. An interesting observation is the consecutive listing of the four towns Przerośl, Raczki, Bakałarzewo and Filipów, which are all neighboring towns within the outback city desert around Suwałki. This implies that certain physiognomic traits are conditioned regionally and suggests that if the idea of restitution were implanted in this region, some physiognomically urban centers could be granted town privileges. A confirmation of both these standpoints is found within the urban group in that same table, where the alignment of Krasnobród, Frampol, Łaszczów and Tarnogród corresponds to neighboring units in the Zamość region, all restituted in the recent decades. Another interesting observation within the rural group are four towns that actually 'break' the set 100-level marker. While the high values of Wierzbica (as noted earlier) and Rejowiec are enhanced by the presence of workman's dwellings associated with marl quarrying, the physiognomies of Piątek and Józefów nad Wisłą are 'intrinsically' urban. Another noteworthy fact is found at the bottom of the list, with five towns displaying V_{phy} value 0.0, which means that there is not one single multiple-family house. Indeed, all (save for Andrzejewo) are small, non-administrative sub-local villages, a fact conjecturing a poignant indication of extreme rurality being defined by single-family housing.

Tab. 7.9. Physiognomic extremes: rural units with most urban values and urban units with least urban values.

Rural units with the most urban physiognomy and those with the least urban			**Urban units with the least urban physiognomy and those with the most urban**		
1	2	3	1	2	3
Town	(V_{phy})	Inhabitants	Town	(V_{phy})	Inhabitants
Wierzbica	128,9	4223	Koprzywnica	16,8	2640
Rejowiec	128,9	2149	Koziegłowy	20,4	2479
Piątek	116,7	2026	Osiek	20,8	2013
Józefów nad Wisłą	105,7	1008	Brok	22,4	1963
Kikół	97,2	2275	Nowe Brzesko	27,6	1651
Ryczywół	95,0	696	Wyśmierzyce	31,7	928
Kazimierz Biskupi	94,3	4419	Skała	33,0	3677
Opatówek	90,6	90,6	Rychwał	33,7	2401
Parzęczew	84,0	914	Skaryszew	34,6	4156
Przerośl	82,0	834	Bodzentyn	35,1	2349
Raczki	81,4	2351	Krasnobród	36,4	3151
Bakałarzewo	80,6	812	Frampol	37,4	1506
Filipów	80,0	2264	Łaszczów	39,0	2211
Wiskitki	79,2	1387	Skalbmierz	42,0	1370
Lututów	76,7	2264	Wolbórz	42,7	2407
Sarnaki	75,5	1162	Tarnogród	42,9	3557
Kurozwęki	75,5	767	Tuliszków	43,7	3461
...			...		
Bobrowniki by Ryki	0,0	580	Żychlin	210,3	9179
Gliniany	0,0	303	Bełchatów (with Grocholice)	216,2	62898
Andrzejewo	0,0	937	Praszka	221,1	8493
Horodyszcze	0,0	818	Czeladź	226,5	34646
Grabowiec by Lipsko	0,0	417	Zambrów	231,1	23485

Source: own calculations based on data from GUS (2009); Population data: GUS (2009).

Within the urban group of towns displaying the least urban physiognomies, 53 % are towns restituted in the last two decades, i.e. after the formal requirements for restitution were lowered (cf. Sokołowski 1999). In the list we find mostly small towns (including Poland's smallest), seldom exceeding 3000 inhabitants. The low physiognomic output can also be a result of territorial delimitation, as some of these towns include incorporated nearby villages with explicitly

rural physiognomies (Koprzywnica, Krasnobród, Wolbórz, Osiek), consequently lowering their overall values. Perhaps even more interesting is the configuration of the *physiognomically most urban* formal towns, with Praszka exceeding the 7.4 times larger Bełchatów (nearly 63.000 inhabitants), and the top value in this thesis going to Zambrów, inhabited 'only' by some 23.500 people. This shows that, despite some general trends, there are huge variations in physiognomic structures amongst particular towns of all sizes but also irrespective of their administrative status. Such differentiation also points to the usefulness of a methodology capable of exposing such intricacies.

7.2.4. Market square analysis

The third morphological feature studied in this thesis is the market square. As shown by the basic statistical relationships, there is relatively little difference between urban and rural market squares (mean V_{msm} 67,9 for urban and 60,1 for rural squares); also, the correlation between market square urbanity and demography is weak. Therefore, analyzing differences between urban and rural squares by their aggregated V_{msm} values would not be very expedient. More interesting is the overall quality of Polish squares in regard to the different variables that define it, how it relates to administrative status and how it can be improved by revitalization. For this reason, the variable cohesion has been brought back.

As table 7.10 shows, most squares (75 %) have a very good or at least good (23.2 %) integrity, both urban and rural units. Such values indicate that Polish squares have a well-defined geometry, making them identifiable as squares. Similar characteristics pertain to the variable 'cohesion', indicating that the great majority of the studied squares are not used as traffic junctions and are adapted to serve as pedestrian public spaces. Whether they actually do it or not is a different matter. The results obtained from the variable 'composition' are alarming; although no squares are 'very badly' composed, only three display very good composition: Kazimierz Dolny (the epitome of the Polish small town), thereto the city of Grodzisk Mazowiecki, and – interestingly – the village of Bodzanów. Instead, most squares – both urban and rural – fall within the category 'bad squares' (circa 3/5) or 'good squares' at best (2/5). Finally, let us examine the level of the squares' compaction, the variable found to be of most importance for the square's urban character. Here, the results are much differentiated; urban squares scored generally 'very well' (52.3%) or 'well' (36.4%), whereas all variants – ranging from 'very good' to 'very bad' – are represented amongst the rural squares (with the strongest presence in the middle categories). This would imply that the squares of the restituted towns actually have more urban character, whereas non-restituted towns lag behind in this particular aspect. Whether this is a factor or just a coincidence cannot be determined conclusively, but a highly compacted market square could act as a strong urban symbol for the local consciousness whose expression could result in application for restitution.

Tab. 7.10. Results regarding the four market square variables, according to administrative status.

Interval within each studied index and its qualitative label		Studied market square variables Amount and % of the designated set that fall within each interval											
		Integrity (V_{int})			**Compaction (V_{cpc})**			**Composition (V_{cmp})**			**Cohesion (V_{coh})**		
		Tot.	**Urb.**	**Rur.**	**Tot.**	**Urb.**	**Rur.**	**Tot.**	**Urb.**	**Rur.**	**Tot.**	**Urb.**	**Rur.**
75 - 100 (very good)	***n***	243	110	133	109	69	40	3	2	1	224	82	142
	%	***75,0***	***83,3***	***69,3***	***33,6***	***52,3***	***20,8***	***0,9***	***1,5***	***0,5***	***69,1***	***62,1***	***74,0***
50 - 74,9 (good)	***n***	75	20	55	114	48	66	122	51	71	89	43	46
	%	***23,2***	***15,2***	***28,6***	***35,2***	***36,4***	***34,4***	***37,6***	***38,6***	***37,0***	***27,5***	***32,6***	***23,9***
25 - 49,9 (bad)	***n***	6	2	4	66	9	57	199	79	120	9	6	3
	%	***1,8***	***1,5***	***2,1***	***20,4***	***6,8***	***29,7***	***61,4***	***59,8***	***62,5***	***2,8***	***4,5***	***1,6***
0 - 24,9 (very bad)	***n***	0	0	0	35	6	29	0	0	0	2	1	1
	%	***0,0***	***0,0***	***0,0***	***10,8***	***4,5***	***15,1***	***0,0***	***0,0***	***0,0***	***0,6***	***0,8***	***0,5***
All intervals	***n***	324	132	192	324	132	192	324	132	192	324	132	192
	%	***100***	***100***	***100***	***100***	***100***	***100***	***100***	***100***	***100***	*100*	***100***	***100***

Summarily, the squares of the analyzed Polish towns (324) display a high degree of integrity and cohesion, but are much differentiated regarding compaction, the most urban trait of market squares, with squares of restituted towns being much more compacted than those of the non-restituted towns. Regarding composition, the majority of squares fall within the middle categories, most of them displaying inferior characteristics. Given the subjective nature of the V_{cps} index, a more detailed analysis is required (as follows).

In order to examine how market square composition pertains to different groups of towns, I have used a distribution model proposed by Jerczyński (1977). While Jerczyński devised the model to classify Polish towns according to their functional profile (agriculture, industry and service), I have substitued functions with the three major land use forms found in market squares: open space (overt-functional square), lawns and thoroughfares (overt-dysfunctional square) and parks and central buildings (obscured squares); Jerczyński's proportions and basis for taxonomy have been

retained. Generally speaking, overt-functional area provides both legibility and square-specific function and could be considered as the most desirable. Overt-dyfunctional area provides legibility but fails regarding function, while obscured area lacks both parameters and should be avoided within urban market squares. For reasons of convenience, each market square type derived from the three types of land use forms was assigned a type letter (table 7.11). Note that only five of the ten possible combinations are represented in the studied set (these are underlined in the table).

Tab. 7.11. Types of market square composition patterns according to the intensity of different land-use elements. Underlined type letters denote types found amongst the studied towns. Source**:** My adaptation of Jerczyński's (1977) model.

Type of square composition	**Type letter**	**Overt-functional area**	**Overt-dysfunctional area**	**Obscured area**
		% of total market square area		
Overt-functional	**A**	100-50	40-0	40-0
Overt-functional with pronounced overt-dysfunctional presence	**B**	60-37,5	50-25	25-0
Overt functional with pronounced presence of obscurity	C	60-37,5	25-0	50-25
Overt-dysfunctional	**D**	40-0	100-50	40-0
Overt-dysfunctional with pronounced overt-functional presence	E	50-25	60-37,5	25-0
Overt-dysfunctional with pronounced presence of obscurity	**F**	25-0	60-37,5	50-25
Obscured	G	40-0	40-0	100-50
Obscured with pronounced overt-functional presence	H	50-25	25-0	60-37,5
Obscured with pronounced overt-dysfunctional presence	I	25-0	50-25	60,37,5
Mixed	**J**	50-25	50-25	50-25

Table 7.12 shows that Polish market squares fall generally within three type categories: B, D, and F[11]; amongst rural squares these are very evenly distributed (at around 1/3 each), while type F is somewhat less prevalent (27.3%) amongst urban squares. As only type B could be regarded as acceptable, such results are disturbing. Especially the pronounced occurrences of F-type squares signal that many squares are in serious need of revitalization in order to make them urban places. Moreover, 63.9% of all squares (type B and D) are highly dysfunctional, i.e. they are not used as squares in terms of pedestrian use and sociability, although many could fairly easily be transformed into such. Given the scope of the revitalization hype currently employed throughout Poland, it could be assumed that this will happen sooner or later. This issue is briefly addressed next.

Tab. 7.12. Distribution of the studied market squares in regard to types based on different composition patterns. Type letters explained in **table 7.11**.

Market square type	**Total**		**Urban**		**Rural**	
	n	**%**	***n***	**%**	***n***	**%**
A	2	*0,6*	2	*1,5*	0	*0,0*
B	114	*35,2*	45	*34,1*	69	*35,9*
D	111	*34,3*	48	*36,4*	63	*32,8*
F	96	*29,6*	36	*27,3*	60	*31,3*
J	1	*0,3*	1	*0,7*	0	*0,0*
Total	**324**	*100,0*	**132**	*100,0*	**192**	*100,0*

Susceptibility to adjustment by revitalization

Taking into account all market square variables (not only composition) there is also the question of their different susceptibility to adjustment (cf. Cudny 2008). Departing from fieldwork observations conducted in the summer of 2011 (and other previous studies), I would rank the studied variables (from least susceptible to most susceptible) as follows:

1. *Compaction* is probably most difficult to adjust. It may be relatively easy if there are only a few gaps; however a square lacking compaction altogether would be very costly to adjust. Firstly, the gaps may be too small to fit new buildings. Secondly, filling too small gaps with artifacts other than buildings (such as trees, fences, small kiosks, etc.) could have strange architectural results. Thirdly, even if the gaps were large enough to fit new buildings, this would probably result in real estate conflicts as most gaps do not constitute separate lots. Finally, it is always more difficult to repair a large 'damage' than to start from the beginning with a thought-out plan.

2. *Cohesion* is the next difficult task. Even if relocation of roads within a disrupted square might seem fairly easy, the problem extends beyond the delineation of the square. The task involves construction of additional bypass thor-

[11] Only two squares represent type A (Kazimierz Dolny and Grodzisk Mazowiecki) and one square represents type J (Zagórów). All these three towns are formally urban.

oughfares, or at least diverting the traffic to other street channels; the first option being sustainable yet costly, the other causing new, similar problems in other parts of the town. Thus, cohesion problems are closely related with issues of traffic flow and cannot be solved unilaterally.

3. *Integrity***,** on the other hand, seems fairly easy to adjust, especially when only a few frontage buildings are missing. Moreover, absence of houses usually does not affect the cadaster and new houses may be constructed without legal disputes. However, a house is not a cheap enterprise, especially when such, in compliance with the prevailing trends, has to be built in a certain traditional style that matches the historical setting of a given square. This would involve architectural expertise and exceed the costs of a standard building construction. However, considering the land value associated with the central location and the possibility of income from retail, a new building along the square might prove a profitable investment for the owner and a boost for the town's aesthetics. Even in highly disintegrated squares, it is simpler to build new houses than to patch up miserable premises. Nevertheless, in some highly agrarian towns, new construction along the square might not seem profitable simply because towns dependent of agriculture are not in need of an urban character.

4. Altering *composition* is the cheapest and easiest way to boost up a degraded square, and especially so when it does not involve alteration of the street network. It is often a one-time investment that can quickly and dramatically improve the face of a sleepy, heavily ruralized town. For example, the square of Janików was prior to 2010 basically a grass lot. After some relatively simple changes in composition (addition of a well, an apron and bench-lined pathways) it suddenly acquired a much more urban look (fig. 7.2) and it all cost only 200.000 zlotys ($ 63.600)[12]. This is perhaps why most revitalization programs aimed at small towns are limited to the square's spatial composition. However, there is always the issue of proper maintenance; a neat, visible and diversified market square space is in constant need of technical and aesthetical attention, as opposed to the previous 'ideal', the wild-grown park, which was more or less self-regulating. Maintenance, on the other hand, is costly. That would explain why towns investing in a revitalization program are those with a stable economy, while small agrarian towns may see such actions as a luxury and rather invest in some other, more suitable project (amongst the towns visited during the summer of 2011, revitalization was restricted to administrative settlements, Janików being an exception) (tab. 7.13).

Tab. 7.13. Restoration projects within market square of 69 surveyed towns (as of July 2011):

TOWN	1	2	3	4	5	TOWN	1	2	3	4	5	TOWN	1	2	3	4	5
Białaczów			x			Kromołów		x				Przytyk			x		
Bogoria		x				Książ Wielki					x	Radoszyce	x				
Ciepielów					x	Kurozwęki					x	Raków			x		
Denków		x				Kurzelów			x			Ryczywół					x
Dębno					x	Lasocin			x			Secemin					x
Gielniów					x	Lelów	x					Sieciechów	x				
Gliniany					x	Łagów	x					Sienno	x				
Głowaczów					x	Magnuszew		x				Skrzynno					x
Gniewoszów			x			*Miasteczko*					x	Sobków					x
Goszczyn			x			Modrzejów					x	Soled nad Wisłą		x			
Gowarczów					x	Mrzygłód					x	Stopnica			x		
Grabowiec					x	Mstów	x					Szydłów				x	
Granica			x			Nowa Słupia			x			Tarłów		x			
Iwaniska		x				Nowy Korczyn					x	Waśniów			x		
Janików	x					Odrzywół			x			Wierzbica					x
Janów					x	Oleśnica				x		*WIERZBNIK*					x
Janowiec					x	Olsztyn					x	Wiślica					x
Jastrząb		x				Opatowiec			x			Włodowice			x		
Jedlińsk		x				Pacanów					x	Wodzisław				x	
Kazanów			x			Pierzchnica	x					Wolanów					x
Klimontów				x		*Piotrkowice*					x	*WYŚMIERZYCE*		x			
Klwów	x					Przybyszew					x	Żarnowiec		x			
Koszyce	x					Przyrów	x					Żarnów					x

1 = full revitalization; 2 = major revamping; 3 = minor revamping; 4 = ongoing project of undefined kind; 5 = no project.

This would conclude that towns of unfavorable market square composition and integrity can be remedied by a relatively simple and inexpensive revitalization (or renovation) project[13]. An urban look, on the other hand, is a good prerequisite for regaining civic rights. However, a full-scale 'urban fix' would also require possession of sufficient compaction, a quality that is much more difficult to achieve. That is why towns like Janików (fig. 7.2), despite conscious urban characterization, fail to appear convincingly urban after all.

[12] *http://bip.ozarow.pl/upload/u%20XLV%20316%2010b.pdf* (access 2011-07-31).

[13] Cohesion is also fairly difficult to achieve, but is more a factor of convenience rather than of true urbanity (cf. chap. 6.6).

Fig. 7.2. Adding 'urbanity' by revitalization in Janików, a heavily ruralized degraded town. *Photo*: M. Dymitrow

Table 7.14 shows some of the most urban market square found amongst rural towns, and a number of squares of formally urban towns whose urban character is largely reduced. Most of the highest value-squares (both urban and rural) are, as noted above, aided by revitalization; this pertains also to some of the least urban squares belonging to formal towns, whose recent revitalization was not yet recorded by the source aerial imagery (e.g. Osiek, Tarnogród). It should also be noted that an urban square may both significantly 'de-urbanize' a small formal town and 'urbanize' a small degraded town visually. The results of such discrepancies may conduce to confusion among locals in regard to the level of urbanity of particular towns. However, a comment is in place. The 'super-urban' square of Koszyce (833 inhabitants) topping the list in table 7.14 with a V_{msm} of 91.1 (picture in the collage of fig. 4.11) should not solely be regarded as a success story. Having visited it in field, it was obvious that this small town could not carry such an urban streak. The large empty sunbaked apron with no shadowing trees and a botched composition of elements *supposedly* permitting sociability clearly discouraged its residents from using it; people did not know what to do there. Contrarily, the second market square on the left-side of table 7.14, that of Przyrów (1222 inhabitants), was much more pleasant – and frequented by people; indeed, its urban composition was designed to fit the scale and the needs of the locals. In conclusion, urban characterization in the context of small towns should neither be exaggerated nor employed forcedly.

Tab. 7.14. Market square extremes: rural units with highest V_{msm} values and urban units with lowest V_{msm} values.

Rural units with the most urban market squares and those with the least urban			**Urban units with the least urban market squares and those with the most urban**		
1	2	3	1	2	3
Town	(V_{msm})	Inhabitants	Town	(V_{msm})	Inhabitants
Koszyce	91,1	833	Sopoćkinie (BLR)	29,4	1300
Przyrów	85,6	1222	Lipsk	31,9	2643
Pierzchnica	83,4	1071	Sapieżyszki (LT)	35,7	254
Nowa Słupia	82,8	1428	Brok	38,2	1963
Szydłów	82,8	1093	Łaszczów	38,9	2211
Odrzywół	82,6	1123	Nowogród	41,0	2189
Wiślica	81,3	542	Ostrów Lubelski	41,6	2241
Janowo	80,4	1047	Mordy	41,7	1879
Lelów	80,4	1120	Złoczew	45,6	3470
Nowe Miasto	79,8	1631	Ludwinów (LT)	47,0	1055
Chodel	79,7	1495	Ogrodzieniec	49,6	4529
Klimontów	79,4	2046	Aleksandrów Łódzki	50,2	21014
Lututów	79,4	2264	Kunów	51,1	3303
…			…		
Kryłów	27,7	357	Czeladź	85,9	34646
Puchaczów	27,1	691	Pilica	88,2	1959
Wiżajny	26,8	931	Skała	89,0	3677
Cegłów	22,9	2183	Wolbrom	89,0	9199
Rossosz	22,6	1082	Kazimierz Dolny	100,0	3750

Source: own calculations based on morphometry. Population data from GUS (2009), Lithuanian census (2001), Population of the Republic of Belarus (2010)

7.3. Prognosticating restitutions based on morphological findings

7.3.1. Outline

As the title of this thesis implies, the scope of this study is oriented towards the issue of future restitutions. Accordingly, this subchapter will attempt to prognosticate which and how many towns meet the morphological and demographic levels of urbanity when compared with their restituted counterparts. Such comparison will simultaneously

elucidate the consistency and the efficacy of both past and current restitutions, and provide a substrate for demystification of the 1867-70 reform. The results will be put into relation to some of the themes introduced in chap. 3 (diffusion zones, city deserts, disadvantaged units) as well as address the problem of restitution from a regional perspective.

7.3.2. Assigning demographic thresholds

One of the most important criteria dictating restitutions today is a sufficient number of residents, as a town that is too small lacks skilled manpower required to perform specialized urban functions. When discussing potential restitutions, one should therefore first arrive at the least acceptable population level (cf. Drobek 1999: 113-117).

The traditional lower threshold of 2.000 inhabitants (Drobek 2005a: 53; Sokołowski 2002: 16; Borusewicz 1999) is since the early 1990's no longer abided by[14], but still – reasons unknown – constitutes a heuristic among geographers (Drobek 1999: 117). I have calculated the mean population values for towns created or restituted since the 1990s, i.e. when the hitherto strict criteria for restitution suddenly became lowered (cf. Sokołowski 1999: 177), perhaps as a spontaneous anti-reaction towards the centralized restitution mode being abolished. In order not to contaminate data, from the 84 new towns invoked between 1990 and 2012, I have excluded the nine large excorporated Silesian towns[15] (often ranging between 10.000 and 20.000 inhabitants) and the former secret garrison of Borne Sulinowo[16]. For the remaining 74 new towns the mean population value was 2.800 and the median was 2.651 (for all 84 towns the mean would be as large as 4.085, while the median would be virtually the same: 2.707). Separate values for the 1990s and the 2000s are more or less the same: the mean value is around 2.800 inhabitants and the median around 2.650 (table 7.15)[17]. From this information one can assume that a typical 'new' town today is one of about 2.650 inhabitants, i.e. significantly higher than the assumed lower limit of 2.000.

Tab. 7.15. Current (1990-2012) restitutions – mean and median population values of newly created/restituted towns.

Period	Number of new towns	Mean population	Median population
1990-2012	74	2.800	2.707
1990-1999	40	2.776	2.651
2000-2012	34	2.827	2.643

Let us now examine how this relates to the settlements studied in this thesis in order to find out how many degraded towns actually meet the most perspicuous criterion – a sufficient population number[18]. I have devised four milestone values, rendering five categories of towns in terms of population size. I found towns larger than the current mean-sized 'new' town (2.650 inhabitants) as adequate in size on a practical level. Towns with a population lower than that but higher than the traditional 2.000 are still conceptually adequate, as many restituted towns fall within this bracket. The next interval – and probably the last feasible one regarding restitution – is that above 1.300, i.e. the smallest population number accepted during the last 20 years (Krynica Morska in 1999 and Kołaczyce in 2010). The fourth bracket is more of a theoretical nature, dropping down to the size of the smallest former town in Poland, Wyśmierzyce, with its modest population of 873 (as of 1 January 2011). In practice, the creation of a new town within this bracket seems unlikely, although it could be contested by reasoning. All remaining towns with a lesser population should be deemed as inappropriate for urban restitution by any means.

As table 7.16 shows, degraded towns in the two uppermost brackets are quite few but multiply significantly once entered the middle bracket (62 units). Yet 64 more units have a slight chance at restitution, which could be augmented if the town could increase its population by, for instance, incorporation of a nearby village, or by luring new inhabitants with attractive investments and new job opportunities. The remaining 51 units are too small for functioning as urban organisms; nevertheless, let us remember that the set thresholds are hypothetical and certainly not watertight. It is noteworthy, though, that even the smallest of towns could gain in population by 'unorthodox' maneuvers as described above. The demographic thresholds arrived at in table 7.15 are put in relation to the morphological index when prognosticating feasible urban restitutions in chap. 7.3.4 (departing from tab. 7.19).

[14] In 1991, Krynica Morska, a new town created from a sea spa with circa 1300 inhabitants was created. In 1993, six towns with less than 2000 inhabitants were restituted (Bieżuń, Frampol, Kleszczele, Korfantów, Tykocin and Wąchock), followed by three more in the same size bracket (Lubniewice, Osiek and Pilica). This trend has been going on ever since.

[15] Bieruń, Imielin, Lędziny, Miasteczko Śląskie, Pszów, Radlin, Radzionków, Rydułtowy and Wojkowice.

[16] From late 1992 Borne Sulinowo was a ghost-town, after the last Red Army troupe that had been stationed there since 1945 departed and handed over the town to the Polish administration.

[17] Note the population figures are from 2009, not from the actual date of the creation of a new town, although the changes in population have been insignificant.

[18] For relevance, only Polish, independent settlements below 5.000 inhabitants were examined at this point.

Tab. 7.16. Population thresholds set in regard to current norms and practices within new urban establishments.

Population threshold		**Population interval**		**Settlements in this study** (272); Poland only, < 5.000 inhabitants			
Threshold	**Meaning**	**Size category**	**Meaning**	**Formally urban**		**Formally rural**	
				n	**%**	***n***	**%**
2.650	Median size in recent restitutions	**2.650 – 4.999**	Practically adequate size	*50*	**62.5**	*12*	**6.3**
2.000	Heuristic urban threshold	**2.000 – 2.649**	Conceptually adequate size	*16*	**20.0**	*14*	**7.3**
1.300	Lowest size practically accepted	**1.300 – 1.999**	Sufficient size if other criteria supported	*13*	**16.2**	*48*	**25.1**
873	Smallest town in Poland today	**873 – 1.299**	Acceptable size for the sake of consistency only	*1*	**1.3**	*69*	**36.1**
below 873	Unprecedented size[19]	**873 or less**	Unacceptable size	*0*	**0.0**	*48*	**25.1**
				80	**100.0**	*191*	**100.0**

Source: My adaptation, population data from GUS (2009). Adm. status as of 1 January 2012.

7.3.3. Assigning morphological thresholds

In order to point out towns that meet a level of morphological urbanity sufficient to qualify for restitution, it is imperative to arrive at minimum threshold values (break points). However, unlike demographic thresholds that can be deduced from documented facts and statistics, morphological thresholds (understood as 'suitable for restitution') require a different approach, as follows. Break points for 'full', 'sufficient' and 'insufficient' urbanity were arrived at by calculating mean values for graph (V_{grf}), physiognomy (V_{phy}) and summative morphology (V_{morf}) in two sets: a) for urban units – restituted towns – up to 5000 inhabitants (contextual comparison, larger towns were excluded), and b) for all rural (non-restituted) towns (only Polish, independent units were taken into consideration at this point). Values above the mean values for urban units were considered 'fully urban', values between mean values for rural units and mean values for urban units were considered 'sufficiently urban', while values below the mean values for rural units were considered 'insufficiently urban' (cf. Drobek 1999: 117). The same procedure was performed for the auxiliary demographic index[20] were the upper value (76.6) came to equal 2932 inhabitants and the lower (49.8) 1235 inhabitants, i.e. coinciding with the norms currently employed in Poland[21]. Regarding market squares (V_{msm}), a different approach had to be performed as there are no typical 'urban' or 'rural' levels (cf. chap. 7.2.1). Therefore, a mean value for the *whole set* of Polish independent units was calculated. Next, the bottom marker for 'insufficient urbanity' was set halfway between the lowest value and the mean value, and, conversely, the top marker for full urbanity was set halfway between the highest value and the mean value. The interval in-between these markers was consequently designated as 'sufficient urbanity' (note that values above 100 denote features contextually incomparable). Following intervals were arrived at (tab. 7.17):

Tab. 7.17. Translation of value ranges for different variables into stipulated urbanity levels (for calculation method, confer text above). The labels are set in regard to a restitution prognosis.

Stipulated label	**Graph (V_{grf})**	**Physiognomy (V_{phy})**	**Market Square (V_{msm})**	**Morphology (V_{morf})**	**Demography (V_{dem})**
'Fully urban'	≥ 84,7	≥ 70,4	≥ 81,2	≥ 75,0	≥ 76,6
'Sufficiently urban'	60,9 – 84,6	43,9 – 70,3	42,5 – 81,1	54,4 – 74,9	49,7 – 76,5
'Insufficiently urban'	≤ 60,8	≤ 43,8	≤ 42,4	≤ 54,3	≤ 49,6

A quick glance at the summative morphological values (tab. 7.18), shows that nearly all formal urban towns fulfill at least sufficient level of urbanity (96.6 %) whereas only half (50.2 %) of the rural towns do. Additionally, 2/3 of the formally urban towns meet also 'full urbanity', whereas only 10 rural towns (5.2 %) come up in that level. Furthermore, although half of the rural towns could be described as 'insufficiently urban', there are in fact four formal towns that also that belong in that category: Brok (52.7), Nowe Brzesko (52.6), Osiek (48.7) and Łaszczów (47.2). Interestingly, Poland's smallest town, the often ridiculed Wyśmierzyce, actually meets sufficient level of summative morphological urbanity (the level of urbanity of restituted towns is also shown in a scatter plot in fig. 7.5, drawn against a framework

[19] Notwithstanding *former* formal towns like Kopanica, the smallest town in Poland in 1933 with 640 inhabitants (Główny Urząd Statystyczny 1932) or Lędyczek, one of Europes's smallest towns in the 1970's with less than 500 inhabitants (Lędyczek 2010-05-07; Drobek 1999: 16); both of them eventually degraded in 1934 and 1973 respectively.

[20] The demographic index was constructed only for the few occasions when morphological data had to be integrated with demographic data. Whenever this was not necessary, unprocessed population figures are instead presented.

[21] All towns above c. 3000 are being granted town privileges, while the lowest acceptable level is currently at c. 1300 inhabitants.

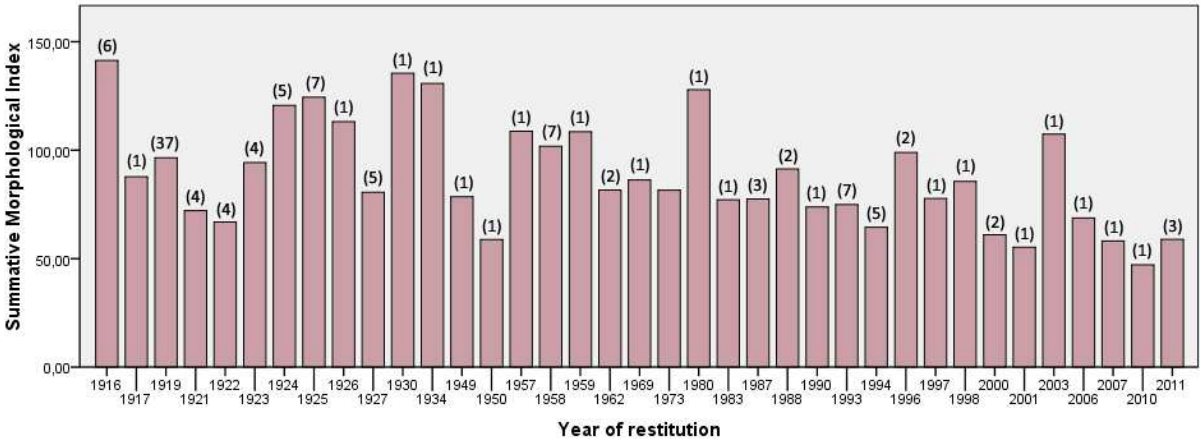
of demographic and morphological thresholds calculated for current restitutions, i.e. how they would score if they were formally rural and applied for restitution today). Another interesting observation is that none of the formal (restituted) towns fails to meet a sufficient level of urbanity regarding *both* demography (<1300 inhabitants) and morphology (V_{morf} < 54.4), which would suggest that current restitutions are not totally degenerated.

Tab. 7.18. Frequencies and shares of towns in this study (highlighting their administrative status) in relation to calculated levels of summative morphological urbanity. Only Polish, independent settlements are analyzed.

Label and V_{morf} range	Formally urban		Formally rural	
	n	%	n	%
'Fully urban' (≥ 75,0)	81	**66,4**	10	**5,2**
'Sufficiently urban' (54,4 – 74,9)	37	**30,2**	86	**45,0**
'Insufficiently urban' (≤ 54,3)	4	**3,3**	95	**49,7**
	122	**100,0**	191	**100**

Nevertheless, although total degeneracy is out of the question, the morphological 'requirements' are constantly changing. Fig. 7.3 shows how the year of restitution relates to the level of morphological urbanity. Two notes are important at this point. Firstly, the number of towns restituted was different in different years (the numbers are displayed above columns) and whenever there was more than one case, the columns represent mean values for that year. Secondly, the morphological level depicts current (2005-2010) state and may differ significantly from the state at the time of restitution. Nevertheless, it is evident that the morphological urbanity of towns restituted more recently (especially from the 1990s onwards) is generally lower than that of town restituted earlier. This can be interpreted in two ways. It can mean that the requirements regarding the morphological criterion have been lowered, or it can mean that formal status does stimulate a development of urban morphology of a restituted town over time.

Fig. 7.3. Restituted reform-towns: current level of morphological urbanity (V_{morf}) in relation to year of restitution. Numbers within bracket indicate number of towns restituted during that year.



Bearing that in mind, let us now proceed with a more detailed analysis of the towns' predispositions for any contingent restitution. The analyses that follow depart mainly form the *summative* morphological index (V_{morf}), although a separate analysis based on *scores of the particular variables* is conducted in chap. 7.3.10. The latter are also used as an analytical tool whenever V_{morf} could not be calculated due to partial lack of data.

7.3.4. Degraded towns and chance of restitution: major findings

The content of table 7.19 constitutes the bulk of the next subchapters dedicated to the different aspects of restitution in Poland, with the reform towns as an example. The table is arranged in two ways: in view of demographic predispositions (arranged vertically) and morphological predispositions (arranged laterally), according to the thresholds set in the preceding subchapters (the relation between these two factors are also shown graphically as a scatter plot in fig. 7.4[22]). Moreover, the table takes into account secondary factors such diffusion zones and administrative restrictions that may either help or impede restitution. The stated V_{morf} values are also differentiated in that they highlight towns that fulfill minimum urban levels in all three of the studied morphological variables and whose urban morphology is more evenly distributed. Lastly, towns located within 'city deserts', i.e. zones were restitution would be most expedient (see legend at the bottom of the table for details). These factors are elaborated separately in the following subchapters.

A verification of the achieved results is difficult as there is no suitable comparison material. However, in a prognostic paper dedicated to potential towns in Poland, Sokołowski (2008: 75-76) lists 75 settlements – whereof 18 reform

[22] An analogous scatter plot for *restituted* towns is found in fig. 7.5.

Tab. 7.19. Degraded reform towns and their feasibility of restitution in terms of morphology and demography (the further up and the further to the left, the more feasible the restitution). Additional markings denote secondary factors and circumstances, explained at the bottom left side of the table.

FULL URBAN MORPHOLOGY V_{morf} > 75,0			**SUFFICIENT URBAN MORPHOLOGY V_{morf} 54,4 – 74,9**			**INSUFFICIENT URBAN MORPHOLOGY V_{morf} < 54,4**		
Towns	V_{morf}	Pop.	Towns	V_{morf}	Pop.	Towns	V_{morf}	Pop.
Practically adequate size (> 2.650 inhabitants)								
Kazimierz Biskupi	**92,2**	4419	**Zaklików**	69,8	3043	Piszczac ***(X)***	53,3	3114
Wierzbica	**89,1**	4223	Osięciny	**68,7**	3017			
Opatówek ***(X)***	**83,0**	4077	**Olsztyn**	**64,9**	2687			
Nadarzyn	**82,2**	3855	Radoszyce	63,9	3345			
			Janów Podlaski	**63,7**	2729			
			Szczerców	63,3	2932			
			Kurów ***(X)***	57,3	2753			
Conceptually adequate size (2.000 – 2.649 inhabitants)								
Rejowiec	**83,4**	2149	Lututów	70,5	2264	Cegłów	43,0	2183
Końskowola ***(X)***	**77,3**	2210	**Klimontów**	**65,7**	2046			
Piątek	76,8	2026	**Bielsk**	**65,1**	2571			
Raczki	**75,8**	2351	Sawin	**65,1**	2178			
Kikół	**75,5**	2275	Filipów ***(X)***	**64,5**	2264			
			Adamów ***(X)***	**60,6**	2191			
			(Okuniew)	57,4	2018			
			Wohyń ***(X)***	55,0	2065			
Sufficient size if other criteria supported (1.300 – 1.999 inhabitants)								
			Nowe Miasto	**70,8**	1631	**Sokoły**	54,0	1511
			Chodel	**68,8**	1495	Miedzna	53,3	1332
			Lutomiersk	**67,9**	1559	Secemin	53,2	1325
			Wiskitki	67,5	1387	Konstantynów	53,1	1438
			Izbica	**67,4**	1902	Siennica	52,8	1993
			Stopnica	**67,1**	1322	Raciążek	**52,8**	1704
			Jedlińsk	**66,3**	1694	Władysławów	52,4	1707
			Koźminek ***(X)***	**64,9**	1995	Skulsk	52,2	1513
			Ujazd	**64,9**	1730	**Nowa Słupia**	51,9	1428
			Mstów	**63,7**	1758	Kamionka	51,7	1925
			Chocz ***(X)***	61,6	1812	Kodeń ***(X)***	51,1	1852
			Łagów	60,5	1588	Michów ***(X)***	50,6	1723
			Kołbiel	**60,4**	1890	Baranów ***(X)***	49,6	1684
			Brudzew ***(X)***	59,0	1636	Gowarczów	49,5	1435
			Sochocin	**59,0**	1987	Grzegorzew	49,3	1952
			Stanisławów	58,3	1602	**Wizna**	48,8	1529
			Maciejowice	**57,7**	1476	**Wojsławice**	48,5	1658
			Iwaniska	56,3	1327	Mokobody	48,0	1732
			Modliborzyce	56,2	1382	**Oleśnica**	47,8	1962
			Stężyca	56,2	1953	Latowicz	46,3	1436
			Babiak	**56,0**	1877	Wisznice ***(X)***	45,4	1542
			Jeżów	55,8	1322	Czemierniki ***(X)***	42,7	1465
			Widawa	55,4	1321	Wąsosz	41,7	1401
			Rozprza	**54,8**	1638			
			Łomazy ***(X)***	**54,5**	1729			
Size acceptable for the sake of consistency only (873 – 1.299 inhabitants)								
Józefów n. Wisłą	76,4	1008	Czerwińsk n. Wisłą	**71,7**	1134	Wąwolnica	54,1	1120
			Parzęczew	69,4	914	*(Służewo)*	53,9	1261
			Raków	67,1	1172	**Bogoria**	53,8	1053
			Burzenin	**66,5**	1027	Szreńsk	53,4	1203
			Wodzisław	**66,0**	1224	Radzanów	52,1	898
			Jadów	**65,5**	1070	**Tarłów**	50,6	941
			Pacanów	**64,7**	1142	**Sobków**	50,5	991
			Przyrów	**64,6**	1222	Bobrowniki k/Lipna	50,4	1152
			Sarnaki	**63,6**	1162	Wilczyn	**50,4**	1235
			Książ Wielki	**63,0**	899	Przytyk	50,1	989
			Bodzanów	62,6	1254	Inowłódz	49,8	879
			Szydłów	62,4	1093	Parysów	49,7	1104
			Odrzywół	62,3	1123	*(Liw)*	49,6	877

	Grabów ***(X)***	62,0	1174	Jastrząb	49,5	1156
	Bolesławiec	**61,9**	1218	Markuszów	49,0	1273
	Lelów	61,5	1120	Radziłów	47,4	1196
	Włodowice	**61,1**	1223	***(Kurzelów)***	47,3	1184
	Janowo	60,9	1047	Bolimów	46,1	937
	Białaczów	**60,2**	1254	Gielniów	45,8	916
	Pierzchnica	60,1	1071	Wiżajny ***(X)***	44,8	931
	Goraj	60,1	1014	Horodło	44,6	1108
	Urzędów	59,9	1083	Sławatycze ***(X)***	43,4	1140
	Turobin	**59,4**	1037	**Komarów-Osada**	41,0	949
	(Pławno)	59,3	1191	Wolanów	40,9	1092
	Krasnosielc	58,1	1202	*(Biskupice)*	38,1	883
	Śniadowo	57,8	1209	***(Tarnogóra)***	36,4	936
	Firlej ***(X)***	57,4	1132	**Grabowiec** k/Zamościa	36,1	928
	Magnuszew	56,9	976	Serokomla ***(X)***	36,1	1070
	Osieck	56,5	938	**Andrzejewo**	33,1	937
	Solec n. Wisłą	56,3	1006	*(Orchówek)* ***(X)***	32,7	1053
	Nowy Korczyn	56,3	1068	Rossosz ***(X)***	28,4	1082
	Janowiec	56,0	1027			
	Żarnów	55,5	1192			
	Dąbrowice	55,4	924			
	Kiernozia ***(X)***	55,2	935			
	Janów	55,0	945			
	Sienno	54,9	955			
Unaccteptable size (< 873 inhabitants)						
	Przeroślł ***(X)***	**74,9**	834	**Żółkiewka**	54,2	825
	(Ryczywół) ***(X)***	66,9	696	**Żarnowiec**	54,0	701
	Koszyce	66,9	833	*(Kazimierz)*	53,7	748
	Bakałarzewo ***(X)***	62,1	812	**Będków**	52,8	629
	Wiślica	61,7	542	Bielawy	50,9	604
	(Kurozwęki)	59,8	767	Klwów	50,1	432
	Ciepielów	58,5	804	Gniewoszów-Granica ***(X)***	49,1	634
	Nowa Brzeźnica	**56,3**	732	Głowaczów	48,4	851
	Sterdyń	54,7	784	**Gorzków-Osada**	48,2	253
				Iłów	47,9	756
				Jeziorzany (Łysobyki) ***(X)***	47,0	821
				Krzeszów	46,3	729
				(Przybyszew)	46,2	684
				(Iwanowice) ***(X)***	46,1	683
				Opatowiec	45,9	349
				(Kamieńczyk)	44,5	634
				Nur	44,3	703
				(Sobota) ***(X)***	44,2	498
				Lądek	41,4	848
				(Czersk)	40,6	737
				Sieciechów	40,2	602
				Waśniów	39,8	446
				(Brdów)	39,6	837
				Puchaczów	38,9	691
				Uchanie	37,7	677
				(Bobrowniki k/Ryk) ***(X)***	37,6	580
				Kazanów	37,5	428
				Goszczyn	37,1	858
				Jarczów	37,1	381
				(Pawłów)	36,6	834
				(Lasocin)	34,7	327
				(Gliniany)	33,6	303
				(Staw) ***(X)***	33,4	569
				Kuczbork-Osada	32,1	280
				(Kryłów)	32,0	357
				(Osmolin)	31,8	422
				(Horodyszcze) ***(X)***	31,0	818
				(Grabowiec k/Lipska)	29,9	470
				(Skrzynno)	29,8	278

L e g e n d

I. DIFFUSION ZONES
(the more intense the diffusion zone, the greater possibility of adoption of the restitution idea)

Klimontów (bold and underlined) = within intense diffusion zone (15-21)

Zaklików (bold) = within moderate diffusion zone (8-14)

Wierzbica (plain) = within light diffusion zone (1-7);

Kurów ***(X)*** (exed) = far from diffusion zones (0);

II. ADMINSTRATIVE RESTRICTIONS
(restitution is much more difficult to achieve)

(Przybyszew) (italic and parenthesized) = not an administrative seat

III. EVENLY DISTRIBUTED URBAN MORPHOLOGY
(urban character is more pronounced and is more likely to spawn urban consciousness, resulting in application for restitution)

Bolded V_{morf}-value indicates that a town reaches minimum urban levels in all three variables: graph, physiognomy and market square

IV. CITY DESERT ZONES
(restitution would be desirable in this area)

Shaded cells denote location within city desert zones

Fig. 7.4. Degraded reform towns and their feasibility of restitution in terms of morphology and demography.

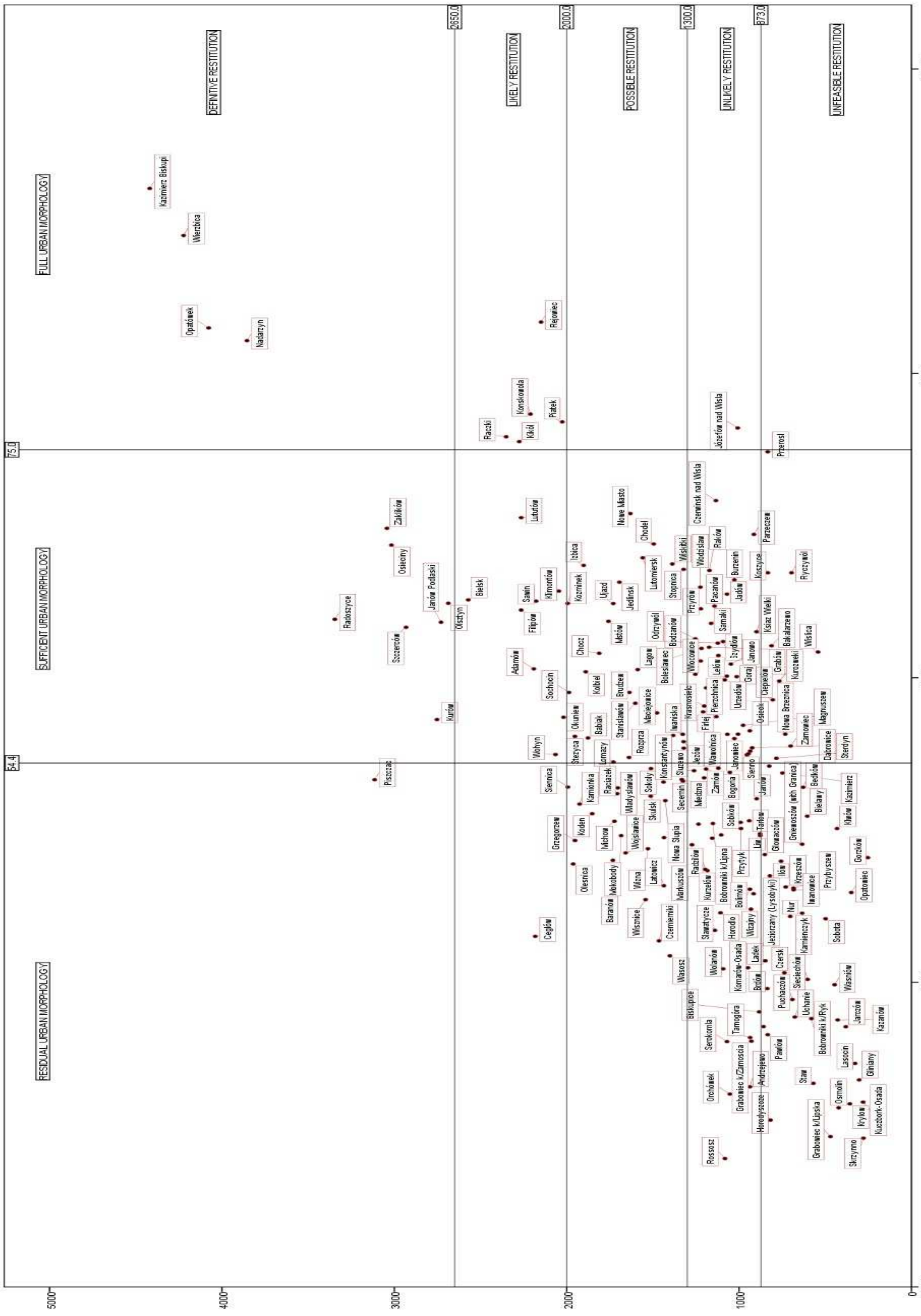
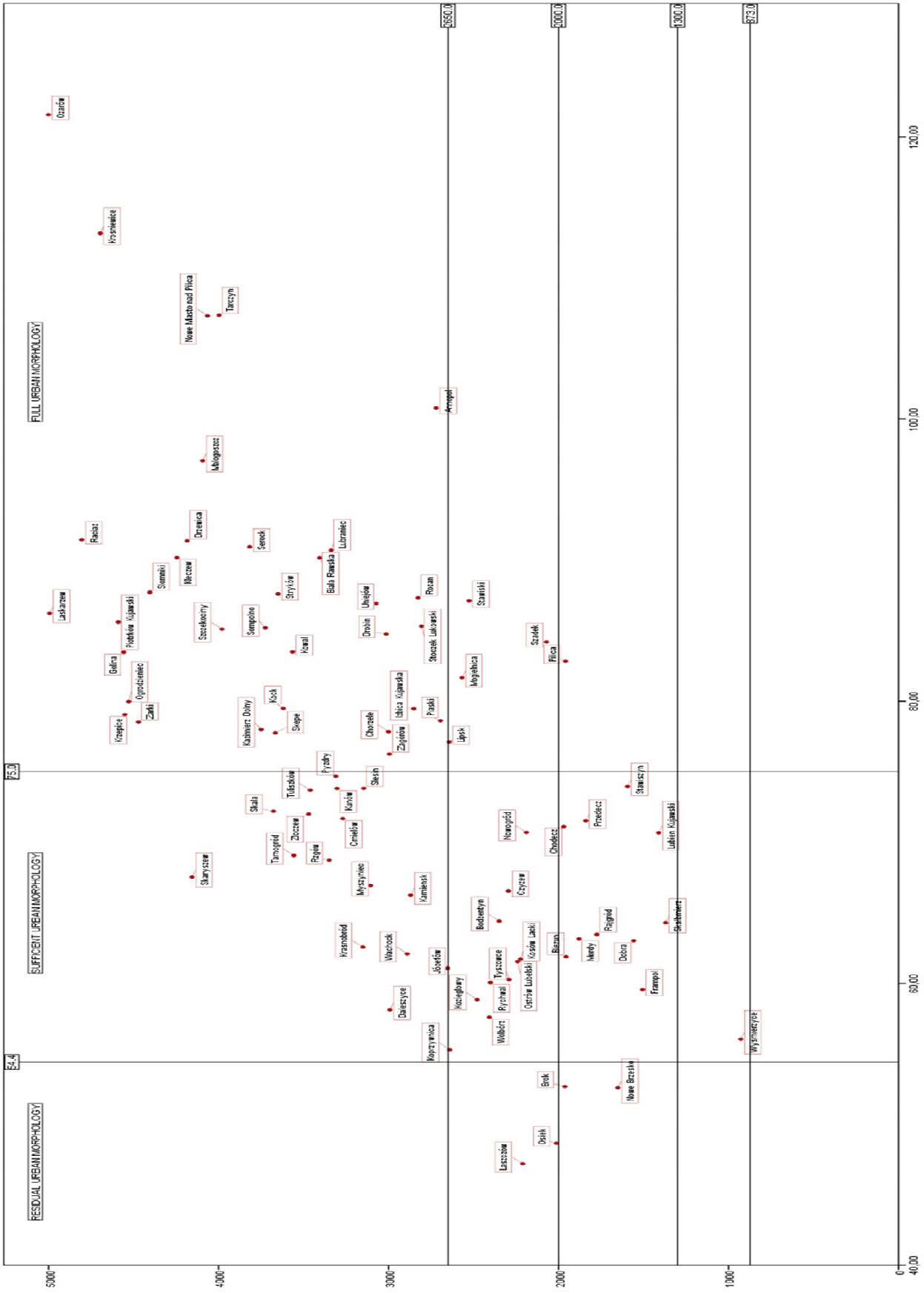


Fig. 7.5. Restituted reform towns and their *hypothetical* feasibility of restitution (i.e. if they were still formally rural and applied for restitution today) in terms of morphology and demography.



towns[23] – that are most likely to regain their urban status. Although Sokołowski takes into account different aspects of urbanity, his prognosis actually includes town plan analysis (but lacks morphological scrutiny). Let us now compare this set of 18 towns with the results of the morphological index, departing from table 7.19.

In the highest size group (>2650 inhabitants), Sokołowski designates all but one town for restitution (the morphologically very urban Nadarzyn, V_{morf} 82.2, is omitted), i.e. a total of 11 towns out of 12. Of these 11, only Piszczac does not meet the assumed level of sufficient urbanity, although barely (V_{morf} 53.3, whereas the threshold is set at 54.4); contrarily three towns (Kazimierz Biskupi, Wierzbica and Opatówek) meet the level of full morphological urbanity. Of the remaining seven towns on Sokołowski's list, five are located within the next population class (2000-2649 inhabitants), whereof three display full urban morphology (Końskowola, Piątek and Raczki) and two sufficient morphology (Klimontów and Filipów). Oddly, Sokołowski does not list Kikół (full urban morphology); in another article (2011a: 375) he actually mentions Kikół as a candidate town for restitution, but objects to its weakly developed town plan. Indeed, the graph value for Kikół is somewhat lowered, 67.2 (although nine *formal* towns in this set display even lower ues[24]), but its physiognomic value is exceptionally high (97.2), thus placing Kikół within the top morphological class. In Kikół's size class, there are six more sufficiently morphologically urban towns (Rejowiec even fully so) that Sokołowski does not mention; however, he lists two of them (Rejowiec and Lututów) in a similar, extended list in his dissertation (1999). One town (Okuniew), is indeed, despite its developed morphology, unsuitable for restitution due to lack of administrative functions, while Wohyń only marginally reaches a sufficient level of morphology (55.0); Sokołowski's exclusion of the remaining three (Bielsk, Sawin and Adamów) may be due to some other, particular reasons. Instead, the remaining two towns on his list fall within the third population class (1300-1999), with Nowe Miasto topping this group's morphological index, and Izbica scoring only slightly lower.

This simple verification indicates that all towns picked by Sokołowski fall within the highest echelons of the morphological index, an objective indicator of accuracy in the assembled methodology.

7.3.5. Restitution possibilities with respect to regional differences

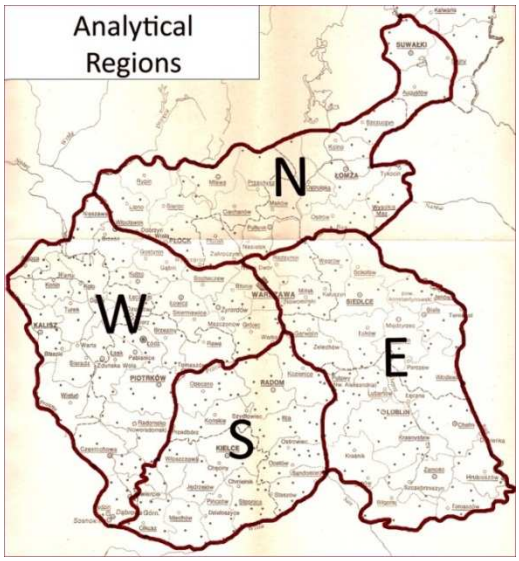


Fig. 7.6. Territory of former Poland divided into analytical regions. *Source*: My adaptation of a base map from Nietyksza (1986)

While analyzing towns it is important to take into account regional differences, because town qualities and town sizes in different regions may vary significantly (Szymańska & Grzelak-Kostulska 2005: 62-63). This subchapter analyzes which and how many towns meet a sufficient level of urbanity (in terms of morphology and demography), with focus on regional differences. For this purpose I have divided the territory of the former Congress Poland into four roughly equal parts, following the course of its major rivers[25] (fig. 7.6):

- ***Region North*** – all territories north of the Vistula and the Bug, equaling the former governorates of Płock and Łomża (prior to the 1893 border change), and the remainder of the Suwałki governorate within Poland's current borders;
- ***Region East*** – all territories east of the Vistula and south of the Bug, equaling the former governorates of Lublin and Siedlce, and the counties of the Warsaw governorate located east of the Vistula river (Radzymin, Nowomińsk and half of the Warsaw county)
- ***Region South*** – all territories west of the Vistula and southeast of the Pilica[26], equaling the former governorates of Radom and Kielce (prior to the 1890 border change).
- ***Region West*** – all territories south of the Vistula and west of the Pilica river[26], equaling former governorates of Kalisz and Piotrków (prior to the 1890 border change), and the main portion of the Warsaw governorate southwest of the Vistula (including the western half of the Warsaw county).

[23] Of these 75 settlements, 22 (29 %) have never had town privileges before, while the remaining 53 (71 %) are degraded towns. 20 of these 53 (37 %) are towns degraded during the reform of 1869-70; excluding the two that were restituted in 2011, Czyżew and Wolbórz, Sokołowski designates for restitution a total of 18 towns analyzed in this thesis.

[24] Wąchock, Lubień Kujawski, Daleszyce, Łaszczów, Dobra, Nowe Brzesko, Rajgród, Stawiszyn and Przedecz.

[25] Dividing it into current voivodeship would not be meaningful for historic reasons (the new administrative division was only introduced in 1999); also following the borders of the old Russian governorates would produce overly fragmented divisions with complicated borders.

[26] In the uppermost stretch and beyond the Pilica's source, following the border between the Piotrków and Kielce governorates (prior to the border change in 1890), thus leaving Lelów, Szczekociny, Kromołów, Ogrodzieniec, Pilica and Sławków in Region South.

Departing from such division, table 7.20 shows that the towns degraded in 1869-70 were more or less equally distributed between regions East (88), South (99) and West (81), with the fewest degradations employed in the North (56[27]). Until today, most of the restitutions were made in region West (51.8%) and to a lesser degree in region North (44.6 %) and South (42.4 %). Region East remains largely under-urbanized, as only 26.1 % of its towns have to date been restituted. Is such differentiation incidental, or are there some regional differences?

Tab. 7.20. Restituted and non-restituted towns, frequencies in regard to analytical regions.

Region	Towns degraded in 1869-70		Restituted or incorporated urban units as of 1/1 2012		Non-restituted or incorporated rural units as of 1/1 2012	
	n	**%**	**n**	**%**	**n**	**%**
North[28]	56	17,3	25	44,6	31	55,4
East	88	27,2	23	26,1	65	73,9
South	99	30,5	42	42,4	57	57,6
West	81	25,0	42	51,8	39	48,2
Congress Poland[28]	**324**	**100,0**	**132**	**40,7**	**192**	**59,3**

Tab. 7.21 reveals that the region-wise rate of restitution intensity actually mimics the intensity of the non-restituted town's morphological predispositions. Region West has the highest share of degraded towns (59 %) that meet the minimum required urban morphology, North and South assume an intermediate level on this matter, while only 40 % of the eastern towns achieve a sufficient morphology level. On a demographic level, the results are quite different (7.22). Although region West still tops the list with the largest amount of towns eligible for restitution (48.7 %), virtually the same amount is achieved by the morphologically weaker region East (47.7 %). Contrarily, only 23.2 % of the southern towns meet a sufficient population level, while region North assumes an intermediate level (35.5 %).

Tab 7.21. Non-restituted towns (region-wise) and their morphological predispositions for restitution.

Region	Non-restituted or incorporated rural units as of 1/1 2012		Meet required urban morphology ≥54,4					Do not meet required urban morphology <54,4	
	n	**%**	**n**	*Full ≥75,0*		*Sufficient 54,4–74,9*		**%**	**n**	**%**
				n	***%***	***n***	***%***			
North[28]	31	16,2	15	*3*	*9,7*	*12*	*38,7*	48,4	16	51,6
East	65	34,0	26	*0*	*0,0*	*26*	*40,0*	40,0	39	60,0
South	56[29]	29,3	32	*1*	*1,8*	*31*	*55,4*	57,1	23	41,1
West	39	20,4	23	*3*	*7,7*	*20*	*51,3*	59,0	16	41,0
Congress Poland[28]	**191[29]**	**100,0**	**96**	***7***	***3,7***	***89***	***46,6***	**50,3**	**94**	**49,2**

Tab 7.22. Non-restituted towns (region-wise) and their demographic predispositions for restitution.

Region	Non-restituted or incorporated rural units as of 1/1 2012		Meet required demography ≥1300						Do not meet required demography <1300	
	n	**%**	**n**	*Full ≥2000*		*Sufficient 1300-1999*		**%**	**n**	**%**
				n	***%***	***n***	***%***			
North[28]	31	16,2	11	*5*	*16,1*	*6*	*19,4*	35,5	20	64,5
East	65	34,0	31	*11*	*16,9*	*20*	*30,8*	47,7	34	52,3
South	56[29]	29,3	13	*4*	*7,1*	*9*	*16,1*	23,2	42	75,0
West	39	20,4	19	*6*	*15,4*	*13*	*33,3*	48,7	20	51,3
Congress Poland[28]	**191[29]**	**100,0**	**74**	***26***	***13,6***	***48***	***25,1***	**38,7**	**116**	**60,7**

A perhaps more interesting analysis is one taking into account the met minimum thresholds regarding *both* morphology and demography (tab. 7.23). The largest share of such towns (38.5 %) is found in region West; fewer – at around one quarter each – is found in regions North and East, and only a futile 16.1 % in region South. However, the largest *amount* of towns eligible for restitution is found in the East (17) and West (15), and much fewer in the South (9) and North (8).

[27] Partially due to 12 of the towns being currently outside of Poland.
[28] Numbers denote only towns within Poland's current borders.
[29] Gniewoszów and Granica are treated as one entity.

These 49 towns, amounting for one quarter of all non-restituted reform-towns are listed in table 7.24. They all have a good chance to be restituted, provided that they also meet other criteria of urbanity (particularly regarding non-agrarian employment) and pass positive local consultations. The least populous towns will probably be investigated more thoroughly and there will be more pressure to fulfill other the criteria (however, if a merger with nearby villages is possible it may help restitution a lot). Since all these 49 tows have a well-preserved small-town character, restitution of these would most likely be granted (cf. chap. 3.8.2), as opposed to towns applying for urban status for the first time.

Tab 7.23. Non-restituted towns (region-wise) and their morphological *and* demographic predispositions for restitution.

Region	Towns de-graded in 1869-70		Meet required urban morphology ≥54,4 *and* demog-raphy ≥1300		Do not meet required urban morphology ≥54,4 *and* demography ≥1300							
	n	**%**	**n**	**%**	**n**	*Meet only morphology*		*Meet only demography*		*Meet neither*		**%**
						n	***%***	***n***	***%***	***n***	***%***	
North[28]	31	16,2	8	25,8	23	7	*22,6*	*3*	*9,7*	*13*	*41,9*	74,2
East	65	34,0	17	26,2	48	9	*13,8*	*14*	*21,5*	*25*	*38,5*	73,8
South	56[29]	29,3	9	16,1	47	23	*41,1*	*4*	*7,1*	*20*	*35,7*	83,9
West	39	20,4	15	38,5	24	8	*20,5*	*4*	*10,3*	*12*	*30,8*	61,5
Congress Poland	**191[29]**	**100,0**	**49**	**25,6**	**142**	**47**	***24,6***	***25***	***13,1***	***70***	***36,6***	**74,3**

Tab. 7.24. Non-restituted towns that meet minimum levels of urbanity in regard to *both* morphology and demography. The towns are arranged region-wise in descending order according to (provisory) mean values for morphology + demography[30].

I. Region North (8 towns)							
1	2	3	4	1	2	3	4
Town	**V_{morf}**	**Inhabitants**	**[Mean]**	**Town**	**V_{morf}**	**Inhabitants**	**[Mean]**
Nadarzyn	82,2	3855	[85,0]	Filipów	64,5	2264	[65,9]
Raczki	75,8	2351	[72,2]	Nowe Miasto	70,8	1631	[64,0]
Kikół	75,5	2275	[71,5]	Sochocin	59,0	1987	[61,0]
Bielsk	65,1	2571	[68,4]	Wiskitki	67,5	1387	[60,1]
II. Region East (17 towns)							
Rejowiec	83,4	2149	[74,5]	Kołbiel	60,4	1890	[60,9]
Zaklików	69,8	3043	[73,9]	Okuniew	57,4	2018	[60,5]
Końskowola	77,3	2210	[71,9]	Wohyń	55,0	2065	[59,6]
Janów Podlaski	63,7	2729	[68,8]	Stężyca	56,2	1953	[59,3]
Kurów	57,3	2753	[65,7]	Stanisławów	58,3	1602	[57,5]
Sawin	65,1	2178	[65,5]	Łomazy	54,5	1729	[56,6]
Izbica	67,4	1902	[64,5]	Maciejowice	57,7	1476	[56,0]
Adamów	60,6	2191	[63,4]	Modliborzyce	56,2	1382	[54,4]
Chodel	68,8	1495	[61,7]				
III. Region South (9 towns)							
Wierzbica	89,1	4223	[90,5]	Mstów	63,7	1758	[61,5]
Radoszyce	63,9	3345	[72,8]	Stopnica	67,1	1322	[59,3]
Olsztyn	64,9	2687	[69,1]	Łagów	60,8	1588	[58,4]
Klimontów	65,7	2046	[64,8]	Iwaniska	56,3	1327	[53,9]
Jedlińsk	66,3	1694	[62,3]				
IV. Region West (15 towns)							
Kazimierz Bisk.	92,2	4419	[93,1]	Ujazd	64,9	1730	[61,9]
Opatówek	83,0	4077	[86,6]	Chocz	61,6	1812	[60,9]
Osięciny	68,7	3017	[73,2]	Babiak	56,0	1877	[58,7]
Piątek	76,8	2026	[70,2]	Brudzew	59,0	1636	[58,1]
Szczerców	63,3	2932	[70,0]	Rozprza	54,8	1638	[56,0]
Lututów	70,5	2264	[68,9]	Jeżów	55,8	1322	[53,6]
Koźminek	64,9	1995	[64,0]	Widawa	55,4	1321	[53,4]
Lutomiersk	67,9	1559	[61,9]				

Source: own calculations; population data: GUS (2009)

In conclusion, ¼ of the non-restituted reform towns within the territory of the former Congress Poland fulfill the minimum criteria for restitution in regard to morphology *and* demography (49 towns). These are not regionally uniform. Western towns tend to be larger and morphologically more developed; the East and the South are each other's

[30] Demographical data have been recoded into index values as shown in chap. 7.3.3.

antipoles, with the eastern towns being generally larger but morphologically weaker, and the southern towns being morphologically strong but generally overly small-sized. The towns of the North assume moderate positions on both accounts. In a morphological sense, such distribution confirms the still existing regional differences between territories east and west of the Vistula River (cf. chap. 4.6). Furthermore, the demographically stronger profile of the eastern towns can be perhaps explained by the high correlation between demography and centrality (cf. Sokołowski 1999: 115). In the east, where city deserts are most pronounced (the non-restituted towns amount for 73.9 %, cf. fig. 3.4) many villages assume levels of centrality equaling those of small formal towns, despite being formally rural. On the other hand, their regionally conditioned less-developed urban morphology may actually be a factor inhibiting them from a final restitution. This would suggest that there are in fact some traces of logics, or, if one prefers, some 'self-regulatory mechanism' behind the uneven restitution pattern of the 1869-70 reform towns. However, as outlined in chap. 3, there are also other factors shaping the spatiality of restitutions in Poland (diffusion of innovations, administrative barriers); these are elaborated next**.**

7.3.6. Restitution possibilities: privileged zones

It has been argued that two important factors contributing to restitutions today are the phenomena *diffusion of innovations* and *agglomeration proximity* (cf. chap. 3.9.2). The map in fig. 7.7 shows degraded towns superimposed on zones of such spatial influence. Note that only *administrative seats* are shown as villages lacking administrative functions are not likely to be restituted. As we can see, the Holy Cross diffusion zone encompasses the largest number of degraded towns. There are also some in the northern part of the Tarnów zone, around Płock, in the southwestern leg of Podlachia, along the South Łódź belt and in the outskirts of the now nearly saturated Zamość zone. There are also a few degraded towns within the agglomerations of Warsaw, Łódź and Lublin, as well as in easternmost Silesia. For more accurate values, I have employed the methodology devised for this purpose in chap. 6.9. I have calculated values for each of the non-restituted towns (including incorporated units), where the higher the value the more intense the idea of a prospective restitution. The maximum value achieved in this way was 21 (very active zone) and the lowest was 0 (no impact). Towns with values zones were divided into four groups representing different intensity zones. Their relative distribution is shown in table 7.25.

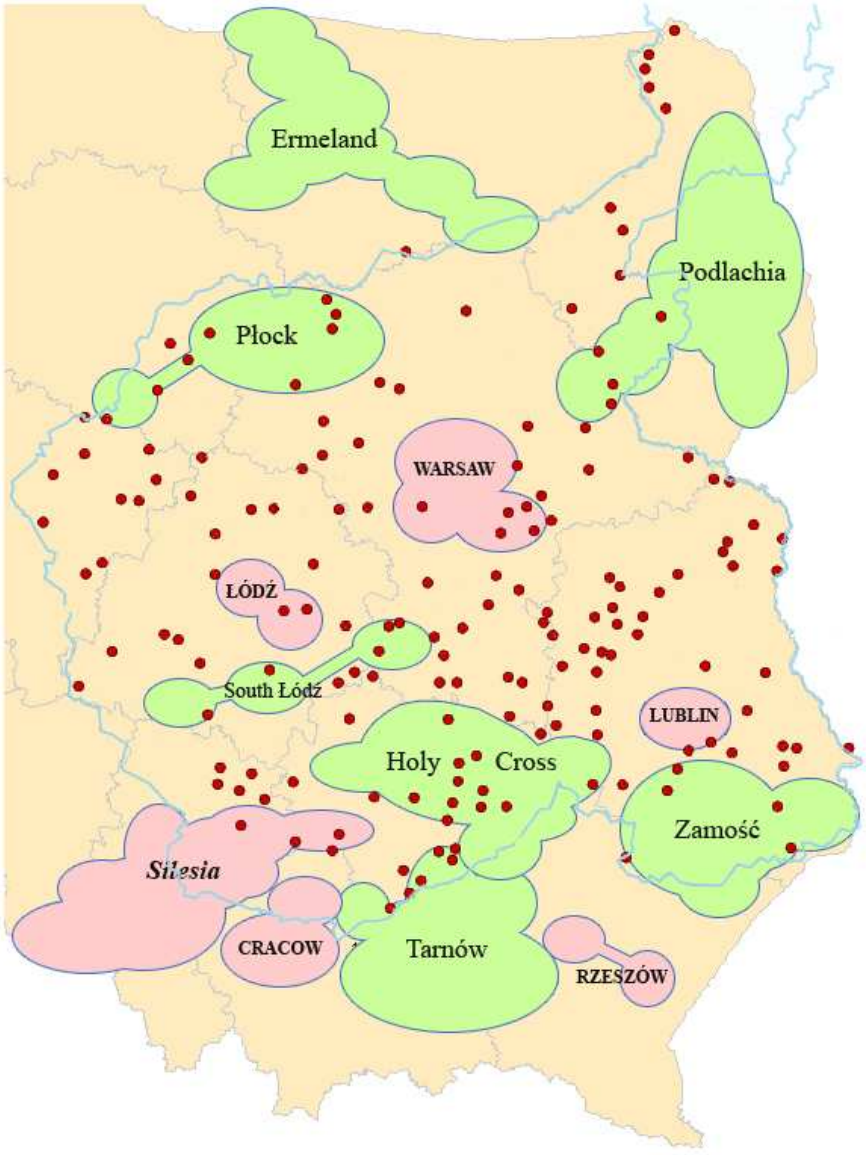


Fig. 7.7. Location of degraded towns (administrative seats only) in relation to so-called *privileged zones* where probability of restitution is high. *Source*: My adaptation of an idea of Krzysztofik (2006); for details cf. chap. 3.9.2.

Both the map (fig. 7.7) and table 7.25 show that degraded reform towns are largely omitted from the spatial influence process. Only 10.5 % of them are located within very active zones while 20.4 % lie within zones of moderate activity. The great majority of towns – 69.1 % – lie within zone zones of light activity where likelihood of diffusion borders randomness (52.2 %) or lie com-

pletely within zones of inactivity (16.9 %). Such results are worrying, as many de facto urban towns will most likely not be restituted because of lack of adequate push.

Tab. 7.25. Non-restituted and incorporated towns (frequencies and shares) according to their proximity to zones where the idea of restitution ranges from very active to inactive.

Intensity of the influential zone	Zone label	Number of towns	%
15-21	Very active	21	*10,5*
8-14	Moderately active	41	*20,4*
1-7	Lightly active	105	*52,2*
0	Inactive	34	*16,9*
		201	***100,0***

Now, how about the towns located within zones where diffusional activity could be regarded as a significant factor? How does such 'privileged' location relate to morphology (and demography) and does it actually spawn a restitutional activity? Table 7.26 shows the 62 degraded towns that are located within zones of very high and moderate activity. It also shows that there is some form of automacy between diffusional influences and fulfillment of sufficient morphological/demographic urbanity that eventually results in the idea of restitution being born (Klimontów, Stopnica, Łagów, Olsztyn, Mstów, Zaklików, Kołbiel, Rozprza). There are also exceptions; in Bogoria, Koszyce, Szydłów, Wodzisław, Goraj and Turobin the restitution idea is active, yet all these towns lack sufficient population. This in turn would suggest 'delusional' tendencies amongst the concerned towns if there had not been a strong urban morphology present: all towns where the restitution idea is active reach at least the minimum threshold (V_{morf} 54.4)[31]. Firstly, these results indicate the viability of spatial factors in Poland, even in regard to towns that are much too small to be restituted. Secondly, a somewhat more conjectural conclusion could be that urban morphology when mixed with the diffusion of the idea will most likely spawn some form of local reaction. Naturally, there are also some exceptions: Iwaniska, Izbica and Bielsk[32] all fulfill the minimum criteria, but the restitution idea has not (yet?) caught interest.

Tab. 7.26. Degraded towns (including incorporated towns) located within zones where restitution may be aided by external factors (Inf.): very active zones (values 21-15) and moderately active zones (14-8)[33]. Towns meeting minimum levels of urbanity (<1300 inhabitants and V_{morf} < 54.4) are displayed in bold text, and incorporated towns (for which there is no full V_{morf}) in italics. Towns were the restitution idea is active are marked with the sign **◊**[34].

Town	Inf.	Town	Inf.	Town	Inf.	Town	Inf.
1	2	1	2	1	2	1	2
Iwaniska	21	**Łagów ◊**	16	Goraj ◊	10	**Kołbiel ◊**	8
Nowy Korczyn	21	Szydłów **◊**	16	*Grocholice*	10	**Okuniew**	8
Bogoria **◊**	21	Nowa Słupia	16	Grabowiec (Zamość)	10	**Rozprza ◊**	8
Opatowiec	21	Kurozwęki	16	Lasocin	10	Sokoły	8
Koszyce **◊**	20	Włodowice	15	**Mstów ◊**	9	Lelów	8
Modrzejów	20	Pierzchnica	15	Turobin **◊**	9	Wojsławice	8
Klimontów ◊	19	Jarczów	14	*Ciechanowiec N.M.*	9	Żarnów	8
Kromołów	19	Gliniany	14	Sienno	9	Wizna	8
Stopnica ◊	18	Wiślica	13	Sobków	9	Kurzelów	8
Raków	18	Komarów-Osada	13	Sterdyń	9	Żółkiewka	8
Pacanów	18	**Izbica**	12	Żarnowiec	9	Tarłów	8
Oleśnica	18	Janów	12	Nur	9	Będków	8
Denków	17	Tarnogóra	12	Andrzejewo	9	Czersk	8
Mrzygłód	17	**Olsztyn ◊**	11	Grabowiec (Lipsko)	9	Uchanie	8
Waśniów	17	Wodzisław **◊**	10	**Zaklików ◊**	8	Gorzków-Osada	8
		Książ Wielki	10	**Bielsk**	8		

The town's relative exclusion from the diffusional process may also be exacerbated by restitutional stagnation, as 2012 was the year when no urban restitutions (or first-time urban locations for that matter) were made. Since 1980, there were only four such years: 1981, 1985, 1999 and 2002[35]. Lack of civic rights bestowals in 1981 can be attributed to the

[31] Bogoria is the only exception, but misses the threshold only marginally – V_{morf} 53.8.
[32] Okuniew, also part of this group, is not an administrative seat and therefore not eligible for restitution.
[33] The meaning of these values is explained in chap. 6.9.
[34] The information regarding the activity of the restitution idea was retrieved by rummaging various internet sites, including official websites of the concerned municipalities. Such method is not very precise, but largely satisfactory.
[35] The six towns created "in" 1995 were de facto established on December 30th 1994.

period of martial law in Poland, whereas 1999 and 2002 were years of extensive territorial-administrative reforms; situations which explain the government's preoccupation with more urgent topics (1985 was an exception). In 2012, however, nothing particular happened; all the more, lack of restitutions was not the effect of governmental denials but entirely due to no applications for urban status being submitted that year. Whether 2012 was an exception (just like 1985) or whether the impact of spatial influence zones is being subdued remains to be seen.

7.3.7. Restitution possibilities: city deserts

A dense network of relatively evenly spaced small towns plays an important role in the spatial development of Poland. Departing from the outline presented in chapter 3.7.4, the map in fig. 7.8 shows degraded towns located within so-called city desert zones, i.e. rural areas with the furthest distance to the nearest town. In order to level off the uneven urban network in central and eastern Poland, it is within these areas that restitutions should first and foremost occur. Table 7.27 shows those degraded towns in the studied set that are located geographically where formal towns are most needed, along with data (morphological, demographical, administrative and diffusional) from table 7.25 in the previous subchapter, showing their de facto feasibility of restitution. For a clearer outlook, the data have been transformed into three classes: A – very feasible; B – feasible; C – not feasible.

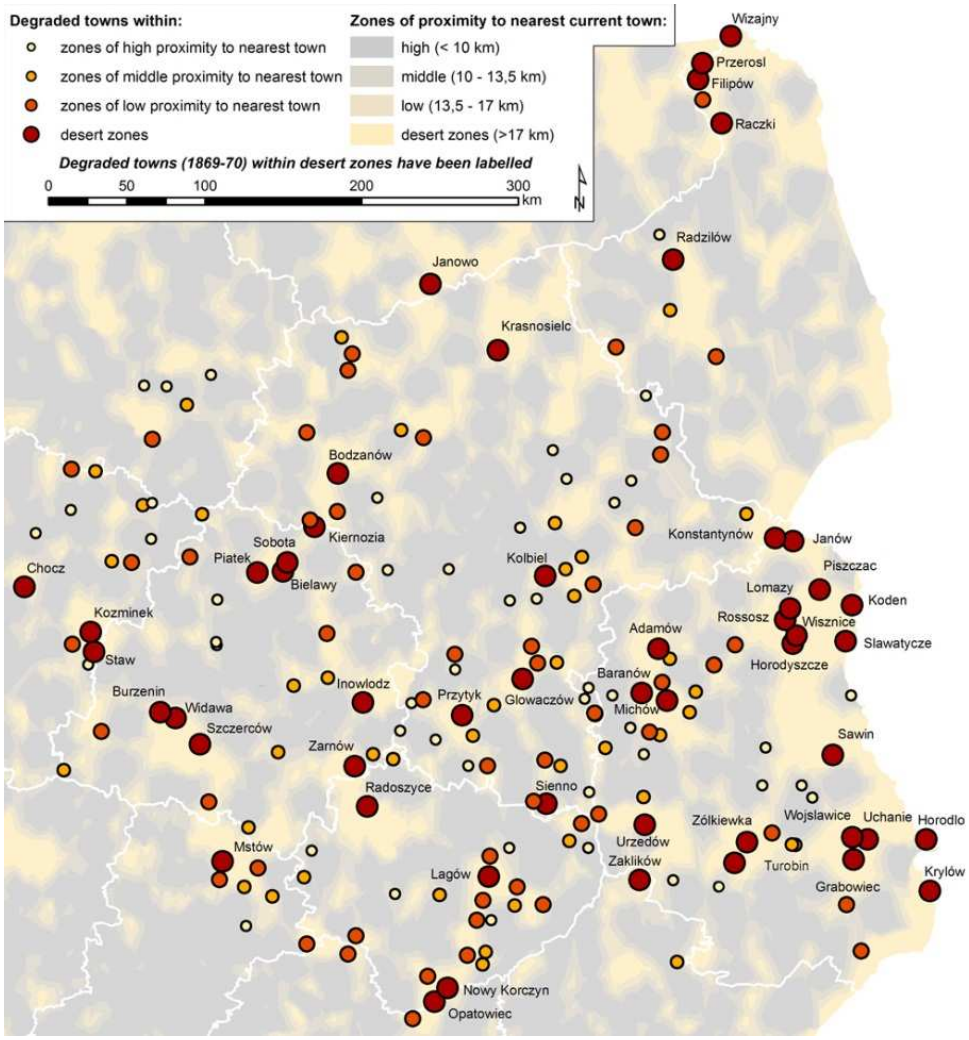


Fig. 7.8. City deserts and distribution of degraded towns in relation to those. *Source*: own work

As we can see, there are 51 degraded towns located in the city desert zones of Poland, whereof only 13 are likely to be restituted, taking into account an aggregate of four important considerations. Only four towns (Łagów, Piątek, Raczki and Zaklików) achieve an A- value. Given the importance of the diffusion factor, only Łagów and Zaklików are likely to be restituted in the nearest time. Of the remaining nine (B+ value), only three are located within diffusion zones (Nowy Korczyn, Kołbiel and Mstów); the remaining six (Adamów, Filipów, Janów Podlaski, Radoszyce, Sawin and Szczerców) are therefore not likely to be restituted, at least in the nearest future. It therefore looks like restitutions will most likely continue to occur in the southern and southern-central part of the former Congress Poland, whereas new additions would be most substantial in the eastern, northeastern and southwestern parts. This is disturbing, as the disproportionate urban network is likely to remain. As seen in the past, even a single restitution in a previously standstill area may trigger a domino-effect. Looking at the map, a penetration phase around the cities of Biała Podlaska, Suwałki and Wieluń could kick off a positive wave of urbanization.

Tab 7.27. Towns in desert zones (whose restitution would be desirable in terms of achieving a proportional urban network) and their de facto feasibility of restitution[36]; legend in separate table below.

1	2	3	4	5	6	1	2	3	4	5	6
Town	**Morf**	**Dem**	**Adm**	**DifProx**	**Sum**	**Town**	**Morf**	**Dem**	**Adm**	**Dif**	**Sum**
Adamów	**B**	**A**	**A**	**C**	**B+**	**Nowy Korczyn**	**B**	**C**	**A**	**A**	**B+**
Baranów	C	B	A	C	B-	Opatowiec	C	C	A	A	B
Bielawy	C	C	A	C	C+	**Piątek**	**A**	**A**	**A**	**C**	**A-**
Bodzanów	B	C	A	C	B-	Piszczac	C	A	A	C	B
Burzenin	B	C	A	C	B-	Przerośl	B	C	A	C	B-
Chocz	B	B	A	C	B	Przytyk	C	C	A	C	C+
Filipów	**B**	**A**	**A**	**C**	**B+**	**Raczki**	**A**	**A**	**A**	**C**	**A-**
Głowaczów	C	C	A	C	C+	**Radoszyce**	**B**	**A**	**A**	**C**	**B+**
Grabowiec	C	C	A	B	B-	Radziłów	C	C	A	C	C+
Horodło	C	C	A	C	C+	Rossosz	C	C	A	C	C+
Horodyszcze	C	C	C	C	C-	**Sawin**	**B**	**A**	**A**	**C**	**B+**
Inowłódz	C	C	A	C	C+	Sienno	B	C	A	B	B
Janów Podl.	**B**	**A**	**A**	**C**	**B+**	Sławatycze	C	C	A	C	C+
Janowo	B	C	A	C	B-	Sobota	C	C	C	C	C-
Kiernozia	B	C	A	C	B-	Staw	C	C	C	C	C-
Krasnosielc	B	C	A	C	B-	**Szczerców**	**B**	**A**	**A**	**C**	**B+**
Kodeń	C	B	A	C	B-	Turobin	B	C	A	B	B
Kołbiel	**B**	**B**	**A**	**B**	**B+**	Uchanie	C	C	A	B	B-
Konstantynów	C	B	A	C	B-	Urzędów	B	C	A	C	B-
Koźminek	B	B	A	C	B	Widawa	B	B	A	C	B
Kryłów	C	C	C	C	C-	Wisznice	C	B	A	C	B-
Łagów	**B**	**B**	**A**	**A**	**A-**	Wiżajny	C	C	A	C	C+
Łomazy	B	B	A	C	B	Wojsławice	C	B	A	B	B
Michów	C	B	A	C	B-	**Zaklików**	**B**	**A**	**A**	**B**	**A-**
Mstów	**B**	**B**	**A**	**B**	**B+**	Żarnów	B	C	A	B	B
LEGEND:						Żółkiewka	C	C	A	B	B-

	Probability of restitution:		
Consideration:	**A (very feasible)**	**B (feasible)**	**C (not feasible)**
Morphological (Morf)	> 75,0	54,4 – 74,9	< 54,4
Demographic (Dem)	≥ 2000	1300 – 1999	< 1300
Administrative (Adm)	Adm. seat	–	Non-adm. seat
Diffusional/Proximal (DifProx)	15-21	8-14	0-7

7.3.8. Disadvantaged settlements and morphology

In chapter 3.9.3 I have outlined a number of imposed barriers that discriminate or highly impede certain settlements from achieving restitution due to unfavorable administrative-territorial location. Let us now examine how this factor relates to the morphology of these settlements by analyzing two major groups of towns subject to such barriers: a) villages devoid of administrative functions; and b) incorporated units.

Degraded towns devoid of administrative functions

In the studied set, there are 27 degraded towns that are not administrative seats. Previous studies have shown that these kinds of villages are largely devoid of urban significance, especially of centrality, which has been taken over by the communal villages (Drobek 1999, Sokołowski 1999). Table 7.28 shows that lack of urban significance also pertains largely to morphology. No one town reaches urban minimum values in all three morphological variables, and those that reach two of them are combinations with the market square (interestingly, the only town that does reach both urban-level graph and physiognomic values – Liw – actually 'misses out' on the market square). Even if a few towns reach – surprisingly – high values in physiognomy (Ryczywół, Kurozwęki, Służewo) or graph (Okuniew, Kazimierz, Kamieńczyk), by missing out on the other value, they come to lack sufficient urban framing. Conversely to this trend, 63 % of the towns actually reach sufficient urban values regarding market squares (especially Pławno, Czersk and Bobrowniki); however, a market square – although an important urban feature – cannot make a town urban by itself. Nevertheless, any contingent restitution would foremost be decided upon a sufficient population and only one town boasts it – Okuniew (it is also the only one located within a privileged zone). Seven other towns are slightly larger than Poland's smallest formal town, but are all smaller than what current restitution practices acknowledge (1300 inhabit-

[36] For summative values, A:s were transformed into 3:s, B:s to 2:s, C:s to 1:s; the number were added and divided by 4. The new values were then recoded: 3 = 'A+'; 2,75 = 'A'; 2,5 = 'A-'; 2,25 = 'B+'; 2 = 'B'; 1,75 = 'B-'; 1,5 = 'C+'; 1,25 = 'C'; 1 = 'C-'.

ants). Allowing for some minor latitude, only four towns could be restituted, taking into account some least acceptable levels of demography and morphology: Okuniew, Pławno, Kurzelów, and, more hesitantly, Służewo. Of these, only Pławno is located in a commune whose seat is located in another village (the adjoining Gidle), and therefore the only one that feasibly could be restituted[37], or, alternatively, merged with Gidle. Moreover, Tarnogóra, another village in the studied set, could also very well be merged with the adjoining Izbica to form one strong urban organism.

This concludes that despite the seemingly disadvantageous situation of villages devoid of administrative functions, actually very few (and often barely) meet the criteria of morphological urbanity, and those that do are usually too small to function as urban units. This confirms that morphology relates similarly to non-communal villages as do other aspects of urbanity, as shown in previous studies.

Tab. 7.28. Villages devoid of administrative functions (disadvantaged in the restitution process) in the studied set and their morphological and demographic properties. Values above calculated 'urban minimums' marked in bold text.

Town	V_{morf}	V_{grf}	V_{phy}	V_{msm}	Pop.	Town	V_{morf}	V_{grf}	V_{phy}	V_{msm}	Pop.
1	2	3	4	5	6	1	2	3	4	5	6
Ryczywół	66,9	58,4	**95,0**	**47,3**	696	Brdów	39,6	48,9	21,4	**48,5**	837
Kurozwęki	59,8	45,3	**75,5**	**58,6**	767	Biskupice	38,1	50,6	24,7	38,9	**883**
Pławno	59,3	52,8	**50,6**	**74,6**	**1191**	Bobrowniki	37,6	52,8	0,0	**60,1**	580
Okuniew	57,4	**77,1**	40,9	**54,2**	**2018**	Pawłów	36,6	46,6	23,3	39,8	834
Służewo	53,9	46,0	**65,9**	**49,9**	**1261**	Tarnogóra	36,4	47,1	25,7	36,3	**936**
Kazimierz	53,7	**75,1**	37,2	**48,9**	748	Lasocin	34,7	42,0	23,7	38,3	327
Liw	49,6	**68,0**	**45,0**	36,0	**877**	Gliniany	33,6	44,0	0,0	**56,8**	303
Kurzelów	46,2	**64,1**	19,0	**58,9**	**1184**	Staw	33,4	44,0	12,9	**43,2**	569
Przybyszew	46,2	46,5	34,5	**57,5**	684	Orchówek	32,7	39,2	31,0	27,8	**1053**
Iwanowice	46,1	47,1	39,1	**52,1**	683	Kryłów	32,0	40,6	27,8	27,7	357
Kamieńczyk	44,5	**74,8**	10,7	**48,1**	634	Osmolin	31,8	31,1	26,4	37,8	422
Sobota	44,2	33,8	**52,7**	**46,1**	498	Horodyszcze	31,0	**63,6**	0,0	29,3	818
Czersk	40,6	41,3	19,0	**61,5**	737	Grabowiec	29,9	46,5	0,0	**43,2**	470
Source: own calculations; data partially from GUS (2009)						Skrzynno	29,8	39,3	11,5	38,5	278

Incorporated units

In the studied set there are eleven incorporated urban units (including one Lithuanian – Poniemoń) and one incorporated rural unit (Granica). Due to their lack of administrative independence data regarding their physiognomy could not be retrieved and I have consequently refrained from calculating a summative morphological index for these. Regarding graph complexity, seven units reach the calculated urban minimum value of 60.8, while additional two (Mrzygłód and Ciechanowiec-Nowe Miasto) miss it only marginally; thereto, all but two (Modrzejów and Wieniawa) have market squares of values higher than the set minimum of 42.5. In regard to population figures, all but one (the rural Granica) are larger than Poland's smallest town; of these, only Modrzejów does not meet the currently employed restitution minimum of 1300 inhabitants (tab. 7.29). Departing from these (incomplete) results, one could deduce that incorporated units are generally larger and morphologically more urban than non-communal villages. Instead, any contingent restitution prospect would most likely be dependent of the degree of spatial relation between the incorporated unit and the host town. As outlined in chap. 5.2, around half of these (especially Wieniawa, and Granica) are highly integrated, whereupon excorporation or disintegration would be misguided and virtually unfeasible. Some towns, however, still constitute separate spatial units, located at a significant distance from their host cities. Of these – taking into account morphology and demography – the most likely candidates are Denków, Kromołów, Mrzygłód and Grocholice, less likely – Głusk. Głusk, however, is the only town whose restitution would be least problematic (it is the seat of the Głusk commune of which it is *not* part of). Of the other four, all but Denków where until 1976/77 seats of separate communes, which could possibly be brought back (like the liquidated in 1976 commune of Jaśliska that was reinstated in 2010). These three are also located within spatially privileged zones[38] (cf. chap. 7.3.6).

[37] The other three are located in urban-rural communes, whose seat is a formal town.

[38] An inspection of incorporated towns within zones of influence reveals relatively many: Mrzygłód, Kromołów and Modrzejów within the Silesian agglomeration, Głusk and Wieniawa within Lublin's zone, Denków within the Holy Cross diffusion zone, Ciechanowiec-Nowe Miasto in Podlachia and Grocholice in the South Łódź belt. Of these eight, Ciechanowiec-Nowe Miasto and Wieniawa can be ruled out because of their strong spatial integration with the host cities, and probably also Modrzejów because of its sheer size and poor morphology (unless seceded together with nearby Niwka to create a town with a population of circa 12.000 inhabitants (12.067 in 2005, source: UM Sosnowiec).

Tab. 7.29. Incorporated units (disadvantaged in the restitution process) in the studied set and their morphological and demographic properties. Values above calculated 'urban minimums' are marked in bold text.

Town	V_{grf}	V_{msm}	Pop.	Town	V_{grf}	V_{msm}	Pop.
1	2	3	4	1	2	3	4
Ciechanowiec-Nowe Miasto	58,1	**65,0**	**1680**	Kromołów	**72,5**	**61,5**	**2581**
Denków	**64,6**	**67,2**	**2226**	Modrzejów	38,5	38,5	**1061**
Dobrzyń nad Drwecą	**118,3**	**67,9**	**10722**	Mrzygłód	59,9	**66,6**	**1460**
Głusk	52,4	**48,6**	**2025**	Poniemoń (LT)	**129,3**	–	**9900**
Granica *(rural)*	37,7	**56,9**	247	Wieniawa	**85,5**	35,7	**13676**
Grocholice	**64,1**	**59,6**	**1497**	Wierzbnik	**70,1**	**73,5**	**1366**

In conclusion, most of the incorporated units in the studied set fulfill the basic morphological and demographical criteria posed in current restitution practices. It could therefore be said that the imposed administrative barriers may prevent some incorporated units from regaining their urban independence. Moreover, some of them are spatially isolated organisms, conspicuously detached from their host cities. Such synthetic constructs may, on the one hand, impede local social integration, and, on the other, prevent rational functioning of such units (cf. Szmytkie 2009, Drobek 2005b).

7.3.9. Lithuanian and Belarusian units

Twelve of the 336 towns degraded during the 1869-70 reform are currently located outside of Poland's borders and were not excluded from this study for the sake of historical consistency, but also as a means of comparison. Due to lack of *physiognomic* data, this particular aspect had to be omitted; furthermore, only five market squares could be analyzed as a result of low pixel resolution in the available satellite imagery for this area. Therefore, the only feature for which there are full data for all twelve units is the town plan (graph).

Table 7.30 shows that the towns in the non-Polish set show huge morphological and demographic variations and as such are not particularly representative. Within the contextual interval (below 5.000 inhabitants), however, the towns show characteristics quite similar to the Polish towns. A notable observation is that all towns above 1000 inhabitants have a graph value that meets the Polish urban minimum, with one notable exception: none of these is rural. The employment of the category 'semi-urban' in both Lithuania and Belarus seems in perspective like a good solution; it is used generally for towns smaller than 2000 inhabitants, i.e. towns that do not have the proper significance of towns, but which nevertheless distinguish themselves from traditionally rural settlements through their distinct function, morphology and history[39] [40]. Could such a model – a win-win situation – act as a source of inspiration for Poland?

Tab. 7.30. Lithuanian and Belarusian (BLR) units in the studied set and their morphological and demographic properties. Values above calculated 'urban minimums' for Polish towns are marked in bold text. U = Urban; SU = Semi-urban; R = Rural.

Town	Cat.	V_{grf}	V_{msm}	Pop.	Town	Cat.	V_{grf}	V_{msm}	Pop.
1	2	3	4	5	1	2	3	4	5
Olita	**U**	**219,1**	**64,5**	69481	Balwierzyszki	SU	**61,9**	–	1180
Poniemoń *(city part)*	**U**	**129,3**	–	9900	Ludwinów	**SU**	**60,9**	**47,0**	1055
Łoździeje	**U**	**112,7**	–	5027	Sereje	SU	58,5	–	933
Pilwiszki	**SU**	**91,1**	–	1493	Wisztyniec	SU	57,0	–	566
Sopoćkinie *(BLR)*	**SU**	**66,8**	29,4	1400	Sudargi	R	44,1	34,9	85
Simno	**U**	**66,7**	–	1940	Sapieżyszki	SU	18,5	35,7	254

7.3.10. Restitution: evenly distributed morphology as opposed to summative morphology (V_{morf})

A summative morphological index (V_{morf}), although practical, may pose some analytical problems. Since it is basically a mean value of three different variables (graph, physiognomy, market square), towns with, for instance, particularly well-developed graphs accompanied by underdeveloped physiognomic structures may produce moderate, seemingly satisfactory summative values. However, for a town to achieve satisfactory overall morphological urbanity, it could be argued that all variables should reach acceptable levels. Therefore, for the sake of transparency – and a fuller analysis – I have also examined how the studied towns scored in this particular aspect (tab. 7.31). Note that the urban group includes *all* towns, i.e. also those above the contextual top-marker of 5.000 inhabitants.

[39] Cf. Law on Administrative Units and Their Borders of the Republic of Lithuania from June 19, 1994, 1994)

[40] Sudargi with 85 inhabitants was probably considered overly small and was therefore made rural; nevertheless its graph is actually more than double the value of Sapieżyszki, a semi-urban unit with 254 inhabitants.

80.5 % of the formally urban towns meet minimum levels of morphological urbanity regarding all three variables, while only roughly one quarter of the rural towns (47) do. Most rural towns, however, reach an urban level in *two* of the three variables, a level that could be deemed as acceptable for restitution as there are also 21 formal towns (17.1 %) with similar scores, whereof nine are recent restitutions[41]. Regarding the different combinations of variables whose minimum level of urbanity has been met, the scenario of an 'urban' graph and physiognomy, but a 'non-urban' market square is the least probable; only four formal towns (Lipsk, Nowgród, Mordy, Ostrów Lubelski) and two rural towns (Bakałarzewo and Liw) match such a profile. A scenario with only a 'non-urban' physiognomy is the most prevalent among both urban and rural units, while one with only a 'non-urban' graph is widespread among rural units but occurs only in three formally urban towns (Rajgród, Stawiszyn, Przedecz). Towns, whose morphological features meet the minimum level of urbanity only in one variable, could be deemed as questionably urban. This pertains to one quarter of the rural towns, but also to three formally urban towns, Brok, Łaszczów and Nowe Brzesko, the latter boasting only an 'urban' market square. This scenario is also shared by a preponderance of rural towns in this category (44 towns), although a few display only an 'urban' graph (Stężyca, Cegłów, Horodyszcze) or only an 'urban' physiognomy (Żółkiewka, Wiżajny, Jarczów). There are also 18 rural towns (9.2 %) that do not reach an urban level in any of the three variables. Their morphology could thus be regarded as *residually* urban at best, although some of them (Czemierniki, Wąsosz) are actually populous enough to be eligible for restitution.

Tab. 7.31. Frequencies and shares of towns in this study (highlighting their administrative status) in relation to the *number* of met minimum criteria of urbanity for the three morphological variables (graph, physiognomy, market square), taking also into account different *combinations* of the latter. Only Polish, independent settlements are analyzed.

Criteria met	Meets minimum of…			Total				Urban				Rural			
	V_{grf} ≥ 60,9	V_{phy} ≥ 43,9	V_{msm} ≥ 42,5	*n*		%		*n*		%		*n*		%	
3	☑	☑	☑	*146*		**45,8**		*99*		**80,5**		*47*		**24,0**	
2	☑	☑	☒	*102*	*6*	**1,9**	**32,0**	*21*	*4*	**3,2**	**17,1**	*81*	*2*	**1,0**	**41,3**
	☑	☒	☑		*59*	**18,5**			*14*	**11,4**			*45*	**23,0**	
	☒	☑	☑		*37*	**11,6**			*3*	**2,4**			*34*	**17,3**	
1	☑	☒	☒	*53*	*5*	**1,6**	**16,6**	*3*	*2*	**1,6**	**2,4**	*50*	*3*	**1,5**	**25,5**
	☒	☑	☒		*3*	**0,9**			*0*	**0,0**			*3*	**1,5**	
	☒	☒	☑		*45*	**14,1**			*1*	**0,8**			*44*	**22,4**	
0	☒	☒	☒	*18*		**5,6**		*0*		**0,0**		*18*		**9,2**	
				319		**100,0**		*123*		**100,0**		*196*		**100,0**	

Tab. 7.32. Rural towns reaching minimum urban levels in all three morphological variables (graph, physiognomy and square). Names in italics denote towns failing to reach the minimum population level[42].

1	2	1	2	1	2	1	2
Town	**V_{morf}**	**Town**	**V_{morf}**	**Town**	**V_{morf}**	**Town**	**V_{morf}**
Kazimierz Biskupi	92,2	Osięciny	68,7	Koźminek	64,9	Kołbiel	60,4
Wierzbica	89,1	Lutomiersk	67,9	Ujazd	64,9	*Białaczów*	60,2
Rejowiec	83,4	Izbica	67,4	*Pacanów*	64,7	*Turobin*	59,4
Opatówek	83,0	Stopnica	67,1	*Przyrów*	64,6	Sochocin	59,0
Nadarzyn	82,2	*Burzenin*	66,5	Filipów	64,5	Maciejowice	57,7
Końskowola	77,3	Jedlińsk	66,3	Mstów	63,7	*Nowa Brzeźnica*	56,3
Raczki	75,8	*Wodzisław*	66,0	Janów Podlaski	63,7	Babiak	56,0
Kikół	75,5	Klimontów	65,7	*Sarnaki*	63,6	Rozprza	54,8
Przerośl	74,9	*Jadów*	65,5	*Książ Wielki*	63,0	Łomazy	54,5
Czerwińsk n. Wisłą	71,7	Bielsk	65,1	*Bolesławiec*	61,9	Raciążek	52,8
Nowe Miasto	70,8	Sawin	65,1	*Włodowice*	61,1	*Wilczyn*	50,4
Chodel	68,8	Olsztyn	64,9	Adamów	60,6		

The 47 rural towns that classify as morphologically urban regarding all three variables are shown in table 7.32. However, only 33 of them reach the minimum population level that would make them eligible for restitution. Note also that two towns (Raciążek and Wilczyn) surprisingly fail to reach the summative urban V_{morf} value of 54.4. Contrarily, 51 other towns that *do* reach that summative value, fail to meet urban levels regarding *all* three variables and are therefore not listed (for instance, Piątek, Józefów nad Wisłą, Lututów and Parzęczew failing – barely – to meet the graph

[41] Bodzentyn, Frampol, Koprzywnica, Koziegłowy, Krasnobród, Lipsk, Mordy, Nowogród, Osiek, Ostrów Lubelski, Przedecz, Rajgród, Rychwał, Skalbmierz, Skała, Skaryszew, Stawiszyn, Tarnogród, Tuliszków, Wolbórz, Wyśmierzyce.

minimum, and Zaklików failing to meet the physiognomic minimum) (cf. tab. 7.19). This confirms the initial assumption that a summative index is not always the ultimate way to prognosticate restitutions, and need to be accompanied by a second, particularized analysis. Still, we must not forget that different towns look differently, even on a morphogenetical level, and sometimes the lack of one urban trait is compensated by another. Furthermore, size is also a factor; for instance, the bigger the town the less important the market square (as reflected in this study's methodology). Also, this 'failing to meet an urban level' is a result of a synthetically devised, very distinct threshold that excludes settlements that *almost* reach it.

In conclusion, a preponderance (80 %) of the restituted towns display a full set of morphological features, whereas only 24 % of the non-restituted towns do. By allowing for some more latitude, i.e. deeming a failure to meet an urban minimum in *one* of the three studied variables as acceptable, a total of 97.6 % of the restituted towns and 65.3 % of the non-restituted towns (128) would classify as sufficiently urban (of the latter group, more than half of the towns also meet the demographic minimum[42]). This would suggest that restitutions in Poland are conducted largely in accord with the towns' morphological urbanity status; at the same time, there are still quite many towns that could be classified as urban as far as morphology is concerned. On the other hand, the recent (2010s) granting of urban status to some dubiously (morphologically) urban towns signals lack of consistency and adequate supervision in governmental evaluations today. Such proceeding may entice some even more dubiously urban towns to apply for urban status and then either contaminate the Polish concept of urbanity (if granted) or cause disappointment (if denied). This would support the hypothesis formulated in chap. 1.5.

7.4. Morphology vs. overall urbanity

In order to verify how morphology compares to other aspects of urbanity, I have used Sokołowski's summary index of urbanity' (subject of his dissertation (1999)), which is a complex calculation based on four subscale indices: size, infrastructure, centrality and function. Sokołowski's indices provide a valuable broadening of the scope of this study, as urbanity is not merely a morphological concept but a synergy of many other attributes. Interestingly, Sokołowski has oftentimes lamented over the lack of the morphological aspect in his summary index; reciprocally, the proposed methodology may prove a potential complement to his index. In two of his recent articles dedicated to the level of urbanity of degraded (and restituted) towns, Sokołowski (2011a; 2011b) presents statistical data based on indices devised for his doctoral thesis (1999). These, together with the data presented for some towns (both degraded and restituted) in the published dissertation itself (1999), as well as some unpublished data received from Sokołowski by e-mail[43] (cf. Dymitrow [2010] 2012) render a set of 70 towns for which there are both summary indices of urbanity (Sokołowski) *and* morphological indices (Dymitrow)[44]. This number amounts for 22.4 % of the studied towns[45], of which 41.4 % are rural and 58.6 % are urban (of the latter group, most are newly restituted towns). Such a share could be regarded as fairly large and sufficiently varied for the sake of a meaningful comparison.

Since Sokołowski's index ranges between 0 and 100, it becomes directly comparable with the morphological index proposed in this study. However, there was one methodological discrepancy that needed adjustment. Sokołowski's index is based on all (2.939) settlements in Poland ranging from 1.000 to 10.000 inhabitants (the Polish rural-urban continuum), where top index values (100) were given to settlements representing the highest intensification of each studied subscale attribute of urbanity. The proposed morphological index, on the other hand, has an embedded 'contextual top marker' so that morphological structures exceeding the context of *small* towns (i.e. more than 5.000 inhabitants, cf. chap. 4.4.2) could be differentiated (index values above 100 denote such structures). This means that in comparison to Sokołowski's index, the morphological index values would be overly inflated. Therefore, for this particular comparison, the index had to be adjusted proportionally to the highest morphological index value for any town in the studied set with a population up to 10.000 inhabitants; this highest value was designated a new value (100) and the remaining values were transformed accordingly[46]. Following formula shows this calculation:

[42] Towns that reach morphological minimums in two of the three variables and additionally sufficient demography but did not make the list in table 7.32 are: Piątek (V_{morf} 76,8), Lututów (70,5), Zaklików (69,8), Wiskitki (67,5), Radoszyce (63,9), Szczerców (63,3), Chocz (61,6), Łagów (60,5), Brudzew (59,0), Stanisławów (58,3), Okuniew (57,4), Kurów (57,3), Iwaniska (56,3), Modliborzyce (56,2), Jeżów (55,8), Widawa (55,4), Wohyń (55,0), Miedzna (53,3), Piszczac (53,3), Siennica (52,8), Władysławów (52,8), Skulsk (52,4), Kamionka (51,7), Kodeń (51,1), Baranów (49,6), Gowarczów (49,5), Grzegorzew (49,3), Oleśnica (47,8) and Wisznice (45,4).

[43] For Babiak, Brudzew, Chocz, Grzegorzew, Koźminek and Skulsk.

[44] Note that Sokołowski has only calculated data for settlements above 1000 inhabitants. Although he also provides data for towns outside of the scope of the 1869-70 reform, these have, for obvious reasons, been excluded from this comparison.

[45] Taking into account only Polish and independent units, i.e. a total of 313 units.

[46] Note that this transformation is meaningful only in the context of this particular comparison, so that the absolute index values in Sokołowski's index and the morphological index would have a similar weight impact. In regard to analyses of e.g. potential restitution, the new transformed values should not be used, as they in this form appear more deflated than they actually are.

$$V_{morf(a)} = \frac{\sqrt{V_{morf}}}{\sqrt{V_{morf(max)}}} \times 100 \qquad (9)$$

where:
$V_{morf(a)}$ = adjusted version of the morphological index
V_{morf} = original version of the morphological index
$V_{morf(max)}$ = maximum value in the morphological index for towns up to 10.000 inhabitants (i.e. Praszka, value 146,68).

Tab. 7.33. Comparison between Sokołowski's summary urbanity index based on size, infrastructure, centrality and function ('Urb') and this study's adjusted morphological index ($V_{morf(a)}$) in terms of deviation (Dev) between the two indices; based on 70 towns for which there were comparable data. **Bold town names** = formal towns, plain town names = rural units.

1	2	3	4	1	2	3	4	1	2	3	4
Town	**Urb.**	$V_{morf(a)}$	**Dev**	**Town**	**Urb.**	$V_{morf(a)}$	**Dev**	**Town**	**Urb.**	$V_{morf(a)}$	**Dev**
Działoszyn	80	86	6	**Józefów**	61	65	3	**Czyżew**	53	67	14
Radziejów	78	85	7	**Wolbórz**	61	63	2	Koźminek	52	67	14
Ożarów	76	91	15	Szczerców	61	66	5	**Nowogród**	52	69	18
Małogoszcz	72	81	9	**Łaszczów**	60	57	-3	**Stawiski**	51	77	26
Drzewica	69	79	10	Kołbiel	60	64	4	**Frampol**	51	64	13
Tarnogród	66	69	3	Piątek	59	72	13	Skulsk	50	60	9
Wierzbica	66	78	12	**Skała**	59	70	11	**Nw. Brzesko**	50	60	10
Myszyniec	65	68	2	Kikół	58	72	14	Brudzew	48	63	15
Lubraniec	65	79	14	**Chodecz**	58	70	12	**Koziegłowy**	48	63	16
Drobin	64	76	12	Burzenin	58	67	9	Grabów	47	65	18
Kazimierz Bk.	64	79	15	**Krasnobród**	58	65	8	Chocz	46	65	19
Piotrków Kuj.	64	76	12	**Bieżuń**	57	65	8	Lutomiersk	45	68	23
Annopol	64	83	19	Babiak	57	62	5	**Rajgród**	45	66	21
Kowal	63	75	12	Widawa	57	61	4	Grzegorzew	45	58	13
Izbica Kuj.	63	74	11	**Rzgów**	57	68	11	**Brok**	45	60	15
Rejowiec	63	75	12	**Lipsk**	57	73	16	**Kunów**	44	71	27
Opatówek	63	75	12	**Bodzentyn**	56	66	10	**Wąchock**	43	65	22
Osięciny	63	68	6	Rozprza	56	61	5	**Osiek**	43	58	15
Kurów	63	62	0	**Lubień Kuj.**	56	69	13	Służewo	42	61	19
Pilica	62	75	13	Jeżów	56	62	6	Dąbrowice	38	61	23
Lututów	62	69	7	**Skępe**	56	73	17	**Wyśmierzyce**	38	62	24
Piaski	62	73	11	**Kamieńsk**	53	67	14	Białaczów	37	64	27
Tarczyn	61	86	24	Ujazd	53	67	14	Pławno	34	64	30
								Raciążek	32	60	28

Source: Sokołowski (1999; 2011a; 2011b; e-mail correspondence)

Tab. 7.34. Deviations (Dev) between Sokołowski's summary urbanity index based on size, infrastructure, centrality and function and this study's adjusted morphological index ($V_{morf(a)}$), expressed in point differences (urbanity minus morphology); based on 70 towns for which there were comparable data. Bold town names = urban entities, plain town names = rural entities. Inh = population numbers as of 2009.

1	2	3	1	2	3	1	2	3	1	2	3
Town	**Dev**	**Inh**	**Town**	**Dev**	**Inh**	**Town**	**Dev**	**Inh**	**Town**	**Dev**	**Inh**
Pławno	30	1191	**Lipsk**	16	2643	**Kowal**	12	3565	**Krasnobród**	8	3151
Raciążek	28	1704	**Brok**	15	1963	Wierzbica	12	4223	Lututów	7	2264
Kunów	27	3303	**Ożarów**	15	5001	Opatówek	12	4077	**Radziejów**	7	6221
Białaczów	27	1254	Brudzew	15	1636	**Piotrków Kuj.**	12	4590	**Działoszyn**	6	6535
Stawiski	26	2526	Kazimierz Bk.	15	4419	**Drobin**	12	3014	Osięciny	6	3017
Tarczyn	24	3997	**Osiek**	15	2013	**Chodecz**	12	1970	Jeżów	6	1322
Wyśmierzyce	24	928	Koźminek	14	1995	**Skała**	11	3677	Rozprza	5	1638
Dąbrowice	23	924	**Czyżew**	14	2295	**Rzgów**	11	3349	Szczerców	5	2932
Lutomiersk	23	1559	**Kamieńsk**	14	2870	**Piaski**	11	2695	Babiak	5	1877
Wąchock	22	2890	Kikół	14	2275	**Izbica Kuj.**	11	2852	Widawa	4	1321
Rajgród	21	1775	**Lubraniec**	14	3338	**Bodzentyn**	10	2349	Kołbiel	4	1890
Chocz	19	1812	Ujazd	14	1730	**Drzewica**	10	4185	Józefów	3	2653
Annopol	19	2720	**Lubień Kuj.**	13	1411	**Nw. Brzesko**	10	1651	**Tarnogród**	3	3557
Służewo	19	1261	Piątek	13	2026	**Małogoszcz**	9	4094	**Myszyniec**	2	3106
Grabów	18	1174	Grzegorzew	13	1952	Burzenin	9	1027	**Wolbórz**	2	2407
Nowogród	18	2189	**Pilica**	13	1959	Skulsk	9	1513	Kurów	0	2753
Skępe	17	3666	**Frampol**	13	1506	**Bieżuń**	8	1956	**Łaszczów**	-3	2211
Koziegłowy	16	2479	Rejowiec	12	2149						

Source: My calculation based on original material and data from Sokołowski (1999; 2011a; 2011b; e-mail correspondence). Population data from GUS (2009).

The results show that there is a strong significant correlation between morphology and summary urbanity (Sokołowski), 0.701 (significance 0.0 at the 0.01 level). Table 7.33 shows index values for both variables regarding particular towns, but also elucidates the discrepancies between the two variables, expressed as point deviations (urbanity minus morphology). Positive values denote situations when a town's morphology is more developed then the town's other aspects of urbanity, while negative values denote situations where a town's summary urbanity overrides the urban impact of morphology. The larger the number (either negative or positive), the larger the discrepancy between morphology and the remaining attributes of urbanity.

Table 7.34 stresses these deviations; the towns are arranged from the most to the least deviating. One notable observation is that in all but one cases (Łaszczów), the values for morphology are higher than those of summary urbanity, indicating that morphology is an important urban asset of towns degraded during the reform of 1869-70. Nevertheless, there are significant variations (from -3 to 30 points) in the analyzed set, with as many towns above as below the mean point deviation (12.9) No clear trends between the analyzed sets in terms of size, administrative status or the absolute urbanity level can be observed, as all possible town variants figure at either end of this continuum. This, in turn defines morphology as an 'unpredictable' aspect of urbanity, one that cannot be deduced simply from statistical data available for supplementary variables. What is clear, however, is that some towns undoubtedly benefit from their more developed morphology when other important aspects of their urbanity are subdued. This could explain the occasional restitutions of some very small and not fully urban towns, but also the retention of some idem towns by their formal urban status; in other words, morphology is a powerful urbanity-defining tool that may easily override other, less visible traits.

7.5. Full list of results

The extended table 7.35 contains a full report of all index values calculated for the towns studied in this thesis. The only towns not included in the table are the incorporated units and the non-Polish towns, for which a full set of data acting as a basis for the calculated indices could not be obtained (the more limited results for these settlements are instead presented in chapters 7.3.8. and 7.3.9 respectively). Thus, the table contains data for all independent settlements in Poland, both degraded towns (formally rural) and restituted towns (formally urban), all in all 312 units[47].

The list is arranged by decreasing summative morphological index values (V_{morf}) in column 5, along with increasing ranks for this particular index (column 6). For the sake of clarity, restituted towns are displayed in shadowed cells and degraded towns are shown in white cells. Such a design permits a clear visual overview of the internal arrangement of the different towns in regard to the urban-specific intensity of their morphology. As we can see, the most morphologically urban towns are the restituted ones, while the least morphologically urban are the degraded towns. In the middle section, there is a distinct reshuffle of towns regarding administrative status, and the aforementioned extremes are also explicitly prominent (i.e. rural units with extremely high values and vice versa). Such a structure assumes the configuration of a rural-urban continuum. Previous studies have shown occurrences of continuum structures in various geographic contexts (e.g. Sokołowski 1999; Szmytkie 2003; Dahly & Adair 2007), also in regard to heterogeneous groups of degraded towns (Drobek 1999). This study stipulates that continual morphological configurations occur just as much in sets of towns with *similar* morphogenetical backgrounds and historical circumstances (cf. chapters 1.7.3. and 5.4)

Furthermore, columns 2, 3 and 4 in tab. 7.35 display values for the three subscale indices: graph (V_{grf}), physiognomy (V_{phy}) and market square (V_{msm}) while column 9 shows scores for the demographic index (V_{dem}), where value 100.0 equals 5000 inhabitants. Finally, column 7 displays mean values for the summative morphological index and the demographic index (V_{tot})[48], along with column 8 displaying the new ranking for this aggregate index.

The addition of the ranking columns permits a much easier comparison between scores of particular towns in regard to morphology only and to morphology in combination with demography (i.e. from a restitution perspective). This implies that if the ranks of both column 6 and 8 are similar then the town corresponds to a normal 'model town' in its specific class. Conversely, towns with large discrepancies are either too small for restitution[49] than what their physical container would suggest, or morphologically underdeveloped in comparison with their size. The values can also be analyzed against a backdrop of calculated threshold values for the different levels of urbanity shown in tab. 7.3.3. Underlined bold values should be interpreted as morphologically 'fully urban', bold values as 'sufficiently urban' (to be formally urban) and values in plain text as 'insufficiently urban' (to be formally urban).

Tab. 7.35 (next two pages). Full list of results obtained by the use of methodology devised and assembled for the purpose of this thesis. For explanation of the abbreviations in the headings, confer the text above (chap. 7.5).

[47] The values for Grocholice are included in Bełchatów's values, and those of Granica's in Gniewoszów's (save for the market square).
[48] I.e. $(V_{morf} + V_{dem}) / 2$
[49] Alternatively, retention of urban status in the case of formal towns.

Town	V_{grf}	V_{phy}	V_{msm}	V_{mrf} & Rank		V_{tot} & Rank		V_{dem}	Town	V_{grf}	V_{phy}	V_{msm}	V_{mrf} & Rank		V_{tot} & Rank		V_{dem}
1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
Bełchatów	260,3	216,2	66,4	234,2	1	294,4	1	354,7	Piaski	78,5	95,2	55,9	78,6	80	76,0	91	73,4
Czeladź	185,5	226,5	85,9	198,0	2	230,6	2	263,2	Żarki	113,9	46,9	73,3	78,5	81	86,5	63	94,6
Zambrów	141,3	231,1	78,0	179,0	3	197,9	6	216,7	Kazimierz Dolny	83,9	56,1	100,0	78,0	82	82,3	71	86,6
Piaseczno	220,0	147,1	77,8	176,5	4	225,3	3	274,1	Chorzele	90,7	67,8	73,9	77,8	83	77,6	83	77,5
Grodzisk Maz.	198,9	152,0	83,3	169,3	5	203,9	4	238,6	Skępe	100,3	55,8	76,9	77,8	84	81,7	73	85,6
Wyszków	203,4	145,1	69,5	167,3	6	201,2	5	235,1	Końskowola	95,6	61,2	75,2	77,3	85	71,9	102	66,5
Grajewo	175,0	164,6	62,3	162,7	7	188,2	7	213,8	Lipsk	75,2	111,8	31,9	77,1	86	74,9	93	72,7
Aleksandrów Łd.	168,1	169,2	50,2	160,8	8	182,9	8	205,0	Piątek	60,0	116,7	53,9	76,8	87	70,2	106	63,7
Busko-Zdrój	160,5	167,7	77,6	152,6	9	170,4	9	188,2	Józefów n. Wisłą	59,5	105,7	64,1	76,4	88	60,7	149	44,9
Praszka	104,5	221,2	81,2	146,7	10	138,5	14	130,3	Zagórów	88,1	61,8	79,8	76,2	89	76,8	86	77,4
Jędrzejów	162,6	144,5	73,2	142,9	11	163,2	10	183,5	Raczki	77,8	81,4	68,4	75,8	90	72,2	101	68,6
Żychlin	104,0	210,3	73,2	140,5	12	138,0	15	135,5	Kikół	67,2	97,2	62,3	75,5	91	71,5	103	67,5
Konstantynów Łd	156,9	138,3	58,3	135,7	13	162,1	11	188,5	Przerośl	65,4	82,0	77,2	74,9	92	57,8	162	40,8
Wolbrom	145,1	148,7	89,0	135,5	14	135,6	17	135,6	Pyzdry	92,2	55,4	77,0	74,7	93	78,0	81	81,4
Poddębice	126,3	163,1	74,2	130,7	15	128,5	19	126,3	Stawiszyn	59,4	83,7	78,7	74,0	94	65,2	124	56,5
Połaniec	126,1	156,5	73,6	127,9	16	130,0	18	132,0	Ślesin	97,7	48,5	75,7	73,8	95	76,6	89	79,3
Włoszczowa	144,3	125,3	77,6	127,2	17	137,9	16	148,6	Kunów	82,4	81,6	51,1	73,8	96	77,5	84	81,3
Głowno	161,7	110,2	68,0	126,9	18	150,9	12	175,0	Tuliszków	102,5	43,7	75,2	73,7	97	78,4	80	83,2
Wieruszów	134,7	130,9	80,5	122,5	19	128,2	20	134,0	Skała	99,2	33,0	89,0	72,2	98	79,0	79	85,8
Ożarów	97,7	173,4	65,0	121,6	20	110,8	33	100,0	Złoczew	81,1	82,1	45,6	72,0	99	77,7	82	83,3
Kłobuck	153,0	88,9	74,2	114,8	21	139,3	13	163,9	Ćmielów	88,2	54,7	72,3	71,7	100	76,3	90	80,9
Kłodawa	106,4	140,3	79,7	114,7	22	116,7	25	118,6	Czerwińsk n.W.	73,7	63,6	77,7	71,7	101	59,6	152	47,6
Wysokie Maz.	119,8	130,9	69,8	114,4	23	126,9	21	139,5	Przedecz	56,0	80,9	77,7	71,5	102	66,1	120	60,7
Przysucha	94,4	149,4	81,7	114,0	24	114,7	27	115,5	Chodecz	71,7	72,1	69,5	71,1	103	66,9	117	62,8
Proszowice	104,2	141,7	75,2	113,5	25	112,8	29	112,0	Nowe Miasto	84,2	48,5	79,8	70,8	104	64,0	134	57,1
Krośniewice	98,3	159,3	70,1	113,2	26	105,0	40	96,9	Nowogród	90,7	80,4	41,0	70,7	105	68,4	112	66,2
Żuromin	126,3	125,1	58,6	112,4	27	123,8	23	135,2	Lubień Kujawski	65,9	81,2	65,0	70,7	106	61,9	140	53,1
Łosice	119,3	121,0	68,7	110,0	28	116,4	26	122,9	Lututów	55,5	76,7	79,4	70,5	107	68,9	110	67,3
Opole Lubelskie	123,1	110,7	75,5	108,7	29	122,4	24	136,1	Zaklików	102,5	33,7	74,5	69,8	108	73,9	96	78,0
Karczew	126,3	105,9	59,1	108,5	30	125,9	22	143,2	Parzęczew	59,0	84,0	65,4	69,4	109	56,1	174	42,8
Działoszyn	134,4	104,0	64,1	108,3	31	111,3	32	114,3	Tarnogród	104,8	42,9	55,8	69,1	110	76,7	87	84,3
Tarczyn	81,1	150,3	84,5	107,4	32	98,4	44	89,4	Chodel	63,2	63,6	79,7	68,8	111	61,7	143	54,7
Nowe Miasto n.P	92,9	143,8	76,9	107,3	33	98,7	43	90,2	Osięciny	83,8	69,6	46,8	68,7	112	73,2	97	77,7
Radziejów	119,1	105,9	80,4	106,2	34	108,9	35	111,5	Rzgów	96,5	50,2	56,0	68,7	113	75,3	92	81,8
Lipsko	97,7	129,3	74,2	105,7	35	108,5	36	111,3	Lutomiersk	87,5	56,2	60,0	67,9	114	61,9	141	55,8
Białobrzegi	98,8	129,9	67,1	105,0	36	113,8	28	122,6	Skaryszew	96,8	34,6	72,5	67,5	115	79,4	77	91,2
Tuszyn	137,8	90,8	56,3	102,8	37	111,8	30	120,9	Wiskitki	48,3	79,2	75,1	67,5	116	60,1	151	52,7
Annopol	73,6	141,0	82,8	100,8	38	87,3	59	73,8	Izbica	72,1	55,1	75,0	67,4	117	64,5	128	61,7
Bełżyce	109,8	100,9	77,2	99,8	39	109,2	34	118,6	Stopnica	70,5	54,3	76,7	67,1	118	59,3	156	51,4
Iłża	86,9	121,8	78,4	99,2	40	101,6	42	103,9	Raków	83,4	40,7	77,1	67,1	119	57,7	163	48,4
Pajęczno	118,9	94,4	66,4	98,7	41	108,1	37	117,5	Ryczywół*	58,4	95,0	47,3	66,9	120	52,1	221	37,3
Sulejów	147,6	67,4	61,2	98,3	42	105,8	39	113,3	Koszyce	66,7	42,9	91,1	66,9	121	53,9	200	40,8
Sławków	129,9	71,4	83,4	97,3	43	108,1	38	118,8	Myszyniec	95,7	49,5	51,2	66,9	122	72,9	98	78,8
Małogoszcz	70,5	134,6	81,8	97,0	44	93,8	48	90,5	Czyżew	78,5	45,9	75,2	66,5	123	67,1	115	67,7
Zwoleń	95,6	103,5	66,7	93,1	45	111,6	31	130,0	Burzenin	66,3	59,7	73,5	66,5	124	55,9	181	45,3
Kazimierz Biskupi	108,5	94,3	66,7	92,2	46	93,1	50	94,0	Jedlińsk	67,2	55,9	75,9	66,3	125	62,3	137	58,2
Bychawa	91,7	109,2	58,0	92,1	47	98,3	45	104,6	Kamieńsk	84,1	55,0	57,1	66,2	126	71,0	104	75,8
Koniecpol	105,3	85,2	77,0	91,7	48	103,0	41	114,3	Wodzisław	63,2	62,1	72,7	66,0	127	57,7	164	49,5
Siewierz	145,1	44,6	78,5	91,7	49	98,3	46	104,9	Klimontów	69,2	48,5	79,4	65,7	128	64,8	125	64,0
Raciąż	85,9	113,0	69,4	91,4	50	94,7	47	98,0	Jadów	62,7	72,3	61,5	65,5	129	55,9	182	46,3
Drzewica	90,7	109,1	67,7	91,4	51	91,4	51	91,5	Bielsk	89,8	45,9	57,7	65,1	130	68,4	113	71,7
Serock	92,0	98,7	78,8	90,9	52	89,2	57	87,4	Sawin	67,2	66,2	61,8	65,1	131	65,5	123	66,0
Lubraniec	86,5	104,6	77,3	90,7	53	86,2	66	81,7	Olsztyn	90,4	46,7	54,9	64,9	132	69,1	108	73,3
Kleczew	93,5	98,2	74,4	90,2	54	91,2	52	92,1	Koźminek	66,3	59,8	68,6	64,9	133	64,0	131	63,2
Biała Rawska	83,5	115,7	64,0	90,1	55	86,3	65	82,5	Ujazd	78,9	44,5	71,3	64,9	134	61,9	142	58,8
Wierzbica	75,6	128,9	52,7	89,1	56	90,5	55	91,9	Pacanów	75,2	45,2	73,8	64,7	135	56,3	173	47,8
Słomniki	86,2	99,7	73,3	87,7	57	90,8	53	93,9	Przyrów	62,3	45,7	85,6	64,6	136	57,0	168	49,4
Stryków	93,5	100,3	62,0	87,6	58	86,5	64	85,4	Filipów	61,8	80,0	51,6	64,5	137	65,9	121	67,3
Różan	99,2	84,7	74,6	87,3	59	81,3	74	75,2	Bodzentyn	80,3	35,1	77,7	64,4	138	66,5	118	68,5
Stawiski	83,2	110,4	60,4	87,1	60	79,1	78	71,1	Skalbmierz	74,4	42,0	76,5	64,3	139	58,3	159	52,3
Uniejów	97,4	93,4	63,6	86,9	61	82,7	70	78,4	Radoszyce	90,4	33,4	69,3	63,9	140	72,8	99	81,8
Łaskarzew	126,1	57,4	71,1	86,2	62	93,1	49	99,9	Mstów	74,1	44,7	72,4	63,7	141	61,5	145	59,3
Piotrków Kuj.	95,9	78,0	81,8	85,6	63	90,7	54	95,8	Janów Podlaski	72,8	62,8	52,2	63,7	142	68,8	111	73,9
Stoczek Łukowski	95,3	92,1	62,2	85,3	64	80,1	76	74,9	Sarnaki	61,4	75,5	53,9	63,6	143	55,9	179	48,2
Sompolno	89,8	85,4	78,7	85,2	65	85,8	67	86,3	Rajgród	59,5	79,2	51,6	63,5	144	61,5	144	59,6
Szczekociny	98,6	74,9	80,6	85,1	66	87,2	61	89,2	Szczerców	86,5	33,0	73,2	63,3	145	70,0	107	76,6
Drobin	88,1	94,1	67,2	84,8	67	81,2	75	77,6	Mordy	69,2	78,5	41,7	63,1	146	62,2	138	61,3
Szadek	69,2	105,1	78,3	84,2	68	74,3	95	64,4	Książ Wielki	70,9	57,5	60,8	63,0	147	52,7	213	42,4
Kowal	91,6	77,0	81,2	83,5	69	84,0	69	84,4	Dobra	61,9	55,6	71,6	63,0	148	59,4	154	55,8
Golina	115,9	60,5	70,4	83,5	70	89,5	56	95,5	Bodzanów	73,6	41,0	73,1	62,6	149	56,3	172	50,1
Rejowiec	71,3	128,9	50,0	83,4	71	74,5	94	65,6	Krasnobród	86,2	36,4	65,9	62,5	150	71,0	105	79,4
Opatówek	89,5	90,6	63,6	83,0	72	86,6	62	90,3	Szydłów	74,1	30,4	82,8	62,4	151	54,6	193	46,8
Pilica	85,9	74,4	88,2	82,8	73	72,7	100	62,6	Odrzywół	64,0	40,3	82,6	62,3	152	54,8	191	47,4
Nadarzyn	132,3	45,4	63,6	82,2	74	85,0	68	87,8	Bakałarzewo	64,1	80,6	41,7	62,1	153	51,2	227	40,3
Mogielnica	83,1	84,9	75,2	81,7	75	76,7	88	71,7	Wąchock	65,9	48,2	75,8	62,1	154	69,1	109	76,0
Ogrodzieniec	109,6	72,4	49,6	80,0	76	87,6	58	95,2	Grabów	59,5	58,0	68,6	62,0	155	55,2	187	48,5
Kock	92,6	71,4	72,6	79,5	77	82,3	72	85,1	Bolesławiec	69,6	45,5	70,8	61,9	156	55,7	183	49,4
Izbica Kujawska	85,5	82,6	66,9	79,5	78	77,5	85	75,5	Bieżuń	70,1	52,9	62,7	61,9	157	62,2	139	62,5
Krzepice	107,4	48,1	82,4	79,0	79	87,2	60	95,4	Wiślica	56,0	47,9	81,3	61,7	158	47,3	254	32,9

Town	V_{grf}	V_{phy}	V_{msm}	V_{mrf} & Rank		V_{tot} & Rank		V_{dem}	Town	V_{grf}	V_{phy}	V_{msm}	V_{mrf} & Rank		V_{tot} & Rank		V_{dem}
1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
Kosów Lacki	**70,9**	**46,9**	**67,3**	**61,7**	*159*	64,2	*130*	**66,7**	Bielawy	44,6	**44,9**	**63,3**	50,9	*238*	42,8	*274*	34,8
Chocz	**70,9**	37,0	**77,0**	**61,6**	*160*	60,9	*148*	**60,2**	Tarłów	57,0	32,1	**62,7**	50,6	*239*	47,0	*259*	43,4
Ostrów Lubelski	**79,6**	**63,4**	41,6	**61,5**	*161*	64,2	*129*	**66,9**	Michow	57,0	39,6	**55,2**	50,6	*240*	54,6	*192*	**58,7**
Lelów	**61,4**	42,7	**80,4**	**61,5**	*162*	54,4	*196*	47,3	Sobków	59,0	**49,1**	**43,4**	50,5	*241*	47,5	*251*	44,5
Włodowice	**68,5**	**56,1**	**58,8**	**61,1**	*163*	55,3	*186*	49,5	Bobrowniki k/L.	54,0	**44,9**	**52,4**	50,4	*242*	49,2	*244*	48,0
Józefów	**77,8**	**48,6**	**55,1**	**61,1**	*164*	66,9	*116*	**72,8**	Wilczyn	**63,6**	**44,0**	**43,5**	50,4	*243*	50,0	*233*	**49,7**
Janowo	56,0	**46,3**	**80,4**	**60,9**	*165*	53,3	*209*	45,8	Klwów	37,7	**47,6**	**65,0**	50,1	*244*	39,7	*287*	29,4
Adamów	**64,5**	**50,7**	**66,5**	**60,6**	*166*	63,4	*136*	**66,2**	Przytyk	**62,3**	28,1	**59,9**	50,1	*245*	47,3	*255*	44,5
Łagów	**72,1**	39,9	**69,6**	**60,5**	*167*	58,4	*158*	**56,4**	Inowłódz	**69,3**	34,0	**46,0**	49,8	*246*	45,8	*261*	41,9
Kołbiel	**80,0**	**45,3**	**55,9**	**60,4**	*168*	60,9	*147*	**61,5**	Parysów	44,6	31,9	**72,6**	49,7	*247*	48,3	*248*	47,0
Tyszowce	**70,5**	**48,8**	**61,5**	**60,3**	*169*	64,0	*133*	**67,7**	Baranów	**65,4**	34,6	**48,9**	49,6	*248*	53,8	*201*	**58,0**
Białaczów	**63,2**	**63,8**	**53,7**	**60,2**	*170*	55,2	*189*	**50,1**	Liw *	**68,0**	**45,0**	36,0	49,6	*249*	45,8	*263*	41,9
Pierzchnica	**67,1**	29,8	**83,4**	**60,1**	*171*	53,2	*211*	46,3	Gowarczów	**72,8**	21,4	**54,3**	49,5	*250*	51,5	*224*	**53,6**
Goraj	55,5	**55,0**	**69,7**	**60,1**	*172*	52,6	*215*	45,0	Jastrząb	52,9	31,6	**63,9**	49,5	*251*	48,8	*246*	48,1
Rychwał	**72,9**	33,7	**73,5**	**60,1**	*173*	64,7	*126*	**69,3**	Grzegorzew	**66,7**	37,9	**43,3**	49,3	*252*	55,9	*180*	**62,5**
Urzędów	**72,1**	40,0	**67,5**	**59,9**	*174*	53,2	*210*	46,5	Gniewoszów	54,4	35,5	**57,3**	49,1	*253*	42,3	*275*	35,6
Kurozwęki *	45,3	**75,5**	**58,6**	**59,8**	*175*	49,5	*239*	39,2	Markuszów	**64,1**	35,5	**47,6**	49,0	*254*	49,7	*237*	**50,5**
Frampol	**79,6**	37,4	**61,7**	**59,5**	*176*	57,2	*167*	**54,9**	Wizna	56,5	36,0	**53,9**	48,8	*255*	52,0	*223*	**55,3**
Turobin	**65,0**	**48,8**	**64,3**	**59,4**	*177*	52,4	*218*	45,5	Osiek	**71,3**	20,8	**53,9**	48,7	*256*	56,1	*175*	**63,5**
Pławno *	52,8	**50,6**	**74,6**	**59,3**	*178*	54,1	*198*	48,8	Wojsławice	40,7	34,8	**70,0**	48,5	*257*	53,0	*212*	**57,6**
Brudzew	**75,2**	42,9	**59,0**	**59,0**	*179*	58,1	*160*	**57,2**	Głowaczów	55,9	27,5	**61,7**	48,4	*258*	44,8	*266*	41,3
Sochocin	**79,2**	**44,2**	**53,7**	**59,0**	*180*	61,0	*146*	**63,0**	Gorzków-Osada	30,1	**44,5**	**69,9**	48,2	*259*	35,3	*302*	22,5
Koziegłowy	**77,1**	20,4	**79,0**	**58,8**	*181*	64,6	*127*	**70,4**	Mokobody	60,4	33,6	**50,0**	48,0	*260*	53,4	*206*	**58,9**
Ciepielów	53,9	**51,8**	**70,0**	**58,5**	*182*	49,3	*240*	40,1	Iłów	43,4	43,0	**57,4**	47,9	*261*	43,4	*273*	38,9
Stanisławów	**80,7**	33,4	**60,9**	**58,3**	*183*	57,5	*166*	**56,6**	Oleśnica	**66,3**	23,9	**53,1**	47,8	*262*	55,2	*188*	**62,6**
Krasnosielc	59,5	**48,5**	**66,5**	**58,1**	*184*	53,6	*204*	49,0	Radziłów	53,9	35,1	**53,3**	47,4	*263*	48,2	*249*	48,9
Daleszyce	**63,7**	**50,4**	**61,1**	**58,1**	*185*	67,7	*114*	**77,4**	Kurzelów *	**64,1**	19,0	**58,9**	47,3	*264*	48,0	*250*	48,7
Śniadowo	56,5	**60,5**	**56,2**	**57,8**	*186*	53,5	*205*	49,2	Łaszczów	**63,6**	39,0	38,9	47,2	*265*	56,8	*170*	**66,5**
Maciejowice	**61,8**	**45,3**	**66,0**	**57,7**	*187*	56,0	*176*	**54,3**	Jeziorzany	44,6	**49,8**	**46,6**	47,0	*266*	43,8	*272*	40,5
Wolbórz	**68,8**	42,7	**61,2**	**57,6**	*188*	63,5	*135*	**69,4**	Latowicz	49,5	40,5	**49,0**	46,3	*267*	50,0	*234*	**53,6**
Firlej	**78,5**	40,1	**53,7**	**57,4**	*189*	52,5	*216*	47,6	Krzeszów	59,4	24,0	**55,4**	46,3	*268*	42,2	*277*	38,2
Okuniew *	**77,1**	40,9	**54,2**	**57,4**	*190*	60,5	*150*	**63,5**	Przybyszew *	46,5	34,5	**57,5**	46,2	*269*	41,6	*278*	37,0
Kurów	**81,4**	43,8	**42,5**	**57,3**	*191*	65,7	*122*	**74,2**	Bolimów	56,0	20,3	**62,1**	46,1	*270*	44,7	*267*	43,3
Magnuszew	58,0	**52,3**	**60,4**	**56,9**	*192*	50,5	*231*	44,2	Iwanowice *	47,1	39,1	**52,1**	46,1	*271*	41,5	*279*	37,0
Osieck	**64,9**	39,0	**65,7**	**56,5**	*193*	49,9	*235*	43,3	Opatowiec	42,7	**44,5**	**50,5**	45,9	*272*	36,2	*299*	26,4
Nowa Brzeźnica	**66,7**	**46,3**	**55,8**	**56,3**	*194*	47,3	*256*	38,3	Gielniów	41,4	25,2	**70,8**	45,8	*273*	44,3	*268*	42,8
Solec nad Wisłą	**63,2**	31,4	**74,3**	**56,3**	*195*	50,6	*230*	44,9	Wisznice	**60,9**	21,0	**54,4**	45,4	*274*	50,5	*232*	**55,5**
Iwaniska	**68,0**	32,7	**68,2**	**56,3**	*196*	53,9	*199*	**51,5**	Wiżajny	50,0	**57,6**	26,8	44,8	*275*	44,0	*270*	43,2
Nowy Korczyn	**65,4**	33,4	**70,0**	**56,3**	*197*	51,2	*225*	46,2	Horodło	53,3	37,6	**42,8**	44,6	*276*	45,8	*262*	47,1
Modliborzyce	**66,3**	41,1	**61,3**	**56,2**	*198*	54,4	*197*	**52,6**	Kamieńczyk*	**74,8**	10,7	**48,1**	44,5	*277*	40,1	*284*	35,6
Stężyca	**88,5**	43,5	36,5	**56,2**	*199*	59,3	*155*	**62,5**	Nur	46,5	29,8	**56,7**	44,3	*278*	40,9	*282*	37,5
Babiak	**70,9**	**45,1**	**52,2**	**56,0**	*200*	58,7	*157*	**61,3**	Sobota *	33,8	**52,7**	**46,1**	44,2	*279*	37,9	*295*	31,6
Wyśmierzyce	**71,7**	31,7	**64,7**	**56,0**	*201*	49,6	*238*	43,1	Sławatycze	55,4	31,1	**43,7**	43,4	*280*	45,6	*265*	47,7
Janowiec	**61,4**	41,1	**65,5**	**56,0**	*202*	50,7	*229*	45,3	Cegłów	**68,9**	37,3	22,9	43,0	*281*	54,5	*194*	**66,1**
Jeżów	**64,5**	38,9	**64,0**	**55,8**	*203*	53,6	*203*	**51,4**	Czemierniki	52,8	34,3	41,1	42,7	*282*	48,4	*247*	**54,1**
Żarnów	60,0	39,4	**67,1**	**55,5**	*204*	52,2	*220*	48,8	Wąsosz	44,0	40,7	40,5	41,7	*283*	47,3	*253*	**52,9**
Dąbrowice	52,3	**48,2**	**65,7**	**55,4**	*205*	49,2	*245*	43,0	Lądek	41,9	23,9	**58,5**	41,4	*284*	41,3	*280*	41,2
Widawa	**77,4**	23,6	**65,1**	**55,4**	*206*	53,4	*207*	**51,4**	Komarów-Osada	44,6	16,1	**62,2**	41,0	*285*	42,3	*276*	43,6
Koprzywnica	**85,5**	16,8	**66,6**	**55,3**	*207*	64,0	*132*	**72,7**	Wolanów	47,8	26,9	**48,0**	40,9	*286*	43,8	*271*	46,7
Kiernozia	59,5	38,8	**67,3**	**55,2**	*208*	49,2	*243*	43,2	Czersk *	41,3	19,0	**61,5**	40,6	*287*	39,5	*289*	38,4
Janów	53,4	**50,6**	**61,1**	**55,0**	*209*	49,2	*242*	43,5	Sieciechów	42,7	36,4	41,5	40,2	*288*	37,4	*297*	34,7
Wohyń	**66,7**	40,2	**58,0**	**55,0**	*210*	59,6	*153*	**64,3**	Waśniów	37,0	19,3	**63,2**	39,8	*289*	34,9	*303*	29,9
Sienno	47,8	**52,2**	**64,9**	**54,9**	*211*	49,3	*241*	43,7	Brdów*	48,9	21,4	**48,5**	39,6	*290*	40,2	*283*	40,9
Rozprza	**64,6**	**55,9**	**43,9**	**54,8**	*212*	56,0	*177*	**57,2**	Puchaczów	51,2	38,3	27,1	38,9	*291*	38,0	*294*	37,2
Sterdyń	54,4	**59,1**	**50,6**	**54,7**	*213*	47,2	*258*	39,6	Biskupice *	50,6	24,7	38,9	38,1	*292*	40,0	*285*	42,0
Łomazy	**67,5**	**47,8**	**48,1**	**54,5**	*214*	56,6	*171*	**58,8**	Uchanie	47,1	23,0	**43,1**	37,7	*293*	37,3	*298*	36,8
Żółkiewka	47,7	**72,6**	42,3	54,2	*215*	47,4	*252*	40,6	Bobrowniki k/R *	52,8	0,0	**60,1**	37,6	*294*	35,8	*300*	34,1
Wąwolnica	47,8	43,5	**70,9**	54,1	*216*	50,7	*228*	47,3	Kazanów	37,7	30,1	**44,8**	37,5	*295*	33,4	*305*	29,3
Sokoły	57,0	39,7	**65,4**	54,0	*217*	54,5	*195*	**55,0**	Goszczyn	38,5	16,1	**56,7**	37,1	*296*	39,3	*291*	41,4
Żarnowiec	**61,4**	28,8	**71,8**	54,0	*218*	45,7	*264*	37,4	Jarczów	36,1	**46,7**	28,4	37,1	*297*	32,3	*306*	27,6
Służewo *	46,0	**65,9**	**49,9**	53,9	*219*	52,1	*222*	**50,2**	Pawłów*	46,6	23,3	39,8	36,6	*298*	38,7	*292*	40,8
Bogoria	**61,8**	25,7	**73,8**	53,8	*220*	49,8	*236*	45,9	Tarnogóra *	47,1	25,7	36,3	36,4	*299*	39,8	*286*	43,3
Kazimierz *	**75,1**	37,2	**48,9**	53,7	*221*	46,2	*260*	38,7	Grabowiec k/Z.	46,4	30,6	31,4	36,1	*300*	39,6	*288*	43,1
Szreńsk	53,4	**57,3**	**49,6**	53,4	*222*	51,2	*226*	49,1	Serokomla	49,5	26,9	31,9	36,1	*301*	41,2	*281*	46,3
Miedzna	59,9	**46,0**	**54,0**	53,3	*223*	52,5	*217*	**51,6**	Lasocin *	42,0	23,7	38,3	34,7	*302*	30,1	*309*	25,6
Piszczac	**74,8**	30,1	**55,7**	53,3	*224*	66,1	*119*	**78,9**	Gliniany *	44,0	0,0	**56,8**	33,6	*303*	29,1	*311*	24,6
Secemin	53,3	41,1	**65,2**	53,2	*225*	52,3	*219*	**51,5**	Staw *	44,0	12,9	**43,2**	33,4	*304*	33,6	*304*	33,7
Konstantynów	59,4	38,4	**61,6**	53,1	*226*	53,4	*208*	**53,6**	Andrzejewo	52,8	0,0	**46,6**	33,1	*305*	38,2	*293*	43,3
Siennica	60,0	**45,3**	**53,2**	52,8	*227*	58,0	*161*	**63,1**	Orchówek *	39,2	31,0	27,8	32,7	*306*	39,3	*290*	45,9
Będków	51,8	**62,0**	**44,7**	52,8	*228*	44,1	*269*	35,5	Kuczbork-Osada	25,1	24,9	**46,4**	32,1	*307*	27,9	*312*	23,7
Raciążek	**68,0**	**45,0**	**45,3**	52,8	*229*	55,6	*184*	**58,4**	Kryłów *	40,6	27,8	27,7	32,0	*308*	29,4	*310*	26,7
Brok	**97,4**	22,4	38,2	52,7	*230*	57,7	*165*	**62,7**	Osmolin *	31,1	26,4	37,8	31,8	*309*	30,4	*307*	29,1
Nowe Brzesko	60,0	27,6	**70,2**	52,6	*231*	55,0	*190*	**57,5**	Horodyszcze *	**63,6**	0,0	29,3	31,0	*310*	35,7	*301*	40,4
Władysławów	**63,2**	40,1	**53,9**	52,4	*232*	55,4	*185*	**58,4**	Grabowiec k/L. *	46,5	0,0	**43,2**	29,9	*311*	30,3	*308*	30,7
Skulsk	**60,9**	36,5	**59,3**	52,2	*233*	53,6	*202*	**55,0**	Skrzynno *	39,3	11,5	38,5	29,8	*312*	26,7	*313*	23,6
Radzanów	41,3	**51,0**	**63,8**	52,1	*234*	47,2	*257*	42,4	Rossosz	41,3	21,4	22,6	28,4	*313*	37,5	*296*	46,5
Nowa Słupia	52,9	20,1	**82,8**	51,9	*235*	52,7	*214*	**53,4**									
Kamionka	**68,0**	28,1	**59,1**	51,7	*236*	56,9	*169*	**62,0**									
Kodeń	**67,1**	40,2	**45,9**	51,1	*237*	56,0	*178*	**60,9**									

Source: own calculations based on morphometry and statistics (GUS 2009)

8. Conclusions and discussion

8.1. Introduction

This chapter summarizes the most important conclusions drawn from the analysis of this study's results and puts them into a broader discussion on the efficacy of the Polish administrative system. The design of subchapter 8.2 is such that it recapitulates the research questions posited in chap. 1.6., followed by brief summaries and main conclusions. The first question corresponds to the intermediate (methodological) objective of this study[1] while questions 2–4 define the main objective[2]. Subchapter 8.3 reflects the general aim of this thesis[3] in a discussion on the problems the Polish administrative system faces, accompanied by suggestions for solutions in 8.4. Subchapter 8.5 revisits and resumes the notion of morphology as a dynamic concept and its feasibility of enhancing urbanity by current revitalizations. It is followed by suggestions for future research in 8.6, along with some final remarks (8.7–8.8) that complete this thesis.

8.2. Conclusions

Following are the main findings of this thesis. The questions are numbered as they appear in chapter 1.6.

1. While assessing morphological urbanity, can field observations be substituted by non-field methods?

The intermediate objective of this study is to assemble and devise an appropriate methodology for the task of investigating the consistency of the Polish rural-urban dichotomy in regard to the attribute 'urban morphology', which is considered as one of the most important constituents of urbanity in governmental evaluations today. The critique of this study is directed towards the singularity, extemporaneousness and subjectivity in the restitution process, resulting in approvals of some dubiously urban centers on the one hand, and denials of centers objectively more urban than many formal towns. The point of departure is such that consistency and relevance can only be achieved by comparison and reference, not only to previous approvals (many of them already blemished by arbitrariness and mismanagement), but also to future candidate cities. Comparison and reference, on the other hand, are only possible if there is a referential database based upon conformal methods of evaluation.

Consequently, the task of this study is to conduct a large-scale comparative inquiry on the matter (degraded towns vs. restituted towns) by complementing existing methods with new methodology that is more directly aimed at small traditional towns. Previous research on morphology's impact on *perceived urbanity* (in the context of the most elementary form of urban-type settlements) has been rather limited due the alleged subjectivity of morphology, most likely caused by its close association with architecture and urban design[4]. My assumption is such that although morphology may be an attribute of urbanity that is more subjective than others, it is nevertheless the result of specific cultural codes that are well-known to the general public and which in turn are associated with certain visual schemata. I argue that these schemata extend beyond the mere scope of 'unquantifiable beauty' and can indeed be deconstructed as any other physical set of elements.

While methods for assessing morphology's two main pillars *town plan* and *physiognomy* can be derived from related studies, there are no similarly effective methods aimed at *market squares*. Seeing market squares as the most important commercial, social, cultural, functional and symbolic hubs of small towns (and often their only urbanized area), such dearth is unfortunate. This is particularly important given that market squares come in a huge variety of states, ranging from fully urban to completely ruralized; this in turn has a significant impact on the degree of urbanity of the settlement as a whole. Drawing upon a wide range of cross-cultural theories as well as observations of current trends and practices in urban design (including field studies in 130 degraded towns), I propose a methodological approach that takes into account *form* (enclosure and legibility), *function* (historic and contemporary) and *size* of market squares in search for their urban denominators. Furthermore, with the intent to moderate the impact of subjectivity inherent to traditional field-based observations (including approximation-laden impreciseness and human error), I have resorted to satellite imagery and aerial photography as primary sources of data subject to both market square and town plan analyses. One exception is physiognomy, whose vertical nature (unobservable from above) necessitated the use of secondary data derived from alternative sources (statistics for household characteristics).

[1] I.e. to operationalize the 'morphological urbanity' criterion by assembling and devising an appropriate methodology for this task.
[2] I.e. to investigate to what degree the concept of urbanity – as conveyed by the Polish administrative system – corresponds to de facto conditions, and particularly so in regard to urban morphology.
[3] I.e. to expound, discuss, and possibly contribute to a deeper understanding of the concept of urbanity in Poland.
[4] Note, however, that even the 'objectively measurable' attributes of urbanity (such as centrality, infrastructure etc.) are in fact highly subjective, because the assembly of variables that make up the attributes' indices lies at the discretion of the researcher.

The new market square methodology (V_{msm}) was validated in the field by three observers (including myself) by subjectively assessing the level of visually perceived (i.e. non-measured) urbanity of 69 market squares of towns studied in this thesis. The correlation between perceived urbanity and the corresponding V_{msm} index was very high (0.845) and fairly consistent for all three observers (0.790, 0.778, 0.824 respectively). This in turn indicates that there is merit in the proposed methodology (supporting the hypothesis posed in chap. 1.5, 3rd point), which nevertheless should be refined further and validated by a larger number of observers[5]. Furthermore, visual in-field assessments of the different market square variables (integrity, compaction, composition and cohesion) showed that these can easily be substituted with non-field morphometry (cf. chap. 6.7.6). The obtained results confirm the expediency of using remote sensing within morphological studies and studies dedicated to measuring urbanicity (Taylor *et al* 2011; Rashed *et al* 2005; Tatem & Hay 2004; Weeks *et al* 2004; Donnay *et al* 2001). In particular, the results converge to Taylor *et al*'s (2011) correlation coefficient of 0.9, reassuring that '[t]he remote-assessment method provides (…) the capacity to assess the quality of large numbers of (…) [urban] spaces without the need for in-person visits, dramatically reducing the time required for environmental audits of public open space' (Taylor *et al* 2011: 105). Such approach is also much more cost-efficient.

The devised methodology has a number of drawbacks, many of which have been dealt with already in the design phase. However, some relatively minor flaws remain; particularly its lesser accuracy in the context of extremely non-urban morphologies, but also in connection with so-called 'urban theme parks' and in cases of extreme ground level differences (cf. chap. 6.7.8). The method is also noted for its immeasurability of architectural traits. My contention is therefore such that the method is a good starting point for general classifications, which nevertheless can benefit from complementary fine-tuning based on e.g. street-view photography.

2. What is the current morphological status of the studied towns?

Although historically homogenous, the studied 336 reform towns are not a uniform group in terms of population. Some restituted (i.e. formal) towns have long exceeded the contextual top maker for a 'small traditional town' – 5000 inhabitants (cf. chap. 7.3.2), while some rural (i.e. still-degraded) towns are so small that they cannot realistically be considered urban in any other sense than strictly morphogenetical[6]. Much more meaningful is therefore an analysis of only those settlements that fall within the population range of a rural-urban continuum, i.e. between the least populous formal town and the top marker pertinent to 'small towns', the latter automatically covering the largest of the rural towns. Such analytical delineation renders a group of 223 units.

Morphological index values for formally urban units are generally higher than those for rural units, but are much more subdued once the largest and smallest towns are removed. On the whole, urban mean values regarding town plan complexity (graph) (84.9) and summative morphology (75.6) are just beneath 20 units higher than the rural values (65.0 and 57.3 respectively); regarding physiognomy, urban values (71.7) are even more pronounced (rural mean 46.5). The least difference is to be found regarding market squares (67.9 for urban and 60.1 for rural units), implying that the market square is a morphological feature that is not only largely independent of administrative status, but also of a settlement's size (correlation 0.196 for urban and 0.214 for rural units). In terms of correlation between the different morphological variables, size and graph are very strongly correlated (0.927), which means that the bigger the town, the more complex its layout. The correlation between size and physiognomy is strong for urban units (0.773), but much weaker for rural units (0.389), indicating that multiple-family housing is a pronouncedly urban characteristic. For urban units, there is also a moderate correlation between graph and physiognomy suggesting that a growing town expands both horizontally and vertically, whereas in rural units, a developing town plan is mostly accompanied by single-family housing. The correlation between market squares and the remaining morphological features is weak, indicating that the market square is a fairly stable morphological feature that does not change in tandem with the spatial expansion and the physiognomic transformation associated with an 'urbanizing' town. Since town plan and physiognomy are two variables mimicking a settlement's demographic development, the addition of the independent variable 'market square' (as anticipated in chap. 1.5, 4th point) provides a new perspective to the morphological analysis of small towns.

An analysis of particular cases for the variables graph and physiognomy shows alarming results. Regarding graphs, in all population classes where both urban and rural units are represented, the value for the least developed graph of a formally urban town (here called 'urban graph') is *always* lower than the most developed graph of a formally rural town ('rural graph'), often significantly so. Some rural towns even surpass the 100-limit, falling outside the context of 'small traditional towns'. This implies that in regard to town plan complexity, there is no consistency between formal

[5] The remaining methods (regarding town plan and physiognomy) could not be tested in field (town plan is an aerial feature is unperceivable in field, while physiognomy would require tedious inventories of all the towns' buildings). However, these methods are more established and have been tested before. Additionally, I have conducted a somewhat improvised verification of the results based on findings from previous studies (7.3.4.), which generally suggests accuracy.

[6] The only reminder of their urban past is their highly residual – yet still perceivable – urban morphology.

urbanity and formal rurality when compared between towns of similar populations. Moreover, 100 % of 'urban graphs' within the continuum range have lower values than the most developed rural graph, while nearly 100 % of the rural graphs are more developed than the least developed urban graph. A quite similar pattern can be discerned regarding physiognomy. All in all, 93.8 % of the rural towns boast a physiognomy that is more urban than the least urban of formal towns (including 78.6 % of the tiny hamlets with less than 500 inhabitants), and the number is actually 100 % for towns of more than 1000 inhabitants. Contrarily, 100 % of formally urban towns up to 1999 inhabitants and as much as 96.2 % of towns between 2000 and 2999 inhabitants have less urban physiognomies than the most physiognomically urban yet formally rural town. All in all, 78.3 % of the formal towns have less urban physiognomies than the formally rural maximum value. Not only do these results confirm a clear continuum configuration of the studied set regarding both town plan complexity and physiognomic structure, they also suggest that the studied set is saturated with extremes. Moreover, the phenomenon is not incidental but prevails consistently throughout the whole rural-urban continuum. This indicates serious inconsistencies within the Polish rural-urban divide in this particular aspect.

As noted earlier, market squares depart from the pattern outlined above in that both formally urban and rural units display similar characteristics. This means that poorly urban squares can be found in large formal towns, and, conversely, highly urban squares can be found in small formally rural settlements. Departing from the hypothesis on morphology's ability to spawn an urban consciousness, it could be deduced that a perfectly urban square amidst a small and otherwise rural town may in fact 'trick' people into believing that their hometown is more urban than it actually is. Due to the crucial role of market squares in the formation of small-town urbanity, it is also interesting to study the overall quality of Polish squares in regard to the different variables that define it, and how it can be improved by revitalization. Summarily, the squares of the analyzed towns display a high degree of integrity and cohesion, i.e. a well-defined geometry that makes them identifiable as public squares. They are, however, much differentiated regarding compaction – the most urban trait of market squares – with squares of restituted towns being much more compacted than those of the non-restituted towns. In terms of composition, the majority of squares fall into the middle categories, with most squares displaying an inferior composition. Regarding the latter, especially the frequent occurrences of F-type squares (i.e. overt-dysfunctional with a pronounced presence of obscurity) signal that many squares are in acute need of a revitalization project in order to transform them into due urban spaces. Since altering a square's composition is the cheapest and easiest way to boost up a degraded square many towns are expected to gain in urbanity, as a result of the current revitalization hype in Poland. If this in turn can contribute to heightened urban consciousness, it may have two implications; on the one hand, it may speed up due restitutions of de facto urban towns, on the other, it may deceptively drag overly small and otherwise insufficiently urban towns into the restitution process, most likely resulting in a denial. It should therefore be noted though that urban characterization in the context of the smallest of towns should neither be exaggerated nor employed forcedly.

In conclusion, the studied set of towns shows an immense morphological differentiation. Particularly striking is the reshuffle of formally urban and rural units within its middle part, assuming the characteristics of a rural-urban continuum. Previous studies have shown occurrences of continuum structures in various geographic contexts (e.g. Sokołowski 1999; Szmytkie 2003; Dahly & Adair 2007), also in regard to heterogeneous groups of towns (Drobek 1999). This study stipulates that continual morphological configurations occur just as much in sets of towns with *similar* morphogenetical backgrounds and historical circumstances (cf. chap. 1.7.3). Not only do the findings of this work support the hypothesis posed in 1.5 (1st point); they also point to the necessity of individual scrutiny, especially in the context of contingent restitutions, and preferably by means of reductionist methods.

3. Which and how many degraded towns meet the morphological criteria for restitution?

Prognosticating towns eligible for restitution is not an easy task because it is difficult to pin down what the minimum standard for Polish urbanity actually is. There are two main problems. Firstly, current approvals of restitutions seem to depart significantly from the assumed official criteria, making it difficult to tell whether the criteria have become outdated or whether they are simply not followed. Secondly, the abandonment of the practice of degradation has retained some very small and questionably urban towns by their formal urban status; furthermore – departing from a static approach – it is impossible to tell whether the current level of urbanity of these towns was acceptable at the time of their restitution, or whether they gradually degraded over time. Therefore, a prognosis departing from the current levels of urbanity is not a very good point of reference; however, it is the only means for an objective comparison. At this point, a second reminder is necessary; morphology is only *one* attribute of urbanity, and cannot ensure restitution by itself. Nevertheless, the strong correlation (0.701) between this study's morphological index (V_{morf}) and Sokołowski's (1999) summative index based on four other attributes of urbanity (size, infrastructure, centrality and function) indicates that morphological scores can act as a more general analytical guide. Still, given morphology's permanence despite possible depopulation, morphology must be analyzed in tandem with population figures (cf. Drobek

1999); this is particularly important in that a morphologically urban yet underpopulated town cannot perform urban functions.

Starting off on a broader level, 75 % of the rural towns are larger than the smallest formal town in Poland (873 inhabitants), while 73 % display higher summative morphological values (V_{morf}) than the morphologically least urban formal town (V_{morf} 47.2). Such figures, although alarming, are not very representative, as they depart from extremes. Instead the lowest demographic threshold has been set to 1300 inhabitants (a minimum found in recent restitutions) and the lowest V_{morf} value has been calculated to 54.4 (cf. 7.3.3). In the light of these new threshold values, only 74 towns (38.7 %) reach the demographic threshold, while 96 towns (50.3 %) reach the morphological threshold. This shows that there is a surplus of morphologically urban towns in relation to towns that can be restituted on the basis of a sufficient population. More interesting is probably how many towns reach the level of minimum urbanity on both accounts (demography *and* morphology). There are in fact 49 such towns (25.6 %), a quite substantial number, with the largest amount of towns eligible for restitution found in the east (17) and the west (15), and much fewer in the south (9) and the north (8). Taking into account regional differences in regard to the overall number of degraded towns in these regions, the largest share[7] of such towns (38.5 %) is found in the west; fewer – at around one quarter each – in the north and east, and only 16.1 % in the south. Towns in the west tend to be larger and morphologically more developed. The east and the south are each other's antipoles, with eastern towns being generally larger but morphologically weaker, and southern towns being morphologically stronger but generally overly small-sized. The towns of the north assume moderate positions on both accounts. In a morphological sense, such distribution confirms the still existing regional differences between territories east and west of the Vistula River, the latter acting as a 'disintegrative trench' – a historically shaped barrier preventing equal development of the Polish space (cf. M.P. 2001 nr 26 poz. 432). Furthermore, the demographically stronger profile of the eastern towns can be explained by the high correlation between demography and centrality; in the east, where the urban network is most underdeveloped, many villages assume levels of centrality equaling those of small formal towns, despite being formally rural. On the other hand, their regionally conditioned less-developed urban morphology may actually be just the factor inhibiting them from an eventual restitution.

Designating towns eligible for restitution on account of their morphological predispositions can also be done by means of reaching minimum urban values *in all three variables* (graph, physiognomy and market square), thus displaying a more evenly distributed set of urban features. There are 47 such towns (24 %), of which only 33 are large enough for restitution. These 33 can be regarded as unquestionably eligible for restitution in regard to the examined variables (in comparison, the corresponding group of restituted towns accounts for 80.5 % and none of these is too small). However, taking into account ingrained morphogenetical variations amongst towns it would seem that meeting at least two morphological criteria would suffice for restitution; there are 128 (65.3 %) such towns whereof nearly half (61 towns) also meet the demographic minimum.

In conclusion, around 25 % of the degraded reform towns (circa 50) are eligible for restitution on both morphological and demographic grounds. Depending on the method, this number ranges between 17.3 % (33 towns) and 31.9 % (61 towns); and may be extended even further due to the constant inconsistencies within current restitutions. Furthermore, in response to Sokołowski's (1999) quest for verification of the morphological element when designating potential towns in Poland (cf. chap. 1.4), the results of this study have largely confirmed Sokołowski's predictions based on different approaches (cf. chap. 7.3.4).

4. In what way are towns that meet the criteria for restitution impeded from it by secondary factors, i.e. factors not pertaining to urbanity per se?

Besides a methodological and a result-oriented research approach, this study also attempts to elucidate the causality of contingent failures to restitute *de facto urban* degraded towns. Three major themes were taken into consideration: *spontaneous spatial factors* (occurrences of privileged zones, i.e. diffusion zones and zones of agglomeration proximity), *imposed factors* (territorial-administrative barriers) and *subjective factors* (ignorance, suspicion and habit). Furthermore this study looks into the spatiality of current and future (prognosticated) restitutions in order to pin down how the latter correspond to the concept of policy for spatial development of Poland[8].

Departing from the model devised upon the spatiality of recent (1980-2011) restitutions in Poland, towns within privileged zones should, accordingly, be most prone to its mechanisms, while towns situated far from such zones, in order to be restituted, must rely on endogenous actions (cf. Krzysztofik 2006: 22). The results of the spatial analysis

[7] Denotes the share of a particular region: north, east, south or west.

[8] The concept departs from the idea that a dense network of relatively evenly spaced small towns should enable the organization of rational service supply to the rural hinterland, promote smooth functioning of agriculture, recreation and forest management, and improve the living conditions of the rural population (cf. chap. 3.7.4).

(based on the methodology devised for this particular purpose in chap. 6.9) show that degraded *reform towns*[9] are largely omitted from this process. Only 10.5 % of them are located within very active zones while 20.4 % lie within zones of moderate activity. Alarmingly, among these two groups there are only 12 towns (6 % of the total) that fulfill the morphological and demographic criteria for restitution[10]. The great majority of towns – 69.1 % – lie within zones of light activity where likelihood of spatial influence borders randomness (52.2 %) or lie completely within zones of inactivity (16.9 %). Such results are worrying, as there is a strong likelihood that many de facto urban towns will not be restituted because of lack of adequate push.

The viability of the alleged spontaneous spatial factors in Poland has been sustained by examining towns that are actually located within the discussed privileged zones. However, the results show that the sheer location within such zones is not enough and must be accompanied by a sufficient urban morphology to spawn the idea of restitution. Indeed, among the 17 towns that fulfill both criteria (very active or moderately active zonal location *and* $V_{morf} \geq 54.4$), 14 have to date been subjected to the idea of restitution. However, it should be noted that six of these 14 towns are too small to be restituted; this shows that both factors are actually strong enough to overwhelm reasonable restitutional initiatives. A somewhat conjectural conclusion stemming from this line of analysis is that urban morphology, when mixed with privileged zonal location, will most likely spawn some form of local reaction.

The next question regards the situation of certain settlements (villages devoid of administrative functions and incorporated units), which, by the design of the Polish system, would be discriminated or highly impeded from being granted restitution due to their unfavorable administrative-territorial status. In spite of their disadvantageous situation, *villages devoid of administrative functions* that meet the criteria of morphological urbanity are actually very few, and those that meet them do so barely; they are also generally too small to function as urban units. This confirms that morphology relates similarly to non-administrative villages as do other aspects of urbanity, as shown in previous studies (e.g. Drobek 1999, Sokołowski 1999). It also shows that this type of imposed barrier is not significant in the general restitution debate, and that the few loud cases (particularly Bnin) where this actually *is* a problem, are in fact isolated encounters. The situation regarding *incorporated units* is quite different as most of them fulfill the basic morphological[11] and demographic criteria. It could thus be said that imposed barriers may indeed prevent some de facto urban incorporated units from regaining their urban independence. Moreover, some of them are conspicuously spatially detached from their host cities. The latter may, on the one hand, impede local social integration, and, on the other, prevent rational functioning of such units (as outlined e.g. in Szmytkie 2009 and Drobek 2005b). However, the recent wave of urban excorporations[12] initiated in the 1990s seems to be over for good; therefore, given the 'diffusionality'[13] of the Polish restitution process, there are no premises suggesting that any new ones will occur (despite the fact that some of the most urban incorporated units actually lie within privileged zones). Another obvious problem would involve delineation and subsequent creation of new communes that would serve as hinterland for the newly created towns.

Subjective factors were not in the focus of this study and their impact could therefore not be quantified. All the same, they are ever-present as reflected in numerous internet-based articles and blogs. Their existence could in turn explain why some fully urban degraded towns, and particularly those located within privileged zones, forbear to apply for restitution. At this point, I would like to point to the usefulness of future studies on this subject.

Lastly, I will address the issue of spatiality of restitutions in relation to the Polish policy for spatial development. The territory of former Congress Poland is widely perforated by so-called 'city deserts', i.e. rural areas with the furthest distance to the nearest town, where – according to the policy – restitutions should first and foremost occur. Departing from a GIS-model based on rural-urban accessibility (cf. 3.7.4) and a layer of degraded towns superimposed onto it (cf. 7.3.7), a set of 51 towns located within city deserts could be discerned. Having cross-referenced those against an aggregate of four important considerations (morphological, demographic, administrative and privileged-zonal) showed that only 13 towns are likely to be restituted. Given the current spatial pattern of urbanization in Poland, it could be deduced that restitutions will most likely continue to occur in the southern and southern-central part of the former Congress Poland, whereas new additions would be most substantial in its eastern, northeastern and southwestern parts. This is disturbing, as the disproportionate urban network is likely to remain. As seen in the past, even a single restitution in a previously standstill area may trigger a domino-effect; it is therefore my contention that restitutions in these specific areas should be encouraged actively.

[9] In Poland there are also other degraded towns (i.e. outside the scope of the reform of 1869-70), many of which are located within active zones.
[10] Only two towns (Zaklików and Łagów) lie within very active zones.
[11] Note, that for the incorporated units a physiognomic analysis could not be conducted due to lack of data.
[12] I.e. secessions of degraded towns from larger towns into which they were previously incorporated.
[13] I.e. high susceptibility to the mechanisms of the process of diffusion of innovations.

8.3. A faulty administrative system: the problems

A characteristic feature of any country's territorial division should be its adaptation to the prevailing physiographic, economic, social and demographic conditions, but also its convergence with national goals that are to be realized by local authorities (Mielcarek 2008: 8). According to this line of reasoning, the politics during the years of Poland's occupation (1795-1918) distorted the aforementioned ideal and instead used territorial division as an instrument of disorganization of the Polish nation. Frequent changes to the administrative division subverted territorial stability, while forbearing to implement changes in order to reflect due economic transformations inevitably hampered development. Since *cities* (formally urban units) were an integral part of Poland's territorial division, the political disorganization affected them directly. One clear example of this was the urban reform of 1869-70.

An investigation of the circumstances surrounding the reform itself (cf. chap. 3.6) points to its inconclusiveness in terms of intent, rationale and stringency. There are no convincing facts stating that the reform was a form of punishment, nor can it be said that it did not largely live up to the posited criteria or manage to 'clean up' the Polish urban settlement system of some very small and *de facto* non-urban towns. Nevertheless, the huge scope of the reform rendered a very large amount of degraded towns – an inconcealable problem that has survived long past the reform's echo had rung out. After regaining independence, Poland inherited the effects (spin-offs) of foreign politics but did relatively little to revert them. During the Communist era that followed, another political apparatus once again employed territorial manipulations as an instrument of disorganization, which only entrenched the already marginalized position of degraded towns. Although the post-1989 regime democratized the Polish urbanization process, the new bottom-up mode failed to become self-regulatory due a range of different factors: loss of urban identification, lack of interest in local development, inability to see relevance with urban status, lack of procedural knowledge as well as unpredictability of governmental evaluations due to ambiguous criteria. This has had inescapable effect on the way urbanity in Poland was left to evolve.

As the results of this study show, there is an immense differentiation among the studied towns, with extremes overbridging the formal rural-urban divide. Even if we would hypothetically assume that the reform *was* a form of punishment, a period of some 140 years is obviously long enough to totally fragment a once – supposedly – fairly homogenous structure. Despite the dubiousness of the circumstances surrounding the reform itself, the results of this thesis show that the reform can no longer act as an umbrella term attached to towns that are 'de facto urban yet unjustly rural'. Although many reform towns actually *do* justice to this epithet, it could be agreed upon that the reform of 1869-70 is nothing short of a cloak of misinformation under which reactionary aspirations are allowed to flourish. Today, it would seem that the reform thrives mostly on recourse to old injustice nourished by Poland's history of chequered relations with Russia, largely ignoring the many years that have passed and the subsequent changes that have occurred since. It all breaks down to the aspect of retroactively constructed valorization propelled by sheer nostalgia: degraded towns are more willingly perceived as treasuries of patriotism and spiritual mastery than as economically depressed rural pockets of the Polish hinterland (Dymitrow 2012). This would also support Bendix' (2000: 37) statement on 'heritage [being] a useful trope for demanding redress for past atrocities (…) without accounting for certain abuses of one's own'.

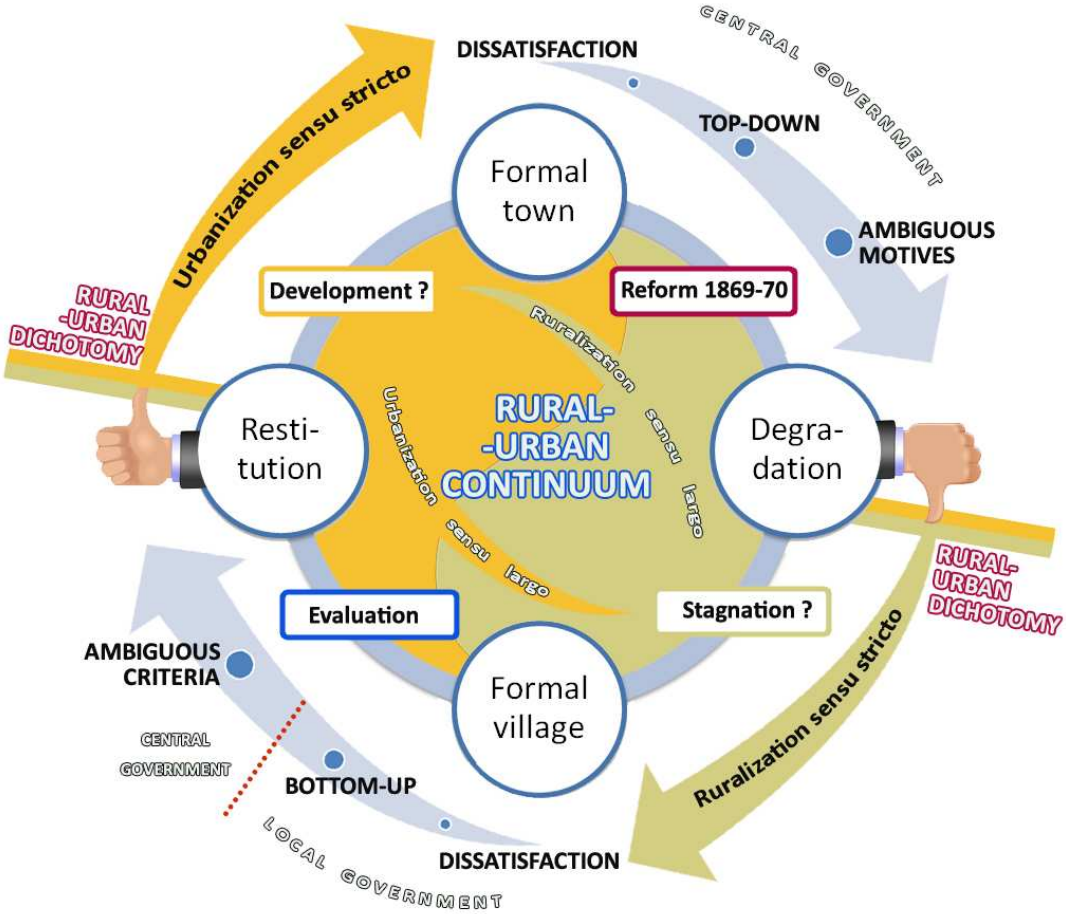
In the introductory section of this thesis I ask whether the reform has analytical merit or whether it is merely a mystification. Departing from the results of this study, it all points to the latter; still, the problem of degraded towns remains. However, it is my contention that the problem can no longer be attributed to a 143-year old decree but is rather the effect of a faulty system that permits retention of contingent aftermaths of the reform, and especially so when such aftermaths diverge from current urbanization standards.

The model depicted in fig. 8.1 shows the place of the reform in the context of the current Polish administrative system, with the focus on agency, drivers and decisive factors in the formal processes of degradation and restitution. The model, whose edges represent those processes, should be read clockwise, with the arrows outside of the circle describing the processes' characteristics[14]. In terms of agency, certain symmetry can be discerned. Both processes are prompted by some form of dissatisfaction (a driver), and both are marred by ambiguity in terms of intent and criteria (decisive factors). On the Czar's behalf (a top-down process), degradations were – officially – the result of a dysfunctional system that became interpreted as a punishment leading to developmental stagnation. On the contemporary local governments' behalf (a bottom-up process), restitutions are often initiated in the name of urban identity and traditions, but can also be interpreted as a pragmatic turn towards economic development behind a smokescreen of historical nostalgia (cf. Dymitrow 2012). Both processes, however, lead, respectively, to ruralization or urbanization sensu stricto, while the rural-urban continuum (in the middle of the circle) remains reshuffled and largely detached

[14] Although both processes together are cyclical (for instance Miasteczko Śląskie was degraded three times and restituted three times), today, the model does not work as a cycle in terms of agency, in that degradations are no longer employed centrally (actually they are not employed at all, but if they would, the decision would have to originate from the local government).

from the formal proceedings. There is, however, one distinct disruption in the symmetry between the authorizations of the central and the local governments. While degradations during the Czarist era were performed centrally, the current democratic restitutional process is only in part locally governed. Although the initiative for application must originate from local governments, the final decisions are made by the central government. Thus, the seemingly benign democratization of the restitutional process is only deceptively designed to reflect the will of the locals.

Fig 8.1. Model depicting intricacies of the current Polish administrative system in regard to the 1869-70 reform. *Source*: own work.



At this point, it is also important to say something about the (assumed) objectivity of the MSWiA (Ministry of Interior and Administration) when evaluating applications for restitution (cf. chap. 3.8.2). Firstly, the evaluations do not seem to conform to any given formula, which means that different aspects of urbanity are discussed for different towns, with some aspects being audaciously obfuscated. One would assume that issues that are not brought forward are implicitly considered as either fulfilled or unfulfilled, depending on the character of the verdict. However, this is clearly not the case. MSWiA seems to accumulate all positive aspects when an approval is underway, and even extend the scope of evaluation towards *new* aspects, such as possession of cultural heritage[15], which N.B. is *not* a prerequisite for urbanity[16]. Such 'extension' seems to take place whenever a planned approval regards a town with some major flaw, such as insufficient population[17]. On the contrary, when a refusal is planned, all negative aspects are accumulated without acknowledging some positive ones[18]. Furthermore, some shortages are clearly exaggerated, as with Biskupiec not meeting the population threshold of 2.000 with 'only' 1.978 inhabitants (MSWiA 2006), while at the same time clearly disregarding analogous deficiencies in four other much smaller towns that have met with an approval. Such scenario indicates a lack of objectivity in governmental evaluations that could be attributed to:

- Lack of formulaic proceedings resulting in a chaotic account of the aspects being evaluated.
- Insufficient reporting of results, hindering insight into the motives predicating the decisions that follow.
- Traits of sophistry in those evaluations that distinctively diverge from the assumed criteria.

[15] As in the case of Zakliczyn (MSWiA 2005).
[16] Cf. Sumień's (1989) statement on urbanity being confused with picturesqueness or charm in chap. 1.3.
[17] A fact reticently disregarded in the cases of Zakliczyn (MSWiA 2005) or Kołaczyce (MSWiA 2009).
[18] E.g. possession of past urban traditions in the cases of Biskupiec and Dobre (MSWiA 2005; 2006).

Although the results of this study show that restituted towns are generally more urban than the non-restituted ones (cf. e.g. figures 7.4.and 7.5), this is only one way of looking at it. The main problem lies, namely, not in what the system includes, but in what it excludes. This is illustrated by the large number of rural towns that fully meet the criteria for urbanity and, as such, could be regarded as misclassified. Furthermore, inclusion itself may sometimes be problematic too as granting civic rights to units that significantly diverge from rife urbanization standards automatically deepens the breach between de jure and de facto urbanity. The design of the system also opens for the possibility for large rural (and de facto fully urban) units to 'exclude themselves' from due restitution should they have something to lose if granted urban status. This is particularly true to towns pushing the 5000-inhabitants limit, the passing of which would automatically revoke subsidies for teachers and farmers (oftentimes an influential local group) should the settlement become formally urban. Ironically, with such law at hand, the larger towns may benefit from remaining rural, while only the smallest ones may see the point of resorting to urbanity. For me, this is like parents receiving child support for their 25-year old children. If the 'child' is in fact an adult, there is no rationality behind parents benefiting from monetary aid that does not pertain to their situation. Throughout Poland there many settlements (some even in this study) that match the described profile, including the 'village' of Kozy with 12.000 inhabitants.

If some rural – yet de facto urban – units are allowed to remain formally rural at their discretion (even if it carries additional costs for the state), analogously, why should not other rural units be unconditionally granted formal urban status if this happens to be the will of their residents? The logics behind such 'illogism' goes way back in history. 'Urban' is still regarded as a state of supremacy while anything that is not urban is by default *rural* (you do not apply for rural status, but you do apply for urban status). Such a norm is likely to be interpreted as an insult, particularly for degraded towns. Furthermore, given the progressive urbanization of the countryside, 'urban' will soon most likely become the new norm; in Sweden, for instance, urban population accounts for 84%, while Poland holds on to the old notion. Furthermore, the constant conflation of formality and culture in Poland inevitably raises the concept of urbanity to an ultimacy on which it cannot deliver. The now expired term 'civic rights', incessantly affixed to the modern understanding of urbanity, seems irredeemably awkward, both as source of confusion for degraded historic towns and as an upholder of the now obsolete rural-urban dichotomy.

Additionally, the system also implements some totally synthetic stipulations (such as the 'one town per one commune' principle), automatically screening off some settlements from the possibility of restitution, even if they would meet the 'modern' *and* the 'historical' definition of urbanity. Inequity is also evident in the current practice of *not* degrading towns that are excessively small or no longer objectively urban. Although such conduct per se might seem respectable, inequity lies in the fact that restitutions today would most likely *not* be granted to towns of similarly reduced urban characteristics. Such respect for a strictly historical asset in the face of a modern outlook on urbanity largely contradicts the principles of urbanization to which the system so ostensively seems to adhere.

Summarily, the administrative system in Poland can be said to have (at least) six major flaws:

(1) **The system is not self-regulatory**. Since the initiative for restitution is a bottom-up process, the system is not designed to sanction *de facto* urban settlements that exist beyond the scope of the local initiative.
(2) **The system is deceptive**. Since the will of the locals will not be respected should a candidate settlement fail to meet a set of centrally assigned criteria, then the bottom-up process is not fully democratic.
(3) **The system is improperly monitored**. Since the criteria regarding restitutions are not unambiguous and ever-changing, the governmental decisions that shape the Polish urban make-up may differ significantly due to various factors, including arbitariness and human misperception.
(4) **The system is susceptible to manipulation**. Large rural yet de facto urban units are free to choose their adminstrative status on grounds beyond the issue of objective urbanity.
(5) **The system is counterintuitive**. It materializes a modern view of urbanity through a historico-symbolical remnant (civic rights), thus implicitly luring degraded towns into a game which many cannot win.
(6) **The system is discriminatory**. It prohibits certain settlements from restitution through stipulations that are wholly detached from the issue at hand (urbanity).

As such, I find the current Polish administrative system as inconsistent, in some instances even paradoxical. It does not seem to adhere to any central idea, be it one of close scrutiny or one of symbolic condonation of the local will. The system is neither rigorous nor generous, and – most disturbingly – it is unpredictable. Furthermore, it is marred by a variety of factors that do not pertain to urbanity per se. In its current design, it is likely to both contaminate urbanity as a *physical entity* and obstruct urbanity as a *quality* (cf. Pacione 2009). Last but not least, it renders a misconceived national urbanization profile, which nonetheless serves as a foundation for official statistics and the various developmental policies and strategies that are derived therefrom.

8.4. Possible solutions

Since formal urbanity in Poland materializes through the historico-symbolical remnant of civic rights, then the Polish system is an irreconcilable hodgepodge of two domains: public administration and cultural heritage. Departing from the problems raised in the previous subchapter, I would argue that the best way to improve the Polish administrative system would be the abandonment of civic rights as a denominator of urbanity in favor of an official, judicially binding tripartite classification of all human settlements into: (1) 'urban', (2) 'semi-urban', and (3) 'non-urban' (or 'urbanizing') units (note that the term 'rural' should not be used for political and factual reasons). In that way, the urbanicity scale would be strictly geographical, and the classification would only pertain to the settlements' developmental needs in terms of governance and lifestyle. The classification itself should be made top-down, by centrally assigned experts, because direct democracy is not really an issue in this particular aspect – the construction of a homogenous, nationwide structure.

As 'urban' would count larger settlements (preferably with more than 5000 inhabitants) that actually perform urban functions, the extent of which is strictly supralocal. Urban morphology (defined explicitly) should be a prerequisite. As 'semi-urban' would count those settlements endowed with an unmistakingly urban morphology but whose central functions are strictly local. As 'non-urban' would count all other settlements, i.e. those clearly lacking urban morphology and which do not perform any central functions or where such functions are marginal at best. Obviously, most degraded towns and even quite many of the smallest *formal* towns would fall into the 'semi-urban' category; the latter would also most likely include numerous large and highly urbanized traditional villages. To keep the classification updated, reassessments should be done every fifth year or so, based on variable oscillations from the previous 5-year period, rather than on absolute values from the time of reassessment[19].

Furthermore, the term 'civic rights' would *not* be superannuated, but retained as an official, yet not judicially binding category. The purpose of its retention would be safeguarding of the material heritage of historical towns irrespective of their current size and function, but also fostering cultural vitality and identity of these communities and promoting a sensitive and imaginative renewal of their townscapes. By retaining this category, none of the formal towns relocated to the judicial 'semi-urban' class would have to be 'degraded'. Furthermore, a centrally assembled committee of specialists (particularly morphologists) would construct a list of degraded towns with preserved – even residually – urban characteristics that would fit into this historical category[20], whereupon information packages about the possibility of 'restitution of civic rights on cultural grounds' would be distributed to the concerned units, including non-administrative villages and incorporated city parts. Next, in respect for democracy, a referendum should be held regarding restitution of civic rights, where no criteria other than a majority vote should apply. Since 'civic rights' would no longer have a judicial meaning, the notion of restitution would hopefully be devoid of suspicion and any contingent tactical turns derived therefrom. It would simply reflect what 'civic rights' stand for – cultural heritage. This new category would also be a perfect platform for networking, experience sharing and active cooperation aimed at strategies for heritage preservation.

It is my contention, that such a scenario would be a win-win solution. Poland has experienced many administrative reforms through the years (the latest most radical one was in 1999 with a major correction in 2002). Perhaps it is time for a new one, but this time on a local level. Until then, let us hope that at least current evaluations will be more stringent and that settlements fulfilling contemporary standards of urbanity will be actively encouraged to apply for due restitution.

8.5. The art of capturing small-town urbanity

Towards the end, let us revisit the notion of physically enhancing urbanity through revitalization, i.e. by recourse to the past – a highly popular endeavor among many small towns today, including numerous degraded towns.

Field observations conducted in 69 degraded towns have shown that various restoration projects have been performed or commenced within the public spaces of many degraded towns (tab. 7.13). Although most of these projects are subsidized by the European Union, their character differs. Since most construction sites are accompanied by information boards, such differentiation becomes apparent (fig. 8.2, as of July 2011):

> **Project in Radoszyce** (fig. 8.2, left): RESTORATION OF RADOSZYCE'S FORMER GLORY AND AUGMENTATION OF THE FUNCTIONAL AESTHETICS OF ITS PUBLIC SPACE BY REVITALISATION OF THE MARKET SQUARE

[19] Such proceeding would secure more accurate classifications, focusing on trajectories rather than on figures that could accidentally be lowered or heightened at the time of reassessment. Such approach is practiced, for instance, in Sweden.

[20] Some basic criteria would be necessary so that not just any village (or heavily ruralized degraded town) could apply and therefore contaminate the notion of 'cultural urbanity'.

Project in Kurzelów (fig. 8.2, right): BASIC SERVICES FOR THE ECONOMY OF RURAL POPULATION [in terms of construction of water and sewage infrastructure].

Fig. 8.2. Two EU-sponsored revitalization projects in two degraded towns; one with an urban intent (Radoszyce, left) and one with a neutral one (Kurzelów, right). A sign of selective policies. *Photo*: M. Dymitrow

Some projects, like the one in Radoszyce, are clearly oriented towards raising the level of morphological urbanity, sometimes with reactionary underpinnings ('restoration of former glory'). These projects are often part of regional programs; in this particular case as a step towards the development of the scarcely urbanized Holy Cross Region. Other projects are propelled by the European Agricultural Fund for Rural Development and typically involve improvement of basic infrastructure, but can occasionally aim at modernization of an urban-specific feature[21]. Paradoxically, this rural-oriented fund has also been sporadically utilized by some *formal cities*, e.g. to create an urban market square (!) in a post-war industrial city (UM Rejowiec Fabryczny 2011). Such process indicates certain selectivity, where the more urban villages receive urban-specific treatment (sensu stricto), whereas the more rural villages are tended to in a more general way (sensu largo). Even if such 'neutral' treatments simultaneously heighten the level of urbanity sensu largo of the latter, there is still a difference of intent. Surprisingly, even some extremely rural settlements, such as Janików, are being 'townified' sensu stricto (morphologically), which – in terms of sanctioning cultural heritage – could be considered as a rational turn. This, however, will mostly likely only make a local difference, as true urbanization (on a regional level) would still require restitution of civic rights, which, seen to the modest size and lack of administrative function of these settlements, seems unfeasible.

One unmistakable observation is that revitalization of degraded towns never aims at cementing the towns' *rural* characteristics, which would suggest that the tide of urban history is ever-present. However, it is interesting how boldly revitalization is used to erase traces of both individuality and historical hybridity; the revitalization schemata are very much the same everywhere (dated wells, benches, street lights, cobblestone pavement), modelled upon Kazimierz Dolny – the epitome of a Polish small town. This may be due to the local planners' high susceptibility to fashions, to avoid risk by 'using a catalogue of heritage clichés' (Ashworth 2007), but such sameness despite the call for uniqueness is not necessarily a sign of degeneracy. It is obviously also a money issue, as many towns seem to hire the same entrepreneurs or at least the same raw materials and mass-produced elements. Still, as Sumień (1989: 138) has noted, uniformity destroys the specifics of *genius loci* – the fundamental characteristic of a historic town. Indeed, the revitalization hype has oftentimes resulted in *ad hoc* alterations, and its lack of proper supervision inevitably adds to further loss of character. Furthermore, as Hermelin (2005: 310-311) has put it, major changes to the physical environment may make places – understood in the sense of *belonging* – cease to exist, and, as they lose their meaning to people, the geographical locality becomes instead a place understood as *space*. In fact, excessive, prefabricated historization of degraded towns may actually erase the last bastions of memorial environments, hitherto preserved by the absence of exploitation. If not tended to, not only may precipitous revitalization result in strangely misplaced, windswept 'urban' market squares amidst tiny villages; it may also hollow the specificity of urbanity in the context of townscape heritage (cf. Dymitrow 2012).

But how about morphological urbanity? From the conducted field study it could be drawn that many revitalization projects tend to give the towns a very dated look from a specific era, or, more alarmingly, a hodgepodge of incoherent styles that is more subject to artistic latitude than historical conformity. Oftentimes, the projects result in towns assuming a 'fairy tale look' (cf. Johansson 2009: 126), or the characteristics of historical theme parks. The cited revitalization project in Radoszyce (fig. 8.2, left), ostensively announces its aim to restore the town's former glory;

[21] Such as the park next to the market square in Solec nad Wisłą.

however, the market square, although pleasant, bears no resemblance to its former appearance. With a minimum of open space, mostly taken up by lawns and trees, the market square consists virtually of a clutter of objects: marble chess boards, Parisian street lamps, a modernist military stele, a gazebo/well hybrid, a defunct fountain and an exotic oversized sundial (fig. 6.11). At the same time, the surrounding buildings remain in a very poor state. Is this the contemporary understanding of former glory? Despite historical mockery, such demonstration of an instantly recognizable image of a chimeric small town must nevertheless be considered as at least an improvement to *functional* aesthetics[22] (Dymitrow 2012). But does it really help gaining urbanity? In terms of market square characteristics, neither enclosure nor legibility can be enhanced by obstructing visibility and cluttering the square's interior. Although the objects used are of urban origin, their application does not respect the context and the scale of the environment. As such they neither enhance nor reduce the perceived urbanity, or, as Ashworth (2007) has put it, 'the most serious consequences of pursuing a chimera are always the wasted resources and missed opportunities'.

The point of this line of thought is that revitalization of the smallest of towns is a delicate matter that requires competence and understanding of the consequences an inadequate intervention can induce. On the one hand, by adhering to some basic urban design principles, and by respecting the settlement's current position within the rural-urban continuum, revitalization may actually do marvels to a neglected, yet de facto urban degraded town. On the other, constrained and self-conscious 'townifications' of positively rural settlements are costly and may seem purposeless in terms of rural governance (cf. Siemiński 2000), while over-the-top urban historization only parodies the notion of urbanity, without actually helping the town to achieve it:

> The absurdity stems from the reality that we are doing it and have been doing it for some generations, at first implicitly and more recently quite explicitly (…). However, it is the contention here that what we are doing is not necessarily what we think we are doing, nor are the results consistent with the objectives (Ashworth 2007).

8.6. Suggestions for future research

Urbanity can be understood as a synergy of different elements and their relative level of intensity, *and* as a label dictating a certain way of governance and a specific path towards development. It is also a value-laden concept with recourse to history and identity, oftentimes ascribed heritage significance. The degraded towns of Poland incorporate all these platforms; their 'urbanity' could thus be regarded as a capsule locked between history and modernity, between identity and economic prosperity, but also between zeal and indifference. They also constitute a unique and interesting element of the settlement hierarchy, inviting to future studies on the differences between 'urban' and 'rural' in the most mature transition zone of the rural-urban continuum. As such, they could be regarded a valuable source of information for any study on the basics of the phenomenon of urbanity.

There are many routes that could be followed when it comes to further research tasks on the development of degraded towns. One of the hypotheses that has remained open in this study is the impact of urban morphology on the formation of urban consciousness. There have been many attempts to measure various 'objective' attributes of urbanity of degraded towns but due to difficulties of obtaining and quantifying certain data, urban morphology and urban consciousness have remained the least examined ones. This study proposes an approach to morphology mimicking that of the more 'objective' attributes; nevertheless, its impact on urban consciousness has remained on a hypothetical level (cf. chap. 1.5, 2nd point). To date, there has been no study measuring the perceived level of urbanity amongst residents of degraded towns, although its necessity has long been heralded. Departing from the assumption that people are the main drivers for societal change of any settlement, the concordance between humans and environment (the degree of urban consciousness) could be considered a crucial factor of such settlement's success. Since humans do not exist in a vacuum, I believe there are certain schemata that can be deduced from this relation, if only subjected to some form of systematic trial. Furthermore, seeing the relation urban morphology–urban consciousness in the light of an anachronistic rural-urban dichotomy creates an opportunity to study the resistance of perceived urban-specific qualities when put to the test of imposed rurality.

As far as the methodology is concerned, this study provides a first draft of a new approach that consequently needs further testing and fine-tuning, particularly in regard to its validity, which can only be achieved by an extended number of observers. Also beyond the scope of the proposed methodology, more detailed follow-up investigations on the impact of urban morphology on the level of urban perception (rather than on urban consciousness as addressed earlier) should be a natural step to objectify morphology as an urban denominator and make it less imponderable.

Different countries define their urban areas in a variety of different ways. In a time of European assimilation through integration (EU, EMU, Bologna Process etc.), maybe the next step would be to lift urbanity off the national level and to standardize a European definition of it? It could be of great interest to establish whether the sense of urbanity today is still markedly divergent in a cross-cultural perspective or whether its transboundary uniformation is

[22] Prior to revitalization it was a thicket (cf. chap. 4.8.3 on greenery and chap. 6.7.8 on urban theme parks).

only a matter of time. The results of this study are only one example of an urban-rural system that does not fully deliver; dissension is also evident in, for instance, Sweden (cf. Hallin 1992: 134). Moreover, much is yet to be said whether the terms 'urban' and 'rural' are at all useful in an rapidly changing reality, particularly in the light of the eternal academic debate on what 'urban' actually means. Therefore, a broader, renewed discussion on the subject, including all empirical evidence that can be used to agree upon the current meaning of urbanity, should be particularly welcomed.

8.7. Final remarks

We often perceive the world in dichotomies: good or bad, male or female, God or science. The urban-rural divide is not an exception; we often use expressions like 'city life' or 'in the countryside', without proper consideration what they really imply. But where does rurality end and where does urbanity take over? Most countries have their own, oftentimes strict, definitions of 'urban' and these definitions differ. Not only cannot urbanity be compared internationally; also within the same countries strict definitions create an artificial barrier within a complex, more subtle reality. Urban processes involve many different aspects of sustainability. In an age of western deindustrialization (as in Poland), settlements renew themselves and find new means of capital investment. For small towns, investors and tourists are an important source of income; therefore, diversification by means of market visibility is a crucial factor for sustainable development.

During the Communist era, the degraded towns of Poland were deprived of any reasonable hopes for a bearable future. Today, in a time of market economy and an age of new values, further aided by the possibility of subventions from the EU, small towns are gaining access to new possibilities for local development. It would be unfortunate if de facto urban units could not benefit from such opportunities simply because they have the 'wrong' judicial status. In such a perspective, restitution of town privileges to towns urban in every aspect but the name seems like the only sensible thing to do. However, the Polish understanding of urbanity is – in a vivid simile – like a sphere trying to reconcile evolutionism with creationism. On the one hand it mimics a scientific approach to urbanity, one that can be measured on the basis of previous theories and scientific methods; on the other, it allows a suspension of critical faculties by letting in culture and tradition onto this formal arena. Although the rural-urban dichotomy has prompted a deluge of criticism, it is still condoned, not least by some academics. For instance, in the final paragraph of an article dedicated to the differentiation of the Polish rural-urban continuum, Sokołowski (2008: 77) contends:

> The mixing of [formal] towns and villages on the urbanity-rurality scale indicates that both new and potential towns occupy a middle position of the rural-urban continuum. The specific of the Polish continuum is the result of an administrative (judicial) distinction of urban from rural. This feature of the national settlement network distinguishes Poland from most countries of Europe and the world. Let us hope that we will not resign from this specific, which should not only be seen as a legal but also as a cultural trait, and that [this specific] will not fall victim to some ubiquitous unification. (my translation)

Unfortunately, Sokołowski does not clarify the reason behind such a stance. If we can agree upon that the rural-urban dichotomy is an anachronism, why do we insist on maintaining it? What is the point of going into trouble of proving the fallibility of an administrative system, only to at a later point embrace it on cultural grounds or with recourse to uniqueness? Could it be simply because the hegemonic, national understanding of urbanity in Poland is so imminent that it overshadows a judgment derived from objective indicators? Let me clarify that I am by far not a person that would dismiss a concept just because it leans on a cultural fundament; however, I once again argue that these two platforms should be separated (like in the UK), rendering a win-win situation rather than chaos and confusion.

Drobek (2005a: 57), in the final thoughts of his article on the smallest towns in Poland assumes a more liberal attitude:

> Maybe we should resign from the formal division of human settlements within the distinction urban-rural? Perhaps an intermediate category (…) would make sense? (my translation)

Yes, it certainly would. It is my contention that the more gradient is applied to *any* continuum structure, the more satisfactory the results will be, regardless of whether we are dealing with school grades, beauty pageants or administrative systems. However, Drobek holds out for the notion that any imposed *central* solution would be undesirable and that such decisions should be left to the discretion of the local authorities. Alas, this second contention of Drobek's once again sets into motion the rationality of a due division, howsoever constructed. As soon as local governments become involved in a question pertaining to a national, systemic structure, ample arbitrariness is bound to materialize. This, in turn, brings us back to square one. Could it be another symptom of a hegemonic Polish view of urbanity? Hopefully, this study – written from an outside, non-Polish point of view – will inspire new perspectives and contribute to more informed urban bestowals, which in time could strengthen the consistency and the efficacy of the Polish urban-rural system.

8.8. Epilogue

The hidden face of urbanity… The title of this thesis uses an allegorical expression to convey the crucial role of urban morphology in the process of perceiving a settlement as urban. It is argued that this cruciality is not only derivative of morphology's prominent and omnipresent visuality, but also as a result of the subconscious association of morphology with a cultural, historically shaped physical archetype of an environment widely interpreted as urban. Furthermore, the prefix 'hidden' has been added to stress an alleged divergence between the physically urban container of the degraded towns and their judicially rural administrative status, the latter implicitly 'hiding' them amidst a myriad other rural settlements endowed with totally different morphologies.

However, at this final point of my work, a slight clarification is in place. This study has shown that although the faces of many degraded towns are indeed hidden, some towns are explicitly rural, or – at best – their morphologies may be their sole urban trait. Sticking to metaphors, such residual urban morphologies are more reminiscent of masks rather than true faces: masks abraded by time, slowly dissolving in the light of a probably irreversible destiny. Still, masks *are* a powerful tool for creating illusion, something many of us may remember from watching some enchanting stage play. In the context of some degraded towns, the 'urban masks' become even more deceiving when seconded by the current hype of revitalization projects. Let us not forget that although urbanity *does* include morphology and other visual tropes, the concept is foremost a synergy of many different traits that takes time to evolve and consolidate; urbanity is not merely an administrative label that can be achieved by uninformed reference to an old reform and a quick make-over. It is a fact that must be borne in mind so that morphology does not unwittingly pave the way for either arbitrary evaluations on behalf of the legislative bodies, or for unrealistic local restitutionary aspirations nurtured by nostalgia for history.

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Annex

1. Original matrix used during the field survey – in Swedish (2 pages)

2. Results from field survey conducted in 69 market squares regarding different variables (scale 1-5, where 5 = highest intensity) as perceived by three observers, including the author (Au)

3. Aerial photography of the 69 field-surveyed market squares (5 pages). *Source*: geoportal.gov.pl; scale 1:540

4. Street-view photography of the 69 field-surveyed market squares – selected examples (5 pages). *Source*: M. Dymitrow

5. Historical border changes of Poland (2 pages)

Analyserad av: _____	*Veckodag och datum*	*Klockslag*	*Väder*	**A. Integritet**	**B. Kompaktion**	**C. Kohesion**	**D. Komposition**	**E. Underhåll**	**F. Estetik**	**G. Bovänlighet**	**H. Urbanitet**
UNDERSÖKT STAD:				**DITT BETYG:**							

(**Annex 1:** Matrix used during the field survey, 1/2)

A. INTEGRITET (Byggnader) *- Är torget helt?*		**E. UNDERHÅLL** (Allmän känsla) *- Är torget i gott skick?*	
5	Torget känns helt inneslutet	**5**	Mkt gott skick, det mesta känns nyrenoverat
4	Torget känns inneslutet trots vissa avbrott	**4**	Gott skick fast inte direkt nyrenoverat
3	OK inneslutning trots flera avbrott	**3**	• Normalslitage • Mycket stora variationer mellan gott och dåligt skick
2	Dålig inneslutning men man anar ändå att det är ett torg	**2**	Torget är ganska slitet, men ändå acceptabelt
1	Ingen inneslutning, känns INTE som ett torg	**1**	Mycket slitet torg, nästintill pinsamt
B. KOMPAKTION (Byggnader) *- Är torget tätt?*		**F. ESTETIK** (Allmän känsla) *- Är torget vackert?*	
5	Torget känns helt tätt	**5**	Perfekt blandning av stil, finess och atmosfär
4	Torget känns tätt trots vissa luckor	**4**	Torget har sin charm trots vissa oönskade inslag
3	Hyfsad täthet trots relativt många luckor	**3**	• Varken bu eller bä • Mycket stora variationer mellan vackert och fult
2	Dålig täthet, med vissa undantag	**2**	Ganska fult torg, trots enstaka ljusa punkter
1	Det här torget saknar allt vad täthet heter	**1**	Fruktansvärt fult, ingen tanke bakom, noll atmosfär
C. KOHESION (Yta) *- Är torget sammanhållet och fritt från hinder?*		**G. BOVÄNLIGHET** (Allmän känsla) *- Är torget attraktivt för bosättning?*	
5	Stor sammanhållen yta, huslängor mkt lätt tillgängliga	**5**	Skulle mycket gärna kunna tänka mig bo här
4	• Stor sammanhållen yta, dock lite problematiskt att nå huslängorna • Hyfsat stor sammanhållen yta och huslängorna ganska lätt tillgängliga	**4**	Skulle kunna tänka mig bo här även om med viss tvekan
3	• Hyfsat stor sammanhållen yta men huslängorna är svåra att nå • Liten sammanhållen yta men huslängorna ganska lätt tillgängliga	**3**	Det hade gått att bo här, men inte gärna
2	• Liten sammanhållen yta och huslängor svåra att nå • Mycket liten sammanhållen yta även om huslängorna är hyfsat tillgängliga	**2**	Skulle helst inte vilja bo här, acceptabelt endast under en begränsad period
1	I princip ingen sammanhållen fotgängaryta och huslängorna är svåra att nå	**1**	Skulle aldrig vilja bo här, även om jag fick betalt
D. KOMPOSITION (Yta) *- Är torget gjort för att fungera som ett torg?*		**H. URBANITET** (Allmän känsla) *- Känns torget som en del av en småstad?*	
5	Mycket stor fokus på människorna, mycket öppen yta att röra sig *fritt* på, lagom inslag av grönska, minimal trafik-fokus (inkl. parkering)	**5**	Känns som del av en fulländad liten stad
4	Torget känns människo-anpassat, men friheten är begränsad pga. träd, gångar, alléer, byggnader etc.	**4**	Känns i för sig som del av en liten stad, men de lantliga inslagen är påfallande
3	Torget är inte trafik-orienterat men det är inte heller människo-anpassat, för mycket ytor som man inte kan röra sig på (gräsmattor, träddungar, rabatter, etc.)	**3**	Känns som ett mellanting mellan liten stad och stort lantsamhälle
2	Människans roll är minimerad, torget är huvudsakligen avsett för trafik och/eller den största delen av ytan går inte att röra sig på	**2**	Känns mest som ett lantsamhälle, men man kan inte undgå att det också har urbana inslag
1	Det här är inte en plats för människor att vara på	**1**	Det här är del av ett typiskt lantsamhälle

(**Annex 1:** Matrix used during the field survey, 2/2)

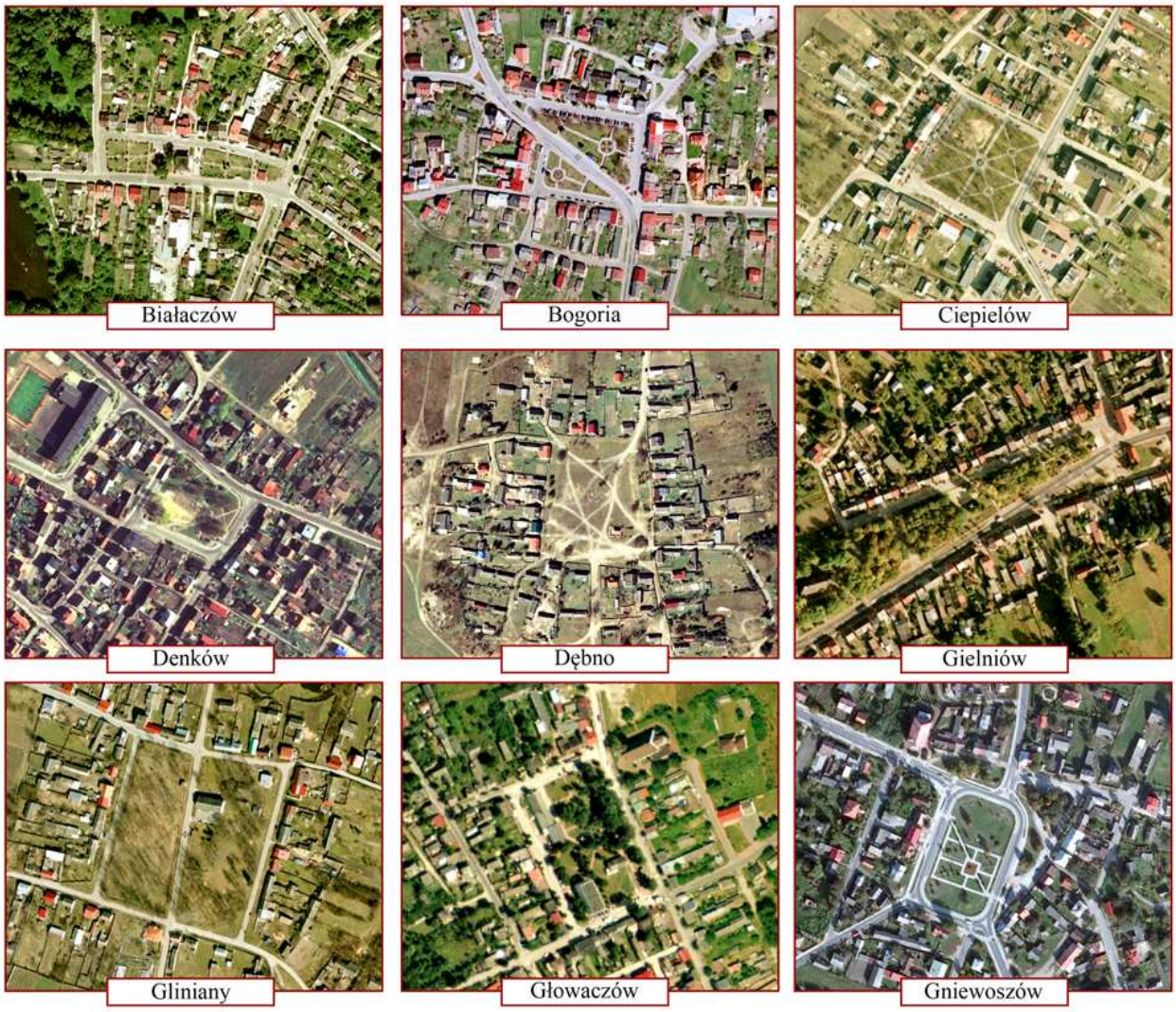
Annex 2: Results from field survey conducted in 69 market squares regarding different variables (scale 1-5, where 5= highest intensity) as perceived by three observers, including the author (Au). Cf. chap. 6.7 for details.

Market square	A. Integrity			B. Compaction			C. Cohesion			D. Composition			E. Maintenance			F. Aesthetics			G. Livability			H. Urbanity		
Observers →	*#1*	#2	Au	*#1*	#2	Au	*#1*	#2	Au	*#1*	#2	Au	*#1*	#2	Au	*#1*	#2	Au	*#1*	#2	Au	*#1*	#2	Au
Białaczów	*4-*	4+	**4+**	*3+*	3+	**4+**	*5-*	4+	**5**	*4-*	3-	**3**	*3*	3+	**4**	*3+*	3+	**4**	*4*	3	**3+**	*4-*	4-	**4-**
Bogoria	*5-*	5	**5-**	*5-*	5-	**4+**	*4+*	4	**3**	*4-*	3+	**3**	*3*	3	**4**	*2+*	3-	**2+**	*3-*	3-	**2**	*3*	3	**3**
Ciepielów	*4+*	5-	**5-**	*5-*	5-	**3+**	*5-*	5-	**5-**	*3*	3+	**3+**	*4-*	4-	**3+**	*3+*	3+	**3**	*4-*	3+	**3**	*4-*	3+	**3**
Denków	*4+*	4+	**4**	*5-*	4+	**5-**	*5-*	5-	**5-**	*3-*	3+	**3-**	*4*	3	**4-**	*4-*	3	**3**	*3*	3	**3**	*3*	3+	**4**
Dębno	*5-*	5-	**5-**	*1*	1	**1**	*5*	5	**5**	*2+*	2	**2**	*3-*	2+	**2-**	*3-*	2+	**3**	*1+*	3-	**1**	*1+*	1+	**1**
Gielniów	*5*	5	**5**	*3+*	3+	**3+**	*4-*	4	**3-**	*3*	3-	**3-**	*3+*	3	**3+**	*4*	4	**4+**	*3+*	3	**3+**	*4-*	4	**4-**
Gliniany	*3+*	4+	**4+**	*3-*	2+	**3**	*4+*	4+	**4**	*2-*	2	**1+**	*3*	2+	**2+**	*3-*	2	**4-**	*2*	2	**3-**	*2*	2-	**2**
Głowaczów	*5-*	4+	**4+**	*2-*	1+	**2**	*4+*	4+	**4+**	*3-*	3-	**2+**	*2+*	3-	**3**	*3*	2	**3**	*3-*	2	**3**	*3-*	2+	**3+**
Gniewoszów	*5-*	4+	**5-**	*2+*	3+	**3-**	*5-*	4-	**4+**	*3-*	3	**2+**	*3-*	3+	**3**	*3-*	4-	**4-**	*3*	3+	**2+**	*4*	4-	**3**
Goszczyn	*4+*	4+	**4**	*1+*	1+	**1**	*5-*	4	**4+**	*3-*	3	**2+**	*3-*	3+	**3**	*2-*	3+	**2-**	*3-*	3-	**2-**	*3-*	3-	**2**
Gowarczów	*3+*	4	**4**	*4-*	4+	**3+**	*2*	3	**2-**	*2-*	2	**1+**	*2*	3+	**2-**	*2-*	3-	**1**	*2-*	2	**2-**	*3+*	4-	**3-**
Grabowiec	*4+*	5-	**5-**	*1*	1	**1**	*5-*	5-	**5**	*2+*	2	**2**	*2-*	2+	**2-**	*3-*	3-	**1**	*3-*	2+	**2**	*2*	2-	**2**
Granica	*5-*	5-	**4+**	*2+*	3-	**2-**	*5-*	5-	**5-**	*3-*	2+	**3-**	*3-*	3	**3-**	*3-*	3	**3**	*3*	2+	**3**	*3-*	2+	**3**
Iwaniska	*4+*	5-	**4+**	*3*	3-	**3-**	*5-*	5-	**4+**	*3*	3	**3+**	*3*	3+	**4**	*3*	3	**4-**	*4*	3	**3+**	*3*	3+	**4**
Janików	*5-*	5	**5-**	*2-*	1+	**2-**	*5*	5	**5**	*3+*	3	**3+**	*3+*	3	**4**	*3+*	3-	**3+**	*3-*	2+	**4-**	*2-*	1+	**2**
Janów	*4-*	3	**5-**	*3+*	3	**3**	*4*	4	**4-**	*2+*	2	**2+**	*4*	3	**2+**	*3-*	3	**1**	*3*	3	**1-**	*2+*	2	**3+**
Janowiec	*4+*	4+	**4+**	*5--*	5-	**3**	*4+*	5-	**5-**	*4-*	3-	**2**	*3-*	3+	**2+**	*3-*	4	**4+**	*4-*	4-	**4**	*4*	4	**3+**
Jastrząb	*4+*	4+	**4**	*4-*	3+	**2+**	*4-*	4	**4**	*3+*	3-	**3**	*3+*	3+	**4-**	*3*	3	**4-**	*3-*	2	**3-**	*3*	3	**3+**
Jedlińsk	*4+*	5-	**4+**	*5-*	5-	**5-**	*4-*	4	**4**	*4*	4	**4-**	*4+*	4+	**4**	*3+*	4	**5-**	*3+*	4	**5-**	*4*	4	**5**
Kazanów	*4*	5-	**5-**	*2-*	2	**1+**	*4*	4+	**4**	*3*	3+	**3-**	*4+*	4-	**3**	*4*	3	**2-**	*4-*	3	**2**	*3+*	3-	**3-**
Klimontów	*5-*	5	**5**	*5*	5-	**5**	*5-*	5-	**4+**	*3+*	3-	**3**	*4-*	2	**3+**	*3+*	3+	**5**	*4+*	3+	**5-**	*5-*	4+	**5**
Klwów	*4+*	4	**4**	*3+*	3	**3-**	*5-*	5-	**4+**	*4-*	4+	**5-**	*4+*	4	**5-**	*4-*	3+	**3+**	*4*	3+	**3**	*4-*	3+	**3+**
Koszyce	*5*	5	**5**	*5*	5	**5**	*5-*	4+	**4**	*5-*	5-	**5-**	*5-*	4+	**5-**	*4+*	4	**4+**	*4-*	3+	**3**	*5-*	4+	**5**
Kromołów	*4*	5	**5-**	*2*	2	**1+**	*4+*	5	**5**	*3*	3	**3+**	*4*	4	**3+**	*4*	4	**3**	*4*	5	**3-**	*3*	3	**3**
Książ Wielki	*4+*	4-	**5-**	*4+*	5-	**4**	*2*	3	**2**	*1*	2-	**1**	*3+*	4	**3+**	*2*	3+	**3-**	*2*	3-	**1**	*3*	4-	**3**
Kurozwęki	*3*	4-	**4+**	*3-*	3	**3-**	*2*	3-	**3+**	*2*	3-	**3**	*2*	2+	**3-**	*2*	2+	**3**	*2*	2	**3-**	*2+*	3	**3**
Kurzelów	*3*	4	**4+**	*4-*	4	**4-**	*4+*	4+	**5-**	*3*	3-	**3-**	*3-*	3-	**4+**	*3*	3	**2+**	*3*	2+	**3**	*3+*	3	**2+**
Lasocin	*3+*	4	**3+**	*1*	1+	**1**	*3+*	4-	**3**	*3-*	3-	**2**	*4*	4	**4-**	*4-*	3+	**3**	*3*	3	**3**	*3-*	3-	**2+**
Lelów	*5*	5	**5**	*5*	5	**5**	*4+*	5	**5-**	*3*	2+	**3+**	*4*	4	**5-**	*4*	4-	**4-**	*4*	4	**4-**	*4*	4	**4**
Łagów	*4*	5-	**5-**	*4-*	4	**4-**	*4-*	4	**3+**	*4-*	4	**4**	*4*	4	**4+**	*4*	4	**4+**	*4*	4	**4-**	*4*	4	**5**
Magnuszew	*4+*	5-	**5**	*3-*	3	**2+**	*2+*	3-	**3**	*3-*	2+	**3+**	*5-*	3+	**5-**	*3*	3+	**4**	*2+*	3	**4-**	*3*	3	**4-**
Miasteczko	*5-*	4+	**4+**	*1*	1	**1**	*5*	5	**5**	*1*	1	**2-**	*2*	3-	**2**	*1+*	2-	**2**	*2*	2	**2-**	*1*	1+	**1**
Modrzejów	*2*	2	**2**	*2*	2	**2**	*3*	3	**4-**	*2*	2	**2**	*3*	3	**2+**	*2*	2	**1**	*3*	2	**1**	*2*	2	**2**
Mrzygłód	*5*	5	**5-**	*2*	2	**3+**	*3*	3	**2**	*3-*	2	**2**	*4*	4	**3**	*3*	4	**3-**	*3*	4	**3**	*3*	3	**3-**
Mstów	*4+*	4	**5-**	*5-*	5	**5**	*4+*	4	**4+**	*5-*	4	**5-**	*4*	4-	**4**	*4*	4-	**4-**	*4*	3+	**3-**	*4-*	3+	**5**
Nw. Słupia	*5*	5	**5**	*5-*	5-	**4+**	*2+*	2+	**2**	*3-*	2-	**1**	*3*	3	**4+**	*2+*	3	**3**	*2+*	2+	**1**	*4-*	4	**4**
Nw. Korczyn	*4+*	5-	**5-**	*4+*	5-	**4**	*4+*	5	**5**	*3*	3-	**3**	*3-*	3	**3**	*3-*	3	**3+**	*3*	3	**3+**	*3+*	3	**4**
Odrzywół	*5*	5	**5**	*5-*	5-	**5**	*3-*	4-	**3**	*3-*	3-	**2+**	*3*	3	**2-**	*3-*	4	**4+**	*3-*	3	**3+**	*5-*	4	**5-**
Oleśnica	*4-*	3+	**4+**	*3-*	3-	**2-**	*4*	3	**4**	*3-*	3-	**2+**	*4*	4	**3**	*3+*	4-	**3-**	*4*	4	**3**	*4-*	3	**3**
Olsztyn	*4-*	3+	**5-**	*5-*	4	**3+**	*4*	3+	**4+**	*3+*	3	**4-**	*3-*	2+	**3-**	*3+*	4-	**3**	*3+*	3	**2+**	*2+*	3-	**4**
Opatowiec	*3-*	4	**4**	*3*	3-	**3-**	*5-*	5-	**5-**	*3-*	3	**3**	*3*	4	**4-**	*2*	3	**3**	*4*	4	**2+**	*4-*	3-	**3**
Pacanów	*5-*	5-	**4+**	*5-*	5-	**4+**	*4+*	5-	**4+**	*3*	3	**3**	*4*	4	**3+**	*4*	4-	**3+**	*4+*	4	**3**	*5-*	4+	**5-**
Pierzchnica	*5*	5	**5**	*5*	5	**5**	*5*	5	**5**	*4*	4	**4+**	*4*	4	**4+**	*4*	3+	**4**	*4+*	4	**4**	*4+*	4	**5-**
Piotrkowice	*5-*	5	**5-**	*1*	1	**1**	*5*	5	**5-**	*1*	2	**1**	*3-*	3+	**3+**	*2*	3+	**2-**	*2+*	4	**1**	*1*	2-	**1**
Przybyszew	*4*	4+	**5-**	*3*	3	**3**	*3+*	4-	**4+**	*3*	2	**1+**	*1+*	2+	**2**	*3+*	3+	**5**	*3-*	3-	**4**	*2*	2+	**2+**
Przyrów	*5*	5	**5**	*5*	5	**5**	*5-*	4+	**5-**	*5-*	5-	**5**	*4+*	4	**4+**	*4+*	4-	**4**	*4*	3	**4-**	*4*	3+	**5-**
Przytyk	*5-*	4+	**5-**	*2+*	2+	**1+**	*4+*	4	**4**	*3*	3	**3-**	*3-*	3+	**3+**	*3-*	3	**3**	*2+*	2	**2+**	*3-*	3	**3**
Radoszyce	*5-*	5-	**5-**	*5-*	5-	**5-**	*4+*	4+	**4+**	*5-*	4	**4+**	*5-*	4-	**4**	*5*	4	**5**	*5-*	4-	**4+**	*5*	5-	**5**
Raków	*5*	5	**5**	*5-*	5-	**5-**	*4*	4	**4+**	*4*	3-	**3+**	*3*	2	**3**	*4+*	3-	**3+**	*4+*	3	**3+**	*4+*	3+	**5**
Ryczywół	*3*	4-	**4+**	*1+*	2-	**1**	*5-*	5-	**5**	*3-*	3-	**2**	*3+*	3	**3-**	*3-*	3	**1**	*3-*	2+	**2-**	*3-*	2+	**2+**
Secemin	*5-*	5	**5**	*5-*	5-	**4+**	*4*	4	**3+**	*3-*	3-	**3**	*3*	3+	**3-**	*3+*	3+	**2+**	*4*	3-	**2**	*4-*	3+	**3**
Sieciechów	*4+*	5-	**5-**	*1*	1	**1**	*4+*	5-	**4+**	*3+*	4	**4+**	*3+*	3-	**4-**	*3+*	3+	**4-**	*4-*	3	**4-**	*3-*	2+	**3+**
Sienno	*4*	4+	**4+**	*5-*	4+	**4-**	*4-*	4	**4**	*4-*	4	**4+**	*3+*	3-	**3+**	*4-*	3	**3+**	*3-*	2+	**3**	*4-*	4-	**3+**
Skrzynno	*3*	3+	**4-**	*1*	1	**1+**	*3-*	3+	**3+**	*2+*	3-	**2+**	*3-*	3-	**2**	*2+*	2	**3+**	*2+*	2-	**2+**	*2+*	2+	**2+**
Sobków	*4+*	4+	**4-**	*3-*	2+	**2**	*4+*	4+	**5**	*3-*	2-	**3-**	*3+*	3+	**3-**	*2+*	3	**2**	*3-*	3-	**1**	*2+*	3-	**2**
Solec n. Wisłą	*5-*	5	**5**	*5-*	4+	**4+**	*4+*	4+	**4+**	*4-*	3+	**3+**	*4*	4-	**4-**	*4-*	3+	**4**	*3+*	3+	**4**	*4*	3+	**5-**
Stopnica	*5-*	5	**5-**	*4+*	5-	**4-**	*4+*	5	**5**	*3*	3+	**3-**	*3+*	4	**3+**	*3+*	4-	**4-**	*4+*	4+	**4**	*4+*	4+	**5**
Szydłów	*5-*	5-	**5-**	*5*	5-	**5-**	*5-*	4+	**5**	*4*	5-	**5-**	*4+*	4+	**4**	*3*	4	**3+**	*4*	4+	**4-**	*4+*	5-	**5-**
Tarłów	*4+*	5-	**5-**	*3+*	4-	**2+**	*2+*	3	**3-**	*2*	3	**2+**	*4*	3+	**4-**	*3+*	4-	**3+**	*3*	3	**3**	*4*	3+	**4-**
Waśniów	*4*	5-	**5-**	*3*	3-	**2+**	*3-*	3-	**3-**	*3-*	2	**2+**	*2*	3-	**2+**	*2+*	3-	**3-**	*3*	3-	**3+**	*3*	3-	**3-**
Wierzbica	*5-*	4+	**5-**	*3-*	3-	**3-**	*3-*	2+	**2+**	*2*	2	**1**	*2+*	3	**2-**	*2+*	3-	**3+**	*2*	2-	**1**	*2+*	3-	**3+**
Wierzbnik	*4+*	5-	**4+**	*4+*	5-	**4-**	*3+*	3	**4-**	*3+*	4	**3+**	*3+*	2+	**2-**	*3-*	3	**2**	*2*	3-	**1**	*4*	4	**5**
Wiślica	*5*	5-	**5-**	*5*	5	**5**	*5-*	5-	**4+**	*3-*	2	**3**	*3-*	3+	**3+**	*3-*	3+	**3+**	*4-*	4	**4-**	*4*	4	**4-**
Włodowice	*5*	5	**5-**	*1*	1	**1+**	*4-*	3	**3**	*3+*	3	**3-**	*4-*	3	**3+**	*3-*	3	**2**	*3*	4	**2-**	*2*	2	**3-**
Wodzisław	*4+*	4+	**5-**	*4+*	4+	**5-**	*4*	4+	**5**	*3-*	2	**3**	*4*	3+	**3+**	*3*	3	**4-**	*3*	3+	**4-**	*3+*	4	**4-**
Wolanów	*4*	4	**4**	*3*	3	**3**	*3*	3+	**3+**	*3-*	2+	**3+**	*3+*	3-	**4-**	*3-*	3-	**3+**	*2*	2	**2**	*3+*	3+	**3+**
Wyśmierzyce	*4+*	4+	**5**	*2+*	2+	**3-**	*5*	5	**5**	*4-*	3+	**3+**	*4-*	3+	**4**	*4+*	3-	**4**	*4+*	3-	**4-**	*3+*	2+	**3+**
Żarnowiec	*4-*	4	**4+**	*4+*	5-	**4+**	*4+*	5	**5-**	*3-*	2	**3**	*4*	4-	**4+**	*4+*	4	**4**	*4+*	4	**4**	*4-*	4+	**5-**
Żarnów	*4*	4+	**4+**	*5-*	4	**4+**	*2+*	2+	**1**	*3-*	2	**1+**	*4*	3	**2+**	*4-*	3-	**2-**	*3-*	2	**1**	*4-*	3+	3

Annex 3:

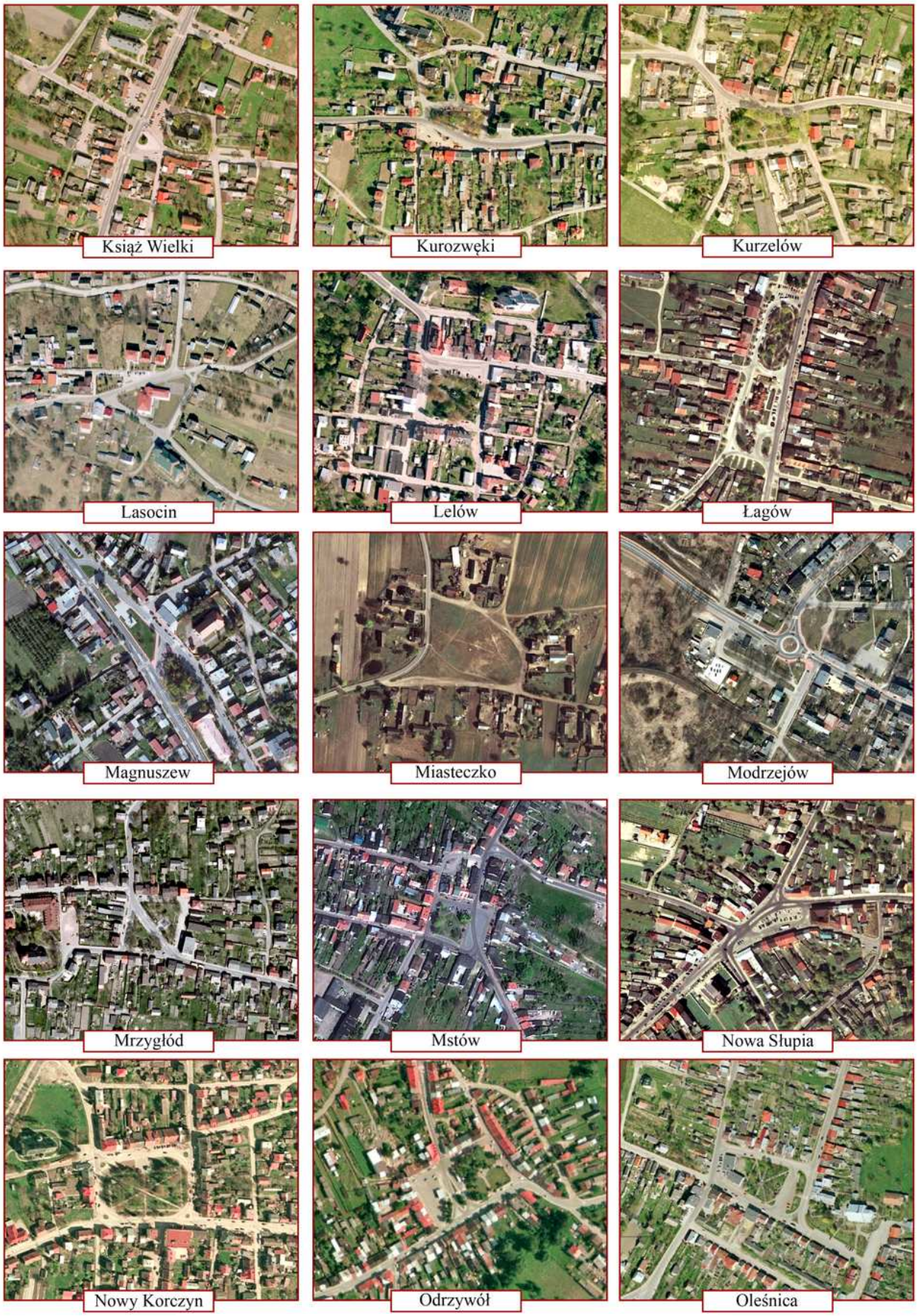
Aerial photography of the 69 field-surveyed market squares

Source: geoportal.gov.pl (scale 1:540)



MARKET SQUARES SURVEYED IN FIELD (Part 1 of 5)
Source: geoportal.gov.pl

MARKET SQUARES SURVEYED IN FIELD (Part 2 of 5)
Source: geoportal.gov.pl



MARKET SQUARES SURVEYED IN FIELD (Part 3 of 5)

Source: geoportal.gov.pl

MARKET SQUARES SURVEYED IN FIELD (Part 4 of 5)

Source: geoportal.gov.pl

MARKET SQUARES SURVEYED IN FIELD (Part 5 of 5)
Source: geoportal.gov.pl

Annex 4:

Street-view photography of the 69 field-surveyed market squares –

– selected examples

Photo: M. Dymitrow

MARKET SQUARES SURVEYED IN FIELD (Part 1 of 5)
Photo: M. Dymitrow


Goszczyn


Gowarczów


Grabowiec


Granica


Iwaniska


Janików

Janowiec


Janów


Jastrząb


Jedlińsk


Kazanów


Klimontów


Klwów


Koszyce


Kromołów

MARKET SQUARES SURVEYED IN FIELD (Part 2 of 5)
Photo: M. Dymitrow


Książ Wielki


Kurozwęki


Kurzelów


Lasocin


Lelów


Łagów

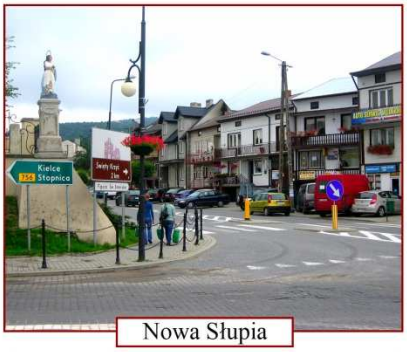

Magnuszew


Miasteczko

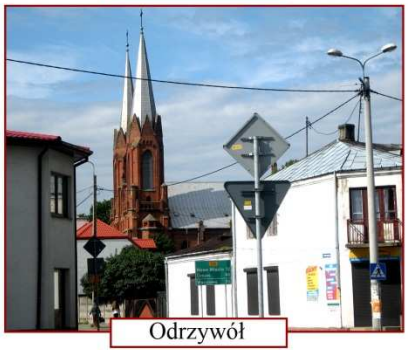

Modrzejów


Mrzygłód


Mstów


Nowa Słupia


Nowy Korczyn


Odrzywół


Oleśnica

MARKET SQUARES SURVEYED IN FIELD (Part 3 of 5)

Photo: M. Dymitrow


Olsztyn

Opatowiec


Pacanów


Pierzchnica


Piotrkowice


Przybyszew


Przyrów


Przytyk


Radoszyce


Raków


Ryczywół

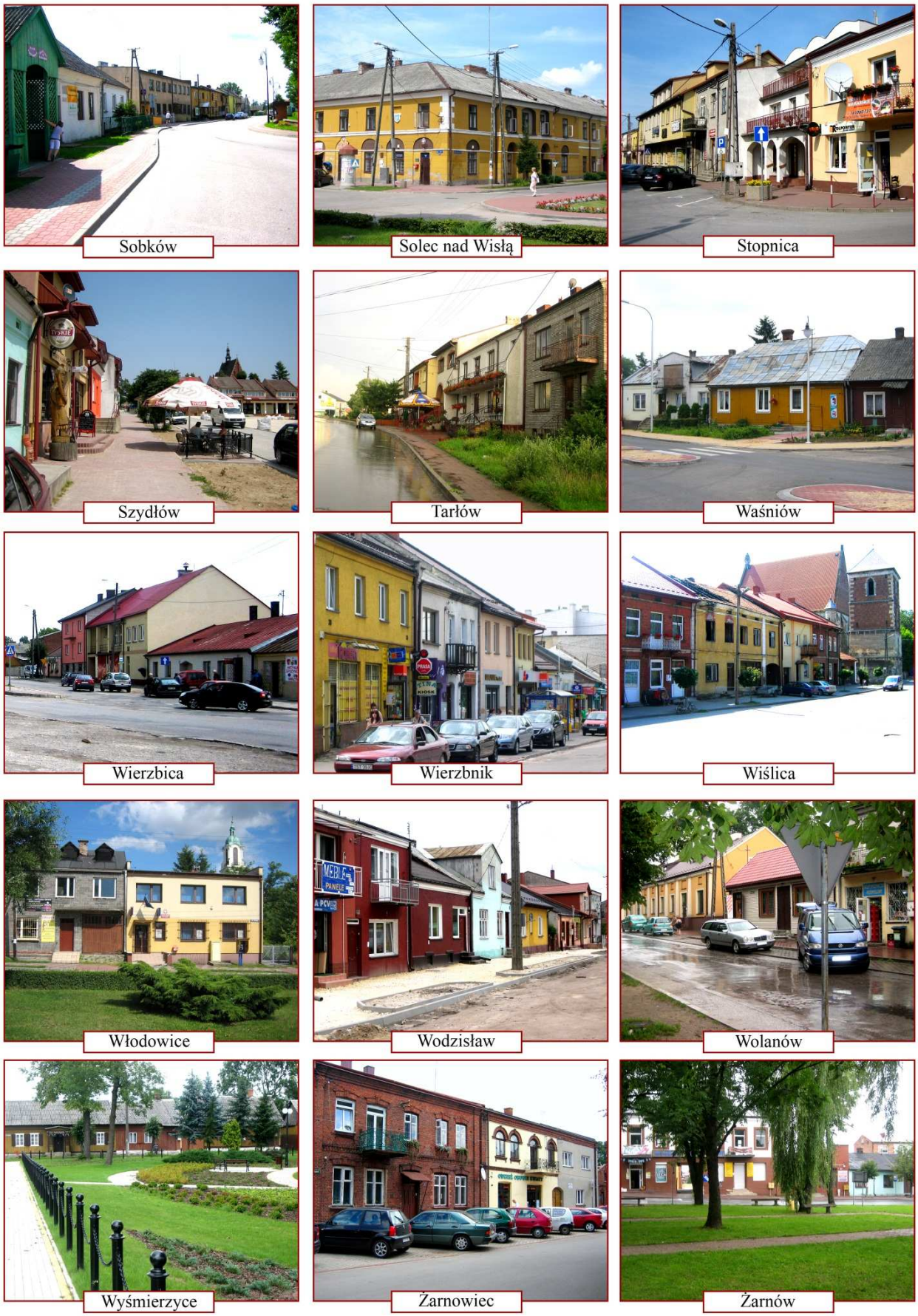

Secemin


Sieciechów

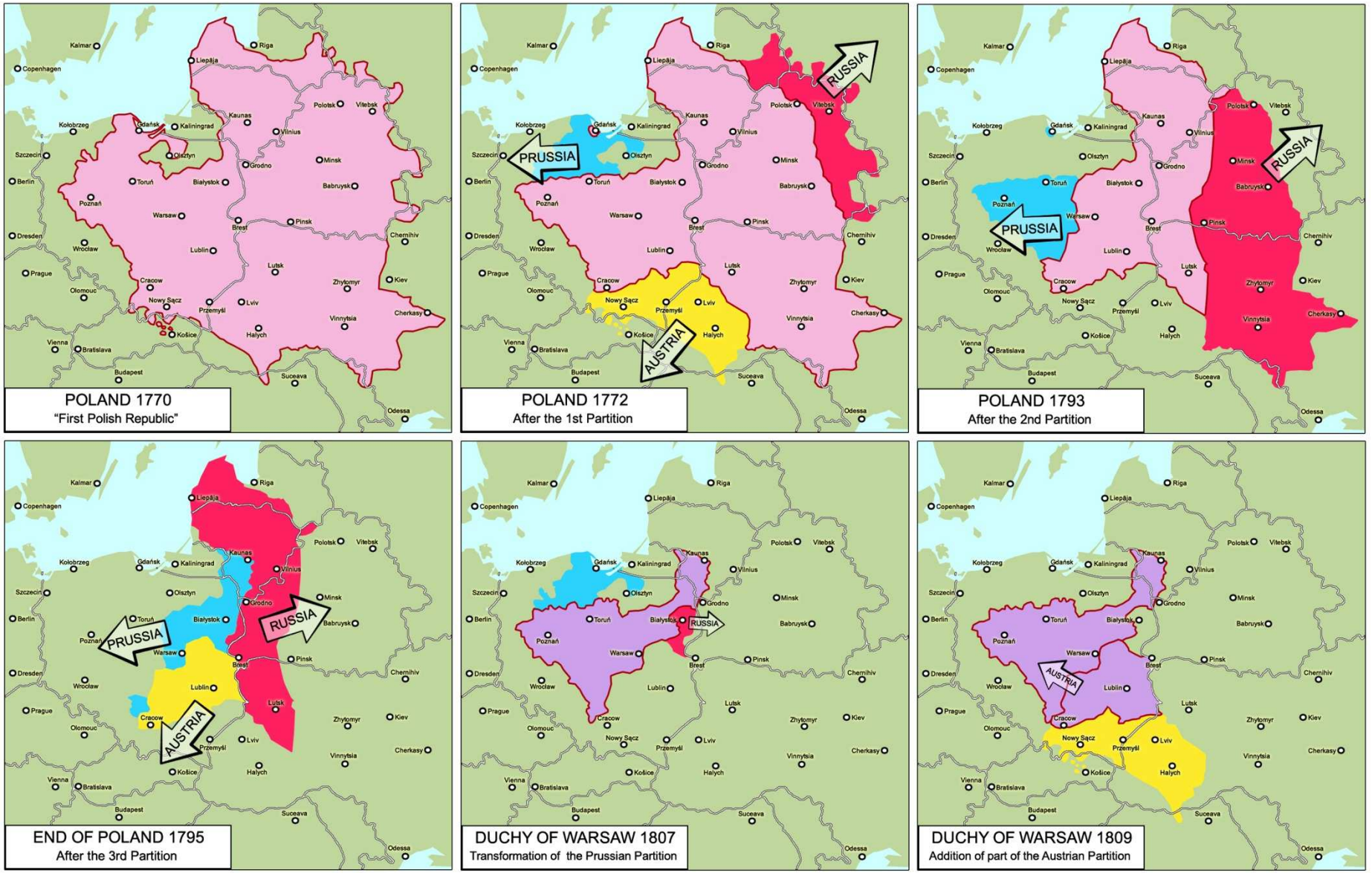
Sienno


Skrzynno

MARKET SQUARES SURVEYED IN FIELD (Part 4 of 5)
Photo: M. Dymitrow

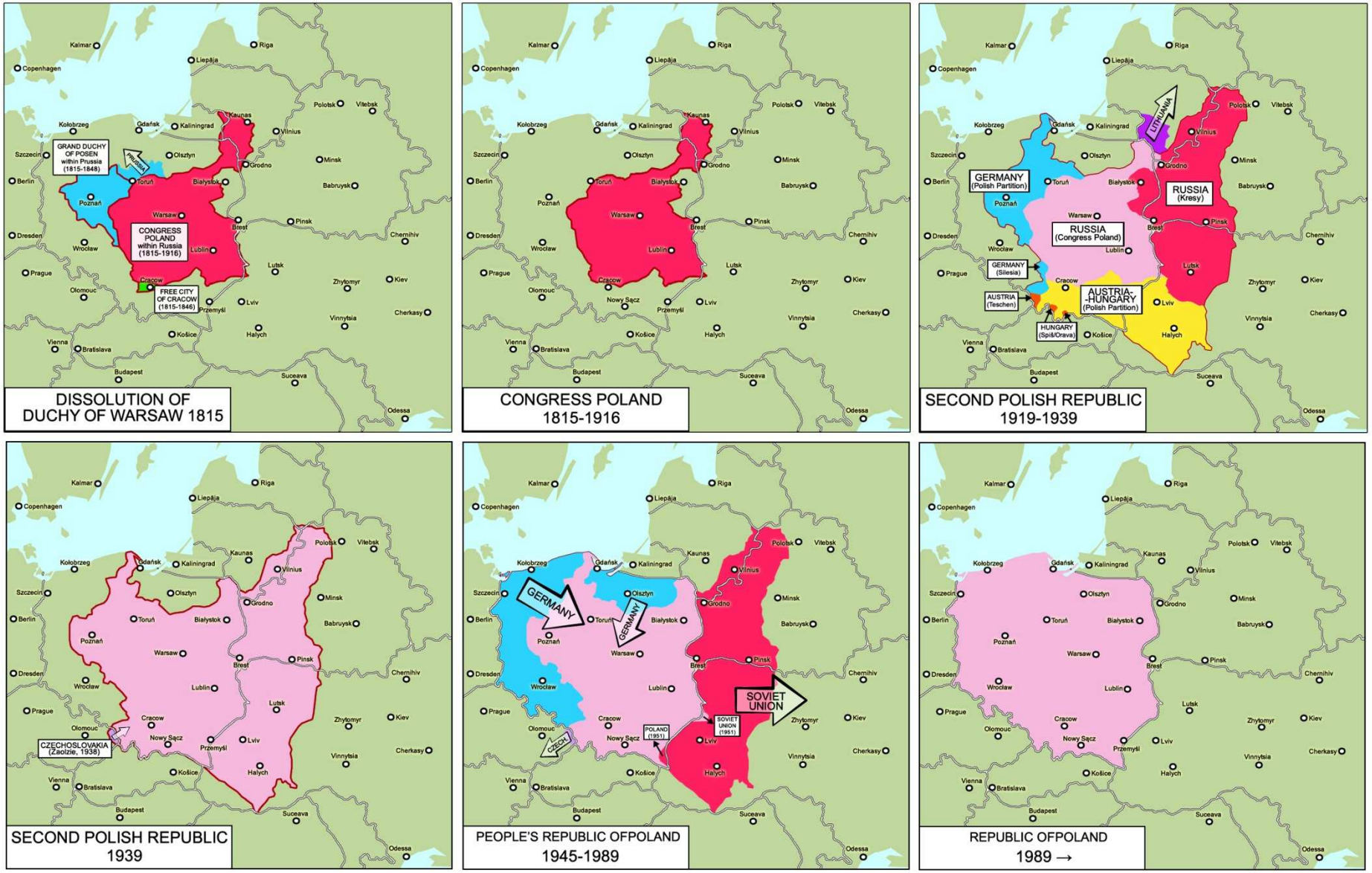


MARKET SQUARES SURVEYED IN FIELD (Part 5 of 5)
Photo: M. Dymitrow



Annex 4: HISTORICAL BORDER CHANGES OF POLAND (Part 1 of 2)

Source: own work



Annex 4: HISTORICAL BORDER CHANGES OF POLAND (Part 2 of 2)

Source: own work

A D D E N D U M

On the 27th of June 2012 the Council of Ministers issued a project for an upcoming decree regarding future (2013) restitutions of four applicant towns (Zaklików, Stopnica, Skierbieszów and Bnin)[1]. The first three are towns degraded in Congress Poland, whereof the first two during the 1869-70 reform and Skierbieszów somewhat earlier, in 1822. Bnin lies outside of the studied area but has been mentioned frequently in this thesis due to the specific circumstances surrounding its seemingly unfeasible restitution, despite strenuous attempts (cf. pp. 41, 44, 72, 127, 161). In all four cases, the Council recommended a *negative* evaluation on following grounds:

Tab. Addendum 1: Negative evaluation of applications for urban status in 2012 – details from the upcoming decree[1].

Applicant town	Population	Voters of	Local consultations on restitution				Council's motivation for not granting urban status
			Attendance (%)	Vote (%)			
				For	Against	Abstain	
Zaklików	3.043	Town	**51.2**	**90.7**	**8.1**	**1.2**	Delimitation of the proposed town too wide
		Villages	*11.3*	*51.8*	*44.9*	*3.2*	
Stopnica	1.327	Town	**89.7**	**88.1**	**1.2**	**0.5**	Insufficient population
		Villages	*81.2*	*61.0*	*33.3*	*8.0*	
Skierbieszów	1.927	Town	**41.3**	**86.5**	**15.3**	**5.8**	Dispersion of buildings and lack of defined town center; insufficient population; faulty documentation
		Villages	*32.9*	*68.1*	*16.9*	*13.6*	
Bnin	2.380	Town[1]	**45.7**	**69.6**	**29.5**	**–**	Unprecedented case of one commune with two towns and the associated formal representation issue; urbanization is about merging not dividing
		Villages	*27.2*	*85.3*	*13.7*	–	

Once again, arbitrariness has been set into motion, and this year's guiding theme seems to be 'no concessions whatsoever'. The denial in the case of Zaklików is strictly a technicality; with its sufficient urban morphology (V_{morf} 69.8) and adequate size (tab. 7.19; photo in fig. 1.2), Zaklików is unquestionably urban, and the local government's carelessness regarding proper delimitation of the proposed town is unfortunate and a waste of one year's preparations (as I pointed out in 3.8.2, improper delimitation always results in denial, but is easily corrected). Also Stopnica (which I have visited in the field) boasts a fine urban morphology (V_{morf} 67.1), replete with a very urban market square and an overall urban physiognomy (tab. 7.19, photo on p. 195). Indeed, it is on the smaller side, but still falling within the scope of the Ministry's earlier evaluations; in the last 20 years, no less than 15 towns failing to meet the set minimum of 2.000 inhabitants have been restituted, most recently in 2010, when Kołaczyce with only 1.300 inhabitants (on par with Stopnica) was restituted. Obviously, the committee this year is made up of more rigid members who even consider Skierbieszów's population figure of 1.927 insufficient (73 people short).

However, the main objection in regard to Skierbieszów is strictly morphological: dispersion of buildings and lack of an 'unambiguously defined town center with urban spatio-functional characteristics'. Although this may be true as to the very town center – there is a market square but it is cluttered with buildings (thus confirming my thesis stated in chap. 4.8.3.) – the first allegation seems unwarranted. A comparison between two satellite images (Stopnica and Skierbieszów) shows that Stopnica (to which *no objections on morphological grounds* have been raised) displays an even more dispersed layout than Skierbieszów[1], which actually looks more compact. If 'dispersion of buildings' refers to adhesion between buildings, than Skierbieszów is less compact than Stopnica, but only in the immediate vicinity of the market square; outside of the historic core, the buildings of Stopnica are equally uncompacted. Since no methods of assessment are provided, the decision of the Council raises serious doubts.

Fig. Addendum 1: Town plans of Stopnica (left) and Skierbieszów (right). *Source*: Google Earth.

Finally, there is the sad case of Bnin, whose inhabitants year after year apply for restitution on cultural, identity-laden grounds (cf. chap. 3.10), only to face denial at each pass. The Ministry's answer is always the same: 1) granting Bnin civic rights would be an unprecedented case of one commune with two towns in it; 2) Bnin would still be represented by the city of Kórnik (the seat of the commune) in all external relations; 3) the process of urbanization is about merging nearby settlements, not dividing existing ones. However, what this really is about is the *imposed factor of territorial-administrative barriers* (which I deliberated in chap. 3.9.3, actually using Bnin as an example), slickly disguised with words of sophistry, full of selectiveness and factual error.

First of all, precedence is not necessarily something bad, given that *all* change starts with precedence. Second of all, the Council retells that in a *historical context*, creation of new towns was always accompanied by establishment of a separate urban government, and hence a commune with two towns in it would breach that tradition. The excursus to history is very interesting, given that the restitution process is supposed to reflect the *modern* understanding of urbanity (as adduced in point 3 in that same motivation on the goals of urbanization). Bringing forth history as a factor seems derisory, because by doing so, one could easily invoke several inconsistencies. For instance, during the Interbellum in Poland (1919-39), there were 15 municipalities[1] endowed with civic rights, but lacked urban governments, thus being officially *rural*; during that same period, there were also 10 municipalities with urban governments[1] that did not have civic rights and were in fact only large villages. Even today we have the so-called *urban-rural communes* (588 units), with common governments for both the town and the surrounding rural hinterland, thus counteracting the alleged historical separateness of urban governments (in one instance, the government is not even seated in the town but in a neighboring village). There is actually very little historical evidence in support of one commune with two co-existing towns in it being more abnormal than any of the cited, fully acceptable, examples. The Ministry relies on historical aspects of urban development, while at the same time breaking other historical considerations, including the historically conditioned rationality of a de facto urban town's right to being a town, and especially when supported by strong influx from democratically held local consultations.

Furthermore, resorting to history only protrudes the indignant issue of Bnin's historically shaped urban independence, lost only as a result of the 1960-70s Communist planning ideal: the aggressive urbanization, when many neighboring towns were forcedly merged into alien, often spatially and socially detached conurbations. Starting with the 1980s, this ideal ended abruptly, and 13 towns actually disintegrated[1] (cf. p. 44). Only *one* merger of two towns has occurred since (between Warsaw and Wesoła), signifying that quite the opposite of what the Council states in point 3 would be the current standard of urbanization. Furthermore, the second point raised by the Council is irrelevant as the inhabitants of Bnin explicitly do not seek municipal independence, only cultural, identity-laden independence expressed through the historical concept of civic rights. The law on 'one town per commune' is an equally outrageous anachronism as the official rural-urban dichotomy, because *town status* must not mean anything else than just that: a settlement in possession of civic rights. I am inclined to believe that the imposed territorial-administrative barrier hampering Bnin from due restitution is a precarious matter, and especially so with Bnin meeting most of the objective criteria of urbanity (cf. Dymitrow [2010] 2012). This is perhaps why contradictory and irrelevant motivations are constantly posed as objections towards Bnin's restitution, in an attempt to internalize it as an anomaly.

Given the respectable attendance figures from the local consultations (in Stopnica's case – outright impressive) and the very high shares of votes *for* restitution (even from the inhabitants of the surrounding villages, which is something quite unheard of), the imminent decision of the Ministry will most likely result in a grievous blow for the local community cohesion, as anticipated in the model on p. 7 (fig. 1.3.). However, the most disturbing fact is that all of this could so easily have been avoided by separating the historical element of urbanity from the formal arena. The new decree project of the Council of Ministers, in a way, summarizes the essence of this thesis, confirming all my caveats and reservations. As seen in the past, the Council has changed its opinion on various matters (as in the case of restitution of the commune of Jaśliska – on third attempt), suddenly diverting from prior, strictly economically conditioned objections towards social grounds, such as the will of the local community and pre-existing social local ties. Let us hope that the final decision of the Ministry will show some consistency by actually *being inconsistent* (as it has been in the past), and approve the application of at least some of the candidate towns, a reward they surely deserve.

[1] Projekt 27.06.12: *Rozporządzenie Rady Ministrów z dnia ... 2012 r. w sprawie ustalenia granic niektórych gmin i miast oraz zmiany siedziby władz gminy*

[2] Including the whole town of Kórnik (7.206 inhabitants), of which Bnin is part of and from which it wishes to be excorporated. The population of Bnin proper is only 1/3 of Kórnik's.

[3] Since Skierbieszów is not part of this thesis, there are no morphological data available for it.

[4] Bircza, Bukowsko, Dubiecko, Dynów, Jaćmierz, Jaśliska, Jezierzany, Mielnica Podolska, Mrzygłód, Nowe Miasto, Nowotaniec, Osiek Jasielski, Rybotycze, Sołotwina and Zarszyn.

[5] Borysław, Jaworzno, Knihinin, Krynica, Krzeszowice, Nisko, Szczakowa, Tustanowice, Winniki and Zakopane.

[6] Zagórz, Poręba, Sławków, Międzyzdroje, Lędziny, Bieruń, Wojkowice, Rydułtowy, Pszów, Miasteczko Śląskie, Imielin, Radlin, Radzionków.

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