UNIVERSITY OF GOTHENBURG

Don’t Shoot the Multicommunicating Messenger!

An Investigation of Multicommunicating in Relation to the Big Five, Social Connectedness, and Media Multiplexity

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Abstract

The aim of this study was to examine the relationship between multicommunicating (MC), the Big Five personality traits, social connectedness (SCS), and media multiplexity within an interpersonal context. To this date, little is known about the construct of MC within the interpersonal context, therefore this mixed methods research presents data that aims to improve our understanding of multicommunication, a communicative practice which entails being engaged in two or more conversations by using nearly synchronous media. The assessment of the answers to the research questions is shaped by an amalgam of personal behavior theories and social behavior theories. In addition, this study applies media multiplicity theory to examine how tie strength influences multicommunicating practices.

A survey was conducted to investigate how personality and SCS influence MC. European residents (N = 107) completed a web-based questionnaire measuring frequency of MC, frequency of weak-tie MC and strong-tie MC, personality, and SCS. The findings of the web-based survey provide evidence that the frequency of MC was significantly positively related to the personality trait of Neuroticism and to Social Connectedness. Although SCS was significantly related to MC Frequency, this effect was semi-partially mediated by Extraversion. In addition, the quantitative results suggest a higher frequency level in close-tie MC in comparison to weak-tie MC. Results show that close-tie MC was positively associated with Extraversion and negatively related to Openness to experience. Additionally, it was found that weak-tie MC was positively associated with E.

The analysis of in-depth interviews (N = 8) shows that the motivation for engaging in multicommunicating practice was positively associated with SCS, as well as productivity and constant availability. In addition, the qualitative findings indicate that MC was more frequently used between strong ties. Conversely, weak-tie MC was found to be avoided due to its negative relational outcomes that were linked to incivility and impoliteness. The implications of these findings for future research are discussed.

Keywords: Multicommunicating, personality, five-factor model, social connectedness, media multiplexity, communication technologies

TABLE OF CONTENTS

TABLES AND FIGURES

1 INTRODUCTION

In this chapter, the problem of the thesis altogether with its wider background is discussed. Furthermore, the purpose of the study, the research questions, and the research contributions are presented.

1.1 Problem Area

The development of new information and communication technologies (ICT) and virtual communication in the recent years has not only shaped the communications environment, but also human beings' interactions. This new communication and information era gave rise to the increased immersion of ICTs into everyday life. In particular, one of the emerging trends is multicommunicating (MC), which denotes the usage of communications technology to participate in several interactions at nearly the same time (Reinsch et al., 2008). It is a special, complex form of multitasking, which denotes the nearly simultaneous engagement in various threads of ongoing communication by using nearly synchronous media. Whereas previous empirical studies have predominantly focused on the phenomenon of multicommunication in the organizational context, no existent research has examined user personality and user attributes in relation to MC within the interpersonal context. Additionally, research on the social impacts of multicommunicating remains scarce (e.g., Cameron & Webster, 2011).

According to Mead, the quintessence of human beings lies in the interaction with other humans, thereby forming their identity and constructing a reality (Lehn & Gibson, 2011). Multicommunicating, a direct consequence of the emerging ICT technologies, depicts a specific type of multitasking practice which occurs in a social context (Cameron & Webster, 2011). In particular, it "points to a socially constructed practice as people attempt to balance their need for communication efficiency and effectiveness" (Reinsch et al., 2008). Undeniably, social ICTs play an increasingly central role in human beings' lives. Specifically, participating in modern society may cause human beings to feel the pressure to juggle many things at once (Wajcman, 2015). In a highly digitalized environment, where users are always connected, the plethora of information, noise, messages, and channels, are likely to cause an impact on our social interactions. Therefore, communication scholars are well placed to examine how communication technologies shape, as well as are shaped by, human interaction. The study of multicommunicating offers a rich, yet unexplored area to communication scholars to investigate the impacts of social ICTs.

The general consensus among multicommunicating researchers is that multicommunicating is a double-edged sword. On the one hand, it can lead to increased

work productivity (Turner & Reinsch, 2007), or it may fulfill the need of social belonging (Seo et al., 2015). On the other hand, "as many of these communication technologies allow the communicator to balance the time pressures of communication through the flexibility of pace, the onslaught of messages may create pressure to "just communicate" at whatever cost" (Turner & Reinsch, 2010, 284). Since the phenomenon of multicommunicating depicts a fairly new trend, it remains yet to uncover whether multicommunication has a detrimental or a beneficial impact on social connectedness. As personality "clearly reflects and affects behavior" (Daly, 2011, 134), it is worthwhile to investigate the individual differences in the communicative dispositions. In addition, to this date, no existing research has yet examined the impact of tie strength and user motivations in relation to multicommunicating within the interpersonal context. This study is a step in that direction.

1.2 Purpose

The primary purpose of this exploratory research is to explore the little-understood phenomenon of multicommunicating to fill a research gap and to develop new ideas and focus questions for future research by examining the relationship between the Big Five personality traits, social connectedness, and tie strength (MMT) on multicommunicating practices. Therefore, the objective of this study is to increase the knowledge of individual behavior differences of multicommunicating, a so far unexplored area in the phenomenon of multicommunicating. Additionally, this study targets to find answers to as why communicators engage in multicommunicating practices and whether tie strength influences this practice.

1.3 Research Questions

In order to fulfill the research objective, several research questions have been formulated. The first research question for the study is:

> RQ 1: What is the relationship between personality traits, social connectedness and multicommunicating?

The second question investigates the relation of Media multiplexity in relation to MC by examining the impact of tie strength on MC practices:

> RQ 2: How does tie strength influence the practice of multicommunicating?

The third question targets to uncover the user motivations for multicommunicating:

> RQ 3: What are the motivations to engage in multicommunicating behavior?

1.4 Expected Research Contribution

First and foremost, empirical research on multicommunicating has been very limited and confined to mostly organizational workplace communication (Seo et al., 2015; Stephens, 2012; Turner & Reinsch, 2010; Turner & Reinsch, 2007; Cameron & Webster, 2005). Consequently, the results of this study will contribute to the current research body of multicommunicating and ICT effects within the interpersonal context. As such, the destined primary audience is the scientific community. Yet, by fostering new directions of thinking, it might, in the long run, change the way what practitioners do (Neuman, 2006).

Therefore, it might benefit the wider society by helping to explain the behavior of human beings in relation to the nearly synchronous use communication technologies at an individual level. Consequently, this paper's social implications could lead to a general awareness of how multicommunicating influences everyday life's social interactions. In addition, it could fuel further future research to discover possible solutions to negative implications of behavior differences in multicommunicating. Furthermore, the findings of this paper will be relevant to organizations for setting up proper guidelines of multicommunicating and technological infrastructure.

1.5 Outline of the Thesis

In the following chapter, a detailed theoretical background relevant to this thesis is provided, forming the basis of the analysis of the empirical results of this research. This is followed by the presentation of the research methodology, providing information about the data collection methods and the data analysis. Consequently, a short outline of the ethical considerations and the reliability and validity of this study's findings is presented. Finally, the empirical results of the study in relation to the theories and the research questions are presented and discussed. Subsequently, the research limitations are discussed and suggestions for future research are presented, ending with a short conclusion.

2 THEORETICAL BACKGROUND

In this chapter, a multidisciplinary theoretical background is presented, which will be forming the basis of analysis of the empirical results.

2.1 Defining Information Communications Technology (ICT)

The rapid growth and development of communication technologies facilitates users to almost synchronously document, share and disclose their daily lives together. It also demarks a new informational era (United Nations, 2003). ICT serves as an umbrella term and stands for "technologies that provide access to information through telecommunications … [and] focuses primarily on communication technologies" (Techterms.com, n.d.). Being used in a myriad of contexts, the definition of the term ICT remains yet vague:

> From the organizational perspective, the workplace has evolved from a discrete time-bound and defined place to a timeless, wall-less and sometimes virtual existence. From the economic development perspective, technology facilitates a reduction in the digital divide where ICT assists disaster preparedness, response, and communication. In education, ICTs are a vehicle for teaching and learning through active application (Zuppo, 2012, 17).

Indeed, ICT is claimed to facilitate and increase productivity and borderless, global communication (Zuppo, 2012). In highly digitalized nations, the use of ICTs is skyrocketing, since ICTs have penetrated classrooms, workplaces and everyday interactions causing transformations in all areas of life. The communication technologies include "the Internet, wireless networks, cell phones, and other communication mediums" (Techterms.com, n.d.). The increased growth of ICTs has presented both opportunities and challenges for human beings:

> As evidenced by the persistence of the digital divide between those who have access to ICT and those who do not, it is important to understand the span of the effects of ICT where ICTs are ubiquitous as much as where they are not due to economic development barriers (Zuppo, 2012, 20).

2.1.1 Computer-Mediated Communication (CMC)

CMC can be described as "the process by which people create, exchange, and perceive information using networked telecommunications systems that facilitate encoding, transmitting, and decoding messages" (as cited in Romiszowski & Mason, 2004, 398). According to Herring, the growth of CMC or the so-called new media goes hand in hand

with the emergence of the Internet itself (2002). Researchers have to be cognizant of how "the Internet and the CMC that it facilitates have permeated people's lives, and they have responded by adapting it to their purposes" (Mizco et al., 2011, 13). Therefore, the advent of CMC has undeniably shaped how people communicate with each other and the way they maintain interpersonal relationships. In other words, "the Internet is not 'out there' in a cyberspace separate from the other spaces of our lives" and "offline relationships are not somehow more 'real' than online ones" (Mizco et al., 2011, 12). Online interactions have the potential to affect the individual's network as much as offline interactions (Haythornthwaite, 2005).

The general consensus within the research body regards CMC as a less "rich" form of communication (Daft & Lengel, 1986; Cameron & Webster, 2005). Text based messages are the most characteristic communicative exchange within CMC (Herring, 2010). The research literature has paid attention to the way CMC influences task performances (Daft & Lengel, 1986; Dennis & Valacich, 1999; Dennis et al., 2008). Therefore, according to Herring (2002, 111), "much of the available research on Internet communication concerns text-based CMC, in which a sender types a message that is transmitted via networked computers and read as text on the recipient's (or recipients') computer screen(s)". More recently popular CMC modes include "text messaging on mobile phones, Instant Messaging, weblogs, and wikis" (Herring, 2010, 1). Nonetheless, emerging multimodal CMC technologies defy the notion of lean media through their richer, multimodal form, integrating video, audio and images (Romizowksi & Mason, 2004).

2.1.2 The Relational Aspect of Communication Technologies

In the age of electronic sociability, one of the most common aspects of ICT is its ability of facilitating engagement in social communication. With the rise of the Internet and the breakthrough of communication technologies, instantaneous, non-stationary, virtual communication has become a commonplace for interpersonal communication. However, the general consensus among researchers is that face-to-face communication still remains the primary social medium to develop and maintain relationships. Therefore, it has been reasoned that ICTs do not replace face-to-face interactions, but rather supplement existing ties (Anh & Shin, 2013; Grieve et al., 2013; Pettegrew & Day, 2015).

The study of Mieczakowski et al. (2011) showed that the majority of participants self-rated their usage of communications technology for 1-3 hours a day in the UK, US, Australia and China. Furthermore, according to a study conducted by the Pew Research Center, 84% of American adults use the Internet, with Internet use being at full saturation levels for young adults with high levels of education and affluent households (Perrin & Duggan, 2015). In other words, "social relations mediated through and with technology … are playing an increasingly important, if not central, role in our lives" (Willson, 2012, 208). The enormous growth of social ICTs has also sparked a recent surge in research by

communication scholars investigating the impact of new media and the Internet on social life. Scholars are particularly interested in the question of whether ICTs improve or decrease well-being.

On the one hand, it has been argued that new media provides the opportunity of maintaining interpersonal relationships (Bargh & McKenna, 2004; Grieve et al., 2013; Pettigrew, 2009). On the other hand, a considerable amount of research has been dedicated to investigate the dark side of communication technologies, associating the usage of CMC with distress (Chen & Lee, 2013), problematic Internet use (Caplan, 2003), loneliness and depression (Van den Eijnden et al., 2008).

2.2 Defining Multicommunicating

Multicommunicating is a direct consequence of the emerging new technologies, denoting a new pattern of communication that is getting increasingly more common (Reinsch et al., 2008). Turner and Reinsch conceptualized a new trend of polychronic behavior which denotes using overlapping "media to do more in shorter spans of time", i.e., to increase productivity and efficiency (2007, 37). Notably, research on MC is fairly limited (see Appendix C). Since its introduction by Reinsch et al. (2008), researchers have primarily focused on its professional implications in workplace communication.

MC is defined as "the practice of participating in two or more conversations or 'speech events' using nearly synchronous media, such as face-to-face speech, telephone calls, video conferencing, chat and email" (Reinsch et al., 2008, 392). Multicommunicating is a behavior that describes overlapping conversations, not sequential conversations. As such, it is facilitated by the "tolerance for slippage in conversational practices" which allows small gaps (Reinsch et al., 2008, 398). Consequently, not only is the context influencing MC practice, but also the technological features of communication devices (Turner & Reinsch, 2010).

In particular, MC is facilitated by the emergence of new media technologies which possess two characteristics that support MC (Turner & Reinsch, 2007). First, compartmentalization allows the communicator to divide his/her attention. Second, the flexibility of tempo describes the flexibility and social constructedness of the medium to allow gaps of silence in conversations (Reinsch et al., 2008). In other words, MC depicts a new trend in the usage of leaner media. Instant Messaging is an example of a new communication technology supporting this so-called slippage phenomenon. In particular, Turner and Reinsch (2010) found that the three most frequent media combinations for MC within the workplace were: (1) Telephone & E-mail (85%), (2) Telephone & Instant Messaging (30%), (3) Face-to-face & E-mail (26%). These findings revealed a strong preference for the pairing of an oral and written medium for multicommunicating practices, as written media provide supportive features for multicommunicating (Reinsch et al., 2008).

Nonetheless, MC has its limits. It is such a cognitively demanding process, that "increasing levels of intensity will, at first, enhance one's performance … followed by a leveling off and, finally, perhaps, by a precipitous decline" (Reinsch et al., 2008, 394). Due to the cognitive complexity of MC, the practice requires a "special skills set", since "a participant divides his or her attention among two or more speech events, and this degrades coordination so as to delay some responses and create gaps of silence" (Reinsch et al., 2008, 392). The scholars hypothesized that the frequency and practice of MC are influenced by the communicators' mental schemata, "which shape a person's understanding of the impact, and therefore, the likely effectiveness of multicommunicating for a specific task" (Reinsch et al., 2008, 397). In particular, Turner and Reinsch (2010) showed that unsuccessful episodes were characterized by the inability to simultaneously manage multiple conversations, which was primarily demonstrated by communication errors including misunderstandings, process errors, wrong target interactions, poor communication, writing errors, and sharing erroneous information. Successful episodes, however, were characterized by the usage of at least one text-based medium (87%), as well as the usage of at least one oral medium (93%).

Multicommunicating *per se* is a polarizing practice – it has the potential to cause negative outcomes. Specifically, Cameron and Webster (2010) investigated the relational outcomes of multicommunicating in relation to perceived incivility, showing that an individual's orientation towards MC, among other factors, exerts influence on the perception of incivility, ultimately influencing interpersonal trust. Reinsch et al. (2008) suggest that the outcomes of MC are related to "a continuum of tolerance for multicommunicating ranging from circumstances, in which it is frowned upon to circumstances in which it is so accepted that it needs to be only partially compartmentalized, if that, and might even be flaunted" (399).

2.2.1 MC and Communication

Polychronic communication is defined as "the managing of multiple conversations at once within a given time period" (as cited in Cameron & Webster, 2005, 91). This is, in other words, another characterization of multicommunicating. MC characterizes an interactive process, which is categorized as a complex form of multitasking, "requiring a person to monitor and to adapt to others while observing appropriate standards of etiquette" (Turner & Reinsch, 2007, 38). The practice of multicommunicating can vary depending on the number of open conversations, the integration of social roles, the pace of each conversation, and the number of topics (Reinsch et al., 2008). Conversely, multitasking in contrast to multicommunicating, does not require to cooperate with another co-communicator and to take him/her into consideration (Stephens, 2012).

The reason multicommunication is described as a complex, cognitively demanding practice is due to the fact that communication *per se* entails high levels of complexity, namely "sharing of information, cognitive content or understanding with varying degrees of awareness and intentionality" (Allwood, 2014, 18). In particular, communication is a two-way process in which at least two co-communicators constantly negotiate meaning. Broadly speaking, communication is "in the widest sense is *transmission of anything from anything to anything with the help of anything (expression/medium) in any environment with any purpose/function"* (Allwood, 2002, 1). In detail, communication is defined as:

> "A and B communicate if and only if A and B share a cognitive content as a result of A's influencing B's perception, understanding and interpretation and B's influencing A's perception, understanding and interpretation. The influence is mediated through their action and behavior or by the results of their action and behavior, e.g. texts or paintings" (as cited in Allwood, 2014, 18).

Furthermore, the complexity of the task and the expertise of the communicator influences the practice of multicommunicating (Turner & Reinsch, 2010). The difficulty of MC might be due to the fact that individuals have to "identify and adjust roles and behavior based on cues in the interaction rather than cues that take place within a specific space" (Turner & Reinsch, 2010, 278). The multicommunicator is required to nearly synchronously "envision the interactions … without the benefit of physical cues to direct the interaction" (Turner & Reinsch, 2010, 278). However, Turner and Reinsch (2010) found that in their empirical study only very few participants acknowledged the fact that multicommunicating engages in a two-way communication. In fact, the aforementioned researchers claim that "multicommunicating requires the communicator to short circuit many of these processes" of communication (Turner & Reinsch, 2010, 283). Additionally, they observed a lack of strategic thought in multicommunicating, hypothesizing that "the response and communication efficiency "is valued more highly than the content of the response" (Turner & Reinsch, 2010, 283).

2.2.2 Multitasking

According to Bluedorn et al. (1992), a polychronic approach, in contrast to a monochronic approach, describes the active involvement in at least two activities. Further characteristics of multitasking include the frequent switches between individual tasks, and the likelihood of interference of different tasks with one another (König et al., 2005). König and Waller (2010, 175) suggested that the behavioral aspect of polychronicity should be referred to as multitasking, whereas the preference for doing several things at once should be conceptualized as polychronicity as "there is no theoretically necessary link between multitasking and preferring to do several things at the same time". This hypothesis is supported by König et al. (2005), who found that polychronicity was not a significant predictor of multitasking performance. Contrastingly, Poposki and Oswald (2010) argue that polychronicity is indeed a predictor of multitasking related constructs.

A considerable amount of literature in the field has paid attention to the multitasking phenomenon in work environments (Stephens et al., 2011; König et al., 2005; Poposki & Oswald, 2010). The impact of multitasking has been well examined, with findings on the negative relationship of multitasking to academic performance (Junco & Cotten, 2012); the detrimental effects on learning of multitasking (Carrier et al., 2015), the negative interference on working memory for brief periods of time due to task interruptions (Clapp et al., 2011). In addition, the preference of multitasking was found to be a significant predictor of mood and personality disorders (Rosen et al., 2013). Furthermore, the general research body gives empirical evidence of the general inefficiency of multitasking in comparison of single-task performance (Courage et al., 2015). Buser and Peter (2012) provide further support for this assumption, revealing that the task-switching in multitasking lowers performance. Additionally, contrary to previous research suggestions, no evidence of gender differences was found (Buser & Peter, 2012).

Previous research on multitasking has showed evidence that increased age provides disadvantages "in at least the initial phases of performance in many jobs" (Salthouse et al., 1996, 329). Similarly, Clapp et al.'s (2011) study revealed that older adults' working memory impairment for multitasking was higher than in comparison to younger adults. Furthermore, empirical research indicated that multitasking preference is significantly related to Extraversion (Poposki & Oswald, 2010; Lieberman & Rosenthal, 2001). Extraverts appeared to exhibit "a larger "grace period" in their multitasking ability before interference occurs" (Lieberman & Rosenthal, 2001, 304). However, König et al.'s (2005) study showed a contradictory result, indicating that neither polychronicity nor Extraversion are significant predictors of multitasking performance.

2.3 McCrae and Costa's Five Factor Model

According to Funder (2001, 198), personality psychology aims to provide "an understanding of whole persons and the dimensions of difference that allow them to be psychologically distinguished from one another". Traditional personality theorists relate the most important traits to some fundamental, core quality of the person. As such, everyday conceptions of personality traits hypothesize that (1) traits are stable over time, and (2) that traits influence behavior (Matthews et al., 2003). Indeed, McCrae and Costa (1995, 231) claim that in interaction with external influences, "traits contribute causally to the development of habits, attitudes, skills, and other characteristic adaptations". As such, the Big Five "provide a general description of the individual's emotional, interpersonal, experiential and motivational styles, providing a starting point for the application of clinical judgements and skills" (Matthews et al., 2003, 396).

The five-factor model (FFM), a merge between lexical and questionnaire traditions (McCrae & John, 1992), has been one of the most influential and most commonly used

approaches to assess personality over the past century. The FFM resolves to a certain extent the chaos of personality constructs in personality psychology (Funder, 2001). Empirical evidence has shown the cross-cultural generalizability of the FFM, indicating the universality of personality traits (McCrae & Costa, 1997; McCrae & John, 1992). Personality traits are not arbitrarily shaped by culture but "represent variations in basic human ways of acting and experiencing" (McCrae & Costa, 1997, 509).

2.3.1.1 The Big Five: A Definition of the Traits

Specifically, the FFM classifies and separates human personality into five traits called Neuroticism (N), Extraversion (E), Openness to experience (O), Agreeableness (A), and Conscientiousness (C). Each of the five dimension consists of further six associated lower-level traits (see Table 1).

The first trait Neuroticism characterizes "a person's tendency to experience psychological distress and high levels of this trait are associated with a sensitivity to danger" (Amichai-Hamburger & Vinitzky, 2010, 1290). Empirical evidence has linked impulsive behaviors, as well as irrational beliefs and disturbed thoughts and behaviors to N (McCrae & Costa, 1987). The inverse pole of N is labeled Emotional stability.

Extraversion, on the other hand, is marked by sociability, talkativeness, and energy (Seidman, 2013). The breadth of variables for E might be due to the fact "that this factor is so well represented in English language adjectives and so often described by personality theorists" (McCrae & John, 1992, 196). Conversely, the opposite pole of E is Introversion. An individual with a low score in E is described as "quiet, reserved, retiring, shy, silent, and withdrawn" (McCrae & John, 1992, 196).

The third trait Openness to experience is marked by intellectual curiosity, enjoyment of artistic pursuits, as well as the consideration of alternative approaches (Amichai-Hamburger & Vinitzky, 2010). However, there exists confusion and controversy about the third domain which might be partly caused by the lack of English trait adjectives for traits related to O (McCrae & Costa, 1987).

The fourth trait Agreeableness describes an individual's tendency to be sympathetic and his/her willingness to cooperate and help. Antagonism, on the other end of the spectrum, describes characteristics such as "hostility, indifference to others, self-centeredness, spitefulness, and jealousy at the other" (McCrae & John, 1992, 196-197).

The fifth trait Conscientiousness reflects an individual's tendency to be disciplined, organized, orderly and responsible. Conscientiousness "can mean either governed by conscience or diligent and thorough" (McCrae & John, 1992, 197). It has been argued that

important real-life outcomes are among this dimension's correlates (McCrae & Costa, 1987). Conversely, the opposite pole Undirectedness is associated with laziness.

Table 1. *Trait Facets Associated With the Big Five (Matthews et al., 2003, 24)*

Neuroticism	Anxiety, angry hostility, depression, self-consciousness, impulsiveness, vulnerability
Extraversion	Warmth, gregariousness, assertiveness, activity, excitement seeking, positive emotions
Openness	Fantasy, aesthetics, feelings, actions, ideas, values
Agreeableness	Trust, straightforwardness, altruism, compliance, modesty, tender-mindedness
Conscientiousness	Competence, order, dutifulness, achievement striving, self-discipline, deliberation

2.3.2 Communication and Traits

Undoubtedly, "personality and communication are inherently intertwined" (Daly & Bippus, 1998, 22). Similarly, Heisel et al. (2003, 22) outline that "unless interpersonal behavior is utterly random, there must be a causal explanation for, at least, its nonrandom component". Therefore, the most common way for communication scholars is to apply traits "devised both in other disciplines and communication, to communication-related concerns" (Daly & Bippus, 1998, 23). Beaty and McCroskey (1998, 43) even go as far to proclaim that "any theory of interpersonal communication that is inattentive to communicator traits is necessarily and substantially incomplete". In their opinion, "traits are at the center of the interpersonal universe" (1998, 44). Since communication is by its very nature driven by human interaction, it follows that in order to understand multicommunication behavior, we need to grasp the personalities of those engaging in MC practices:

> Traits are correlated with communication-related variables in meaningful ways. They account for significant variation in communication behavior as well as communication-based perceptions. At the same time, communication plays an important role in the development and maintenance of dispositional tendencies. Psychological and sociological explanations of the etiology of many personality variables emphasize the critical role of communication (Daly & Bippus, 1998, 22).

There exists a rather limited research body on the relationship between communication and traits (de Vries et al., 2013; McCrosky et al., 2001; Heisel et al., 2003). Specifically, "non-neurotic extraverts are not shy or apprehensive about touch" and are assertive and responsible (McCroskey et al., 2001, 367). Extraversion and Neuroticism are predictors of affinity-seeking competence (Heisel et al, 2003). Furthermore, neurotic introverts possess communication apprehension, are less immediate and less affect oriented, and demonstrate

higher levels of verbal aggressiveness (McCrosket et al., 2001). Conversely, Undirectedness and Antagonism were found to be predictors of verbal aggressiveness (Heisel et al., 2003).

Furthermore, in the age of constant connectivity, communication does not only take place face-to-face, but a great part of it occurs online. Recently, a considerable body of research has been dedicated to uncover how individual characteristics, especially individual psychological attributes, shape network behavior (Balmaceda et al., 2014; Amichai-Hamburger & Vinitzky, 2010; Ehrenberg et al., 2008; Correa et al., 2010; Totterdell et al., 2008). Empirical evidence points to the positive correlation between high levels in Extraversion and/or Openness to experience and social media use (Correa et al., 2010); and to a negative correlation between Emotional stability and social media use (Correa et al., 2010). Extraverted young adults were found particularly positively related to social media use (Correa et al., 2010). Further, male neurotics were related to higher social media use in comparison to female neurotics (Ehrenberg et al., 2008).

2.4 Media Multiplexity

Media multiplexity (MMT) is a theory proposed by Haythornthwaite (2005). The idea behind MMT is that the type of tie strength of an individual's personal social network influences and drives the communication media usage. In other words, the "tie determines the ways, means, and expression of communications, and it determines the motivation, needs and desires for communication" (Haythornthwaite, 2002, 385). Haythornthwaite differentiates between strong ties and weak ties, arguing that "more strongly tied pairs make use of more of the available media" (Haythornthwaite, 2005, 130).

Haythornthwaite links her MMT to Granovetter's research on tie strength (1983). Taking on a social network perspective, a tie exists between two communicators "wherever they exchange or share resources such as goods, services, social support or information" (Haythornthwaite, 2002, 386). Individuals maintain many ties with other individuals, some of them being part of the same social networks, others not. As such, communication becomes the key to maintaining ties, and media provides such a connection (Haythornthwaite, 2002). Haythornthwaite's contents that the examination of ties provides an examination of "building blocks for networks" (2002, 387). The nature of social network ties can be assessed by several factors such as "frequency of contact, duration of the association, intimacy of the tie, provision of reciprocal services, and kinship" (Haythornthwaite, 2002, 386).

MMT postulates that the size of an individual's social network has a beneficial impact on their health, happiness and their sense of belonging to a community (Haythornthwaite, 2000). According to Haythornthwaite (2000, 195), "those who communicate more frequently maintain more relations and more socially supportive relations, and report more

positively about their desire for future work and social interaction". Empirical evidence suggests that a higher frequency of weak ties might have a harmful impact on close ties as the maintenance of weak ties occupies cognitive capacities (Chan, 2015b). Similarly, the findings of Mieczakowski et al.'s (2011) revealed that work-based communication at home had a negative impact on the quality of family life.

There is a body of research that suggests evidence for media multiplexity (Ledbetter, 2009; Mizco et al., 2011; Schon, 2014; Van Cleemput, 2010). Evidence was found in Ledbetter's investigation (2009) of media use in same-sex friendships among college students. Additionally, the exploratory social network study on adolescents' communication patterns by Van Cleemput (2010) successfully linked a higher number of used media with higher tie strength. Another study on strong ties and relationship maintenance provided weak evidence for MM, as the "number of channels was weakly related to solidarity", a communication motive (Mizco et al., 2011, 12). The finding gives support to Haythornthwaite's assertion "that people with close ties use CMC for a range of informational and emotional exchanges" (Mizco et al., 2011, 21). Schon (2014) found that the number of media used by parents and adult children in order to maintain their relationship has a modest impact on communication and relationship satisfaction among parent-adult children dyads.

2.4.1 Strong-Tie and Weak-Tie Communication

MMT regards online exchanges "as real in terms of their impact on the tie as are offline exchanges" (Haythornthwaite, 2002, 388). In other words, face-to-face communication is as important as Instant Messaging: Both create an impact on the user and both help, in different ways, to maintain and strengthen social bonds (Boase et al., 2006). The personal network composition ranges from both weak and strong ties, both being advantageous for several reasons. Weak ties tend to be "more instrumental than strong ties, providing informational resources rather than support and exchange of confidences" (Haythornthwaite, 2000, 198). Strong ties, on the contrary, convey trust and support, motivation, intimacy and a shared understanding for complex information exchange (Haythornthwaite, 2000; Haythornthwaite, 2002). As such, strongly tied pairs exchange emotional content such as "social support, companionship, emotional aid and advice" (Haythornthwaite, 2000, 199). Ties come and go in an ongoing ebb and flow, growing and declining when the "reasons for the strong associations reaches its conclusion" (Haythornthwaite, 2002, 387).

MMT posits that new media is more readily adopted by strong ties if it suits or complements their communication needs. On the other hand, new media is less readily adopted by weakly tied pairs, who are more passive in their usage and adoption of media (Haythornthwaite, 2002). However, Haythornthwaite also suggests that new media could create a positive impact on particularly latent ties (existing, yet inactive ties) and helps to

develop and strengthen them by its implementation. Conditions of media change are said to provoke dissolution on weakly tied pairs, and additional robustness on strongly tied pairs by providing new means to connect with each others.

Particularly, strong ties expand their media repertoire by using multiple means of communication to support the communicative exchange and the maintenance of the tie (Van Cleemput, 2010). Strong ties are argued to influence each other to use and adapt to new media. Conversely, weak ties use fewer and more common, established means of communications and protocols to communicate with each others (Haythorntwaite, 2002). They are distinguished by a low motivation to communicate and low mutual influence, albeit provide the other communicator access to information. Furthermore, less strong pairs lack the motivation to communicate with each other, as "without the support of strong ties, individuals are less likely to want to expend extra effort to stay in touch, and online ties will fade under these conditions" (Haythornthwaite, 2000, 221). Notably, a balance of network ties is crucial, as "weak ties provide exposure to a range of ideas and viewpoints, and strong ties provide the social and emotional support needed to support work in the online environment" (Haythornthwaite, 2000, 221).

2.5 Defining Social Connectedness

Social connectedness is referred to as "the experience of belonging and relatedness between people" (Van Bel et al., 2009, 1). Specifically, Lee and Robbins (1995) argue that connectedness is an aspect that pertains to belongingness, a concept of self-psychology theory coined by Kohut in 1984. Baumeister and Leary (1995) claim that the desire for interpersonal attachments is a universal and fundamental human motivation. As such, this explanatory construct serves to explain and understand human interpersonal behavior. The empirical support for social connectedness has been provided in studies which have associated connectedness with the psychosocial development of women (e.g., Lee & Robbin's, 2000). In addition, Walsh et al.'s (2009) research about adolescents' mobile phone usage provides further evidence for the belongingness hypothesis.

According to Lee and Robbins (1995), connectedness develops during adolescence and describes how a mature self can successfully maintain companionship and affiliation within the larger social environment without any feelings of threat to his or her self-esteem. In other words, it denotes "one's opinion of self in relation to other people" (Lee & Robbins, 1995, 239). Connectedness, thus, describes a sense that "allows people to maintain feelings of being "human among humans" and to identify with those may be perceived as different from themselves" (Lee & Robbins, 1995, 233). Contrastingly, the scholars Van Bel et al. (2009, 1) describe "social connectedness as a short-term experience of belonging and relatedness".

Being a core human need, it entails goal-directed activity in order to satisfy the need to form stable social bonds and to resist the dissolution of already existing relations. It goes without saying that social connectedness has a fundamental impact on people's psychological wellbeing. According to Ahn and Shin (2013, 2455), "connectedness is a reward for individuals in that those who form and maintain social connections typically experience positive affect such as happiness". Thus, the study of belongingness and SCS serves to further uncover why people communicate with each other. As such, "needs are central to the communication process" because "we know that individual needs, manifested in the motives people express, influence the selection of interpersonal partners, communication strategies, channels, and expectations about the strategy's success." (Rubin & Martin, 1998, 300).

People who score high in connectedness "tend to feel very close with other people, easily identify with others, perceive others as friendly and approachable, and participate in social groups and activities" (Lee et al., 2001, 310). Conversely, people with a low connectedness level "tend to feel interpersonally distant from other people and from the world at large. They often see themselves as outsiders, feel misunderstood by others, have difficulty relating with the social world, and are uncomfortable in social situations" (Lee et al., 2001, 310). This postulation is in line with Lee and Robbins (1995) who argue that the lacking of a feeling of connection causes people to feel distant and different from their social environment, which, eventually causes friction in the acceptance of social roles and responsibilities, ultimately creating further social isolation and frustration due the perceived failure. Similarly, Baumeister and Leary (1995) claim that the loss of belongingness can, besides negative affect, provoke certain types of pathology.

2.5.1 Social Connectedness and Communication Technologies

We live in a technological universe where people seem to be always connected, always in perpetual contact. Unsurprisingly, the Internet and new communication technologies play an important role in how we cultivate our social relations and engage in social interactions. As interpersonal communication is goal-directed, communication with others serves as a tool to satisfy people's ego needs and other basic needs (Rubin & Martin, 1998). The social need to belong is consequently closely related to interpersonal communication motives (Rubin & Martin, 1998).

Prior research of people's use of communication technologies has revealed that the usage of communication technologies promotes the feeling of belongingness and social connectedness (Walsh et al., 2009; Pettigrew, 2009; Lam, 2012) and well-being (Chan, 2015b). Indeed, one study indicates that the primary benefit of mobile phone usage appears to be connectedness to others, with the need to belong as the driving force to maintain social bonds (Walsh et al., 2009). Similarly, Pettigrew's (2009) investigation of strong-tie dyads' text messaging usage revealed that text messaging supported interpersonal

connectedness and autonomy. In addition, Ahn and Shin's (2013) research gives further evidence that the social use of media enables people to efficiently seek connectedness. However, on the other hand, Seo et al.'s (2015) study exemplifies that the need to belong might also cause problematic mobile phone use.

Computer-mediated social interactions are suggested to have a diminished positive impact on users' positive mood in comparison to face-to-face communication (Sacco & Ismail, 2014). Indeed, existing research provided evidence of Janus-faced nature of virtual communication and social media (Ahn & Shin, 2013; Allen et al., 2014; Sheldon et al., 2011; Seo et al., 2015). In particular, one study found that virtual communication might facilitate, but also hinder people's psychosocial well-being (Ahn & Shin, 2013). Similarly, another investigation showed that social media causes both positive and negative psychological outcomes for adolescents (Allen et al., 2014). Furthermore, empirical findings provides evidence that the frequent use of Facebook usage is positively related to people's relatedness satisfaction, yet it is also correlated with feelings of disconnection (Sheldon et al., 2011).

2.5.2 Social Connectedness, Belonging and Personality

To this date, existing research on how personality traits predict social connectedness seems to be limited (Grieve & Kemp, 2015; McIntryre et al., 2015). Prior research mainly concentrated on the relationship between belongingness and personality (Seidman 2013, Malone et al., 2012). Grieve and Kemp's (2015) found that Extraversion, Openness to experience and Emotional stability were positively associated with experiencing social connectedness derived from Facebook use. In addition, Lee et al.'s (2008) findings showed that social connectedness functions as a mediator which facilitates extraverts to maintain subjective well-being.

Besides the little empirical research on the relationship between social connectedness and personality traits, there is existing research regarding belongingness and personality traits. Malone et al.'s (2012) findings demonstrated that individuals scoring high in Extraversion and Agreeableness tended to self-report high levels of belongingness. Conversely, participants who scored high on Neuroticism reported lower levels of belongingness (Malone et al., 2012). However, Seidman's (2013) study on Facebook usage showed a contrasting result: High scores in Agreeableness and Neuroticism were the best predictors of engaging in behaviors and motivations associated with belongingness. Extraversion, on the other hand, was related to a more frequent use of Facebook as a communicative tool in order to maintain and extend offline relationships (Seidman, 2013).

3 METHODOLOGY

This section starts with a brief discussion of the used research type, approach and methodology for the study. Moreover, this chapter presents an overview of the data collection, study design and sampling method used in this research. It is followed by an overview of the study's employed data analysis methods and concludes with an outline of the ethical considerations and the presentation of the research credibility.

3.1 Research Type and Approach

Multicommunicating is a relatively new practice that lacks empirical research. Considering the nature of this research, it is conducted in new areas of inquiry and therefore set to be exploratory. It aims to get a deeper insight into the phenomenon of MC by assessing a new angle, namely the relationships between MC, personality, SCS, and tie strength. Looking at the research questions, the objective is to generate new ideas and hypothesis regarding the social activity of multicommunicating, laying the foundation for future research.

As this study is not based on a well-defined subject, it can hardly claim to be of a descriptive nature. Yet, on the other hand, one cannot feign a clear-cut distinction between the several research purposes, as a researcher always assumes a certain presumption and preconception when undertaking her or his research. As such, the starting point of the research cannot be equivalent to a tabula rasa: It is not without preconceived ideas about the phenomenon of multicommunicating. Considering the fact that this research used both quantitative and qualitative methods of data collection, this research aimed to see through the eyes of the people being studied and who ultimately "are capable of attributing meaning to their environment" (Bryman, 2012, 405). Consequently, this study took an inductive logic of reasoning.

3.2 Research Methodology

This research adopts a pragmatic framework of the research process. As such, "pragmatism emphasizes that all aspects of research inherently involve decisions about which goals are most meaningful and which methods are most appropriate" (Morgan, 2014, 1050). Considering the fact that the phenomenon of MC is fairly unexplored, a mixed methodology seemed the most appropriate method to approach the inquiry problem and consequently strengthen the validity, meaningfulness and interpretability of the results (Greene et al., 2006).

Mixing both styles of research provided a complementary strength and an improved comprehension in understanding the phenomenon of multicommunication (Neuman, 2006). This study applied a complementarity mixed-method, where "qualitative and quantitative methods are used to measure overlapping but also different facets of a phenomenon yielding an enriched, elaborated understanding of that phenomenon" (Greene et al., 2006, 70). The primary purpose for using a complementarity mixed method study where both methods possess the same status was to seek "elaboration, enhancement, illustration, clarification of the results from one method with the results from the other method" (Greene et al., 2006, 71).

The quantitative research followed a more linear research path, which proceeds in a clear, step-by-step line (Neuman, 2006). The focus for the quantitative part of this research was the relationship between personality, MC, SCS and tie strength. The qualitative data collection of the research in the form of semi-structured interviews took place in parallel. In-depth interviews provided especially useful to "understand the meanings of information, opinions and interests in each respondent's life" (Brennen, 2013, 28). The aim of integrating qualitative research style in the study was to "present authentic interpretations that are sensitive to specific social-historical contexts" (Neuman, 2006, 151).

3.3 Data Collection

3.3.1 Questionnaire

This study employed a web-based, quantitative questionnaire. The usage of a web-based survey provided particularly useful to ask about multicommunicating behavior, as it allows to "measure many variables, test multiple hypotheses, and infer temporal order from questions about past behavior, experiences, or characteristics" on a large number of people (Neuman, 2006, 276). The main advantage of using an Internet survey is that it is fast and inexpensive for the generation and obtainment of quantitative data (Bryman, 2012; Neuman, 2006). Moreover, a further strength is the absence of the interviewer effect, as the researcher "does not manipulate a situation or condition to see how people react; he or she simply carefully records answers from many people who have been asked the same questions" (Neuman, 2006, n. d.). In this case, using a self-report questionnaire proved to be particularly useful for the measurement of the Big Five, as self-reports are probably the best way to measure personality (McCrae & Costa, 2003). It is therefore a legitimate tool to generalize findings, as it draws inferences to the population (Neuman, 2006).

3.3.1.1 Overview of the Web-Survey Design

The questionnaire, created on SoSci Survey, consisted of four sections with closed-ended questions and took an average of 20 minutes to complete. This survey was pilot tested with a small set of 5 respondents similar to those sampled in the final survey prior to its online distribution. Participants could participate in the survey by receiving the survey's URL through social media and E-mail. Prior to the survey, information was provided with a time estimate to complete the survey and information about a monetary incentive drawing for their participation. After receiving a brief introduction explaining the survey, the respondents were asked to complete the questionnaire. Four main areas were covered during the survey and followed by a final part covering demographic factors, such as age, education, occupation and place of residence. The section below will reveal the measures which the participants progressed in chronological order.

(1) Frequency of Multicommunication

The first part of the questionnaire was designed to measure the multicommunicating behavior within the participant's interpersonal context. Multicommunicating behavior was a measure of the frequency of other communication activities during an identified communication activity of a specific media. Specifically, participants were asked to rate their multicommunicating behavior frequency on a 5-point Likert scale (from 1 = "Very rarely", to 5 = "Very frequently") on 14 connected questions. Negatively worded questions were reverse coded. The responses were later averaged to create a composite index of MC frequency (M = 2.86, SD = 0.768, Cronbach's Alpha α = .867).

(2) Weak-Tie and Strong-Tie Multicommunication

The participants were assigned to indicate how their MC practices relates to (1) a close, strong relationship and (2) weak relationships. Specifically, respondents were asked to indicate on a 5-point Likert scale (from 1 = "Very rarely", to 5 = "Very frequently") how frequently they use other communication media during the usage of a primary communication medium such as (1) Face-to-face communication, (2), E-mail, (3) Video conferencing, (4) Text messaging (SMS), (5) Voice telephone (Landline, Mobile phone), (6) Instant Messaging (e.g., Facebook messenger, Whatsapp). The survey was inspired by Ophir et al.'s (2009) media multitasking index. SMS as primary communication medium was discarded from the analysis due to Ophir et al.'s (2009) suggestion that it is hard to accurately describe the hours of use and timing for it. Responses were later averaged to create a composite index of the 30 connected items for weak-tie MC (M = 2.19, SD = .681, Cronbach's Alpha α = .921) and the 30 connected items for strong-tie MC (M = 2.28, SD = .687, Cronbach's Alpha α = .912).

(3) Big Five

The second part of the survey consisted of the completion of the 40-item Mini-Marker Set (Saucier, 1994), a self-report measure, in order to assess personality along the domains of the five-factor model. The abbreviated subset is a widely used self-report measure of the FFM. It contains 40 items which are scored on a 9-point Likert scale (from 1 = "Extremely

inaccurate", to 9 = "Extremely accurate"). The scores for the eight items on each factor were averaged to produce measures of Extraversion (α = .838), Agreeableness (α = .814), Conscientiousness (α = .803), Emotional stability (α = .790), and Openness (α = .807).

(4) Social Connectedness

In order to assess the extent to which participants' multicommunicating behavior was related or facilitated connectedness, the Revised Social Connectedness scale (SCS-R) was used in this study (Lee et al., 2001). It measures social connectedness "as a psychological sense of belonging, or … as a cognition of enduring interpersonal closeness with the social world *in toto*" (Lee et al., 2001). The scale consisted of 20 items rated on a 6-point Likert scale (from 1 = "Strongly disagree" to 6 = "Strongly agree"). The SCS-R scale provides good internal reliability and validity (Lee et al., 2001). In this study, the SCS-R scores a Cronbach's Alpha of α = .925, qualifying as a very reliable measurement scale (M = 4.39, SD = .845).

(5) Demographics

After the fourth section, a short last part measured the demographic data. In particular, participants were asked to submit data concerning their age, gender, educational background, occupation, and country of residence.

3.3.1.2 Participants

The primary goal of the quantitative questionnaire was to get a representative sample of the target population in question (Neuman, 2006). As such, the focus of this investigation was the population of Internet users. Two restrictions were used to describe the set: (1) 18 years or older, and (2) place of residence in Europe. In order to reach the selected sample, the author shared the survey link via social media (Facebook, Twitter, LinkedIn) and E-mail. Snowball sampling was applied in order to make initial contact with the author's social network and to ask survey respondents to share the link with further possible candidates.

The web survey involved a total of 107 respondents. The nature of the survey was cross-sectional, i.e., it was conducted at a specific point in time, and the timeline for administering the survey was April 2, 2016 to April 16, 2016. All the participants took part by choice. Moreover, respondents could voluntarily specify their E-mail address to indicate whether they would be willing to participate in an online raffle to win a 10€ Amazon gift card.

Collected information included gender, age, education, place of residence and employment. As figured in Table 2, the female quota consisted of 68.8%, whereas the male quota covered a ratio of 30.8%. The demographics reveal that the youngest age group (between 18-29 years old) scored the highest quota of 62.6%, with the lowest quota

consisting of 2.8% of the age group between 40-49 years. In terms of educational background, 13 (12.1%) of the respondents had a High School degree, 38 of the respondents (35.5%) were in possession of an undergraduate degree, 50 respondents (46.7%) possessed an educational background with a postgraduate degree, and 6 (5.6%) reported other.

Table 2. *Demographic Characteristics of the Survey*

Variable	Number	Percentage
Gender		
Male	33	30.8
Female	73	68.8
Other	1	0.9
Age (years)		
Between 18 and 29	67	62.6
Between 30 and 39	32	29.9
Between 40 and 49	3	2.8
50 or more	5	4.7
Education		
High School	13	12.1
Undergraduate Degree	38	35.5
Postgraduate Degree	50	46.7
Other	6	5.6

As figured in Figure 1, the highest quota of place of residence consisted of 50.5% Sweden with 54 participants, followed by 16.8% Spain (18 participants), 15.9% Germany (17 participants), 7.5% Austria (8 participants), 3.7% UK (4 participants), 1.9% Hungary (2 participants), 0.9% Holland (1 participant), 0.9% Cyprus (1 participant), 0.9% Denmark (1 participant), 0.9% France (1 participant).

In terms of employment characteristics, the majority of the participants (44) reported employment with a quote of 41.1%, followed by 37.4% reporting University student (40 participants), 9.3% self-employed (10 participants), 4.7% seeking employment (5 participants).

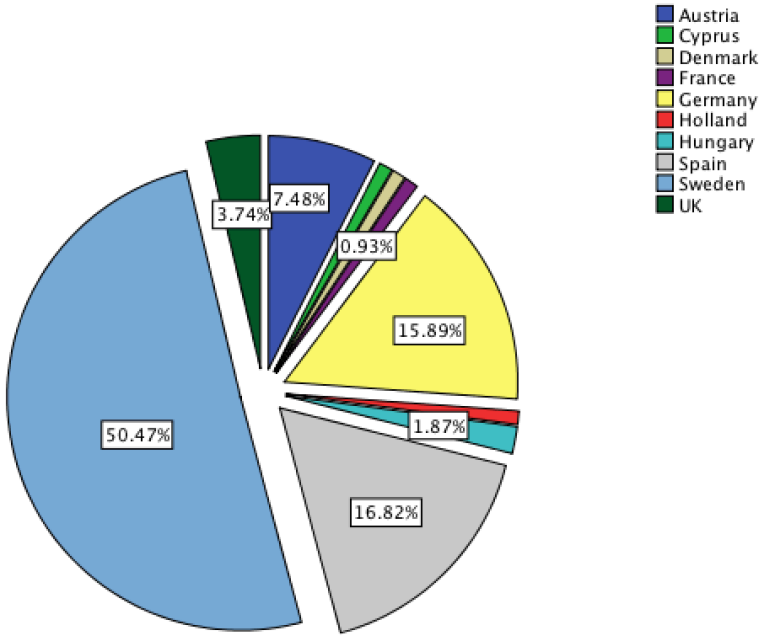

Figure 1. Country of Residence.

3.3.2 The Interviews

The second part of the study consisted of semi-structured qualitative interviews, which further clarified the respondents' multicommunicating behavior and motivation with in-depth questions. The purpose was to shed light on what the interviewee believes as relevant and important regarding the research questions. In comparison to the structured approach of the questionnaire, this part, therefore, emphasizes a more open-ended view of the research process (Bryman, 2012). The qualitative research, in comparison, to the quantitative research, offers more flexibility and provides rich, detailed answers. The researcher was encouraged to ask new questions, "adjusting the emphases in the research as a result of significant issues that emerge in the course of interviews" (Bryman, 2012, 481).

Semi-structured interviews as an empirical research tool are specifically useful because it provides less restriction on the investigated research topic and enables participants to narrate their own account of their multicommunicating practices. Using interviews provided itself as the most appropriate method for research question 3, as in-depth interviews provided especially useful to "understand the meanings of information, opinions and interests in each respondent's life" in order to get a complete picture of the studied phenomenon (Brennen, 2013, 28).

3.3.2.1 Interview Design

In general, the interviews took an average of 35-55 minutes. An interview guide was designed which consisted of a list of open-ended questions to be covered so that participants could answer in their own terms. Applying open-ended questions provided particularly useful for exploring the relatively new phenomenon of multicommunicating where there exists only a limited research body. As such, the respondent was given the unlimited choice to answer and could answer in detail. The interview guide provided the opportunity to ask follow-up questions or other further probing questions in response to significant replies (Bryman, 2012).

In particular, the interview consisted of 3 sections: (1) Multicommunicating, (2) Multicommunicating motivations, (3) Strongly and weakly tied pairs multicommunication and communication. Prior to the interview, a brief introduction to the research purpose and the insurance of data confidentiality was provided. Moreover, a short definition of multicommunicating, close-ties and weak-ties was provided. Subsequently, the interview proceeded with these three investigated sections:

The first section consisted of general questions about multicommunicating behavior in the participant's everyday, personal life. It investigated with questions such as "Have you ever been engaged in more than one conversation at once? and "How often do you engage in more than one conversation at once?".

The second section aimed to uncover the participant's motivation in relation to multicommunicating. Questions were aimed to find out why participant's engaged in multicommunicating behavior ("Why do you multicommunicate?"), as well as the perceived strength and weaknesses of multicommunicating ("What do you like about multicommunicating? What do you dislike?").

The third section investigated multicommunication differences between close friends and weakly tied friends. Sample questions were "Who is receiving these other ongoing conversations at the same time?" and "If you are in a primary conversation with your close friend/weakly tied friend, how often do you multicommunicate at the same time?". It also asked respondents about their media combinations in relation to strongly paired friends and weakly tied friends. Additionally, it included a short section with questions about the importance of friendship and the participant's general level of social connectedness.

After the third part, a very short section asked the participant's demographic data, such as age, nationality, place of residence, the level of education, and occupation.

3.3.2.2 Time, Place and Instruments

As this research was characterized by a cross-sectional time dimension, personal, face-to-face interviews were carried out from March 24, 2016 to April 3, 2016. Many different locations were utilized, such as the interviewees' homes, university grounds, and public places for the interviews. The face-to-face interviews took place in Sweden and Germany. Some of the selected interviewees residing in other countries than Sweden and Germany were interviewed via the video conference platform Skype. All the interviews were audio recorded via the researcher's laptop and mobile phone. Moreover, additional brief notes were taken on paper during the interview. All the data was subsequently transcribed and coded.

In order to minimize the social desirability bias, in which the nature of the interviewer, as well as the social setting and the presence of other people during the interview might affect answers (Neuman, 2006), it was aimed to make the interviewee feel as comfortable as possible during the interview. Additionally, the researcher tried to be as neutral as possible, yet intended to establish a mutual rapport in order to create a positive atmosphere for the interviewee.

3.3.2.3 Participants

For the participant recruitment process of the interviews, the selection of participants was criterion based. The inclusion criteria consisted of (1) being 18 or older, (2) being situated in Europe, and (3) to actively communicate both online and offline. The employed method for the participant recruitment process was purposive sampling. More specifically, potential candidates were screened and selected through the researcher's informal and formal networks, such as social media networks. Moreover, snowball sampling was also utilized on a minority of the interviewees in order to broaden out to other potential candidates (Bryman, 2012).

Eight individuals aged 23 to 31 (four men and four women) were recruited to participate in this study. Facing the issue of a very time-consuming process for the transcription and coding process, it was decided that the number of eight interviews was sufficient enough in order to fully answer the research questions, since no new insights emerged. Table 3 presents an overview of the participants that partook in this study. 50% of the participants had a professional occupation, whereas 50% consisted of students. Four different nationalities were identified. The majority of the of the participants (75%) resided in Sweden. Other places of residences were situated within Europe, namely the UK and Austria.

Table 3. *Demographic Characteristics of the Interview Participants*

Participant	Gender	Age	Occupation	Education	Nationality	Residence
P1	Female	27	Student	Undergraduate	German	Sweden
P2	Male	23	Employed	Undergraduate	German	UK
P3	Male	31	Employed	Postgraduate	German	Sweden
P4	Female	26	Student	Undergraduate	German	Sweden
P5	Male	27	Student	Undergraduate	Austrian	Austria
P6	Male	31	Employed	Other	Swedish	Sweden
P7	Female	25	Student	Undergraduate	American	Sweden
P8	Female	30	Employed	High school	Swedish	Sweden

3.4 Data Analysis

3.4.1 Quantitative Data Analysis

The quantitative data of this study was analyzed with the help of the statistical program SPSS 23. The program was chosen due to its popularity among quantitative research data analysis among social scientists. Moreover, the questionnaire for this research was created on SoSci Survey, which allowed the findings to be exported to SPSS. Subsequently, SPSS was used to examine the relationship between variables. The core routine was to answer the question whether a relationship between MC, personality, tie strength and SCS existed. Specifically, alongside descriptive statistics, statistical analyses such as correlation and multiple regression were used to explore relationships among variables. Other statistical functions such as parametric tests and nonparametric tests were used to compare groups.

3.4.2 Qualitative Data Analysis

The goal of the analysis was to investigate why individuals multicommunicate and the relationship between tie strength and MC frequency. Furthermore, it was of interest to study the influence of tie strength on MC practices. Therefore, the analysis started right after the data collection initiation by applying the process of coding, where the transcribed interviews, i.e., "data are broken down into component parts, which are given names" (Bryman, 2012, 689). The advantage of using a coding process is that in comparison to coding in quantitative data, it does not manage and think of data in a fixed way and is "in a constant state of potential revision and fluidity" (Bryman, 2012, 402). Consequently, the chosen strategy for the qualitative data analysis was grounded theory. It is one of the most commonly used analytical frameworks for qualitative research. As such, the essential

operation used within this approach was coding (Bryman, 2012). The data collection process and the data analysis was iterative in nature.

This study highlighted key categories which emerged from the data and justify which factors led to the creation of these categories. An initial coding template was developed to identify all the researched variables by employing the topics of the interview guide as the initial categories. During the coding process, the author added additional categories and revised the original code labels for a more accurate presentation of the data. This initial template was consequently refined after the first interviews and consisted eventually of themes that grouped several categories together.

3.5 Ethical Considerations

For ethical reasons, the participants of this study (interviewees and survey participants) were previously informed of their anonymity in this report. The anonymity of all participants was kept, alongside the confidentiality of data recordings. Consequently, all the interview data has been depersonalized, so that nothing can probably identify the interviewees. In order to minimize any potential harm to participants, participants were informed about the nature of research and their involvement (Denscombe, 2007). Their participation in this study was voluntarily consented before their participation in the study, such as by clicking on the web-survey link to participate in the questionnaire and/or agreeing voluntarily to be interviewed. In addition, the researcher asked permission to audio record the interviews.

3.6 Reliability and Validity

Reliability refers to the consistency in reaching the same measurement results and can be increased by considering several ways when it comes to measurement issues. Firstly, it can be obtained by clearly conceptualizing all constructs (Neuman, 2006). This study developed unambiguous and clear theoretical definitions, clearly defining what constructs it was measuring within the quantitative data collection as well as qualitative data collection. Furthermore, the objective was to present the gathered material as detailed and specific as possible in order to increase the chance of replication.

Moreover, this study possesses reliability, as it based its concepts on theoretical findings. All concepts were based on reliable, proven research within the literature field of personality, SCS, MC, and MMT. For the web-based questionnaire, a pre-test and consequent revision and further testing also led to an increase in its reliability (Neuman, 2006). A further important point is that anonymity was provided for both the interviews and the web survey, thus aiming to avoid the participant bias, which could have potentially

harmed the study's reliability. Furthermore, the employed 40-item Mini-Marker Set (Saucier, 1994) possessed acceptable reliability. Additionally, the SCS-R scale (Lee et al., 2001) itself also possesses good internal reliability and validity. The internal reliabilities of the scale on multicommunicating was very reliable, reaching a Cronbach's alpha $\alpha = .867$, it appears as a very reliable measurement scale. Furthermore, both weak-tie MC ($\alpha = .921$) and strong-tie MC ($\alpha = .912$) provided a very reliable measurement scale.

With regard to the validity of a research study, external validity is related to the generalizability of the study (Bryman, 2012). In this study, a web-based survey was used to collect reliable data using validated research questions. In addition, semi-structured interviews were used to investigate user motivations. First of all, as this study combined quantitative and qualitative research, the combination of both methods allowed "the researcher to offset their weaknesses to draw on the strengths of both" (Bryman, 2012, 641). Secondly, in terms of face validity, the judgment of a scientific supervisor was sought in order to confirm the validity of indicators measuring the construct of multicommunicating for both the qualitative research and quantitative research method.

Notably, qualitative research hardly trumps with external validity. The researcher formed part of the analytical instrument, which in turn might have affected the objectivity of the evaluation process. Yet, the focus lies on achieving depth, aiming to shed light on different aspects of the subject matter. However, as the applied measure of MC and tie strength was quite precise and observable the validity of the quantitative research increased. Moreover, the objective was to be truthful, a essential principal of validity (Bryman, 2012). Therefore, the audio recording of all the interviews via two devices, the careful transcription and the subsequent coding, increased the reliability and validity of this study.

4 RESULTS

In this chapter the empirical data of the research is presented. First, the qualitative interview findings are illustrated, followed by the subsequent presentation of the quantitative results of the web-survey.

4.1 Interview Results

The results of the interviews aim to answer the research questions (2) Does tie strength influence multicommunicating?, and (3) Why do people engage in multicommunicating? Three major themes became evident in the interviews and were related to either the actual multicommunicating behavior or the perceptions about multicommunicating in relation to relational outcomes. They are presented in the forms of the following questions to be answered below:

(1) What are the reasons to multicommunicate?
(2) What are the perceptions and outcomes of multicommunicating?
(3) How do the relational dimensions influence multicommunicating?

First, multicommunicating allowed nearly constant availability. One interesting finding was how the role of expectancy and pressure regarding immediate text-based answers facilitated multicommunicating. Second, participants perceived multicommunicating as a source of entertainment and productivity. Third, multicommunicating was credited with facilitating interpersonal connectedness. Finally, it emerged in the interviews that the primary downside of multicommunicating was incivility. Incivility was found to influence the relational outcomes of multicommunicating. In particular, tie strength was found to influence the frequency of multicommunicating behavior, as participants reported to avoid multicommunicating behavior with weakly tied pairs due to the perceived incivility. Furthermore, the media characteristics were found to influence the perceived incivility and hence the multicommunicating behavior. Throughout this study, all participant quotes use pseudonyms to protect confidentiality.

4.1.1 What Are the Reasons to Multicommunicate?

4.1.1.1 Constant Availability

Multicommunicating allowed a perpetual method of communication. Three different categories could be identified among the respondents: “perpetual contact”, “expectancy”, “easiness due to technology”.

For the first category "**perpetual contact**", participants consistently reported investing an incredible amount of their time to try to be available for their social contacts. The common reported tendency of the participants was to be available almost twenty-four-seven, as one respondent explained: *"I would say I am pretty available at all times"* (P8, 30). Another participant reported that there was no choice of not being available: *"You always have to be available. You can't be unavailable anymore."* (P5, 27). Another respondent noted, *"I always check [the instant messages] and as long as there is not a very demanding question or thoughtful question, I will reply immediately."* (P2, 23). Another respondent reported on his availability: *"[I invest] huge amounts of time, several hours each day."* (P6, 31).

The second category "**expectancy**" was found to be playing an important part with regard to why participants reported engaging in MC behavior. One participant reported that she multicommunicated because she did not want to leave the other person on the other end *"hanging"* (P8, 30). Another participant explained how the cell phone usage is connected with constant availability and expectancy: *"In general I would say you expect pretty immediate replies because everyone is always on the phone."* (P1, 27). Furthermore, another respondent reported being conscious of the pressure related to multicommunicating:

> "[I multicommunicate] because I am forced to. The plague of devices that we have nowadays forces us to be constantly available for every subject that tries to communicate with us, because the common tendency in society has become that you have to be not only always available, but always a fast answerer to everything." (P3, 31).

The third category "**easiness due to technology**" is related to the perceived easiness of MC due to technology. There is a unity in the interviews regarding how the communication devices facilitated MC. For instance, one interviewee responded that *"it's easy, you can engage in many conversations and you want to keep track of everything that is going on."* (P4, 26). In the following quote, one participant recognizes the impact of technology on his life, claiming that: *"I think that technology forces you. I think I'm kind of addicted to it [multicommunicating]. It's kind of like a drug."* (P5, 27). The cell phone was reported as a vital tool to enable perpetual contact and multicommunication. As all of the respondents stated using their cell phone as their main communication device, the findings link constant availability to the respondents' cell phone usage. For example:

> "Maybe it's my phone [why I multicommunicate], I use it for everything." (P5, 27).

> "The fact that I always have Wi-Fi access and I have my mobile on me always makes it easy to pull out my phone and start messaging people if I'm out and about with other people. I'd say I do tend to stay connected almost twenty-four-seven." (P7, 25).

4.1.1.2 Multicommunicating as a Source of Being Busy

Here, three different categories were identified among the respondents' answers, such as "boredom", "feeling productive", "planning".

Throughout the interviews, the need to be entertained emerged as an important factor influencing the respondents' multicommunicating behavior. Therefore, the first category "**boredom**" was included, as the findings indicate that engaging in multicommunicating practices due to boredom is a regular reason to engage in this behavior, for example when *"the main conversation was not demanding enough"* (P3, 31). Another respondent agreed: *"Sometimes you're not so interested in a conversation"* (P4, 26). Similarly, another respondent acknowledged, *"[I multicommunicate] when I am bored."* (P2, 23). Additionally, the findings indicate a reported need for communicative entertainment. One participant recognized the entertaining side of multicommunicating, commenting on its benefits: *"It's a source of entertainment. It's kind of diverse, you can have two really different conversations with two people."* (P6, 31). Similarly, another participant reported that MC can be an entertaining activity per se: *"Sometimes it can also be fun if you're multicommunicating and both conversations are fun and you're excited about it."* (P8, 30).

The second category "**feeling productive**" includes findings that indicate that participants reported to multicommunicate in order to feel productive, or in other words, to get things done. One participant reported that due to multicommunication, *"I will constantly keep busy."* (P2, 23). Another participant agreed, *"It feels really good because I'm kind of busy and it feels like I'm finishing a lot of things at the same time, so it feels effective."* (P4, 26). Another participant commented that multicommunicating made her feel productive, *"you have the feeling that you're also winning time."* (P8, 30). Yet, she also disclosed how multicommunicating causes her to feel the opposite of productive, linking it to stress and errors occurring during the simultaneous conversations. Similarly, another participant described how exhaustive the practice of multicommunicating is: *"Afterwards you're pretty exhausted because you are talking to somebody and simultaneously you're writing and it's too much."* (P5, 27).

The third category "**planning**" refers to the observed participants' motivation to multicommunicate in order to organize and plan their schedules. One participant explained that in general, the need to plan causes her to multicommunicate: *"I talk to my friends about stuff that happened during the day, and then I would also text with another friend to plan where to meet up."* (P1, 27). Similarly, one participant notes, *"the situations when I multicommunicate are more connected to a mood, when I need help, ask some questions, plan something."* (P6, 31). Another participant explained that she frequently multicommunicated in order to meet friends after her work. She said, *"I do it [multicommunicating] a lot for planning something because maybe I'm at work and after work I'm going to meet up with somebody, but the plan is not decided yet."* (P8, 30).

4.1.1.3 Interpersonal Connectedness

When describing the reasons and motivations on multicommunication, nearly all participants had something positive to say regarding how multicommunication facilitates staying in touch with friends. One participant said, *"So I do it [multicommunicating] because I want to keep in touch with my closest friends."* (P1, 27). She subsequently went on to highlight the connectedness afforded by multicommunicating: *"Multicommunicating is good in the way that you can spend time with friends and it's still possible to kind of be with other friends at the same time."* (P1, 27). Furthermore, another participant agreed that *"Maybe you just want to be nice and reachable."* (P8, 30). She continued to illustrate in the following excerpt how multicommunicating made her feel connected with her friends:

> "It could be fun, you get excited, so many friends you're trying to handle in those conversations at the same time. It might be a joyous feeling like 'Oh, I have so many friends right now'." (P8, 30).

Her sentiment was widely shared by the other interviewees. One interviewee specifically highlighted how multicommunicating made him feel not being alone: *"To be honest, I just need the instant gratification, like I'm hanging out with somebody, I'm not alone."* (P6, 31). Another participant offered the example how he is multicommunicating to remain in contact with friends who were separated by distance: *"The advantage is that you are not waiting for a reply. As I live far away from some of my friends I can refresh contact with them without disturbing everyday life."* (P2, 23).

Multicommunicating did not only afford connectedness but the need for connectedness also simultaneously exerted pressure to perpetually maintain relationships and communicate very actively. As such, the pressure to connect simultaneously with other individuals in order to belong was found to cause multicommunicating behavior:

> "For example, you have group chats on Whatsapp and your friends will write the whole day, sending pictures to each other and you kind of feel left out when you don't text them directly." (P5, 27).

4.1.2 What Are the Perceptions and Outcomes of Multicommunicating?

4.1.2.1 The Incivility of Multicommunicating

Throughout the interviews, it became evident that the primary downside of multicommunicating was incivility. Whilst multicommunicating was used for practical reasons such as organizing and planning, the words "impolite" and "rude" were regularly used by the participants when discussing their multicommunicating behavior. Therefore, three categories emerged in the analysis of the empirical data, including "impolite", "disrespectful", "diverged attention" and "media combinations".

First, the category "**impolite**" included participants' perception that MC was regarded as an impolite behavior that often needed justification to be socially accepted. This category comprises a more general observation of the participants' opinion of how multicommunicating is a polarizing practice. For instance, one participant commented that *"if I spend time with my very close friends I also try to avoid having at the same time a conversation on my phone because I think it's impolite."* (P1, 27). Another participant noted that she felt impolite when multicommunicating: *"Typically, I feel quite rude and I know that sometimes some other people think it's rude as well."* (P7, 25). One participant noted the circumstances in which he would find it improper and rude to engage in multicommunicating: *"If I were to sit with one person only at the table I would find it very rude if that person had a multicommunication going on."* (P3, 31). Similarly, this opinion was shared by another participant: *"If you are the only point of contact for other people or for one certain person and if that person gets left alone in that situation, I think it is rude."* (P2, 23).

The second category "**disrespectful**" describes how multicommunicating was perceived as uncivil, as the multicommunicator tends to breach the norms for mutual respect while being engaged in a conversation. Therefore, this category focuses on how multicommunicating affects the receiver. The findings show that most of the interviewees were aware that their diverged attention caused the receivers to feel disrespected. Specifically, one interviewee highlighted: *"It makes me feel a bit disrespectful, and it makes the other side feel a bit disrespected. So, I feel a bit annoyed and I feel a bit guilty, like 'I should not be doing this' even though I'm doing it."* (P7, 25). Moreover, one respondent reported: *"Because you are choosing to engage in another conversation. It does take priority off the first communication you're in."* (P8, 30). Another respondent recognized the impact that multicommunicating had on himself and his friends: *"The biggest issue is that you disrespect people and being mean to people by having conversations."* (P6, 31). One respondent had very strong feelings regarding multicommunicating: *"I find it very frustrating and disrespectful if I am talking to a person and if they pay equal attention to a mobile device than to myself."* (P3, 31).

The third category "**diverged attention**" has been included as several respondents reported being conscious of how a diverged attention caused by multicommunicating made the other co-communicators feel neglected. Several participants highlighted the distractive nature of being engaged in several conversations simultaneously: *"It [multicommunicating] creates natural gaps of silence because it's hard for my brain to probably coordinate, making a sentence in one media and then making a sentence to another person, especially at the same time."* (P7, 25). One respondent reported his strong dislike of diverged attention: *"I hate when people are in a face-to-face conversation and keep their mind focused on their phones."* (P2, 23). Another respondent described how MC might limit the communicative interactions: *"It just makes me put less effort into each of the conversations, and the outcome is usually a lot of repetition in both ways."* (P3, 31). Interestingly, many respondents commented that they were aware of the diverged attention

that MC caused, yet preferred to be the multicommunicator themselves instead of being neglected by other multicommunicators: *"I more dislike it when I'm the person being neglected, not when I do it myself."* (P4, 26).

Regarding the fourth category "**media combinations**", most of the described uncivil outcomes included situations in which face-to-face conversations or voice calls were the primary communication media employed for multicommunicating. Oral communication media, especially the medium of face-to-face, were reported to allow less flexibility during multicommunicating: *"I would say it's face-to-face and maybe I start engaging with my phone on a chat, I think that's the most common scenario [when it gets addressed]."* (P8, 30). Conversely, multicommunicating via several ongoing text-based messages was not reported to be impolite by the participants. One participant stated that if he was multicommunicating via text-based messages such as IM and E-mail, the co-communicators *"have no idea"* about the other ongoing conversations (P3, 31). However, another respondent pointed out that people were aware of their co-communicator's multicommunicating behavior, but did not mind: *"When you get texts sometimes you can see that the person didn't pay that much attention, but no one is really surprised when it takes longer, because you need time to type and people also kind of expect that you do something else."* (P4, 26).

4.1.2.2 Relational Outcomes

Multicommunicating was reported by all participants to cause an impact on their relations. Two main categories, "receiver irritated" and "receiver neglected", were distinguished from the results.

First of all, the category "**receiver neglected**" exemplifies how most of the participants reported that the produced diverged attention during multicommunicating instances caused the co-communicator to feel neglected. One participant commented, *"I think the other person sometimes feels neglected, because you are not fully paying attention. It's feels a little bit like a secondary thing."* (P4, 26). Another participant noted that the caused gaps increased the other person's perception of being ignored and neglected:

> "Definitely gaps of silence happen if I am multicommunicating, which can be a bit awkward because from the person's side that is being ignored, they feel neglected and they feel like 'what am I doing here, you're not paying attention to me, you're not communicating with me'." (P7, 25).

Very similarly, another respondent reported how it made him feel neglected when other individuals were multicommunicating while being engaged in a conversation with him: *"For me it's annoying when somebody does that. When you're in a face-to-face conversation with another person and the other person writes somebody all the time, you think 'okay, can I just leave?'."* (P5, 27). However, another interviewee described that the

caused distraction by multicommunicating did not lead to any serious conflict, but rather provoked *"a shout for attention"* (P3, 31).

Secondly, concerning the category "**receiver irritated**", the majority of the participants reported how the receiver was irritated or frustrated due to the respondent's multicommunicating practice. In contrast to the first category, the receiver is expressing distress and annoyance caused by multicommunicating. For example, one respondent emphasized the relational effects caused by multicommunicating: *"I think it [multicommunicating] could not deteriorate friendships, but it could maybe lessen them a little bit."* (P7, 25). Another respondent commented on the caused negative outcome: *"I lose track, plus that my receiver on the main, or probably face-to-face communication, is irritated or tends to be upset because he has to repeat himself."* (P3, 31). Furthermore, he continued to describe the reason of the negative outcome:

> "It must be certainly frustrating from the other point of view to talk to a person who is not looking at you, because you forget that to have a face-to-face conversation you need eye contact at the same time. If that doesn't occur, it takes away an important part of the communication." (P3, 31).

In addition, one respondent highlighted his knowledge of how the partner's awareness of the other ongoing conversations increased the perceived frustration:

> "Today I met a friend at a bar and I had my phone in my hand and multicommunicated. I think she was annoyed because I texted while talking to her but not really paying attention and she noticed." (P5, 27).

4.1.3 How Do the Relational Dimensions Influence Multicommunicating?

4.1.3.1 Weakly Tied Friends/Acquaintances

In general, respondents reported avoiding multicommunicating with weakly tied friends. The findings indicate several reasons why participants generally communicated less frequently with acquaintances. These were divided into several categories, namely: "low frequency", "high risk of incivility" and "low expectancy".

Throughout the interviews, it emerged that the majority of interviewees shared a low frequency of multicommunicating with acquaintances. These findings were subsequently grouped under the category "**low frequency**". One interviewee reported the low frequency of multicommunicating with acquaintances: *"I think multicommunication happens more often with close friends."* (P8, 30). She continued to describe that she avoided multicommunicating while engaging in a primary conversation with an acquaintance:

> "I don't see an acquaintance as much as my close friends, so maybe I would be more hesitative of engaging in a second one [conversation] if I'm already in one with them, just because it's not someone I see that often. So it might be that I respect that one more." (P8, 30).

Others reported:

> "I almost never multicommunicate with acquaintances." (P2, 23).

> "More often with friends, I try not to do it [multicommunicating] with acquaintances." (P4, 26).

Interestingly, one participant pointed out the paradox of his low frequency of multicommunicating with acquaintances in comparison to his high frequency with close friends: *"When you think about multicommunicating, you will do that with your friends who you love, and with your acquaintances, you would not do that, you would be engaged in a conversation."* (P5, 27).

The second category "**high risk of incivility**" displays the major reason that emerged in the data of participants reporting why they would engage less in multicommunicating with weakly tied friends. Examples include:

> "I would get engaged less in a conversation with a person I don't know so well because I want to give a good impression and the person doesn't know me that well. They might think that it's not very nice to be on the phone while we're talking." (P1, 27).

> "I try not to [multicommunicate with an acquaintance]. Because I want to be polite and show the person that I engage in the conversation." (P4, 26).

One participant specifically describes why he engages less in multicommunicating with acquaintances. He states how one has to consider the rules of etiquette more strictly with acquaintances due to the mutual lack of understanding:

> "I don't multicommunicate with people [acquaintances] because I need to listen to them and I need to stay focused, because my friends will understand that I multicommunicate, but they don't, they will be annoyed and find it rude. And my friends, they get me and I get them." (P5, 27).

Similarly, another respondent commented on the high risk of increased perceived incivility when multicommunicating with acquaintances: *"They don't know me. If I were to bring up my phone and text somebody they wouldn't know why I was doing it or what I would mean by it, so that would be a high risk of getting pissed off or getting disrespected."* (P6, 31).

The category "**low expectancy**" summarizes how participants had a general low expectancy to their acquaintances' immediate answering behavior. For example:

> "I would give them the feeling that they can contact me anytime, but maybe sometimes I would not respond directly." (P1, 27).

> "They can contact me, but I would not contact them in the same haste as my close friends." (P6, 31).

> "I guess I have no expectations. They'll answer when they'll answer." (P7, 25).

4.1.3.2 Closely Tied Friends

The findings indicate that participants reported engaging more frequently in multicommunicating practices with closely tied friends. Multicommunicating appears to be a common, accepted practice among closely tied friends. The findings were divided into the categories of "high frequency", "high tolerance" and "high expectancy".

The majority of participants agreed that their level of multicommunicating was high among closely tied friends. These findings are labeled within the category "**high frequency**". For example, one participant reported, *"I mostly multicommunicate with close friends because I mostly communicate with close friends or relatives."* (P2, 23). Another participant commented, *"I would say I invest a lot of time staying connected with my [close] friends. I want them to feel like that they can contact me anytime."* (P1, 27). Others reported:

> "Usually when I'm with my friends they will rather see me multicommunicating. With weakly tied friends I would rather not multicommunicate." (P5, 27).

> "I would do it [multicommunicating] more with people I am much more close with, because then I feel like it's okay." (P7, 27).

The category "**high tolerance**" characterizes how the majority of respondents reported a higher multicommunicating tolerance level of their close friend in comparison to acquaintances. For instance, one interviewee reported, "Usually, most of them [close friends] are very tolerant because it's pretty common to multicommunicate nowadays." (P1, 27). One participant reported that a high mutual understanding of each other made multicommunicating a socially acceptable behavior: *"I don't need to tell my friends at all that I'm multicommunicating, they just get it."* (P5, 27). The high tolerance level was related to how with close friends one could behave less polite, as friends were more forgiving in general. For example, one participant reported: *"I would say my friends are more tolerant because they spend so much time with me, so when I take some minutes off it's probably fine, also with your friends you don't have to be so polite sometimes."* (P4, 26). Similarly, another participant commented:

> "I think close friends are more tolerant because if you're hanging out with them so often and if I'm being more open with them about who I'm messaging and why I

am doing it perhaps they are more tolerant and accepting it than with an acquaintance." (P7, 25).

The category "**high expectancy**" describes how participants reported a high level of expectancy of immediate answering to conversations with close friends. Participants reported:

> "I would say it's mostly very close friends that I'm answering immediately, I try to answer them quickly." (P1, 27).

> "If they are my closest friends, it probably feels kind of weird to actually not speak at least once every day." (P7, 25).

> "I would take the answer a little bit more serious with my close friends than with my acquaintances or I would choose them before the acquaintances to answer first." (P3, 31).

4.2 Web-Survey Results

In this section, the quantitative results are presented, starting with the presentation of the findings for the relationship between MC Frequency, Personality and SCS. Subsequently, the results for the relationship between weak-tie MC and strong-tie MC are presented.

4.2.1 Personality

The average of the 8 responses for each scale was calculated in order to arrive at the mean response for items on the given scale (see Table 4). The scores for the eight items on each factor were averaged to produce measures of Agreeableness (M = 7.18, SD = 1.114), Conscientiousness (M = 6.57, SD = 1.293), Emotional stability (M = 5.45, SD = 1.446), Extraversion (M = 5.73, SD = 1.353), and Openness to experience (M = 6.56, SD = .922).

Table 4. *Average and Deviation of Personality Dimension Distribution*

	Agreeableness	Conscientiousness	Emotional stability	Extraversion	Openness
Average	7.18	6.57	5.45	5.73	6.56
SD	1.114	1.293	1.446	1.353	.922

N = 107.

An independent t-test revealed that there was a statistical difference between men and women for the personality dimension Openness to experience (t (104) = -2.432, p = .017). Prior to conducting the t-test, one participant who marked the gender category in the survey as "other" was excluded, resulting in the participant size of 106.[1] The results show

[1] Due to this, for all the subsequent gender t-tests the sample size consisted of 106 participants.

that males scored slightly higher in Openness to experience (M_M = 6.87, SD_M = .739) than females (M_F = 6.41, SD_F = .966). Yet, there was no statistically significant differences for gender for the personality dimension Agreeableness (t (104) = 1.474, p = .143), Conscientiousness (t (104) = .252, p = .802), Emotional stability (t (104) = -.853, p = .396), and Extraversion (t (104) = -.434, p = .665).

As determined by one-way ANOVA, no statistically significant difference between age groups and personality was found: Extraversion (F (3,103) = 1.300, p = .279), Agreeableness (F (3,103) = 1.411, p = .244), Conscientiousness (F (3,103) = .388, p = .762), Emotional stability (F (3,103) = 1.707, p = .170), Openness (F (3,103) = 1.405, p = .246).

4.2.2 Social Connectedness

The t-test results show no statistical significance of the answers of each gender. There is no clear distinction that can be drawn between the two gender groups (t (104) = .144, p = .886). The results show that female participants (M_F = 4.40, SD_F = .878) reported slightly higher levels of MC frequency than did male participants (M_M = 4.37, SD_M = .791). Furthermore, no statistically significant difference between age groups was found as determined by one-way ANOVA (F (3,103) = .505, p = .679).

4.2.3 Multicommunication Frequency

The answers of each gender are tested by an independent samples t-test in order to examine any significant differences. The t-test results show no statistical significance (t (104) = -.431, p = .667). The results indicate that male participants (M_M = 2.91, SD_M = 0.79) reported slightly higher levels of MC frequency than did female participants (M_F = 2.84, SD_F = 0.79).

There was a statistically significant difference between age groups as determined by one-way ANOVA (F (3,103) = 4.091, p = .009). Table 5 shows the frequency of MC arranged by age group. A Tukey post-hoc criterion test revealed that the multicommunication frequency was statistically significantly lower for the 50 or older group compared to the 18-29 group (p = .007), and 30-39 group (p = .015). There were no statistically significant differences between the 50 or older group and 40-49 group (p = .719).

Table 5. *Summary of MC Frequency by Age Groups*

Age	M	SD
18-29	2.94	.623
30-39	2.90	.928
40-49	2.38	.750
50 or more	1.81	.780

N = 107.

On the basis of the constructed MC Frequency scale, the category 'multicommunication receiver' was measured through individually scoring the mean of question eight (*I simultaneously use two or more media for one interpersonal contact*) and question nine (*I simultaneously use two or more media for more than one interpersonal contact*). The results show that the majority (43%) of the participants (N = 107) very rarely multicommunicated with only one interpersonal contact (M = 2.30, SD = .134). This is followed by 17.8% of the participants reporting multicommunicating rarely with one interpersonal contact, 14% occasionally, 16.8% frequently, and 8.4% very frequently. Multicommunication with more than one interpersonal contact was reported more frequently (M = 2.84, SD = .136). Additionally, research question 10 (*When multicommunicating, I often switch social roles*) revealed that participants frequently exchanged social roles during MC (M = 3.47, SD = .122).

Furthermore, the single items of the category of the MC Frequency scale named 'MC reasons' were investigated. Question 12 (*I multicommunicate because I lose interest in what I am doing if I have to focus on the same conversation for a longer period of time*), question 13 (*I multicommunicate to get things done in less time*), and question 14 (*I multicommunicate to keep in touch*) were compared to each other in order to illustrate the participants' reasons of MC. The results indicate that social connectedness was highest ranked (M = 3.52, SD = .127), followed by efficiency (M = 3.29, SD = .130), and eventually boredom (M = 1.97, SD = .120).

4.2.3.1 MC Frequency: Testing Relationships

Before progressing to multiple regression analysis, zero-order correlations tested the correlation among the independent (personality dimensions, SCS) and dependent variables (MC Frequency). Pearson correlations were conducted to assess the basic relationships among this study's variables, and are figured in Table 6. In general, the study found that individuals' personality trait Emotional stability was negatively related to the frequency of MC (r = -.237, $p < .05$). These results suggest that people who are less emotionally stable, tend to multicommunicate more frequently. The coefficient of determination (R^2 = 0.0556) shows that 5,6 % of the variability in MC Frequency is shared by Emotional stability.

There was also a strong, positive correlation between SCS and Extraversion (r = .511, p < .01), and a correlation of medium strength for SCS and Agreeableness (r = .359, p < .01), and SCS and Emotional stability (r = .397, p < .01). All of them were statistically significant. The other personality dimensions and SCS were not significantly related to MC frequency. As expected, the personality traits were positively correlated with each others. The highest correlation was Conscientiousness with Emotional stability (r = .461, p < .01).

Table 6. *Correlation Matrix of Study Variables*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) MC Frequency	-						
(2) Extraversion	.178	-					
(3) Agreeableness	-.005	.203*	-				
(4) Emotional Stability	-.237*	.137	.289**	-			
(5) Conscientiousness	-.095	.095	.182	.461**	-		
(6) Openness	.086	.081	-.065	-.167	-.050	-	
(7) SCS	.182	.511**	.359**	.397**	.186	-.130	-

N = 107.
* = p < .05, ** = p < .01.

A multiple linear regression analysis (see Table 7) was consequently performed to assess the ability of Extraversion, Agreeableness, Conscientiousness, Openness to experience, Emotional stability, and SCS to predict MC Frequency. The predictors were entered unordered. A significant regression equation was found (F (6,100) = 3.086, p = .008). The model explained 15.6% of the variance of MC Frequency. Two of the six variables were statistically significant. The relationship between Emotional stability and MC Frequency was negative and statistically significant (β = -.355, p = .002). SCS was positively related to MC Frequency and statistically significant (β = .303, p = .014). Additionally, among all entered variables, Emotional stability was the strongest predictor of MC Frequency, it accounted for 12.6% of the variance of MC Frequency while SCS contributed 9.2%.

Table 7. *Multiple Regression of MC Frequency*

	b	SE *B*	β	*p*
Model 1				
(Constant)	2.193	.777	-	.006
Extraversion	.041	.062	.073	.505
SCS	.275	.110	.303	.014
Agreeableness	-.023	.069	-.034	.740
Conscientiousness	.010	.062	.017	.868
Emotional stability	-.189	.060	-.355	.002
Openness	.053	.080	.063	.512
R^2	15.6%			

Betas are standardized coefficients.
N = 107.

A semi-partial correlation analyses were run to determine the relationship between an individual's MC Frequency and SCS whilst independently controlling for Extraversion,

Agreeableness, and Emotional stability. There was a statistically significant, positive semi-partial correlation between MC Frequency and SCS whilst controlling for A, r (106) = .197, N = 107, p = .043. In addition, a statistically significant, positive semi-partial correlation between MC Frequency and SCS was found whilst controlling for Emotional stability, r (106) = .301, N = 107, p = .001. These results suggests that higher levels of SCS tend to predict higher levels of MC Frequency, even after controlling for mediator effects of Agreeableness and Emotional Stability. Yet, whilst controlling for E, there was a statistically insignificant positive semi-partial correlation between MC Frequency and SCS, r (106) = .106, N = 107, p = .271, suggesting that E indeed influences the strength of the relationship between SCS and MC Frequency.

4.2.4 Weak-Tie MC and Strong-Tie MC

Table 8 shows the frequency of strong-tie and weak-tie MC arranged by age group. The analysis of an unequal variance Welch t-test showed that there was no statistically significant age group difference for strong-tie multicommunication (F (3,103) = 1.481, p = .485). The analysis of a variance test showed that there were no statistically significant age group differences for weak-tie multicommunication, either (F (3,103) = 2.016, p = .116).

Table 8. *Summary of Strong-Tie MC and Weak-Tie MC by Age Groups*

	Strong-Tie MC		Weak-Tie MC	
Age	M	SD	M	SD
18-29	2.22	.616	2.23	.669
30-39	2.42	.705	2.24	.705
40-49	2.63	1.570	1.77	.590
50 or more	1.87	.798	1.56	.447

N = 107.

For close-tie MC, an independent t-test revealed that there is no statistical significant difference between the two gender groups (t (104) = 1.741, p = .964). Females scored slightly higher (M_F = 2.36, SD_F = .700) than males (M_M = 2.11, SD_M = .638). Similarly, for weak-tie MC, an independent t-test revealed no statistically significant differences between male and female participants (t (104) = 1.262, p = .707).

Bivariate Pearson correlations (Table 9) were also conducted to assess the relationship between weak-tie MC/or close-tie MC with the other studied variables. The findings show a statistically significant relationship between weak-tie MC and the personality dimension Extraversion (r = .251, p = .009), whereas close-tie MC showed no significant relationship with the studied personality dimensions. There was no significant relationship between the frequency of close-tie MC and SCS (r = -.119, p = .221), and the frequency of weak-tie MC and SCS (r = .002, p = .986). As beforehand mentioned, there was a significant

relationship between SCS and Extraversion (r = .511, p < .001), SCS and Agreeableness (r = .359, p < .001), and SCS and Emotional stability (r = .397, p < .001).

Table 9. *Weak-Tie MC and Close-Tie MC Correlation Matrix*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) Close-Tie MC	-	.698**	.101	-.156	-.048	-.137	-.170	-.119
(2) Weak-Tie MC	.698**	-	.251**	-.077	.012	-.074	-.007	.002
(3) Extraversion	.101	.251**	-	.203*	.059	.137	.081	.511**
(4) Agreeableness	-.156	.077	.203*	-	.182	.289**	.065	.359**
(5) Conscientiousness	-.048	.012	.059	.182	-	.461**	-.050	.186
(6) Emotional stability	-.137	-.074	.137	.289**	.461**	-	-.167	.397**
(7) Openness	-.170	-.007	.081	.065	-.050	-.167	-	-.130
(8) SCS	-119	.002	.511**	.359**	.186	.397**	-.130	-

N = 107.
* = p < .05, ** = p < .01.

Multiple linear regression analyses (see Table 10 and 11) were conducted to assess the ability of Extraversion, Agreeableness, Conscientiousness, Openness to experience, Emotional stability, and SCS to predict weak-tie MC and close-tie MC, respectively. The predictors were entered unordered.

For close-tie MC, a significant regression equation was found (F (6,100) = 2.253, p = .044) for close-tie MC and the entered predictors (see Table 10). The model explained 11.9% of the variance of MC Frequency. Two out of the six variables were statistically significant. The relationship between Openness to experience and close-tie MC frequency was negative and statistically significant (β = -.231, p =.020). Extraversion was positively related to close-tie MC (β = .259, p =.022), and the strongest predictor of close-tie MC, as it accounted for 6.7% of the variance of close-tie MC. Openness contributed 5.3%. Both predictors show very moderate results. SCS was not statistically significant in relation to close-tie MC (β = -.208, p =.094).

Table 10. *Multiple Regression of Close-Tie MC*

	b	SE *B*	β	*p*
Model 1				
(Constant)	3.973	.710	-	.000
Extraversion	.132	.056	.259	.022
SCS	-.169	.100	-.208	.094
Agreeableness	-.055	.063	-.091	.382
Conscientiousness	.019	.056	.035	.739
Emotional stability	-.056	.055	-.119	.307
Openness	-.172	.073	-.231	.020
R^2	11.9%			

Betas are standardized coefficients.
N = 107.

A multiple linear regression analysis was performed to assess the ability of the selected independent variables (E, SCS, A, C, O, Emotional stability) to predict weak-tie MC Frequency (see Table 11). The findings showed an insignificant regression equation for Model 1 (F (6,100) = 1.867, p = .094). In Model 1, only E (β = .251, p =.009) was found to be a significant predictor of weak-tie MC frequency, t(100) = 3.094, p = .003.

A significant regression equation was found for Model 2 (F (6,100) = 7.035, p = .009), which only included the variable E. Model 2 explained 6.3% of the variance of weak-tie MC Frequency when E is used as only predictor.

Table 11. *Regression analyses of Weak-Tie MC*

	b	SE *B*	β	*p*
Model 1				
(Constant)	2.282	.711	-	.002
Extraversion	.175	.056	.347	.003
SCS	-.106	.100	-.132	.293
Agreeableness	-.051	.063	-.084	.422
Conscientiousness	.036	.056	.067	.530
Openness	-.042	.073	-.057	.563
Emotional stability	-.040	.055	-.086	.466
R^2	10.1%			
Model 2				
(Constant)	1.467	.280	-	.000
Extraversion	.126	.048	.251	.009
R^2	6.3%			

Betas are standardized coefficients. N = 107.

5 DISCUSSION

ICT has become a central role in our lives and the growth of social media and social networks has captured the interest of researchers to explore its impact on social life. Indeed, the issue of social relations mediated through and via technology has become a prominent research field in recent years. Therefore, this research's focus, namely the practice of MC, advances the literature on the synchronous uses of new technologies introduced in society by exploring personality, tie strength, and motivations associated with MC. This study aims to set foot on an unexplored terrain and discover new grounds for future research on MC and ICT usage in relation to social and relational communication.

In particular, this study examined the research questions through the perspectives of social connectedness, media multiplexity and the Big Five. It focused on multicommunication, a practice of engaging in several communications at nearly the same time (Turner & Reinsch, 2007). It was sought to predict MC frequency (distinguishing between close-tie and weak-tie MC) based on the psychological Big-Five dimensions (Costa & McCrae, 1992) and social connectedness (Lee & Robbins, 1995). The five-factor model measures individual differences in personality by distinguishing between five basic personality dimensions (Funder, 2001). SCS is a construct that aims to measure an individual's psychological sense of belonging and closeness to the social world (Lee et a., 2001). This paper has taken the line of research between MC and personality a step further in a number of ways.

5.1 Personality, Multicommunication, and SCS

First, no similar analysis has been done based on MC and communicators' personalities. In the research literature, we can find different works that discovered differences among personality traits and social network use (Balmaceda et al., 2014; Amichai-Hamburger & Vinitzky, 2010; Ehrenberg et al., 2008; Correa et al., 2010; Totterdell., 2008), as well as personality and communication (de Vries et al., 2013; McCroskey et al., 2001; Heisel et al., 2003). This present study demonstrates that the high levels of Neuroticism as well as SCS can predict MC Frequency (RQ 1).

Along these lines, the correlational analysis shows the negative relationship between Emotional stability and MC and reveals a significant, positive relationship between SCS and Extraversion, Agreeableness, and Emotional stability. The relation of MC to Extraversion is consistent with previous research, which tested how personality played a role in relation to social media use (Grieve & Kemp, 2015), and in well-being (Lee et al., 2008). The correlation between Emotional stability and SCS was consistent with previous research (Grieve & Kemp, 2015; Amiel & Sargent, 2004). High Agreeableness and

Neuroticism were found to be the highest predictors of behavior related to belongingness for Facebook usage, with neurotic individuals using Facebook as a way to communicate and to seek information (Seidman, 2013).

Multiple regression analysis revealed that Emotional stability accounted for moderate variance in MC Frequency. None of the other personality factors were significantly predicting MC. In other words, higher levels of Neuroticism predict higher levels of MC Frequency. These findings fit well with the underlying disposition of Neuroticism: In theory, high Neuroticism scorers are associated with being anxious and emotional, whereas high scores in Emotional stability are associated with being calm and even-tempered (Orchard et al., 2014). Previous research demonstrated a negative correlation between Emotional stability and social media use (Correa et al., 2010). Here, neurotic individuals appear to use MC more frequently, yet less frequently seek support and company as emotionally stable individuals do. In the found literature, Neuroticism is often related to loneliness, stress, and social anxiety (Matthews et al., 2013), thus providing a plausible explanation for the patterns of findings. There is a general consensus that high scores in N relates to chronically experienced negative affects and psychiatric disorders (McCrae & John, 1992). Neurotic individuals might resort to MC practices due to the associated trait facets social anxiety and fear of failure (Matthews et al., 2003). Therefore, MC might be caused by the irrational belief and the experience of emotional distress in relation to tie maintenance (McCrae & Costa, 1987), which ultimately causes the impulsive behavior of engaging in MC due to the experienced fear of losing touch with their social network ties.

A further explanation for the findings might be located in linking Neuroticism to impulsive behavior, the experience of psychological distress, and depression (McCrae & Costa, 1987; Matthews et al., 2003). This might elucidate the negative correlation between Emotional stability and MC – as in Ehrenberg et al.'s (2008) findings neurotic individuals scored higher in mobile phone addiction. Additionally, Seo et al.'s (2015) study revealed that problematic mobile phone use was positively linked to multicommunicating during face-to-face communication. Conversely, extraverts were found to report less compulsive Internet use symptoms than introverts (McIntyre et al., 2015).

Followed by Emotional stability, the second strongest predictor in this study's findings was SCS with a contribution of 9.2% of the variance in MC Frequency. The results display a very moderate effect on MC. These findings are consistent with the qualitative findings (see multicommunication motivations), which suggest that participants experienced SCS derived from multicommunicating.[2] However, the semi-partial correlation analysis revealed that E was found to be a mediator of SCS, therefore influencing the relationship between SCS & MC Frequency. This result is consistent with Lee et al.'s (2008) finding which showed that SCS and E are related, albeit different psychological constructs. Additionally, Malone et al.'s (2012) finding provide evidence that extraverts tend to self-report higher levels of belongingness. Consequently, the facets of E, i.e., being talkative,

[2] For a deeper discussion see section "Multicommunication Motivations".

active, affectionate and a joiner point to the fact that extraverts highly value being socially connected with their social network, which ultimately might have caused higher levels in SCS, influencing the relationship between SCS and MC Frequency.

Moreover, in the conducted correlation analysis, SCS was positively associated with (1) Extraversion, (2) Emotional stability, and (3) Agreeableness. These findings are consistent with previous research linking Extraversion to SCS (Grieve & Kemp, 2015; Lee et al., 2008) and Extraversion to belongingness (Malone et al., 2012). In addition, were the findings in line in relating Emotional stability to SCS (Grieve & Kemp, 2015), Agreeableness to SCS (Malone et al., 2012), and Agreeableness to Belongingness (Seidman, 2013). Similarly, Seidman (2013) discovered that Agreeableness and Neuroticism were the best predictors in belongingness behavior on Facebook.

Contrasting to the study of Poposki and Oswald (2010), who found evidence of a positive relationship between Extraversion and polychronicity, no significant relationship was found between Extraversion and MC Frequency. This statistically non-existent correlation was the most puzzling, as theory suggests that Extraversion is associated with polychronicity (Conte & Gintoft, 2005; König & Waller, 2010) and multitasking (Lieberman & Rosenthal, 2001). Yet, on the other hand, König et al.'s (2005) findings revealed that Extraversion was not a significant predictor of Multitasking performance.

No evidence was found for gender differences in MC. This finding is consistent with Buser and Peter's (2012) non-significant results in gender differences for multitasking. In addition, the results show that increasing age (50 or older) indicates less MC Frequency in comparison to the younger cohorts (18-29 and 30-39). Older age groups (50 or older) were found to multicommunicate less frequently in comparison to the youngest age cohort (18-29), and the second youngest age cohort (30-39). This finding reflects studies on multitasking that revealed similar results concerning age differences (Salthouse et al., 1996; Clapp et al., 2011).

From the results obtained, we can conclude that personality does appear to affect the way in which a person multicommunicates. An understanding of the relevance of personality to MC behavior may help to explain why some people are more heavy multicommunicators than others. As such, this finding has created new questions which center on the interaction between personality and further variables that affect peoples' MC practices. This study is thus in the nature of pioneer research studies, and it remains yet important to further our understanding of the individual differences in MC.

5.1.1 Personality, Weak-Tie MC, Strong-Tie MC, and SCS

The conducted correlation analysis results indicate that weak-tie MC is positively related to Extraversion. Conversely, besides a strong, positive correlation to weak-tie MC, the correlation matrix showed no statistically significant correlations for strong-tie MC. In other words, these findings suggest that participants who engaged in close-tie MC are most likely to engage in weak-tie MC and vice versa.

The results of an unordered regression analysis in which the personality domains and SCS were entered, indicated that for close-tie MC, Extraversion was found to be the most important predictor (6.7%), followed by the second strongest predictor Openness to experience (5.3%). The regression model only explained 11.9% of the variability in close-tie MC, thus indicating a moderate relationship. The association of close-tie MC with Extraversion provides further evidence of linking Extraversion with polychronicity (i.e., the preference of engaging in several activities at the same time) and polychronic behavior (Lieberman & Rosenthal, 2001; Poposki & Oswald, 2010, Conte & Gintoft, 2005). Interestingly, Emotional stability was not significantly associated with close-tie MC.

Similarly, model 2 of a linear regression analysis of weak-tie MC was found to be statistically significant, showing a positive association between E and weak-tie MC, which accounted for a modest 6.3% of the variance in weak-tie MC. Model 1 of the multiple regression analysis for weak-tie MC was statistically insignificant. Therefore, further research is needed to enhance the understanding of the relationships between weak-tie MC, personality factors and social connectedness.

With regard to the results of the in-depth interviews, the findings show that respondents strongly reported to avoid multicommunicating practices with weak ties due to reasons of incivility (see the following section). Future research is needed to establish a link between politeness and weak-tie MC. In addition, the findings demonstrate that SCS did not significantly contribute to the multiple regression models of either close-tie MC and weak-tie MC.

Extraverted individuals are associated with being sociable, excitable characters, whereas high scorers in introversion are usually calm and even-tempered (Orchard et al., 2014). Here, the results are consistent with the trend in the literature, linking Internet use to Extraversion (Tosun & Lajunen, 2010; Orchard et al., 2014, Ross et al., 2009). As such, extraverts are defined as having high levels of sociability (McCrae & Costa, 1987). They have a higher tendency to engage in social activities and are recognized for being in possession of a large social network. As such, their tendency to extend their social network might explain these findings. Similarly, Tosun and Lajunen's (2010) findings suggest that extraverts used the Internet to maintain long-distance relationships and to support daily face-to-face relationships. Furthermore, in Orchard et al.'s (2014) study, Extraversion was linked to social media use for recreational purposes and the acquisition of new connections.

It is reasonable to argue that MC might provide extraverts a way to maintain close, and weak ties within their social network. Being very sociable in nature, MC, facilitated by communication technologies, might prove to be useful for their social tie maintenance, as "strong ties provide frequent access to close others and easy and timely access to the information they have" (Haythornthwaite, 2000, 198), and weak ties provide "experience, information, attitudes, resources, and contacts" (Haythornthwaite, 2005, 128). This paper is in line with Haythornthwaite's assumption that online interactions can affect ties just as much as offline interactions (Mizco et al., 2011). Therefore, "those who communicate more frequently maintain more relations and more socially supportive relations" (Haythornthwaite, 2000, 195). Additionally, in Butt and Phillips' (2008) study on mobile phone use, extraverts and neurotic individuals spent more time using text messaging services such as SMS. In this study, Instant Messaging was the most used MC combination medium with the other proposed primary communication media. Extraverts' preference for text messaging might function as a tool of social extension that could potentially cause multicommunicating behavior. As such, the findings would be consistent with Boase et al.'s (2006) research that links cell phone and IM usage to core ties.

Furthermore, given that MC is a cognitively complex activity, considering individual differences in cognitive performances might additionally illuminate this study's findings. Hahn et al. (2015) tested how personality played a role in attentional performance. Their study focused on visual attention by employing a change detection paradigm. The findings suggest that a high level of Extraversion is a predictor of increased attentional performance (Hahn et al., 2015). Therefore, as MC involves shifting the attention between various, ongoing conversations, extraverts might possess a higher tolerance for interruptive tasks, which might lead them to score higher in MC Frequency.

The significant, negative relationship between Openness to experience and close-tie MC was surprising, as this personality factor is related to curiosity and high likeliness to try out new methods of communication (Ross et al., 2009). Individuals scoring high in Openness to experience are intellectually curious, enjoy artistic pursuits, and are in general willing to take alternative approaches into consideration (Amichai-Hamburger & Vinitzky, 2010). The negative regression indicates that for each increase in Openness to experience there is a decrease in close-tie MC. Therefore, these findings are to a certain extent in conflict to Ross et al.'s study, who found Openness to experience to be related to online sociability and CMC knowledge (2009). One possible reason for these findings might be that high scorers in Openness tend to avoid MC with close ties, as close-tie communication is characterized by a higher complexity of exchanged information and resources, such as providing support and exchanging confidences (Haythornthwaite, 2000). Therefore, arguably, even though high scorers in Openness are believed to actively seek to expand their media repertoire (Haythornthwaite, 2000), MC appears not to be the preferred practice which enables these individuals to originally and creatively convey intimacy and trust with close ties. Moreover, high scorers in Openness to experience are characterized by the trait facets of introspective, unusual thought processes, and preference of

intellectual matter (McCrae & Costa, 2003, 53). Therefore, "with harmonious passion, integrative self-processes are at play leading the person to fully partake in the passion activity with an openness that is conducive to mindful attention, concentration, and flow in the process" (Vallerand et al., 2014, 9). As individuals were shown to experience high levels of concentration when engaging in a passionate activity (Vallerand et al., 2014) and high scorers in Openness to experience are associated with feelings, aesthetics and a high value for experience (McCrae & Costa, 2003), arguably high scorers in Openness to experience might prefer to channel their concentration in only one activity at a time.

5.2 Weak-Tie vs. Close-Tie MC: MC Tolerance Disparities

The analysis of in-depth interviews in relation to research question 2 revealed that participants tended to avoid MC with weak ties. There are two possible explanations tied to the respondents' answer: First of all, strong- or close-tie communication is characterized by a high motivation of frequent communication and multiple types of resource and information exchanges (Haythornthwaite, 2005). Conversely, weak-tie communication characterizes infrequent and primarily instrumental resource and information exchanges (Haythornthwaite, 2005). Whereas strong ties proactively seek contact and adapt media to joint use, weak ties are distinguished by being in opportunistic, passive contact with each other, benefitting from passive opportunities of interaction (Haythornthwaite, 2005). Therefore, the results were not surprising, considering that weak ties use fewer means of communication media and communicate more infrequently as in comparison to strong ties (Haythornthwaite, 2005). In particular, especially strongly tied pairs are associated with a desire for proximity, such as physical proximity and face-to-face contact. Yet, when distanced, the lack of face-to-face communication may cause an extra effort to maintain a virtual proximity (Haythornthwaite, 2000). Here, this so-called extra effort could relate to MC, which may enable close ties to stay in touch with each other, thus supporting close relationships.

Secondly, in this study, the caused relational outcome of perceived incivility was the most frequently reported relational outcome of MC during the in-depth interviews. MC was often associated with being disrespectful, rude and impolite - specifically during face-to-face conversations. Consequently, examining the tie strength MC differences might illuminate these findings. Strong, personal relationships are noted for a high mutual level of trust, intimacy, and mutual understanding. Closely tied pairs tend to be like each other, in contrast to weak ties, who tend to be unlike each other (Haythornthwaite, 2005). Weakly tied pair communication inclines to be more instrumental (Haythornthwaite, 2000). As MC involves shifting one's attention between several, ongoing conversations, the multicommunicator's lack of attention breaches the joint communicative action of negotiating meaning with another co-communicator. Consequently, MC may be, at some times, perceived as rude or inappropriate (Cameron & Webster, 2011). These caused interruptions and the inattentiveness might provoke disrespect (Goffman, 1956). According

to the literature on impoliteness studies, impoliteness might be an intentional or unintentional act of face-aggravation, frequently placing emphasis on the joint construction of both the speaker and the hearer (Dynel, 2015). Therefore, in general, it is likely that closely tied pairs will not take instantaneous offense or perceive their co-communicator's MC behavior as face-threatening as weak ties. Arguably, the close tie receiver might engage himself/herself in similar MC practices. Yet, weak ties do not share the same mutual level of high trust, therefore, as "the mere act of starting a conversation imposes demands on the addressee's time and attention" (McGlone & Giles, 2011, 212), the caused lack of attention might be regarded by the weak tie receiver as disrespectful and face threatening. Indeed, the respondents reported their knowledge of the weak tie's low tolerance with regard to MC. Hence, the participants reported employing several strategies that involved covert MC instances with weak ties, for the mitigation of the exerted face threat by MC. According to Reinsch et al. (2008), this suggests low tolerance levels for MC. On the other hand, the respondents reported to overtly multicommunicate with close ties, suggesting thus a high tolerance level for MC.

Surprisingly, not such a significant disparity between the mean of weak-tie and close-tie MC was found in the quantitative findings. However, most mentioned multicommunicating instances in the interviews involved the primary communication medium face-to-face, and none of the respondents mentioned MC causing incivility during only text-based MC instances. Therefore, respondents might have solely focused on the negative effects of MC on face-to-face communication with weak ties, not keeping in mind the other media combinations. Furthermore, it is uncertain whether participants of the interviews experienced some form of interview bias, in which they might have exaggerated their avoidance of weak-tie MC and politeness. Nonetheless, the findings provide evidence for media multiplexity by showing that close ties combined several media more frequently to multicommunicate than weak ties.

5.3 Multicommunication Motivations

This research's qualitative observations in relation to research question 3 illuminate that there were three major themes observed in the interviews that provided empirical evidence of the MC motivations: First, participants were engaged in MC practices due to reasons of constant availability. Second, MC was viewed as a source of being busy and productive. Third, interviews reasoned to use MC in order to satisfy their need of social connectedness.

To begin with, one of the reported motivations for the respondents to engage in MC activities was to increase productivity and efficiency within the interpersonal context (Turner & Reinsch, 2007). MC was used to meet the participants' needs of getting things done in less time. It was one of the most reported benefits of MC. These results were consistent with the general research body on MC (Turner & Reinsch, 2010; Stephens, 2012). Turner and Reinsch's (2010) findings of MC episodes at the workplace revealed

that MC was regarded by their participants as an opportunity for efficiency and "to do more in less time". In line with Turner and Reinsch (2010) findings, it was observed that while engaging in MC, the communication efficiency was prioritized instead of the content *per se* of the response, therefore making the content especially vulnerable to communication errors.

Similarly, this investigation's results show that MC was associated with killing two birds with the same stone: It kept being entertained and busy and likewise helped to plan social activities. Such conceptions capture the essence of modern society, which is characterized by an "obsession with doing more at once is symptomatic of the frenetic pace of life" (Wajcman, 2015, 14). Indeed, Leshed and Senger's (2011, 905) study on busyness in everyday life and the use of productivity tools revealed that "American individuals across a demographic range have internalized a cultural emphasis of busyness as a moral value to construct positive identities as busy individuals". In particular, the scholars defined "busyness" as "not simply about factually having a lot to do; instead, it is the valuing of "doing more in less time," as well as concrete practices and habits in individuals' daily lives that instantiate this idea" (Leshed & Senger, 2011, 905). Even though the scholars' analysis was based on US interview accounts, a similar finding was discovered in this study's interview accounts. Taking into consideration the emphasis placed on busyness and productivity in the findings, MC was found to be a productivity tool which increased participants' productivity and planning. Yet, on the downside, some participants also complained about the stressfulness of MC practices and the communication overload it causes.

Furthermore, the results indicate that constant availability appears to be another driving force of MC. The need for perpetual contact, the expectancy of immediate response, as well as the easiness of engaging in MC behavior, facilitated by communication technologies, lie at the heart of this motivation. The findings are underscored by other Reinsch et al.'s (2008) assumption that technologies facilitate MC practices. Being available around the clock was uncovered to be desirable and quite common among the respondents. The findings suggest that accessibility was, to a certain point, almost the norm. Given that individuals reported a perceived pressure or expectancy of answering immediately, perpetual contact can serve as a form of motivation to engage in MC behavior. For example, urgency was another formulated reason to engage in MC. Participants had to answer time-sensitive messages that expected an immediate answer. In addition, the grand majority of interviewees responded that the frequency level of MC was medium to high, with MC episodes occurring at least once a day.

The results are consistent with Stephens' (2012, 213) study, which showed that being available is an important factor of MC:

> "It is a state of readiness to engage in multicommunication. … It highlights the key role that other people play in contemporary communication practices and how the proliferation of technology and mobile devices has increased accessibility."

The daily usage of mobile phones was reported by all the interviewed respondents - facilitating constant availability, as well as MC practices. Mobile phones were reported to bridge the geographical distance and to support constant connection via synchronous communication media apps such as Whatsapp and Facebook Messenger, among others. Additionally, the findings revealed that the mobile phone was the most prominent communication technology device used by the participants for MC episodes (indifferent to weak-tie or strong-tie MC). Mobile phones, thus, not only facilitated constant availability but also, on the other hand, were viewed as a potential source of disruption.

Arguably, "mobile phones may be ushering in a range of new communication patterns, social relationships, and corresponding forms of life" (Wajcman, 2015). According to Wajcman (2015, 139), mobile phones "operate regardless of location, giving rise to a new pattern of continuous mediated interactions, variously known as constant touch, perpetual contact, absent presence, or connected relationships". Similarly, Seo et al. (2015) discovered that problematic cell phone use was one of the main reasons for multicommunicating during face-to-face conversations. Their study linked constant availability with the strong need for social reassurance (Seo et al., 2015).

This leads us directly to the third and last major discovery regarding MC motivation, namely social connectedness. The results illustrate that MC is a double-edged sword and a polarizing practice: On the one hand, it possesses a relational function, being a tool for maintaining relationships and on the other hand, it is a potential source of perceived incivility (Reinsch et al., 2008). Nonetheless, maintaining connectedness to others was revealed as another major motivation for MC. Consistent with the Social Connectedness theory (Lee & Robbins, 1995), participants were actively seeking for connectivity and avoiding loneliness. The findings captured how participants reported to consciously engage in MC as a goal-directed behavior to satisfy the need to form and maintain stable social bonds. This research consequently verifies Seo et al.'s (2015) hypothesis. Social connectedness appears to indeed at least in some parts explain why individuals engage in MC, yet it became apparent that such conceptions of social connectedness were only referred to close-tie MC. The qualitative findings are to a certain extent in line with the quantitative analysis: SCS was found to be the second strongest predictor of general MC Frequency. Nonetheless, there was no statistically significant connection for close-tie MC and SCS in the quantitative findings.

Even though the content was reported by the majority of participants to be of a simple nature during MC episodes, MC has been associated with greater levels of social support and connectedness from close friends. Therefore, the connectedness they were referring to was a connectedness at the individual level, not the overall level. Participants reported that the maintenance of strong ties was the main motivation to MC, this might be due to the emotional connectedness between the individuals and close ties (Lee & Robbins, 1995). MC made the participants feel close to their strong ties, characterizing a strong other-orientation (Lee & Robbins, 2000). As SCS is an aspect of belongingness, MC facilitates

to fulfill the two main features of belongingness proposed by Baumeister and Leary (1995). First, respondents reported their need of frequent personal contact with their close friends, and second, the bond with close ties was reported to be stable with a continuation in the foreseeable future (Baumeister & Leary, 1995).

Chan's (2015a) examination on mobile phones and well-being reflect that both voice and online communication via mobile phone was positively related to "various indicators of subjective well-bonding and bridging capital" (96). Similarly, Walsh et al. (2009) provided evidence of linking mobile phone use with feelings of belongingness among Australian youth. Relatedly, participants in this study felt reassured to be always reachable and to be able to contact their friends. After all, mobile communication enabled them to overcome borders and stay connected with their friends and acquaintances. Respondents reported their need for constant connection, leaving their cell phones on at mostly all times. As claimed by Baumeister and Leary (1995), the need to belong is satisfied when the person believes that the other cares about his/her welfare and likes or loves him/her. The importance of showing interest and affection to close friends was even prioritized to such an extreme point by one participant that not multicommunicating was claimed to evoke feelings of being left out. Consequently, it might be argued that the increased need for social connectedness increases consequently MC practices for close ties. It might be probable that the discontinuity in constant tie maintenance provoke a potential fear of missing out (FoMo), a relatively new phenomenon which demarks "the desire to stay continually connected with what others are doing" (as cited in Alt, 2015, 111).

5.4 Limitations

Several limitations of the study should be addressed. First, care should be taken to generalize the findings beyond the study sample. In the matter of external validity concerning this study's sampling, it is difficult to claim that the results of such research are representative for the whole Internet population. This is partly problematic, as there is no single existent sampling frame or standard system for the assignment of E-mail addresses of the population of Internet users per se (Horner, 2008). It is a very large population, consisting of an almost infinite number of potential participants. As such, this research might be classified as non-representative, as the quantitative data was based on online participants' recruitment. With regard to the sample, it is duly noted that this research is also biased concerning the digital divide, considering only highly digitalized nations within Europe. It is focusing on one side of the vertical digital divide, namely those individuals who have access to Internet and ICTs (Spiekermann et al., 2015), which may be problematic when generalizing this study's findings. Furthermore, providing the questionnaire as well as the interviews in English might have influenced answers, as misunderstandings are more likely to happen in languages other than one's mother tongue.

The final subsample of the web-survey yielded a larger proportion of female participant taking the survey than male participants. This imbalance should be noted as one limitation of this research study. However, this study still contributes to the growing literature body of multicommunicating by illuminating aspects of individual differences of multicommunication. Therefore, by employing in-depths interviews, the employed qualitative methods facilitated a better understanding of the emerging phenomenon of MC. In addition, while this study does offer a contribution to individual differences and motivations of MC, the quantitative and qualitative findings consisted of a large sample size of Millenials, i.e., young adults. Generalizing beyond this demographic is not recommendable, considering that this age cohort consists of digital natives and tech-savvy individuals who are used to multicommunicating, multitasking, and online communication.

Moreover, this study's data collection method relied on self-reported data, which can be subject to social desirability biases. Especially, this is the case for multicommunicating behavior, which is a polarizing practice that is often regarded as impolite and distractive. Indeed, several sources of bias were acknowledged in this study in relation to the incongruence of the quantitative findings. For the survey-based data collection, self-report used in this study may have some implications for the reliability and validity for some of the measured variables. On the other hand, the survey, as well as the interview, did provide anonymity in order to reduce the social desirability bias. Future studies could prevent such a bias via the use of more sophisticated data collection methods.

An additional limitation of this study concerns this study's measure of MC Frequency. Precisely, more validation is required as the scale has limitations. For instance, some items were redundant, others irrelevant to measure the frequency of MC. In terms of the measurement of the key variables of weak-tie and strong-tie MC, the present study has an additional limitation concerning the range of media included for these scales. Due to practical concerns such as keeping a relatively short instrument, other probably relevant media were not included. Another possible limitation concerns the key variable of tie strength. It is acknowledged that there exist wide variations of tie strength, yet this study only distinguished broadly between close ties and weak ties.

Finally, it should be noted that due to the nature of this cross-sectional study, there is no total confidence in the direction of causality between personality dimensions, tie strength, social connectedness and multicommunication. Longitudinal research designs will be necessary to consequently examine and establish the direction of causality and to measure change or stability over time.

5.5 Directions for Future Research

With the proliferation of Instant Messaging, as well as other emerging communication media, this research area represents a rich area for future research. Undoubtedly, future research is needed to establish the causality between MC, personality, SCS, and MMT. Ideally, future studies might be replicated with a more heterogeneous and larger sample, including older age groups. In addition, developing a valid and reliable MC scale for interpersonal communication is an important priority for future research.

Moreover, future research is needed to study further variables that motivate MC practices. It would be worthwhile to include further situational and relational variables that may interfere with the motivations for MC. In this sense, it would be valuable to include variables such as politeness, FoMo and problematic cell phone use. Furthermore, it remains a topic for future research to determine which specific motives lie behind neurotics' MC behavior, as "people initiate conversations with others to satisfy needs" (Rubin & Martin, 1998, 300). As a starting point, it might be useful to orientate these results to the study of Orchard et al. (2014), which revealed that the Eysenck's personality factor Neuroticism is positively related to the usage of social networks for motives of escapism. Last but not least, further research is needed to investigate the influencing factors behind age differences for multicommunicating practices.

5.6 Conclusion

Communication technologies have permeated almost all aspects of our lives, influencing the way we communicate with each other and maintain and form social bonds. Communication scholars are therefore well-placed to investigate the various roles played by communication and technology in interpersonal communication. Specifically, multicommunicating is an emerging phenomenon of research, which is characterized by many unanswered questions. So far, previous research has examined multicommunicating practices within the workplace context, yet multicommunicating is "characterized by many unanswered questions" (Cameron & Webster, 2011, 767). Relying on personality theory and self-psychology, as well as on theories of communication and media multiplexity, this current study explored the individual differences and motives regarding multicommunicating and provided new insights of multicommunicating practices within the interpersonal context. From the results obtained, it can be concluded that personality affects the way in which a person multicommunicates with others, and that tie strength influences multicommunicating behavior.

The results, though modest, show that the personality dimension Neuroticism is related to multicommunication. Neurotic individuals are believed to engage more frequently in multicommunicating practices due to an experienced emotional distress in relation to tie maintenance. Further, results suggest that individuals with higher scores in Social

Connectedness tend to multicommunicating more often. Multicommunicating was found to be driven by a desire to feel socially connected to close ties. Additionally, the participants were motivated to multicommunicate in order to be constantly available and productive. This might be ascribed to Reinsch et al.'s (2008) assumption, which claims that multicommunicating is "an example of the use of technologies that emerges" from "norms such as productivity and efficiency" which encourage "speed and interpersonal accessibility" (399). Interestingly, it was found that expectancy played an important role when participating in modern society – participants felt the pressure to engage in many things at once.

This study's results extend past research on media multiplexity by demonstrating that strong ties multicommunicate more frequently than weak ties. For both tie strength conditions, Extraversion was found to be related to multicommunication practices, which might be ascribed to the fact that extraverts tend to have high levels of sociability and tend to engage more frequently in social activities (Amichai-Hamburger & Vinitzky, 2010; McCrae & Costa, 1987). The qualitative findings illuminate that multicommunicating was perceived as a polarizing practice with the potential of being interpreted as uncivil behavior, especially when practiced with weak-tie friends.

Due to several study limitations the results have to be viewed with caution, taking into consideration that the sample consisted of young participants with high levels of education, with the majority of the sample residing in highly digitalized European nations. Consequently, future research needs to continue to shed light on many of the psychological and social factors that lead people to engage in this communicative multitasking behavior. In short, there is a need to further examine the situational, relational, individual and normative aspects of multicommunicating (Seo et al., 2015). This study does a step in that direction, extending the empirical work on multicommunicating.

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APPENDIX

Appendix A

The Web-Survey

soSci
oFb - der onlineFragebogen

Seite 01
Introduction

Welcome!

Dear participant,

Thank you for participating in this Master's Thesis research on Multicommunicating! The questionnaire will take you approximately 20 minutes to fill out. This participation enters you into a drawing to win a 10€ Amazon gift card.

Please answer all questions as honestly as possible and fill in the questionnaire completely.

All data gathered in this survey will be used exclusively for academic purposes. All data will be treated anonymously. No information about your identity will be collected, retained or shared.

For further information about this research or any questions concerning your participation, please contact the researcher Raquel Pfister Sustacha at guspfisra@student.gu.se.

Seite 02
Multicommunicating Frequency

Multicommunicating

This part measures your multicommunicating practice within your interpersonal, everyday life. Multicommunicating can be described as being engaged in at least two conversations at the same time. When you multicommunicate, the open conversations are overlapping by using nearly synchronous media, such as face-to-face speech, telephone calls, video conferencing, instant messaging and e-mail.

A conversational thread can be identified by a sequence of communicative turns which end when a task has been accomplished and/or with conversational openings and closings.

For each statement, please rate the extent to which you multicommunicate, ranking from 1 (very rarely), 2 (rarely), 3 (occasionally), 4 (frequently), to 5 (very frequently).

I often engage in multiple conversations at the same time.

e.g. I am in a face-to-face conversation with a friend and simultaneously instant-message on Whatsapp another friend.

Very rarely				Very frequently
○	○	○	○	○

I focus my attention on a single communicative interaction.

Very rarely ○ ○ ○ ○ ○ Very frequently

I often stop in the middle of an ongoing conversation to switch to another conversation.

e.g. I am in a face-to-face conversation with a friend and simultaneously switch to instant-message on Whatsapp another friend.

Very rarely ○ ○ ○ ○ ○ Very frequently

I often divide my attention among two or more ongoing conversations.

Very rarely ○ ○ ○ ○ ○ Very frequently

I tend to completely finish one conversation before starting another conversation.

Very rarely ○ ○ ○ ○ ○ Very frequently

When managing several conversations at once, I switch back and forth between them rather than to manage one at a time.

Very rarely ○ ○ ○ ○ ○ Very frequently

While engaging in one conversation, I am often interrupted by other conversations/by another conversation.

Very rarely ○ ○ ○ ○ ○ Very frequently

I simultaneously use two or more media for one interpersonal contact.

For example: I am in a conversation on an instant messenger with my friend, and I am simultaneously on a voice call with the same friend.

Very rarely ○ ○ ○ ○ Very frequently ○

I simultaneously use two or more media for more than one interpersonal contact.

For example: I am in a conversation on an instant messenger with my friend, and I am simultaneously on a voice call with another friend.

Very rarely ○ ○ ○ ○ Very frequently ○

When multicommunicating, I often switch social roles.

e.g. the social roles of parent, spouse, close friend, sibling, University classmate, etc. ...

Very rarely ○ ○ ○ ○ Very frequently ○

I openly multicommunicate, and people involved in the ongoing conversations know it.

Very rarely ○ ○ ○ ○ Very frequently ○

I multicommunicate because I lose interest in what I am doing if I have to focus on the same conversation for a longer period of time.

Very rarely ○ ○ ○ ○ Very frequently ○

I multicommunicate to get things done in less time.

Very rarely ○ ○ ○ ○ Very frequently ○

I multicommunicate to keep in touch.

Very rarely				Very frequently
○	○	○	○	○

Seite 03

Close friends tie strength

Media combinations

This part measures how your multicommunicating practices relate to close relationships and weak relationships within your personal life.

For each of the five presented primary media, indicate how often you engage in other simultaneous communication activities during a primary communication activity.

Mark in each field your appropriate answer, ranging from "Very Rarely" to "Very Frequently".

Multicommunicating with close friends

Close friends: I frequently communicate with close friends and we have a mutual influence on each other. I exchange intimate, emotional content with my close friends. I give social and emotional support and companionship to my close friends.

Face-to-face communication

When I use this primary communication medium with close friends, I simultaneously communicate via ...

	Very Rarely 1	2	3	4	Very Frequently 5
Face-to-face communication	○	○	○	○	○
E-mail	○	○	○	○	○
Video conferencing (e.g. Skype)	○	○	○	○	○
Text messaging (SMS)	○	○	○	○	○
Voice telephone (landline, mobile phone)	○	○	○	○	○
Instant messaging (e.g. Facebook messenger, Whatsapp)	○	○	○	○	○

Instant messaging (e.g., Facebook chat, Whatsapp)

When I use this primary communication medium with close friends, I simultaneously communicate via ...

	Very Rarely 1	2	3	4	Very Frequently 5
Face-to-face communication	○	○	○	○	○
E-mail	○	○	○	○	○
Video conferencing (e.g. Skype)	○	○	○	○	○
Text messaging (SMS)	○	○	○	○	○
Voice telephone (landline, mobile phone)	○	○	○	○	○
Instant messaging (e.g. Facebook messenger, Whatsapp)	○	○	○	○	○

E-mail

When I use this primary communication medium with close friends, I simultaneously communicate via ...

	Very Rarely 1	2	3	4	Very Frequently 5
Face-to-face communication	○	○	○	○	○
E-mail	○	○	○	○	○
Video conferencing (e.g. Skype)	○	○	○	○	○
Text messaging (SMS)	○	○	○	○	○
Voice telephone (landline, mobile phone)	○	○	○	○	○
Instant messaging (e.g. Facebook messenger, Whatsapp)	○	○	○	○	○

Voice telephone (landline, mobile phone)

When I use this primary communication medium with close friends, I simultaneously communicate via ...

	Very Rarely 1	2	3	4	Very Frequently 5
Face-to-face communication	○	○	○	○	○
E-mail	○	○	○	○	○
Video conferencing (e.g. Skype)	○	○	○	○	○
Text messaging (SMS)	○	○	○	○	○
Voice telephone (landline, mobile phone)	○	○	○	○	○
Instant messaging (e.g. Facebook messenger, Whatsapp)	○	○	○	○	○

Video conferencing

When I use this primary communication medium with close friends, I simultaneously communicate via ...

	Very Rarely 1	2	3	4	Very Frequently 5
Face-to-face communication	○	○	○	○	○
E-mail	○	○	○	○	○
Video conferencing (e.g. Skype)	○	○	○	○	○
Text messaging (SMS)	○	○	○	○	○
Voice telephone (landline, mobile phone)	○	○	○	○	○
Instant messaging (e.g. Facebook messenger, Whatsapp)	○	○	○	○	○

Seite 04

Weakly tied friends strength

Media combinations

This part measures how your multicommunicating practices relate to close relationships and weak relationships within your personal life.

For each of the five presented primary media, indicate how often you engage in other simultaneous communication activities during a primary communication activity.

Mark in each field your appropriate answer, ranging from "Very Rarely" to "Very Frequently".

Multicommunicating with weakly tied friends/acquaintances

Weakly tied friends/acquaintances: I am less motivated to communicate with my weakly tied friends or acquaintances. We have a low mutual influence on each other. Communication with them often provides access to information.

Face-to-face communication

When I use this primary communication medium with weakly tied friends, I simultaneously communicate via ...

	Very Rarely 1	2	3	4	Very Frequently 5

Face-to-face communication	○ ○ ○ ○ ○
E-mail	○ ○ ○ ○ ○
Video conferencing	○ ○ ○ ○ ○
Text messaging (SMS)	○ ○ ○ ○ ○
Voice telephone (landline, mobile phone)	○ ○ ○ ○ ○
Instant messaging (e.g. Facebook messenger, Whatsapp)	○ ○ ○ ○ ○

Instant messaging (e.g., Facebook chat, Whatsapp)

When I use this primary communication medium with weakly tied friends, I simultaneously communicate via ...

	Very Rarely 1	2	3	4	Very Frequently 5
Face-to-face communication	○	○	○	○	○
E-mail	○	○	○	○	○
Video conferencing	○	○	○	○	○
Text messaging (SMS)	○	○	○	○	○
Voice telephone (landline, mobile phone)	○	○	○	○	○
Instant messaging (e.g. Facebook messenger, Whatsapp)	○	○	○	○	○

Voice telephone (landline, mobile phone)

When I use this primary communication medium with weakly tied friends, I simultaneously communicate via ...

	Very Rarely 1	2	3	4	Very Frequently 5
Face-to-face communication	○	○	○	○	○
E-mail	○	○	○	○	○
Video conferencing	○	○	○	○	○
Text messaging (SMS)	○	○	○	○	○
Voice telephone (landline, mobile phone)	○	○	○	○	○
Instant messaging (e.g. Facebook messenger, Whatsapp)	○	○	○	○	○

E-mail

When I use this primary communication medium with weakly tied friends, I simultaneously communicate via ...

	Very Rarely 1	2	3	4	Very Frequently 5
Face-to-face communication	○	○	○	○	○
E-mail	○	○	○	○	○
Video conferencing	○	○	○	○	○
Text messaging (SMS)	○	○	○	○	○
Voice telephone (landline, mobile phone)	○	○	○	○	○
Instant messaging (e.g. Facebook messenger, Whatsapp)	○	○	○	○	○

Video conferencing

When I use this primary communication medium with weakly tied friends, I simultaneously communicate via ...

	Very Rarely 1	2	3	4	Very Frequently 5
Face-to-face communication	○	○	○	○	○
E-mail	○	○	○	○	○
Video conferencing	○	○	○	○	○
Text messaging (SMS)	○	○	○	○	○
Voice telephone (landline, mobile phone)	○	○	○	○	○
Instant messaging (e.g. Facebook messenger, Whatsapp)	○	○	○	○	○

Seite 05

Personality

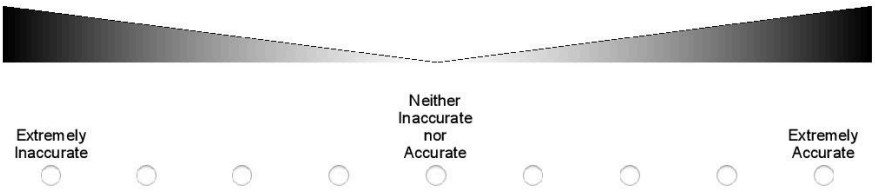
Personality

How accurately can you describe yourself?

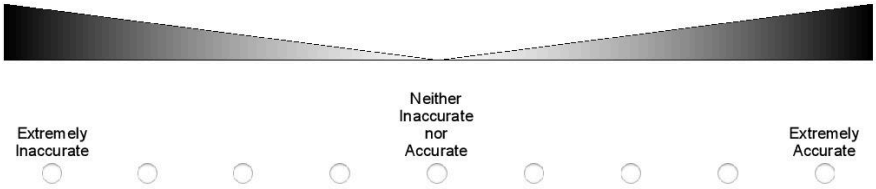
Here are a number of personality traits that may or may not apply to you. Describe yourself as you see yourself at the present time, not as you wish to be in the future. Describe yourself as you are generally or typically, as compared with other persons you know of the same sex and of roughly your same age. Please rate each trait as accurately as it applies to you using the rating scale from 1 "extremely

inaccurate" to 9 "extremely accurate".

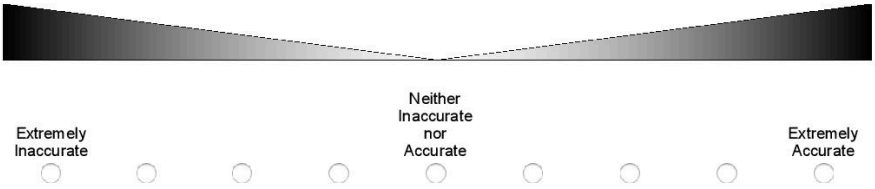
Bashful



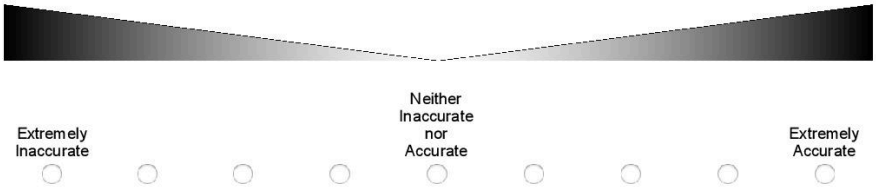
Bold



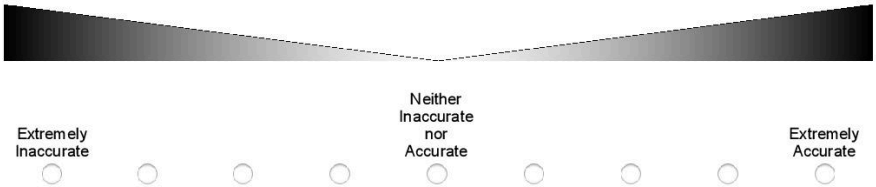
Careless



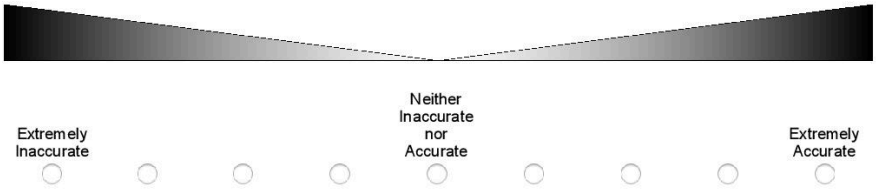
Cold



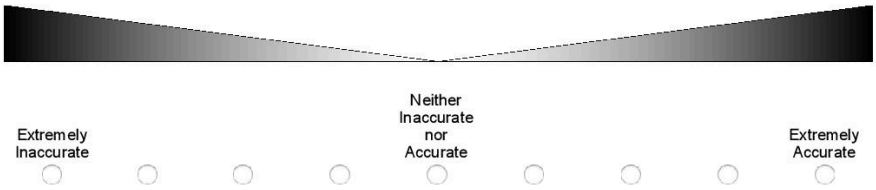
Complex



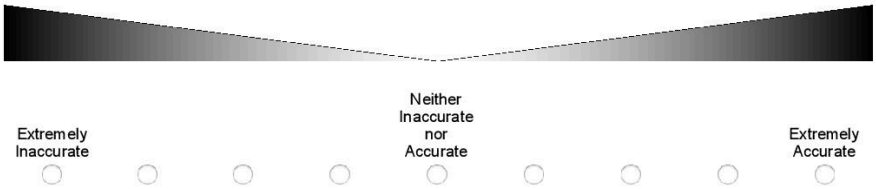
Cooperative



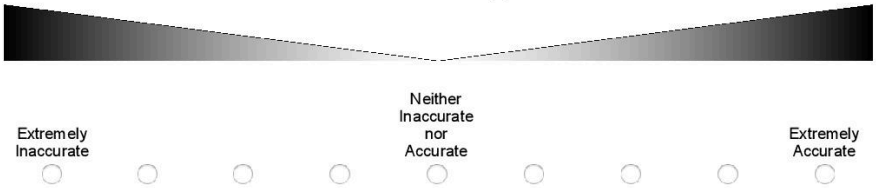
Creative



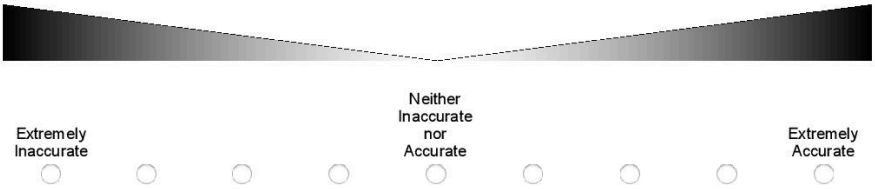
Deep



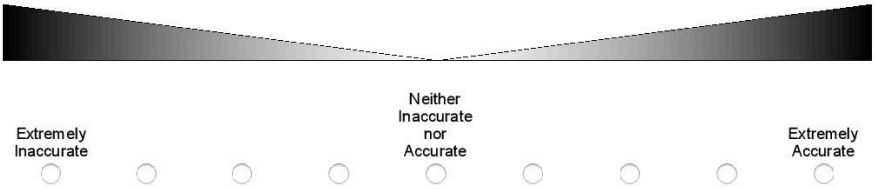
Disorganized



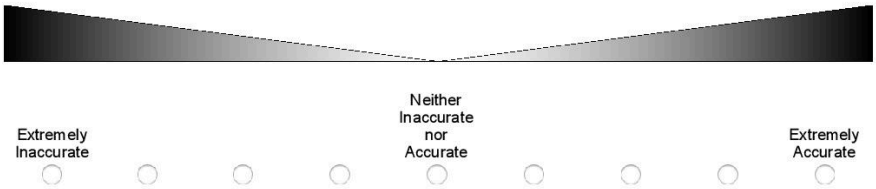
Efficient



Energetic



Envious



Extraverted

Neither Inaccurate nor Accurate

Extremely Inaccurate ○ ○ ○ ○ ○ ○ ○ ○ ○ Extremely Accurate

Fretful

Neither Inaccurate nor Accurate

Extremely Inaccurate ○ ○ ○ ○ ○ ○ ○ ○ ○ Extremely Accurate

Harsh

Neither Inaccurate nor Accurate

Extremely Inaccurate ○ ○ ○ ○ ○ ○ ○ ○ ○ Extremely Accurate

Imaginative

Neither Inaccurate nor Accurate

Extremely Inaccurate ○ ○ ○ ○ ○ ○ ○ ○ ○ Extremely Accurate

Inefficient

Neither Inaccurate nor Accurate

Extremely Inaccurate Extremely Accurate

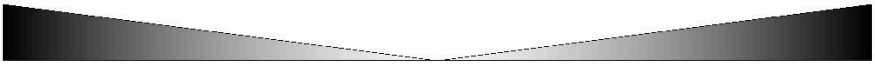
Intellectual

Extremely Inaccurate — Neither Inaccurate nor Accurate — Extremely Accurate

Jealous

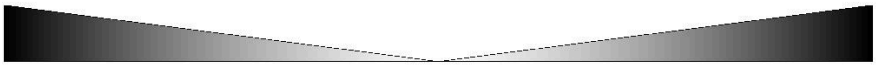
Extremely Inaccurate — Neither Inaccurate nor Accurate — Extremely Accurate

Kind



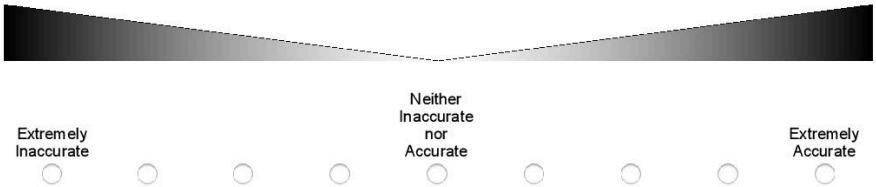
Extremely Inaccurate — Neither Inaccurate nor Accurate — Extremely Accurate

Moody

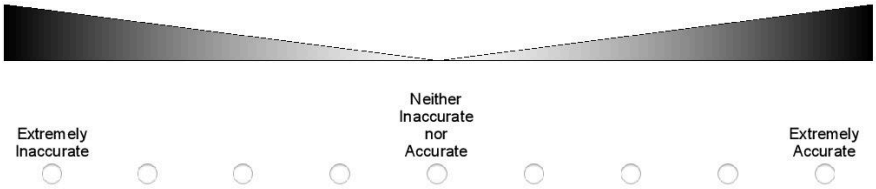


Extremely Inaccurate — Neither Inaccurate nor Accurate — Extremely Accurate

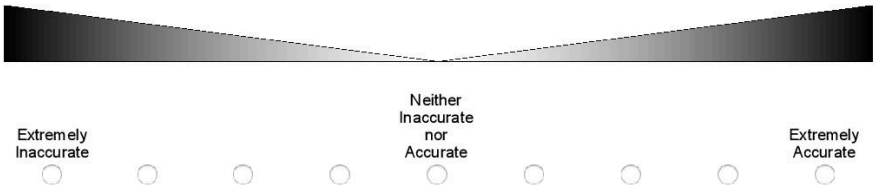
Organized



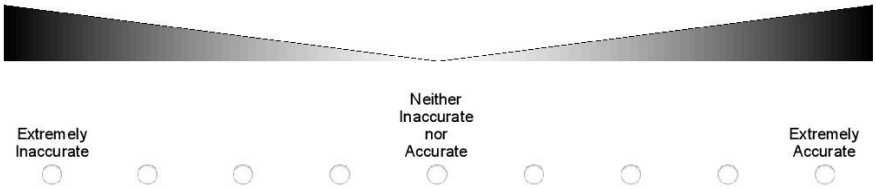
Philosophical



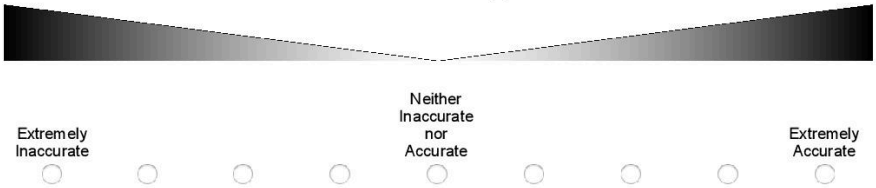
Practical



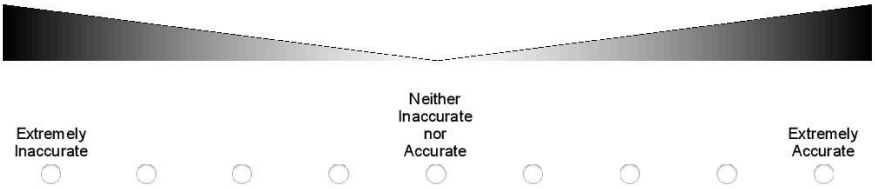
Quiet



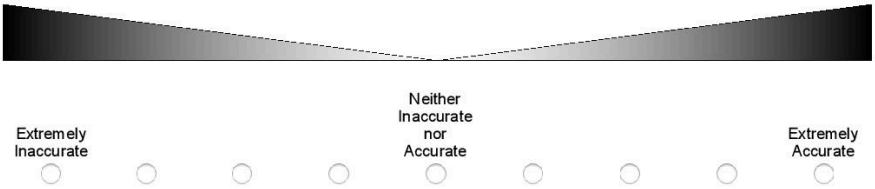
Relaxed



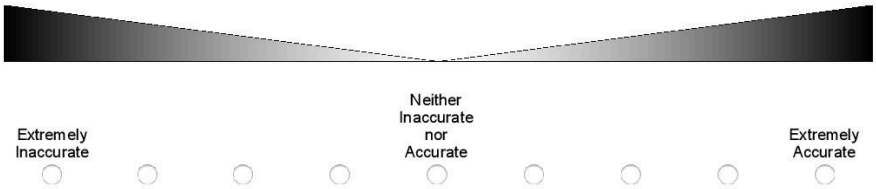
Rude



Shy

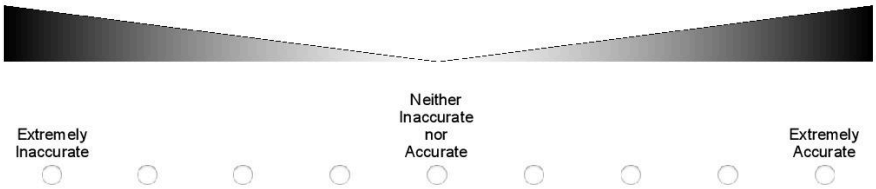


Sloppy

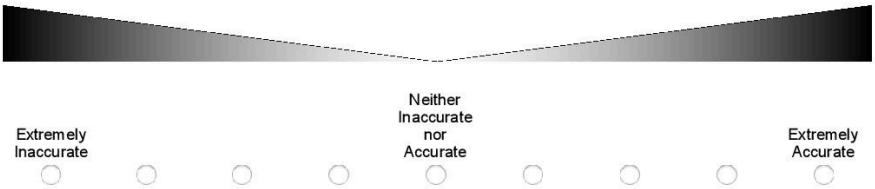


Sympathetic

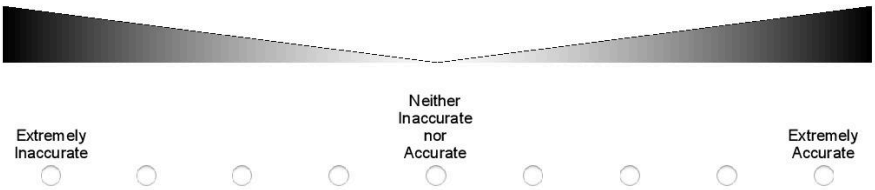
Systematic



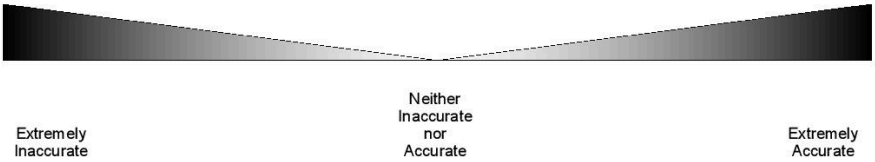
Talkative



Temperamental



Touchy



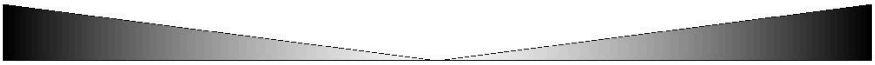
Uncreative

Extremely Inaccurate — Neither Inaccurate nor Accurate — Extremely Accurate

Unenvious

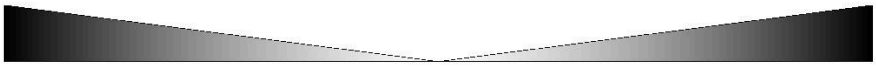
Extremely Inaccurate — Neither Inaccurate nor Accurate — Extremely Accurate

Unintellectual



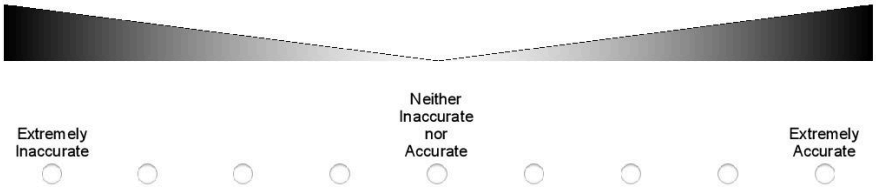
Extremely Inaccurate — Neither Inaccurate nor Accurate — Extremely Accurate

Unsympathetic

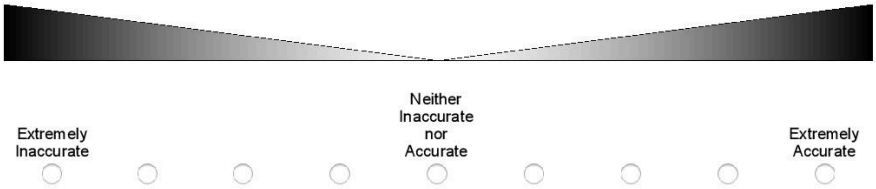


Extremely Inaccurate — Neither Inaccurate nor Accurate — Extremely Accurate

Warm



Withdrawn



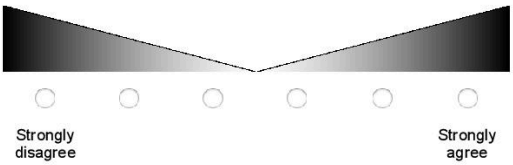
Seite 06

Social connectedness

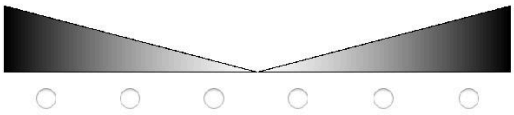
Social connectedness

Here are a number of assumptions that may or may not apply to you. Please rate each of the declarations as they apply to you using the rating scale from "strongly disagree" to "strongly agree".

I feel distant from people.

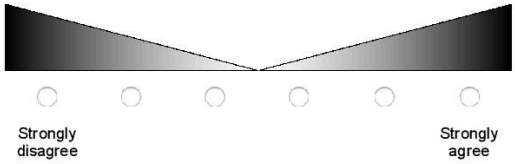


I don't feel related to most people.



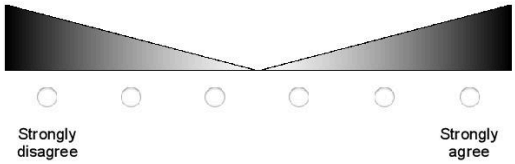
Strongly disagree Strongly agree

I feel like an outsider.



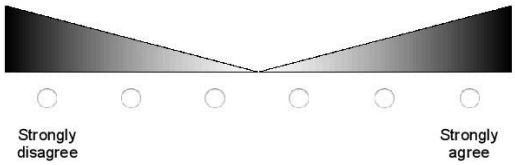
Strongly disagree Strongly agree

I see myself as a loner.



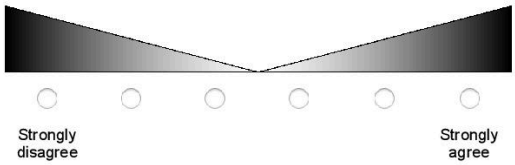
Strongly disagree Strongly agree

I feel disconnected from the world around me.



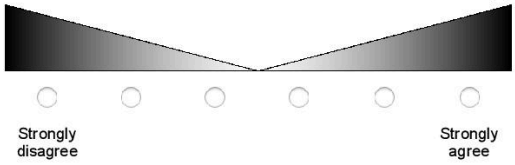
Strongly disagree Strongly agree

I don't feel I participate with anyone or any group.

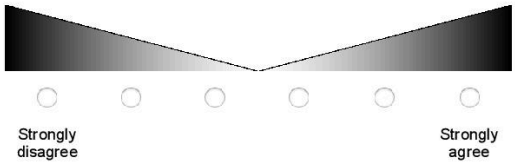


Strongly disagree Strongly agree

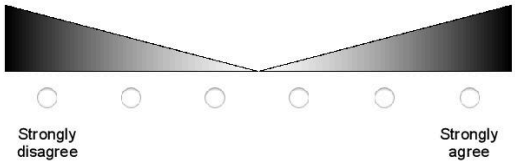
I feel close to people.



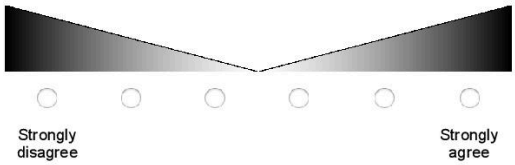
Even around people I know, I don't feel that I really belong.



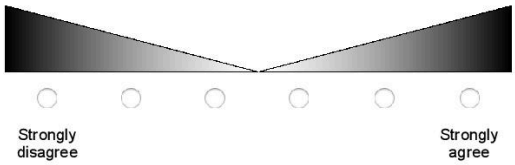
I am able to relate to my peers.



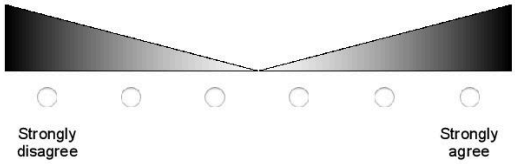
I catch myself losing a sense of connectedness with society.



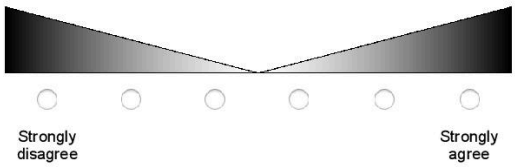
I am able to connect with other people.



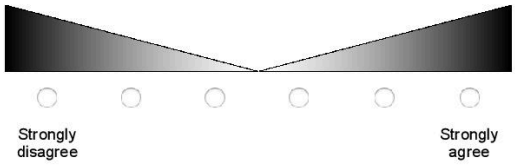
I feel understood by the people I know.



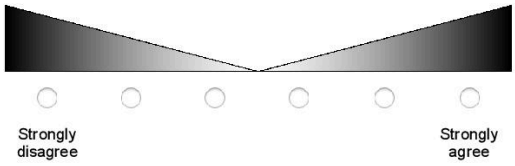
I see people as friendly and approachable.



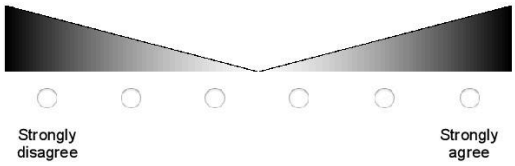
I fit in well in new situations.



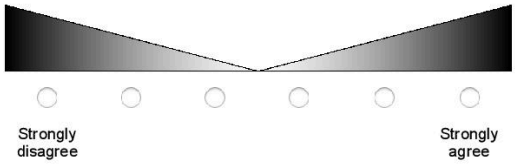
I have little sense of togetherness with my peers.



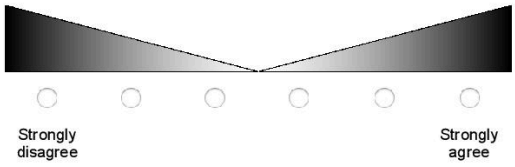
My friends feel like family.



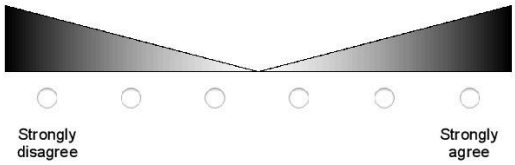
I find myself actively involved in people's lives.



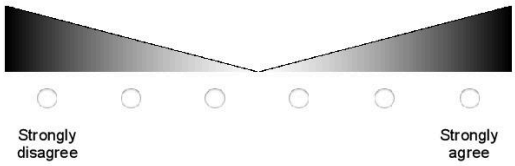
Even among my friends, there is no sense of brother/sisterhood.



I am in tune with the world.



I feel comfortable in the presence of strangers.



Seite 07

Outro

Demographic data

Thank you for your participation! We are almost done!

Before finishing this survey, please read each statement carefully and select your answer or fill in the answer if required. By clicking "Next" you submit this questionnaire.

What is your gender?

- ○ female
- ○ male
- ○ other

How old are you?

I am ____ years old

Where are you from?

Nationality _____

In which country are you currently living?

Country _____

What is your highest educational achievement?

Please select the highest level of qualification you have obtained.

- ○ High school
- ○ Undergraduate degree
- ○ Postgraduate degree
- ○ Other

What do you do professionally?

- ○ University student
- ○ Employee

- ○ Self-employed
- ○ Seeking employment
- ○ Other

E-mail

Please enter your E-mail to participate in the 10€ Amazon gift card drawing.

Letzte Seite

Thank you for completing this questionnaire!

We would like to thank you very much for helping us.

Your answers were transmitted, you may close the browser window or tab now.

B.A. Raquel Pfister Sustacha, Gothenburg University – 2016

Appendix B

Multicommunicating Interview Guide

INTRODUCTION

Hello, my name is Raquel Pfister Sustacha and I am conducting my Master thesis research at the Gothenburg University. The purpose of this research is to explore a behavior called multicommunicating. Multicommunicating can be defined as being engaged in at least two ongoing conversations at (almost) the same time. We are exploring the how relational strength influences this practice.

Therefore, just before we start, I'd like you to know how to distinguish between close friends and weakly tied friends:

- Close friends are friends with whom you exchange intimate, emotional content and give social and emotional support to.
- Weakly tied friends (or also acquaintances) are those individuals with whom you are less motivated to communicate and usually don't talk that frequently to. You have a low mutual influence on each other.

[Confirm first name.]

Okay, great. Before we begin the interview, I would like to go over a few quick points. First, this interview will be audio recorded, and these audio files will be destroyed at the completion of this research. Your identity will be kept anonymous and none of your data will be used, nor disclosed to any unauthorized person. If you feel uncomfortable answering any questions, you do not have to answer them, and you can end this interview at any time.

By participating in this interview you consent to participate in this study and to the above mentioned information. If you have any questions or concerns about this research after the interview, please E-mail me.

Do you have any questions before we begin?

Media & Communication devices usage

Before we start: Please tell me about your general usage of communication media and communication devices.

- Which type of communication media (e.g. video conferencing, Instant Messaging, E-mail) do you generally use?
- Which type of communication devices do you generally use?

Multicommunication in general

First, I have some general questions about your multicommunication behavior in your everyday, personal life.

1. Have you ever been engaged in more than one conversation at once?
    a. If no: Why? / If yes: Why?
    b. What do you mean by that?
2. Can you recall a specific incident where you were multicommunicating?
    a. What did you do then?
    b. How did X react to that?
3. How often do you engage in more than one conversation at once?
    a. Does it happen on a daily basis, several times per week, occasionally per month?
4. Can you describe a successful incident of mc?/Can you describe an unsuccessful incident of multicommunicating?
5. In which situations do you multicommunicate more often? In which less often? In which environment?
6. How does the chosen type of media influence your multicommunicating? How do they afford and help you with multicommunicating? (flexibility)
    a. E.g. Why do you have a specific media preference? Differences in gaps in face-to-face conversations vs. text based messages?
7. What kinds of messages and content are you likely to send when multicommunicating?
8. At which pace do your conversations normally move when multicommunicating? (e.g. rapid, with no gaps – medium: some gaps – slow: a lot of gaps and silences)
9. What is your average number of media combinations when you mc?

Multicommunication: Motivations

1. Why do you multicommunicate, if at all? (Alternatively: What are some of the reasons you might choose to interact in simultaneous conversations?)
2. How does it make you feel when you multicommunicate?
3. How does it make the other person feel?
4. What do you like about multicommunicating? What do you dislike? (Alternatively, what is the best thing about multicommunicating? What is the worst thing?)
5. How do you think does it affect your relationships when you multicommunicate and when your friends do it?

(Tolerance)

- How openly do you manage your several ongoing conversations with your close friends? Do they know that you are conversing with someone else at the same time?
    - And with your weakly tied friends?

- How tolerant are your close friends of you mc?/ How well do you feel understood by your close friends regarding your mc behavior? (e.g. delays)
    - And how tolerant are your acquaintances of you mc?
- How tolerant are you of your close friends' mc/acquaintances' mc?

Strongly and weakly tied pairs

Now, we are going to talk a little about how you multicommunicate with your friends in your personal life.

(The importance of friendship/Social connectedness)

- How important are friends in your live?
- How important are your acquaintances in your live?
- What is your general sense of togetherness with your peers?
    - How often do you communicate together?
- How actively do you find yourself involved are you in people's lives?

(Connectedness/Availability)

- How much are you inclined to invest into staying connected and being available all the times?
    - Do you want your friends to feel that they can contact you anytime they like?
    - And your acquaintances?
- How high are the expectations to reply back immediately when you communicate with your friends/and acquaintances?
- Do you constantly check and answer instant messages?
- Do you think it is rude not to answer a conversation with a close friend promptly?
    - And with a weakly tied friend?

(Media combinations)

- When you mc, who is receiving these conversations at the same time? Who is on the other end?
- What is the highest number of conversations when multicommunicating? What is the average number of conversations when multicommunicating?
- If you are in a primary conversation with your close friend, how often do you multicommunicate at the same time?
    - Which media you generally tend to combine when you manage several communications at once?
    - If you were to rank the most commonly combined media combination(s), which ones would it be?
- If you are in a primary conversation with an acquaintance/weakly tied friend, how often do you multicommunicate at the same time?
    - Which media you generally tend to combine when you manage several communications at once?

        - How often?
    - If you were to rank the most commonly combined media combination(s), which ones would it be?

Is there anything important about your multicommunicating practice that we haven't talked about at all?

OUTRO

Thanks for your participation. Could you quickly indicate your age and nationality (where you are living), as well as your level of education, please?

- Age:
- Nationality:
- Place of Residence:
- Education level:
- Occupation:

Table 12. *MC Research*

Source	Theory Base	Focus	Participants	Methods	Findings
Cameron & Webster (2005)	Polychronicity, Media Richness & Critical Mass	Workplace IM	19 employees	Case-study and semi-structured interviews	IM used to multicommunicate; IM symbolizes informality; IM is perceived as leaner medium than FTF; IM as an additional method for communication;
Turner & Reinsch (2010)	Goffman's presentation of Self & Critical Incident	Successful and unsuccessful MC episodes within work environments	201 MBA students	Questionnaire	Frequent pairing of telephone and electronic text; Unsuccessful incidents described as the inability to maintain several conversations at once, causing in communication errors;
Cameron & Webster (2011)	Spiral theory of incivility & Social Exchange Theory	Relational outcomes of MC in relation to perceived incivility	432 organizational employees	Survey with qualitative open-ended and closed-ended questions	Several factors influence perceived incivility during MC: conversation initiator, individual's conversational performance, accessibility of the individual; suspicion or certainty of individual's engagement in other ongoing, existing conversations; conversation partners' perception of the individual's incivility influence interpersonal trust;
Stephens (2012)	MC & Rennecker et al.'s Six Behavioral Dimensions	Scale development of MC during work meetings to measure micro behaviors that influence communication practices	(1) Pilot study of organizational employees; (2) College students	(1) Online survey (2) Online survey	MC consists of five major factors during organizational meetings: Informing, Influencing, Supporting Others, Participating in Parallel Meetings and Being Available;
Seo, Kim & David (2015)	Social Assurance & Problematic Use of Mobile Phone Use	Problematic cell phone usage in everyday interactions in relation to adult attention deficit/hyperactivity	432 adults	Online survey	Frequent MC is positively related to problematic cell phone use (PUMP) and ADHD; the motivations for PUMP include a strong need for social assurance; female participants were linked to a strong need for SCS;