

# THE CONTROLLING SOUL AND THE AUTOMATIC BODY

- a critical account of the control-automaticity distinction

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## Introduction

In the theoretical context of 'attention research' the distinction between 'controlled' and 'automatic' processing has emerged. (e.g., Posner and Snyder (1975) and Shiffrin and Schneider (1977)) The terms are defined as mutually exclusive, e.g., cognitive processing is either controlled, voluntary and conscious or automatic, involuntary and unconscious. This leaves no room for explanations of, e.g., skills which probably require an analysis in terms of 'unconscious

control' or 'controlled automaticity'.

Although this view has been challenged (e.g., Jonides et.al. (1985), Neuman (1987), Ryan (1983), its basic assumptions are still rather taken for granted among many cognitive psychologists. I argue that the distinction suffers from a serious lack of explanatory value and that the fundamental problem lies in the fact that these two terms have, by some researchers, been defined as mutually exclusive. I will here give an account of the basic conjectures which implicitly frame such a scheme.

I will argue that the distinction's conceptual origin can be found:

- In our every-day use of the terms 'controlled' and 'automatic', respectively. I think that the terms' literal meanings as well as their employment in 'folk-psychology' (i.e., every-day language of human mind and action) have heavily influenced this theoretical approach.
- In phenomenological considerations; the feeling of being in control or not being in control of one's actions and the feeling of controlling one's own thought processes.
- In a confusion between epistemological awareness and phenomenal consciousness. Control may require access to that which is controlled, but not experience of the same.
- In Descartes' dualistic view of human behaviour, he distinguished between behaviour that was elicited within the body and behaviour which has its cause in internal will.

## 1. The every-day meaning of 'automaticity' and 'control'

The terms 'automatic' and 'control', respectively, have a place in every-day language. Folk-psychology has successfully taken up on these terms and uses them in a derived sense, e.g., in 'acting automatically', and 'to be in control of one's feelings'. When we employ them in yet another context namely that of cognitive psychology we must, however, be very careful. In every-day psychology the terms are used with no ontological implications, a person may under ordinary circumstances be said to 'act automatically', with the question of whether she therefore is an automaton left completely open.

## **‘Automatic’**

As is the case with most of our psychological vocabulary, ‘automatic’ in characterisations of mental processes or behaviour is used in a metaphorical sense. Literally, an automatic (mechanical) device is self-regulating and works without direct and continuing human operation and supervision. It may need someone to turn the machinery on, but thereafter it is working all by itself. The automaton is dependent on a human being to be around and turn it on. A robot is automatic in this sense. In folk psychology, the term is employed in descriptions of a special mode of human behaviour. According to the Wordsworth Concise English Dictionary acting automatically is defined as ‘acting without thinking’, ‘acting without conscious volition’, ‘suspension of control by the conscious mind’. The metaphor likens the ‘mind’ or ‘the thought’ to that person (or likewise) who presses the button and turns the machine on.

## **‘Control’**

To ‘control’ something basically means ‘to see that it is accurately done’. The means to obtain control may differ as long as they include supervision and the ability (and right) to interfere.

Our everyday intuitions about human control include control over different kinds of (automatic) processes, as well as control over other human beings, respectively. Control over a process is described in terms of supervision, guidance, direction, regulation, and the right to initiate and stop a process at any arbitrary moment. Control over other human beings can be described in the same terms. However, the question of control over other human beings has a moral dimension, which control over e.g., factory processes lacks. Controlling other people entails that their wills and intentions are secondary to those of the controller.

A typical example of the first kind of control is the situation of a business executive. She is not directly concerned with what is happening on, i.e., the production-line. The major role of the executive lies in planning and dealing with novel situations. The people who work in the production are, however, also executing control. Their task may be to monitor the band and watch for deficit products in order to throw them away as they come.

In the theoretical framework of automatic and controlled cognitive processing

the executive's role have been taken up on, while the workers functions have been overlooked. In a factory, there is a hierarchy of control processes and in order to execute control on one level, knowledge of the overall end is not required.

## 2. Metaphors in every-day language and in psychological theory

When we use metaphors a frequent problem arises: the term's literal meaning involves some unwanted features along with those for which the term is picked. The term 'automatic' has its conceptual home-base in the world of mechanical devices. The meaning 'functioning without continuing human control' has unfortunately accompanied the term 'automatic'. In its derived sense, it gives a picture of a person being split into partly the controller, partly the automatic process. This is the case for our every-day use of 'acting automatically' as well as for psychological theorising; it becomes, however, more problematic in the latter case. The reason is that in ordinary language we do not have to deal with the metaphysical consequences of our language, but when we use a term intending it to have explanatory power, an implicit metaphysical claim is often made. In Descartes' theory this claim is both explicit and intended as the body is conceived as a literal automaton which, within certain limits, can regulate itself. The soul is the human being which plays the part of the controller. The very terms 'automaton' and 'automatic' thus indicate that we can successfully divide human behaviour into those that emanate from the body and those that have their origin in 'the self' or 'the will' or 'consciousness'.

According to the hypothesis that the mind works as an information processor the following picture emerges: Control is executed by a 'central processor' (or 'operating system' Johnson-Laird 1983, 'supervisory system' Norman&Shallice 1986, Shallice 1988, 'an executive system' Logan&Cowan 1984). The central processor has, however, a limited capacity. The majority of cognitive processes takes place in parallel, outside the central processor and does not interfere with the tasks of the processor. Controlled processing is slow, serial, effortful, capacity-limited, subject to interference and can be interrupted. By definition, controlled processes are under direct conscious control of the central processor, which forms intentions and issues commands to realise these intentions. The role of the central processor is to initiate and inhibit cognitive operations.

The tasks of the 'central processor' resemble those of a business executive and the overall control system of the human mind is, according to this view, strongly

analogous to that of a business corporation. The control processes are not concerned with domain-specific detail. Low-level 'production-line' functions can run along with only intermittent intervention from the executive, the major role of the executive lies in planning and dealing with novel situations.

Our intuitions about cognitive 'control', as well as those of 'automaticity' are, thus, coloured by the every-day use of the term. One of these is that the controller and the controlled are functionally separate, which leads to the conclusion that a process cannot control itself. Another is that the 'important decisions' are made by one single entity.

In every-day life we also talk about how one person can control another. To execute control over other human beings, in this sense, is to make them do what we want. Control in its derived sense has consequently also been regarded as closely connected to our will powers. As a result, 'the controller' has implicitly been defined as a functional equivalent to our every-day notion of 'the will'.

### 3. The relation between consciousness and control

The definition of 'automatic' and 'controlled' processing are partly made in terms of consciousness. Posner and Snyder proposes three operational criteria to distinguish automatic processing. One is that an automatic process occurs without giving rise to conscious awareness.

Control is therefore (explicitly or implicitly) equated to conscious control. The central processor is the functional equivalent to phenomenal consciousness. The origin of this idea lies partly in phenomenological experience. A general experience of being in control colours many of our conscious experiences. The wrong conclusion has therefore been drawn that control is functionally dependent on consciousness.

Umiltà (1988) who is an proponent for this view suggests that consciousness has the function of control and that voluntary control over cognitive processes depends on the phenomenal experience of being conscious. It is the very fact that we have phenomenal experience of a process that brings it under voluntary control. The question is, how did experience get into the picture, is it not enough with knowledge about the controlled process to execute control? We can easily imagine and grant, that the controller has to know something about the process she is supposed to control, if she is to be able to in some sense monitor the

ongoing processes. Whether the controller must have a special kind of experience of the process in question is, however, debatable.

One possible underlying cause of this picture is, thus, the conflation of phenomenal experience and epistemological awareness. No one honestly believes that just because 'being in control' has a certain 'feel' to it, the 'feel' is the control. Implicitly, however, this is the underlying and taken for granted idea. The feeling of controlling oneself in combination with the fact that it seems as if the controlling device must have access to the controlled processes concomitantly lead to the wrong conclusion: that access has to be phenomenal.

### **Does awareness imply experience?**

From all possible meanings of consciousness we can elicit three which are especially important here:

1. Phenomenal consciousness. The experience of seeing, hearing et cetera, the-what-it- is-like character.
2. Subjective awareness. The ability to report. X is subjectively aware of Y if he/she can verbally report Y. (Also called 'access consciousness'.)
3. Objective awareness. X is objectively aware of content/state/event Y if Y is used to guide X's actions. If X can make a discriminatory response between Y and Z. (Also a kind of 'access consciousness'.)

From these uses we can extract two basic meanings of being 'conscious', that which has to do with experience and that which describes knowledge in some sense. In the case of objective and subjective awareness, the first may be described as an expression of procedural knowledge and the second as declarative knowledge.

Eriksen (1960) proposes that 'awareness' may be defined as the ability to make a discriminatory response. Thus, if the subject reports lack of awareness but nevertheless is able to make a discriminatory response, the subject is objectively aware. Eriksen has an interesting point here; any definition of 'awareness' in terms of verbalisation entails that language can adequately represent the richness of subjective experiences. Further, such definition excludes voluntary responses other than verbal reports. For instance, take the case of driving a car. I may not be subjectively aware of exactly what I am doing when I have my thoughts

somewhere else, but apparently I am aware in some sense, because I respond accurately to sudden turns of the road, red lights in front of me, and I can regulate the current speed of the car.

If we define 'awareness' in this manner, we may be aware of something and at the same time not experience it.

#### 4. The relation between what we want and what we control

Another of Posner and Snyder's criteria for automatic processes is that they occur 'without intention'.

The ambiguity of the concept 'intention' is of pivotal importance here. As Anscombe (1963) points out, there is the meaning of intention as a state of mind, on one hand, and the characterisation of actions as intentional, on the other. Which of these uses do Posner & Snyder refer to? They could be using 'intention' as meaning a conscious state of mind, but then the criterion seems a bit superfluous since they have another criterion (see above) which excludes conscious awareness altogether. If they, on the other hand, mean that automatic processing can never be intentional, meaning 'deliberate' or 'voluntary' slightly different problems ensue. This leads to a non-satisfactory exclusion of the possible existence of voluntary processes which are unconscious in some sense (e.g., different kinds of 'skills').

#### 5. The scope of dualism

The conceptual origin to the definitions of 'automatic processes' and 'controlled processes', lies partly in our every-day tendency to think in dualistic terms, which in this case, presents itself in this particular choice of metaphors. These every-day intuitions get a theoretical framework in the philosophy of Descartes. My main point is that the distinction between two different kinds of cognitive processing reflect a dualistic view of behaviour which is a philosophical inheritance from Descartes. He distinguished between behaviour which is elicited within the body, and behaviour which has its origin in internal will. Descartes took his methodological departure in phenomenology. We experience that we are controlling some behaviour but not other. These phenomenological reflections were turned into ontology; behaviour which do not have the feeling of control 'attached' to it cannot, according to his views, have been initiated by the

soul. In Cartesian terms the distinction does have an explanatory value: we have two kinds of behaviour (mental processing) because one is guided by the soul while the other is elicited in the body, which, by the way, is a literal automaton. However, the sad part is that the Cartesian agenda leaves neither room for conscious experiences which are not voluntary (e.g., when we find ourselves ‘automatically drawn’ to a bright light or a strong noise) nor for unconscious processes which are voluntary (e.g., the early processing of sensory information regarding an object we have decided to look at, or the neural processes which elicits movement of a leg.)

## Summary

The strong connection between consciousness and control resides in a dualistic metaphysics. In Descartes' theory this conclusion is drawn upon the facts that we on some occasions experience that we have control and that all our experiences ‘belong to the soul’. We can, however, not force phenomenology into functionality. The experience of control does not explain control, nor does it imply it. I argue that the Cartesian view persists in the distinction between ‘automatic’ and ‘controlled processing’ as it is formulated by e.g., Posner and Snyder (1975) and Shiffrin and Schneider (1977). Their views presuppose a strong version of dualism.

Our every-day intuitions of ‘automatic’ versus ‘controlled’ actions reflect the same basic dualistic idea, but since meaning in every-day language is allowed to be in-exact the distinction does not here entail the same metaphysical implications. As long as we do not intend to explain these actions we do not have to subscribe to any metaphysics.

Our natural inclination for dualistic views and solutions seem to be difficult to overcome, which is remarkably salient in modern philosophy of mind. (See e.g., F. Radovic 1998)

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