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Free Will: How Does Decision-Making Work?

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ABSTRACT: Compatibilism claims that a person is a free agent when no external circumstances prevent an action; internal factors such as unconscious thoughts and conditioned responses do not prevent free agency. Contemporary psychology and neuroscience reveal, however, that complex internal factors are involved in our decision-making process and invite new criticisms of compatibilism. I introduce the dual-system theory and implicit bias and discuss the case of mental illness as a disability to decision making. I argue that compatibilist accounts of free will ascribe free will to agents who should not be considered free agents.

According to compatibilists, when there are no external circumstances preventing a person from doing what he desires to do, he acts with free will (Williams, 30). Compatibilists maintain that internal factors such as unconscious thoughts or emotions triggered by a region inside our own brain, such as the amygdala, are not obstacles to free will (Williams, 31–3). Compatibilists use "the way we ordinarily use the word 'free'" as evidence for this claim (Williams, 34). However, decision-making does not work the way we ordinarily think. Not all of our internally- caused actions should be called "free." In this paper I explain two types of cases where a person makes decisions without external impediments, and the person should not be considered free. In the first section, I argue that contemporary psychology and neuroscience indicate that most of our daily actions are caused in such a way that they should not be considered free. In the next section, I show how mental illness, just like physical impairment, can prevent a person from making decisions freely.

Positive Psychology and Compatibilism: Dual-Thinking System

The dual-thinking system theory originated with Daniel Kahneman and was developed by many other scholars. Some call it a dual "process" instead; the term "system" may indicate inaccurately two distinct and isolated things (Schlosser, 38). I use the terms 'System 1' and 'System 2' nevertheless to refer to the two types of processes, and for our purposes it will not matter that these do not refer to distinct portions of our brain.

System 1 functions automatically without a clear awareness; in social psychology textbooks, it is introduced as "automatic processing." However, System 2 requires conscious attention; it is a slower way of thinking, also known as a "controlled process" (Myers and Twenge, 53).

System 1 is characterized as fast, effortless, and unconscious. It is described as "autonomous," which implies that all responses from System 1 are triggered by stimuli without any deliberated and controlled reasoning (Schlosser, 38). For example, if someone needs to decide what kind of tableware she wants to use for her soup, without any conscious concerns or struggle between the choice of a spoon and chopsticks, she can pick the spoon.

System 2 is characterized as slow, deliberative, and conscious. The processes of priming and decoupling are essential for System 2. This means that people usually need to take time to allow the required working memory resources to load and occasionally to make efforts to break their habitual thinking or behaving patterns (Myers and Twenge, 53; Schlosser, 38). Normally, System 1 would not be able to solve a complicated mathematical equation or respond to a moral difficul-

ty one has never encountered. Solving a mathematical problem requires us to draw knowledge from a database of memories, and responding to a new difficulty requires us to break the habitual way of thinking since new problems can hardly be solved by old habits of thinking. In those circumstances, a person would need the capacity of System 2. Because such decisions require problem-solving skills and logical reasoning, the person must access memory resources to retrieve the related information in order to prepare a response.

Evidence supporting dual system theory not only comes from psychological research (Kahneman) but can also be found in contemporary neuroscience. Recent brain imaging shows the neurodynamics of the underlying functioning of the two systems: brain regions such as the ventral striatum and the ventromedial prefrontal cortex (VMPFC) produce the automatic responses and enable these responses to influence people's behaviors. On the other hand, other brain regions, such as the dorsolateral prefrontal cortex (DLPFC), produce the complicated responses of controlled processes (Greene, 698).

Kahneman's dual system theory has become one of the most influential and convincing explanations of decision-making. There are also other multisystem theories that postulate three or four types of processes, but all of these agree that there cannot be just one system or process for an individual to make decisions (Gendler, 192).

Implicit Biases

Joshua Greene uses a metaphor to explain how the dual system operates on humans: if we can consider a human mind as a camera, System 1 is an automatic mode of this camera; its emphasis is on efficiency; all it takes is just to click a shutter. System 2 is the manual mode; it emphasizes flexibility. In order to take a satisfying picture with System 2, one needs dedicated time, effort, and knowledge of photography (Greene, 696).

This metaphor helps us to see potential problems the Dual Systems Theory raises for morality. Just like the way most people take most of their daily pictures with the automatic mode of a camera, people also have a habit of using their System 1 to generate a quick response automatically. There is nothing to be condemned for maintaining efficiency in daily life; we do not want to spend too much time making decisions if we want to get out of a place that has terrible smells. Nevertheless, over reliance on System 1 leads to a lack of thinking efforts; it could generate inaccurate images and judgments about certain things or groups of people and, therefore, trigger implicit biases.

Implicit biases are the biases that people have but are not aware of. Most widely, psychologists use the Implicit Association Test (IAT) to detect implicit biases. In one version of this test, a participant needs to select whether a positive or negative word is associated with a white face or a black face with very limited time allowed to respond (Myers and Twenge, 85). An example of implicit bias is when one automatically takes a detour when one sees a group of Black people gathering in a dark alley if one would not do the same when seeing a group of white people. Another example is when a female candidate has an equal skill level and qualifications as a male and an employer prefers the male candidate over the female for no reason of qualification.

Many people in the U.S. have some education in anti-racism and anti-sexism; whoever has those educational experiences should be capable of making a reasonable decision against racial or gender biases. However, activating System 2 requires them to access the knowledge in their memories, a process that requires time and effort. Assuming the participants of the IAT, or the people in the examples mentioned above, are given enough time or effort to think, they will realize that their quick responses are biased. Those people's minds fully embrace the ideals of equality; there is no conscious belief, desire, or intention to discriminate, but their System 1 is already encoded by the associating characteristic of their background culture, which is shaped by the historical

influences of racial and gender discrimination (Gendler, 203).

Can We Control System 1?

We have limited control over System 1. Fortunately, there is enough evidence to support the idea that the processes of System 1 can be calibrated and overridden. One piece of the evidence dates back to the time before the multiple process theories were developed. Phenomenological studies in the 20th century revealed that consciousness can be categorized into different processes: when someone sees that there are a dozen cigarettes, he is not yet aware of what he is doing at the moment. When others ask him, he will finally be aware that he counted the cigarettes (Sartre, 11–2). Sartre calls the awareness of the cigarettes "reflected consciousness" and the awareness of his action of counting cigarettes as "reflective consciousness." In an action of reflection, the reflective consciousness posits the reflected consciousness as an object (Sartre, 11). Sartre himself describes this process of objectification as "sculpting" or "giving birth to" his earlier awareness of cigarettes (483). In other words, it indicates that our impression or first response can be "sculpted" or modified by later cognitive processes.

The second type of evidence of our influence over System 1 is from cognitive science. Metacognition refers to a form of thinking about thinking, very similar to Sartre's reflective consciousness on the process of decision making (Vierkant, 8). When people doubt their thoughts or understanding, they are thinking about their thinking. Through intentional mental actions, a person can create an ideal state of mind to perform metacognition over her attitudes and thoughts; this is called "managerial control" (Vierkant, 6).

There is also another method to override the System 1 processes and change their conditioning; it is called "implementation intentions." We practice associating the stimulus with a response that is in harmony with our objectives. For example, we can say to ourselves, "When I see Black people in an alley, I will think of the word 'safe' in order not to take a detour" (Gendler, 210).

Both reflective consciousness and metacognition theoretically belong to System 2 because both of them involve complicated and deliberate logical reasoning, and neither can be activated without enough time and effort. In conclusion, the existence of System 1 and social conditioning do not entail that people do not have free will since they can be overridden.

Some might argue that since we can override the outputs of System 1, we have control over System 1, which entails that overriding System 1's thinking is as deliberate as System 2. However, both reflection and metacognition take place *after* the decision of the System 1 process is completed. Both need to be activated with enough time and effort, so they are part of System 2. Finally, implementation of intentions requires a practice of habit cultivation, which reverses the biased condition with a new condition; this is using a preferred System 1 result to replace the unwanted System 1 result.

Mental Illness and Compatibilism: Phenomenology and Limited Freedom

The environment and external factors that influence people's decisions need to be taken into consideration for the individual's decision-making capacity. Joshua Shepherd addresses the problem of the capability of recognizing and responding to reason and claims that agents should only be responsible for their performance when they are competent in that situation (203). Although connecting the free will debate to moral responsibility is a larger topic to discuss, Shepherd's claim indicates how the possible choices that are available to an individual are limited by his competencies and his specific circumstances.

Robert Francis Murphy is a disabled person who spent many years in a wheelchair. In his book, *The Body Silent*, he shares his personal experiences and reflections on his physical impairment. He mentions that being disabled means there is a

difference from others (90). He attempts to explain this difference by borrowing some viewpoints from phenomenologists such as Maurice Merleau-Ponty: that the body is the starting point of our apprehension and construction of the world; it is the prerequisite for all mental and physical interactions with the world (Murphy, 99; Mackenzie & Scully, 342). Because of losing a limb, Murphy is actually disconnected from the world in which he is situated. That is the significance of his physical impairment (Murphy, 99).

Although it has been difficult for a non-disabled person to imagine the life of a disabled person, we can imagine how physical impairments affect the way in which others live. For example, when there is a friend knocking on my door on a Saturday morning, the most natural thing for me to do is to stand up and to walk to my living room in order to answer the door. The door-knocking sound is an external stimulus from the environment, and the decision to "stand up" and "walk" are responses of System 1. But Murphy would not be able to do that; because of his physical impairment, it is impossible for him to stand up and walk. In this circumstance, the door knocking still exists as the stimulus, and without his wheelchair, there can be no response from him. Therefore, the "connection" to the world is lost unless Murphy finds another way—his wheelchair—to respond and to "reconnect" to the world. He is not capable of making a decision to stand up and to open the door; this is a limitation on his freedom of decision-making.

Mental Illness

Physical impairment is not an isolated case in which people's freedom of choice is limited. There are many other cases where people lose the competence to make a choice. People start losing competencies to choose to do certain things if they become dysfunctional, which might be caused by disease, mental illness, or simply old age. The *Diagnostic and Statistical Manual of Mental Disorders*, 5th Edition (DSM V)—the most recent national-wide manual for mental illness diagnoses—is more and more attuned to the neurological causes of mental disorders (Hacking). This indicates that even though mental factors are treated as internal factors, their medical causes are similar to physical illness, injury, or impairment because they are biological. Today's abnormal psychology and psychopathology textbooks define "mental illness" as "dysfunction" (Nolen-Hoeksema and Jennings, 5). This means that mental illness is a dysfunction in cognitive and mental activity, which suggests that how mental illness restricts one's mental capacity is no different from how physical disability brings physical limitation. For example, some people with mental illness are not capable of recognizing a wide range of moral considerations, and in some situations, moral sensitivity might even be absent (Shepherd, 204). Even though it is very difficult to determine if they really "ceased to be a responsible agent," it would be obvious that their free will is limited by their own internal situation.

As a significant problem in our lives, mental illness has drawn increasing attention from philosophers. Its relevance to free will has been noted in discussions on compatibilism. One of the compatibilist-prominent accounts of mental illness is the higher-order desire account. This account indicates that each person has a psychological web that allows the desires to be separated into different orders. For example, an agent is using a drug of his own free will even if he is drug addicted but has a higher-order desire to keep using the drug (McKenna and Coates).

According to this account, when people need to eliminate an abnormal behavior, they need to generate a reactive attitude in a higher-order position to counter the will that directs the abnormal behavior (McKenna and Coates). This explanation about abnormal mental functioning is similar to the decision-making mechanisms of ordinary or healthy people; it is just a matter of educating and cultivating the thinking habits of a patient.

However, as we discussed above, the main cause of mental illness is the neu-

rological and biological factors that lead to mental dysfunction. This means these dysfunctions could apply in multiple situations, such as if the patient's psychological network is damaged or non-existent, or if cognitive dysfunction might cause the inability to recognize their desires and to identify one from another.

The problem is that the higher-order desire account's explanation for freedom during mental illness is based on the assumption that dysfunctional people have the same, or at least similar, capacities as functioning people. This hypothesis has already been disproved and rejected by many contemporary neuroscientists.

Conclusion

I have shown that there are two internal obstacles to a person's decision-making. The first is based on the dual-system theory, which challenges the compatibilist notion of free will by revealing that people's actions that are controlled by System 1 are no more than conditioned reactions to a stimulus. Due to the influences of personal capacities, social conditioning, and implicit thoughts, people cannot be aware of a wide range of choices when System 1 is operating; this is essentially similar to being tied to a chair. On the other hand, System 2 thinking is capable of activating metacognition and reflective consciousness; therefore, people are able to realize that there are potential alternate choices in the range of their consideration. This could be considered free decision-making.

The second type of obstacle is mental illness, which has a neurological basis. Patients who are mentally ill may be unable to think about the social and moral aspects of their actions. This means that in their decision-making they are restricted just as a person chained to a wall is restricted in how far he can move.

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