Power and Automatic Cognitive Processing

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Abstract: This article discussed how power affects individuals' cognitive processing style. Power increases the tendency to rely on automatic cognitive processing during impression formation. Compared to low power individuals or groups, those with high power tend to pay less attention to subordinates, to use stereotyping and prejudices, and to make less accurate judgments. Control motivation and approach/inhibition tendency provide theoretical explanation for the effect. There still lacks further evidences to show that power affects cognitive processing in more broad scope besides impression formation. Goal-oriented theory and abstractive thinking may provide a new perspective to understand the link of power and cognitive processing style.

1. Introduction

As usual, power are treated as a symbol of social status, and usually studied by politics and sociology. However, from 1990s, psychologists started to treat power as a mind status, which can be manipulated temporarily, and affect people's emotion, cognition and behaviours[1]. Fiske firstly proposed theory that power influences control motivation, and stereotype is one of manners for power to maintain and reinforce their social status[2]. Later, Keltner, Gruenfeld and Anderson discussed power and social cognition processing in the theory of approach and inhibition[3]. Many empirical researches provided evidences for these theoretical assumptions, and found that powerful people prefer using stereotype, pay less attention to others, and make less accurate judgments[1,4,5].

2. Theory about Power and Social Cognition

Most definitions of power highlight controlling resources and influencing others. Here, we choose Keltner et al. definition about power[3]. They defined power as an individual's relative capacity to modify others' states by providing or withholding resources or administering punishments.

Previous studies have outlined two fundamental cognitive processing systems: automatic cognition and controlled cognition[6]. Automatic social cognition, characterized by its rapid and effortless nature, is typically associated with the utilization of cognitive heuristics and simplistic rules to facilitate judgment formation. Conversely, controlled social cognition is a deliberate and demanding cognitive process that entails the careful consideration of numerous response alternatives and the assessment of various stimulus attributes.

The earliest theory associating power and social cognition is from Fiske's theory[2]. She considered

power in the construct of control motivation, and proposed that the powerful have motivations to maintain their control while the powerless are motivated to restore control. She focused on one aspect of social cognition: stereotype, and listed three reasons to explain the relationship of power and social cognition. Firstly, as power-holders have already controlled enough resources and are able to affect others, it is not necessary for them to pay attention to other individual's information in order to control their own outcome. Secondly, powerful people have to distribute their attention to many aspects, so they don't have enough cognitive resources to do controlled cognition and tend to use automatic cognition, such as stereotype. Thirdly, stereotype is actually one way to finish control. The powerful control the powerless by stereotype. In opposite, less of control causes more systematic cognitive of low power people. Powerless people try to seek more information about powerful people in order to get more resources and control.

Later, in Keltner et al. power approach/inhibition theory[3], they constructed the relationship for power and two basic dimensions in social cognition. Keltner et al. summarized previous power research, and considered power form the basic theory form in psychology: approach and inhibition. Their paper highlighted that the majority of consequences resulting from power can be explained through the framework of Gray's neural substrates' approach and inhibition theory[7], as well as Higgins's theory[8] on promotion and prevention self-regulatory focus. The authors presented compelling evidence for this model across four key domains: affect, attention to rewards and punishment, social cognition, and behaviors. Specifically, they proposed that individuals with power tend to rely on automatic social cognition, whereas those without power lean towards controlled social cognition. Furthermore, the authors identified another factor contributing to this phenomenon: heightened power is associated with positive affect, which in turn enhances the preference for automatic processing, whereas diminished power is linked to negative affect, resulting in a greater reliance on controlled processing[9].

3. Empirical Evidences for Elevated Power and Automatic Cognition

Most evidences suggest that power increases automatic cognition when perceiving others and forming impression towards others. Firstly, research showed that power affects attention towards targets in social cognition. Fiske constructed a fake decision-making situation, and recruited undergraduates as decision-maker to evaluate high-school students' job applicant[2]. The findings of the study indicate that as participants' power increased, their level of attention towards the applicants decreased. Additionally, another study revealed that individuals in positions of power tend to base their judgments on immediate subjective experiences rather than relying on core attitudes or prior knowledge[10].

Furthermore, power is associated with an increased tendency towards stereotyping and prejudice. A separate investigation conducted by the Fiske lab examined how individuals with power allocate their attention during the process of forming impressions. By manipulating participants' sense of power and measuring their dominance trait, the researchers discovered that individuals with high power exhibited a greater inclination to focus on information that aligns with existing stereotypes. Also, powerful people usually form their impression towards others based on stereotypes instead of traits. They proposed two processes for powerful individuals to use stereotype when perceiving and judging others: a) ignore information inconsistent with stereotypes when they lack dependency (this is the automatic means); b) pay attention to stereotype-consistent information for explicit control (this is the systematical means) [1].

Researchers used IAT paradigm to explore the relationship between power and race discrimination. The result showed that when Whites are at high social status, they showed stronger and more automatic race discrimination towards their Black subordinate, compared to the situation when they,

as subordinates, face Black leaders[11]. This study partly unveiled the link of power and prejudice, but not totally proved that power really increases race discrimination. Guinote, Willis and Martellotta examined this effect in further. They found that primed power can increase individual's inner race prejudice, while the power of perceiver targets does not affect prejudice[4].

Thirdly, power also hampers the accuracy of judgment. Keltner and Robinson undertook a study aimed at evaluating the capacity of traditionalist and revisionist English professors to precisely perceive their own attitudes and book preferences, as well as those of their adversaries[12]. The findings revealed that traditionalists, who possess greater social influence within society, were more inclined to inaccurately gauge disparities and foster polarization among their opponents. Moreover, indirect indications imply that individuals in positions of authority are susceptible to rendering imprecise evaluations of their subordinates. For instance, early research by Kipnis demonstrated that powerful individuals tend to undervalue the performance of those with less power[13]. More recently, another study suggested that individuals in positions of power have a tendency to overestimate their own capabilities while devaluing the contributions of their subordinates, particularly when using incongruent influencing tactics within a group[14].

Limited evidence exists regarding the impact of power on individuals' judgment, aside from the domain of impression formation. Only one study has shown that power can reduce the inclination to seek advice from others. Power-holders tend to rely heavily on their initial judgments, leading to less accurate assessments[5].

The preference for automatic processing among power-holders extends to group dynamics, such as race and gender. Keltner et al. noted that different groups possess varying degrees of resource control[3]. Groups with higher status have the ability to influence groups with lower status through their own resources, employing rewards and punishments. Consequently, individuals in dominant groups tend to adopt an automatic processing style when perceiving those in lower power groups, similar to how powerful individuals perceive those with less power. Conversely, members of low-power groups tend to prefer a controlled processing style. In comparison to groups with less power, dominant groups often rely more on stereotypes and prejudice.

Guinote, Brown, and Fiske investigated the relationship between group size and social perception among group members[15]. Minority group members tend to engage in interpretative reasoning more frequently than members of majority groups. They perceive less control over their outcomes, rely less on factual information, and make more dispositional attributions about social targets compared to their counterparts in majority groups. The researchers suggested that group size influences the focus of processing, but not the effort put into processing. Additionally, an fMRI study revealed that Whites have difficulty fully activating the brain's fusiform "face area" during recognition memory[16].

Supporting the link between elevated power and automatic cognition, researchers proposed that low-power group members pay closer attention to both in-group and out-group differences, whereas high-power group members only recognize differentiating aspects among in-group members[17]. This is because powerful individuals primarily focus on features that align with category membership, while individuals of lower status pay attention to distinguishing features. As is often the case, Whites are regarded as a group with higher social status compared to Blacks. One study found that when interacting with Whites, Blacks can differentiate between different traits and the quality of interactions, whereas Whites fail to recognize these distinctions. Similarly, Miller and Malloy discovered that in face-to-face interactions, gay men were able to differentiate traits of heterosexual males, whereas heterosexual men struggled to differentiate traits of gay interaction partners.

4. Opposite Evidences about Power and Automatic Cognition

However, until now, all evidences supporting the link of power and automatic thinking are in one

specific area, person perception, especially when targets are people in lower social status. There is no direct evidence suggesting that power increases automatic processing in other cognitive activities, such as pure cognitive task, or organizational decisions.

There are also some boundary conditions when elevated power leads to systematic thinking. For example, in one study of Overbeck and Park[18], they found that high power individuals perform better than low power individuals when recalling others' personal information and differentiating information of each other. Another study compared power-primed and neutral participants, and found that powerful perceivers have a stronger desire to process additional target information than neutral ones when they lose prediction and control towards targets. Meanwhile, power-holders are also more prone to spend their processing effort on salient domain information (morality and competence).

Regarding these opposite effect about the relationship of power and cognitive processing, some theories of power provide reasonable explanations. Smith and Trope proposed that the powerful tend to process information in a more abstract manner than the powerless, instead of processing less effortfully[19]. For instance, when perceiving a target, powerful individuals are more likely to process primary traits of targets or primary aspects of stimuli at a higher and more abstract level, while powerless individuals focus more on targets' concrete bahaviours or information. Only when provided the categorizing types of targets, the powerful are prone to use stereotype to process information. In Guinote's situated focus theory of power, she posited that power promotes goal pursuit, so power-holders are prone to focus and respond to goal-relevant information[20]. Meanwhile, their cognitive processes are more flexible according to situation, relative to powerless individuals.

5. Discussion

Power can increases automatic processing during the whole process of person perception, including attention, stereotyping, prejudice and judgment[1,2,4,5]. Besides, the link of power and automatic cognition is not only found at the level of individual perception. The same effect also exists between groups with different social status, such as different race, sex and occupations[15,17,20]. Some researcher also formed theory to provide explanations. Fiske posited that the inclination towards stereotyping among those in positions of power stems from a desire for control[2]. Conversely, Keltner et al. argue that power-holders' inclination towards automatic processing is another facet of their approach[3].

Nevertheless, we cannot conclude that powerful people process automatically towards all various stimulus in all cognitive activities, because nearly all evidences supporting power holders' preference for automatic processing are in one specific area: impression formation. Some research provide opposite evidences proving that powerful people use more systematic processing relative to powerless ones[18]. Moreover, there are also other explanations for the empirical studies about power and impression formation. Smith and Trope pointed that powerful people prefer abstractive thinking rather than automatic effortless processing[19]. Guinote and Vescio believed that powerful individuals' focus depends on situation and goal[20].

In summary, we can confirm that powerful individuals tend to use automatic cognition when they perceive other people and form impression. However, the cause of this effect is still needed further studying. Researchers are not sure that this effect is due to broad cognitive processing style preference of individuals with different levels of power or power-holders' strategic cognitive resources distribution. Further studies are needed to prove whether power can lead to automatic cognitive processing in all cognitive activities.

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