

Empowered People's Aesthetic Preferences Driven by Motor Fluency

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Abstract

The current research tested the hypothesis that power increases reliance on experiences of motor fluency when forming aesthetic preferences. This hypothesis was tested in a study that primed participants with either power or powerlessness, manipulated their motor fluency (i.e., by either occupying their dominant hand with an object or not), and then had them report aesthetic preference for another object. Powerful individuals showed a significant difference in their preference for the object depending on whether it was easy for them to imagine interacting with the object or not. As predicted, powerless individuals showed no significant difference in preference mediated by the motor fluency manipulation. The practical implications of this finding applies to a variety of settings (e.g. family, organizational, educational etc.) in which powerful individuals are making decisions that may impact their own and/or other peoples' lives.

Keywords: Power, Preference, Fluency

1. Introduction

Motor fluency, the ease with which people mentally simulate acting upon an object¹ is a topic of interest that has been extensively researched within the field of Psychology. In many studies motor fluency has been linked to aesthetic preferences for objects^{1,2}. The hypothesis that judging an object is subconsciously influenced by the easiness in mentally simulating the interaction with that object has been tested with positive results^{3,4}. These results showed that, indeed, as the mental simulation of the interaction with a specific object becomes easier, the liking for that object increases. Conversely, when something makes imagining the interaction with an object harder, the preference for the object decreases¹. One possible explanation for this tendency is that the increased motor fluency induces a subjective feeling of familiarity, which triggers positive affect; this increases the preference for the stimulus and acts as a heuristic that positively influences the judgment of the object^{3,5}.

Evidence suggests that the tendency of relying on motor fluency when forming impressions of objects depends heavily on social factors, such as an individual's power position^{6,7,12}. Power, originating in the Latin word *potere* meaning *to be able*, has been defined as the ability to produce desired outcomes, to influence or control others⁸. Research indicates that people in a powerful position rely more on momentary subjective experiences (such as motor fluency) when making a judgment, than on prior attitudes and knowledge⁶. Guinote proposed the Situated Focus Theory of Power, to explain the difference in behaviour between powerful and powerless individuals⁸. The theory states that powerful people rely more on intuition, feelings, ease of simulation, motivations, when making decisions and forming impressions and judgments; this is thought to occur because they are more focused, more selective in processing information, and more attuned to the situation than powerless people. The cognitive processes of a powerful individual are thought to be more focused on demands of the situation and respond more in accordance with situational cues. Therefore it is concluded that powerful individuals' behaviour is influenced by the subjective feelings dependent on their immediate situation; in contrast, powerless individuals focus less on their subjective feelings when making

decisions⁸.

This idea regarding the behaviour of powerful/powerless individuals has been tested and confirmed by several experiments. In a taste study, participants were primed with power or powerlessness by being asked to write about an event in which they either had power over someone or someone had power over them. Hunger was a predictor of the amount of food eaten by the powerful participants, and not a predictor of the amount of food eaten by the powerless participants⁷. In another study, participants were also primed with power or powerlessness in the same way as in the previously mentioned study. They were then provided with a NASA report about sending humans to Mars, and asked to provide either a small or a large number of arguments in favour of sending humans to Mars. The situational information in this case was the ease vs. difficulty in generating arguments. The results showed that powerful but not powerless individuals were more in favour of sending humans to Mars after they easily generated few arguments and less in favour after struggling to generate many arguments in favour⁶.

Powerful people rely on situation-derived subjective feelings such as motor fluency. Also, feelings of motor fluency have been linked with increased liking of objects, since the easiness of imagining interaction with an object boosts the preference for it. Combining these two ideas results in the hypothesis that powerful compared with powerless individuals are influenced by the easiness of simulating interaction with an object (motor fluency) when forming an opinion about the object (aesthetic preference). This hypothesis is tested in the present research. More specifically, it is hypothesized that powerful individuals will rate an object (a pen) as less likable if the motor fluency (imagining holding the pen with ones' dominant hand) is impaired by something else in the environment (having the dominant hand occupied by a fork). Participants are assigned to one of two conditions: either primed with power (by being asked to write about a past event in which they had power over someone), or primed with powerlessness (by being asked to write about a past event in which someone had power over them). Then they are asked to hold a fork in either their dominant or non-dominant hand while forming an impression of an image of a pen. Finally, they are asked how much they liked the pen. If the hypothesis is true, powerful but now powerless subjects should rate the pen differently depending on the condition they are in: less likable when having the dominant hand occupied by the fork, and more likable when not having the dominant hand occupied by the fork.

2. Methodology

Individuals participated for 2 pounds or course credit. I aimed at recruiting 100 participants, and out of the 102 participants recruited we excluded 6. One participant was excluded as he was much older than the rest of participants (i.e., age 51 years compared with the sample mean age of 22.08 years with a standard deviation of 5.32 years); three other participants were excluded because they guessed the hypothesis of the study (e.g., "an interaction between level of power and how you perceive the objects: positively/negatively; I also would guess that holding the fork in your dominant hand would make it less likely that you felt you couldn't reach the pen than if the fork was in your non dominant hand"); two other participants were excluded as they were outliers: one was an outlier on the evaluation of the pen measure, and the other one was an outlier on the fluency measure. This left 96 participants (59 females, 37 males; $M_{\text{age}}=22.08$ years, $SD_{\text{age}}=5.32$ years) in the sample.

The respondents were invited to the cubicles of the Psychology Department of University College London, where they completed an online questionnaire. They were told that the study was composed of two shorter unrelated studies, the first one dealing with memories of past events, and the second one with evaluations of home utensils. They were randomly assigned to the conditions of a 2 (power: powerful vs. powerless; between-subjects) x 2 (fluency: dominant hand occupied vs. dominant hand free) mixed design.

In order to prime the participants with either power or powerlessness, they were asked to write about a particular incident in which either they had power over someone (powerful condition) or someone else had power over them (powerless condition)⁹. They were then asked to pick up the fork from the desk in front of them and hold it in either their right or left hand. While holding the fork, the participants were shown a picture of a pen for 10 seconds; the picture of the pen was taken from the paper of Shen and Sengupta¹. Participants were asked to what extent they imagined reaching and holding the pen (on a scale from 1=*not at all* to 7=*a lot*), and how imagining holding the pen felt (on 7 point scales on: *difficult-easy*, *unpleasant-pleasant*, *wrong-right*, *uncomfortable-comfortable*, $\alpha=0.81$). The subjects were asked to evaluate both the fork they were holding (on a 7-point scale from *unattractive-attractive*, *unfavourable-favourable*, *negative-positive*, $\alpha=0.88$), and the pen they saw (on a 7-point scale from *unattractive-attractive*, *unfavourable-favourable*, *negative-positive*, $\alpha=0.90$). Subsequently, participants reported on 7-point scales how much they were in charge (1=*not at all* to 7=*fully*) and how much influence they had (1=*very little* to 7=*very much*; $r=0.72$, $p<0.001$) in the situation described earlier.

To rule out alternative accounts, the role of perceived mood and task evaluation was assessed. Mood was measured by asking participants how they felt (1=*sad, discontent, tense, and bad* to 7=*happy, content, relaxed, and good*; $\alpha=0.91$). Task evaluation was measured by asking to what extent participants found the task annoying, irritating, stressful, and confusing (1= *not at all* to 7= *very much*; $\alpha=0.73$). The study ended after participants were asked for demographic information (including handedness and native language), if they ever participated in a task involving power, and what they thought the aim of the study was; they were also asked how attentive they were while performing the task (1= *not at all attentive* to 7= *very attentive*). Participants were then thanked and debriefed. I did not run any additional conditions or measure any other dependent variables not mentioned in this report.

Participants were either power primed or powerlessness primed, either left or right handed, either asked to hold the fork in the left or the right hand. So the independent variables were power, handedness, and hand used to hold the fork. The dependent variable was the rating participants gave to the pen they were shown. Powerful participants who held the fork in their dominant hand were expected to give the pen lower ratings than powerful participants who held the fork in their non-dominant hand.

3. Results

Manipulation Check. An ANOVA with the between subjects factors, power, and having the dominant hand blocked, revealed that participants in the powerful condition felt more in control ($M=5.88, SD=0.81$) than participants in the powerless condition ($M=2.82, SD=1.15$), $F(1, 92)=226.14, p < 0.001, \eta_p^2=0.71$). The power manipulation was successful.

Aesthetic preferences. For the pen evaluation, a 2 (power: powerful vs. powerless) x 2 (dominant hand blocked: yes vs. no) ANOVA was conducted on participants' pen evaluation scores; the test revealed a power-by-blocking interaction, $F(1,92)=5.40, p=0.022, \eta_p^2=0.06$, (all other $F_s < 1$, all other $p_s > 0.44$). When participants' dominant hand was blocked, high and low power participants evaluated the pen equally, $F < 1.39, p > 0.24$. However, when their dominant hand was not blocked, participants in the high power condition liked the pen more ($M=5.85, SD=0.74$) than participants in the low power condition ($M=5.15, SD=1.27$), $F(1,92)=4.26, p=0.04, \eta_p^2=0.04$. As hypothesized, participants in high power liked the pen significantly more when their dominant hand was not blocked ($M=5.85, SD=0.26$) than when their dominant hand was blocked ($M=5.31, SD=0.19$), $F(1,92)=2.83, p=0.09, \eta_p^2=0.03$. Also, participants in the powerless condition did not show a significant difference in the ratings of the object regardless of the situation they were in: when their dominant hand was blocked ($M=5.67, SD=0.23$) or when their dominant hand was not blocked ($M=5.15, SD=0.22$), $F=2.57, p > 0.11$. Participants were also asked to evaluate the fork they were holding while forming an impression of the pen. For the fork evaluation, a 2 (power: powerful vs. powerless) x 2 (holding the fork in the left vs. right hand) ANOVA was conducted on participants' fork evaluation scores; the test revealed a power-by-blocking interaction, $F(1,92)=4.78, p=0.03, \eta_p^2=0.05$. Participants in the low power condition showed no difference in the ratings of the fork, regardless if they held it in their dominant or non-dominant hand $F < 0.01, p > 0.93$. Participants in the high power condition on the other hand, liked the fork more if they held it in their dominant hand ($M=4.71, SD=1.14$) than if they held it in their non-dominant hand ($M=3.57, SD=1.43$), $F(1,92)=10.12, p=0.002, \eta_p^2=0.1$.

An ANOVA on participant fluency scores, revealed a power by dominant hand blocking interaction $F(1,92)=3.13, p=.08, \eta_p^2=0.03$. People in the powerful condition found it easier to imagine interacting with the pen if their dominant hand was not blocked ($M=4.35, SD=0.88$) than if their dominant hand was blocked ($M=3.73, SD=1.04$), $F(1,92)=3.42, p=0.07, \eta_p^2=0.04$. No difference was found in the fluency rating of powerless primed participants, $F < 0.43, p > 0.5$.

When assessing the control variables (mood and task evaluations), I found that mood but not task evaluation was affected. The effect of power on mood, $F=11.03, p < 0.01, \eta_p^2=0.11$, revealed that people in the high power condition were in a better mood ($M=4.93, SD=1.23$) than the people in the low power condition ($M=4.05, SD=1.24$). Task evaluation was not affected, all $F_s < 1.18$, and all $p_s > 0.28$. Even if controlling for mood, the power-by-blocking interaction remains significant, $F(1,92)=4.64, p=0.034, \eta_p^2=0.05$.

4. Discussion

The hypothesis of the study was supported by this experiment. The participants in the powerful condition showed a difference in their preference for the pen they were exposed to, depending on whether their dominant hand was blocked

or not. Power primed participants who had their dominant hand occupied liked the pen less than power primed participants whose dominant hand was free. This difference was not found in the preference rating of participants primed with powerlessness. Interestingly, when looking at the results from a different angle, they show that when participants' dominant hand was blocked, high and low power primed participants evaluated the pen equally; when participants' dominant hand was not blocked, the power primed ones liked the pen more than the powerlessness primed ones. These results suggest that powerful people's aesthetic preferences depend on situational cues, but powerless people's aesthetic preferences do not. The this tendency occurs because powerful people find it easier to imagine interacting with objects (i.e., have higher motor fluency) if their dominant hand is free than if it is not free; motor fluency is constant across people primed with powerlessness. Furthermore, the results showed that power primed participants rated the fork as more favourably if they held it in their dominant hand than if they held it in their non-dominant hand. No differences were found in the powerless participants' fork ratings. This suggests that powerful but not powerless people like objects more if they hold it in their dominant hand, than if they hold it in their non-dominant hand. The results of this study are significant even when controlling for participants' mood.

The results of this study are in line with results of previous studies. Research conducted by Topolinski and Strack^{3,4} found that motor fluency increases the likelihood of liking objects. Also, Shen and Sengupta¹ found that when something makes imagining the interaction with the object harder, the preference for the object decreases. These tendencies were found in the present research within the power primed participant condition. Furthermore, Weick and Guinote⁶ suggested that people in a powerful position rely more on momentary subjective experiences (i.e., motor fluency) when making a judgment, than on prior attitudes and knowledge. Weick and Guinote's⁶ argument study, and Guinote's⁷ taste study supported this hypothesis. Although using a different experimental design, the current study found similar results with both these studies. One possible explanation for the results of the present study is that powerful people's higher self-confidence makes them rely more on intuition and situational cues than on experience. Jihern and Dongwon¹⁰ suggest that powerful people have power-induced confidence. This confidence boost could increase their likelihood of relying on their instinct and therefore have an impact on how they make decisions; based on the phenomenon of embodied cognition (i.e., thoughts influenced by the body sensations), the instinctive decisions are shaped by situational information¹¹. Thus, powerful people could make decisions trusting their instinct shaped by situational cues because of their power-induced self-confidence.

One weakness of the present study is that it does not include a self-confidence measure, which could have been used as a possible mediator of the results. If that was the case, the levels of significance of the results might have been negatively affected. Also, another limitation of is that participants had to form an impression and rate an image of an object (i.e., the pen) and not an actual object. There could be difference in how people perceive an object vs. a computer-screen representation of that object; this is a problem especially since we were interested in measuring the extent to which people imagine interacting with the object. The motor fluency could have been different if participants were exposed to an actual pen.

The field would benefit from future research addressing these limitations. A future study could propose an experimental design in which participants are exposed to the object they are asked to form an impression of; it could also measure participants' self-confidence levels. Future research could also address the question of whether the effects found in this study still hold when powerful people are aware of these tendencies. One such study could start by providing participants with information about the tendency people have of liking objects better when nothing stays in the way of imagining interacting with them. The findings of the present study contribute to the research area by linking the concepts of motor fluency and social power. Previous studies suggested the effect of motor fluency on aesthetic preferences, and also the fact that powerful people rely on situational cues when making decisions. This study puts together the two models, and gives additional support to the Situated Focus Theory of Power proposed by Guinote⁸.

In conclusion, the present research suggests that empowered people make decisions based on situational information (i.e., motor fluency). When forming aesthetic preferences of objects, they rely on the easiness of imagining interaction with the objects. This tendency does not occur when people are not in positions of social power. The findings of the current research are important for their many practical applications in a variety of settings (e.g. family, organizational, school etc.) in which individuals who have the power are making decisions that may have an impact on their own or on other peoples' lives; the present research suggests an explanation for the mechanism behind powerful people's decision making processes.

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6. References

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