

Is Fast Feminine?: The Effect of Speed of Observed Hand-Motor Actions on Consumer Judgment and Behaviors

Abstract

This paper shows that observing a slow (vs. fast) hand-motor action with an advertised product (e.g., fabric, shaving foam, etc.) can evince stereotypic feminine (vs. masculine) schematic associations and, subsequently, alter consumer judgment. In three studies, we provide evidence on the effect of dynamic-observed experiences across advertising contexts.

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Personal experiences using hand movements and gestures have been shown to influence attitudes by activating heuristics, visual fluency, and emotional attachment (Labroo & Nielsen, 2010; Hadi & Valenzuela, 2014; Streicher & Estes, 2016). Extending this literature, we investigate how speed of *observed* hand-motor actions affect consumer judgments – driven by schematic associations between *speed of hand-motor actions* and *femininity-masculinity*.

Prior research suggests that observed sensorimotor experiences, being less fluent than self-experiences, might be driven by activation of schematic associations (Kwon & Adaval, 2017). For example, observing a slow rub of facial cream might elicit associations of nurturance and tenderness (i.e., feminine traits; Hoffman & Borders, 2001). More broadly, speed-power, which is a type-A behavioral attribute, has been associated more with masculinity (vs. femininity; Dohi, Yamada, & Asada, 2001). Therefore, we propose that observing slow (vs. fast) hand-motor actions will evoke feminine (vs. masculine) schematic associations (H#1). These associations may, in-turn, be taken as a decision cue for product judgments (e.g., using a cup’s flimsiness to form quality inferences of mineral water; Krishna & Morrin, 2008). Likewise, we hypothesize that slow (vs. fast) hand-motor action with a product will lead to a transfer of schematic associations - such that the product itself is perceived more feminine (vs. masculine; H#2). Finally, drawing upon social identity theory, we expect that observing a slow (vs. fast) hand-motor action with a product will evince a higher product evaluation among female (vs. male) consumers (H#3). This is because individuals are motivated to process information and make product choices to maintain their in-group association (Berger and Heath, 2007; Brough et al., 2016).

In Study 1, MTurk participants ($N= 259$) were assigned to either slow or fast speed between-subject conditions. Each participant watched two randomly-presented videos (i.e., driving a car and shopping cart) depicting the context of hand-motor actions. They, then, shared their attribute associations for the action-doer i.e., feminine (gentle, nurturing, and caring) and masculine (risk-taking, aggressive, and dominant; Hoffman et al., 2001), perceived speed, video characteristics (manipulation checks), age, and gender (control variables).

We conducted a repeated-measures ANCOVA with speed as between-subjects factor and context (shopping cart or driving a car) as within-subjects factor. An analysis on the feminine-attributes index ($r=.75$) showed a significant effect of speed ($M_{slow}=4.06$ vs. $M_{fast}=3.30$, $p<.01$) suggesting that slow speed evinced a feminine schematic association. Likewise, the analysis on masculine-attributes index ($r=.69$) found that fast speed triggered a masculine schema ($M_{slow}=3.04$ vs. $M_{fast}=3.93$, $p<.01$). These effects held across contexts ($p < .01$) and retained significance without the covariates ($p<.01$).

Study 2 demonstrates the transfer of schematic associations to the featured product (i.e., shaving foam; H#2). In a pre-test of 5 shaving foam cans (fig.1), MTurk participants ($N = 103$) identified “Ultra-Sensitive” labelled foam as significantly lower on perceived masculinity ($M_{Ultra-Sensitive}= 4.66$) compared to “Bold” labelled foam ($M_{Bold}= 5.87$, $p< .01$).



Fig.1: Study 2 (Pre-test): Experimental Stimulus

In main Study 2, MTurk participants ($N=254$) were assigned to either slow or fast between-subject conditions. The stimuli video showed a male applying shaving foam (fig.2). Participants were asked to choose the foam product they believed that the protagonist is applying ("Ultra-Sensitive" or "Bold"). They, then, rated the individual on the schematic attribute associations, video characteristics, manipulation checks, and control variables as study 1.



Fig.2: Study 2: Experimental Stimulus

We conducted a logistic regression to test whether slow (vs. fast) hand-motor action led to a featured product to be perceived as low/ "Ultra-Sensitive" (vs. high/ "Bold") on masculinity. The main effect of speed was significant ($\chi^2_{(6)}=3.71, p=.05; H\#2$) with no significant covariates ($p>.35$). Specifically, participants chose less of the high masculine product ("Bold") upon observing a slow ($P_{slow}=48.81\%$) vs. fast ($P_{fast}=60.62\%$) hand-motor action ($\chi^2_{(1)}=3.56, p=.06$). We then ran a MANCOVA on schematic associations [DVs: femininity and masculinity index]. The analysis showed that slow (vs. fast) speed activated a significant feminine schema ($M_{slow}=4.53, M_{fast}=3.79; p<.01$) but did not alter the masculine associations ($M_{slow}=3.59, M_{fast}=3.54; p=.79$) for the protagonist. Gender and video characteristics had a significant effect ($p<.01$) but did not interact with speed to influence the associations. This implies that slow (vs. fast) speed activated similar stereotypic associations across genders.

Then, we ran a mediation analysis using PROCESS Macro Model 4 (Hayes, 2012) with speed as the predictor, schematic associations (feminine and masculine indexes) as parallel mediators and product-choice as binary-outcome. This analysis found that fast speed led to a decline in feminine associations ($p<.01$) but did not alter the masculine associations ($p=.79$). Both feminine and masculine associations significantly influenced the choice of shaving foam ($p<.01$). The direct path from slow (vs. fast) speed to product choice became non-significant after including the mediators ($p=.47$). The relative indirect effect of speed on product choice was significant only through feminine associations (95% CI: [.16, .72]) but not masculine associations (95% CI: [-.15, .11]). These findings allude to the co-occurrence of schematic associations, which may be transferred to a target product (H#2). In Study 3, we investigate

whether female (vs. male) consumers use speed of observed hand-motor actions to form their purchase intention. If our theory holds, we expect female (vs. male) consumers to evince higher evaluations upon observing a slow (vs. fast) hand-motor action. This is because consumers are influenced by gender-identity maintenance motives and choose products that affirm their femininity (vs. masculinity).

Study 3 had a 2(speed: slow vs. fast) x 2(participants' gender: male vs. female; self-reported) between-subjects design. Postgraduate students ($N=89$) watched the stimuli video depicting a lateral hand-movement, which varied on speed (slow: 2.5 cm./sec. vs. fast: 5 cm./sec) over a white duvet cover (i.e., target product; fig.3). Participants, then, shared their purchase intention and responded to the same measures as the previous studies.



Fig.3: Study 3: Experimental Stimulus

An ANCOVA on purchase intention revealed no significant main effect of speed ($F_{(1,82)}=.41$, $p=.52$) and participant's gender ($F_{(1,82)}=.08$, $p=.77$) but a significant interaction effect ($F_{(1,82)}=3.75$, $p=.05$; H#3). The effect-size improved upon excluding the covariates ($F_{(1,85)}= 5.09$, $p=.03$). To summarize, across 3 studies, we demonstrate that observing hand-motor actions, varying on speed, can affect consumer evaluations.

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