CARDIFF UNIVERSITY
PRIFYSGOL CAERDYDD

ORCA – Online Research @ Cardiff

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository:https://orca.cardiff.ac.uk/id/eprint/160761/

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

Dogerlioglu-Demir, Kivilcim, Ng, Andy H. and Koçaş, Cenk 2023. Gracefully yours: would snap judgments of one's subtle graceful movements lead to inferences about their emotional intelligence? Journal of Retailing and Consumer Services 75 , 103484. 10.1016/j.jretconser.2023.103484

Publishers page: https://doi.org/10.1016/j.jretconser.2023.103484

Please note:
Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies. See http://orca.cf.ac.uk/policies.html for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.

Title Page (with Author Details)

Gracefully Yours: Would Snap Judgments of One's Subtle Graceful Movements Lead to Inferences About Their Emotional Intelligence?

Kivilcim Dogerlioglu-Demir[1]
Andy H. Ng[2]
Cenk Koçaş[3]

1Assistant Professor of Marketing, Ozyegin University, Nisantepe, Orman Sk. No:13, 34794 Cekmeköy/İstanbul, Turkey
Tel:+90-216-564 9983
e-mail:kivilcim.dogerlioglu@ozyegin.edu.tr
(corresponding author)

2Lecturer in Marketing, Cardiff University, Aberconwy Building, Colum Drive, Cardiff, Wales, United Kingdom CF10 3EU
Tel: +44 (0)29 2251 0204
e-mail: NgA4@cardiff.ac.uk

3Professor of Marketing, Sabanci University, Orhanli-Tuzla, Istanbul, Turkey
Tel:+90-216-4839674
e-mail:kocas@sabanciuniv.edu

Manuscript (without Author Details) Click here to view linked References

Gracefully Yours: Would Snap Judgments of One's Subtle Graceful Movements Lead to Inferences About Their Emotional Intelligence?

Abstract

Subtle bodily movements such as gracefulness (defined as smoothness, control and elegance in movements) are readily legible by others and these movements might serve as important cues to other people's personal characteristics. The results of four studies contribute theoretically to research on the relationship between movements and emotional intelligence. In study 1, manipulating grace in movements using the Laban Movement Analysis (LMA) system, a person who moves gracefully was found to be judged as more emotionally intelligent (EI) than one who does not move gracefully. In Study 2, EI was shown to predict gracefulness, with EI self-reported by the participants and gracefulness rated by raters. Study 3 demonstrated that a person who moves gracefully (vs. non-gracefully) is judged as more suitable to be a salesperson/spokesperson for a company, mediated by perceived EI. Study 4 showed that a brand whose logo moves gracefully (vs. non-gracefully) is judged as more adaptable and as having higher service quality. Current research documents a consequential impact of such cues on consumption and have substantial practical implications for marketers.

Keywords: animated logos; customer orientation; emotional intelligence; logos; movements; service quality

1 Study Background

1.1 Literature Review

Is it possible to infer that someone might be a proper colleague, a good salesperson, an appropriate spokesperson for a brand, or even a good romantic partner just by observing the way they walk or engage in daily routines such as organizing a table or carrying a book? Would it be at all possible that individuals can pick up cues about someone's traits from subtle movements even without interacting with them or seeing their face? For instance, could good control in movements be a reliable indicator of effective regulation of one's emotions? Could customers tell the extent of customer orientation of a brand just by observing movements of sales staff or spokesperson or even the motion of that brand's animated logo? With this paper, we hope to provide theoretical background and empirical evidence for why one's subtle movements (i.e., graceful movements vs. ungraceful movements) might lead to strong inferences about their traits such as emotional intelligence (EI).

Despite growing use of self-service technology, frontline staff is still the most crucial factor for overall store evaluations (Sharma et al., 2021). Further, EI has been documented as extremely critical for customer service representatives or frontline employees. Those with higher EI perform better at their tasks involving direct customer encounters and receive fewer complaints as such employees are better at regulating emotions (Sony & Mekoth, 2016; Prentice, 2019). EI is also significantly and positively related to perceived service quality (Miao et al. 2019) and customer orientation (Rozell, Pettijohn and Parker 2004). Especially in retailing contexts, contact between the sales rep and the customer is highly emotionally charged. As a result, the emotions coming from either party might influence the attitudes and behaviors of both sides (Prentice, 2016). A recent study by Yao et al. (2022) reported that even the congruency between the level of EI of both parties moderates the relationship between communication style of the sales rep and consumers' willingness to interact with the salesperson. That is, when EI similarity is low, the social-oriented communication style (vs. the task-oriented) yields a higher willingness to interact. When EI similarity is high, however, communication style does not really matter.

Extant research examines implications of bodily movements on perceptions of someone's situational attitudes and mood (Aviezer et al., 2012; Burgoon et al., 2017) and emotions (Melzer et al., 2019), ideology and political identity (Samochowiec et al., 2010), sexual orientation

(Ambady, Hallahan & Conner 1999) and personality traits (Koppensteiner 2013). Almost all these studies discovered that certain traits can be drawn based only on minimal motion information such as upper body movements (Koppensteiner 2013), facial expressions (Zwebner et al. 2017) and even eye movements (Hoppe et al. 2018, Rauthmann et al. 2012; Risko et al., 2012).

1.2 Research Objectives

Though there have been such hints in the literature, suggesting a movement-trait link, to our knowledge, this is the first paper to propose that movements such as gracefulness (defined as smoothness, control and elegance in movements) are readily legible by others and such movements are employed as reliable indicators of certain personality traits, such as EI. EI is defined as the ability to monitor one's own and others' feelings and emotions (Salovey & Mayer, 1990). People utilize the perceived level of EI in individuals to discriminate among them. EI is beneficial for the spectator to spot because it is a key element one looks for in a friend, a romantic partner and even in an employee. Detecting lack of EI is also crucial as it might point towards potential risks associated with engaging with those individuals. We hypothesize that control in movements depicted in graceful movements is an indication of EI.

To establish the proposed relationship, we conduct four studies. In study 1, manipulating grace in movements using the Laban Movement Analysis (LMA) system, we show that a person who moves gracefully is judged as more emotionally intelligent than one who does not move gracefully. In Study 2, rather than manipulating grace, we use natural movements of people. We found that EI is predicted by gracefulness, with EI self-reported by the participants and gracefulness rated by raters. In study 3, we study the downstream consumer consequences of this relationship and apply the graceful movement concept to a company context. We discovered that a person who moves gracefully (vs. non-gracefully) would be judged as more suitable to be a salesperson/spokesperson for a company. This relationship is mediated by perceived emotional intelligence. Finally, in study 4, we study animated brand logos. We demonstrate that a brand whose logo moves gracefully (vs. non-gracefully) is judged as more adaptable and as having higher service quality.

We believe that our findings have substantial managerial implications for salesperson selection/training as well as animated logo selection. In an increasingly competitive marketplace, retailers want to maximize service quality. Selecting employees who are high on EI, and training them in emotional competencies, may enhance service quality (Prentice, 2019; Prentice & Nguyen, 2020; Sony & Mekoth, 2016). Live Commerce (L-commerce), that integrates live streaming into e-commerce, requires effective communication between service providers and customers. Yun et al. (2023) maintains that authenticity, interactivity and visualization to be critical factors in determining customer satisfaction with the purchasing process in L-Commerce transactions. We believe that customers will be able to read subtle cues even in such online interactions. Further, brands are constantly seeking ways to manage customer perceptions of their identity through their logos. Logos are known to affect brand evaluations, purchase intentions, and brand performance. Choice of color, size and shape of logos is extremely important as such characteristics may convey brand meanings beyond the function of the product (Japutra et al., 2018; Septianto & Paramita, 2021). Animated logos represent exciting opportunities for effective branding (Luffarelli et al., 2019) as movement directions and pace, variations in frequency and duration of motion also convey different meanings to customers (Guido et al., 2016). Further, compared with static images, animated images were found to elicit greater pleasure and more favorable attitudes (Laroche et al., 2022). With this study, we also provide simple yet easily applicable recommendations pertaining animated logo designs.

Overall, our research has three major objectives: One, we hope to show the link between movement (gracefulness) and trait (EI). Two, we aim to demonstrate that people do not only infer EI from subtle movements but also reach conclusions about customer orientation of a brand even from the movements of a person representing the brand. Third, we hope to extend this finding to animated logos and show that graceful logos too can convey customer orientation of a brand.

2 Theoretical development

The moment we see a person, we form impressions about him/her. Cues such as movements and expressions convey a wealth of information about the characteristics of an individual and guide us in shaping our impressions. In fact, extant research shows that

personality differences affect how individuals express themselves nonverbally. Observers reach high rates of consensus in personality judgments drawing from brief displays of an individual's movements. For instance, we can tell individuals' current felt emotions just based on their facial expressions. In fact, Ekman (1982) reports biologically based facial expressions independent of cultural background. These expressions are inherent to us and readily legible by others.

Previous research has also shown that people can tell via very subtle cues such as facial expressions about one's ambiguous traits such as political identity. For instance, Swiss and German politicians' political attitudes (i.e., right-wing versus left-wing) could be judged from 15 second videos and photographs of their faces (Samochowiec et al., 2010). Similar studies using American politicians' faces as stimuli suggest parallel findings (e.g., Olivola, et al., 2012). Conservatives were found as powerful, while liberals were perceived as warm only by looking at their faces. Facial expressions are also used to judge critical traits such as intelligence, trustworthiness, warmth and dominance (Zwebner et al. 2017). There are several studies that even report relationships between personality traits and eye movements. Individuals high in openness spend a longer time fixating on locations when viewing abstract animations (Rauthmann et al., 2012), and curious individuals examine more of the regions in a naturalistic scene (Risko et al., 2012). Further research has reported promising connections between eye movement of individuals while doing daily tasks such as shopping and walking and personality traits (for neuroticism (40.3%), extraversion (48.6%), agreeableness (45.9%), conscientiousness (43.1%), and perceptual curiosity (PCS, 37.1%)) (Hoppe et al., 2018).

Attitudes, emotions and personality traits are recognized not only from facial expressions, but also from whole body movements even in the absence of a facial expression. Variations in frequency and duration of motion are used as cues to identify such characteristics. For instance, movements such as rhythmically moving legs are found to be related to situational attitudes such as boredom and embarrassment (Aviezer et al., 2012). Emotions such as anger, sadness, fear, and happiness are also recognized from whole body movements (Melzer et al., 2019). Further, extant research reports relationships among personality traits and bodily movements. Koppensteiner (2013) suggests that motion patterns share common properties with representations of personality. Extraversion that can be observed from exaggerated motions probably originates from high stimulation. While vertical bodily movements might be an unfriendly signal, horizontal bodily movements are suggested to point at calmness and emotional stability.

Bodily movements can even be used to diagnose patients. Kluft, Poteat and Kluft (1986) discovered that personality disorders such as multiple personality disorder are reflected in bodily movements (i.e., movement of body parts, tension-flow rhythms, and efforts in dance movements). Their findings demonstrate that each personality had a distinct movement pattern. Thus, dance/movement therapists at psychiatric facilities should be trained to observe and decode manifestations of personality disorders in the form of bodily movements. There is also literature suggesting that bodily movements indeed indicate atypicality in individuals. Neurodevelopmental disorders, such as autism, Williams syndrome, and children born preterm depict themselves as abnormal actions, reflected in body coordination, visual and motor planning (Braddick and Atkinson, 2013). Gowen & Hamilton (2013) and Minshew et al. (2004) demonstrate that individuals with developmental disorders are generally less stable in their posture and postural sway. Lack of smoothness and jerkiness of movement, a stiffer gait, lack of fluidity in everyday movements (Nobile et al. 2011) and mild clumsiness (Hallett et al. 1993) are also signs of atypicality in individuals.

All these findings seem to suggest that personality is fundamentally connected to bodily movements and people are sensitive to these non-verbal cues when there is limited information available about a person. From an evolutionary perspective, the presence of such a predictive skill is reasonable. For instance, Hugill et al. (2011) found that sensation seeking, a costly signal of a man's health and vigor, can be conveyed via males' dance movements. These signals are easily comprehensible by women and used as a guide in mate selection. In fact, cues drawn from movements are used for identity detection as correct recognition of out-group members is functional in survival (Nesse, 2005). Individuals are more averse to risk as early detection of potential risks is important. Further, identity detection is more receptive to preventing erroneous inclusion than erroneous exclusion because of potential risks associated with bonding with a wrong individual. This idea is also known as the smoke-detector principle (Nesse, 2005). From an evolutionary perspective, accurate assessment of peoples' characteristics is practical as it allows us to predict how individuals would act or react in the future (e.g., we would expect agreeable people not to create conflicts easily). Bodily movements can be used as credible signals to identify those with whom we would like to approach and form a relationship and those with whom we would like to avoid interacting.

In this paper, we explore gracefulness in movements. We define graceful movements based on the Laban Movement Analysis (LMA) system. This system is used to describe what moves, where it moves, how it moves, and the 'why' of movement, in the relationship of the mover to self, others and the environment (Davis 1970). There are four main movement categories: Body, Space, Shape, and Effort. The Body category depicts which body parts are moving, and the harmonization of these parts as well as daily movements such as walking. The Space category refers to the direction of a movement (up/down, forward/backward, sideways open or across), planes the movement occurs in (vertical, sagittal, and horizontal), as well as use of the Kinesphere (e.g., far-reach space, peripheral movement). The Shape category corresponds to changes in the shape of the body itself. The Shape category refers to whether a body encloses or spreads, rises or sinks. The Effort category describes how the body moves (i.e. lightly, suddenly, freely). Weight, Space, Time, and Flow are four sub-categories under the Effort. Weight-Effort spans between the poles of Strong and Light and refers to the amount of force in the movement. Space-Effort ranges between Direct and Indirect and refers to the attitude toward the movement's direction. Time-Effort spans from Sudden to Sustained, reflecting the acceleration and deceleration of movement. Flow-Effort expresses the mover's attitude toward controlling the progression of movement, from a higher control–Binding to little control or moving with abandon–Freeing (Studd and Cox 2013). We propose that the Effort aspect is central in shaping grace in any given movement. Keeping everything else (body, space and shape) constant but manipulating the Effort is expected to lead to a change in grace perceptions as Direct (vs. indirect), light (vs. strong), sustained (vs. sudden) and higher control (vs. low control) in such actions are clear signs observers use to read grace in people. Lack of grace will result in a stiffer gait and a lack of fluidity in movements.

We further propose that gracefulness in movements as depicted by smoothness, control and elegance (as opposed to accelerated, sudden and jerky movements) is a reliable signal of high trait EI. [1] Trait EI refers to noncognitive traits, behavioral dispositions, and motivational variables that are linked to successful coping with environmental demands and adaptability. It refers to an effective management of one's own and others emotions (Petrides & Furnham, 2000). As control as opposed to low control in movements seems to be a defining feature of

[1] Conceptualization and assessment of EI fall into two main categories, referred to as "trait EI" and "ability EI." The ability approach defines EI as a set of cognitive abilities related to the efficient use of emotional information to guide reasoning and behavior (Mayer & Salovey, 1997).

graceful movements, we believe that such a high control in actions can be read as reliable signals of control of emotions. Extant literature suggests that high trait EI individuals can effectively control emotions, have a capability of having fulfilling relationships and empathize with others (Petrides, 2009). A high trait EI individual is a stable person, someone you want to have a close relationship with. EI is beneficial for the spectator to spot because it is also a key element one looks for in a friend, a romantic partner and even in an employee. In fact, previous research has established that the level of EI can predict employee burnout (e.g., Bakker & Schaufeli, 2000), effective leadership (Côté et al., 2010) and successful communication skills (Mortillaro, Mehu, & Scherer 2013). Thus, based on the smoke-detector principle, EI score might be effectively utilized as an elimination tool, a red flag to stay away from people who might be lacking these skills. In many cases, though, there is no way we can get an EI score of people whom we interact with. Instead, we form initial impressions about individuals based on subtle cues even before we talk to them. We encounter a salesperson at a store or see a spokesperson of a brand in an advertisement and based on such indirect cues evaluate the person we see. We argue that daily movements like walking indeed may hint at one's EI. We then transfer such evaluations onto the brand and company.

A rare partial glimpse into the link between EI and gracefulness is work on dancing and musicianship. For instance, a positive relationship between EI scores and ballet dancing ability is suggested by Petrides et al., (2006). These authors, however, did not examine movement-trait link; rather looked at general dancing abilities, such as technique and expression acquired through long hours of training. Thus, in their work, ambition and self-motivation rather than movement are proposed to be the underlying reasons for such high EI scores of highly abled ballet dancers. There is also some work on trait empathy and rhythmic entrainment ability, suggesting a connection between trait empathy and musicianship (Bamford & Davidson 2017). More specifically, the ability to entrain movement to a musical beat is a credible sign of trait empathy. To effectively coordinate regular, periodic movement with multiple external actors, an individual must be able to perceive and produce rhythmic signals, while being able to integrate perception and motor production to adjust when necessary and fully embody the beat of their target. This work is in line with research suggesting that certain emotional abilities and movement control may utilize similar brain regions. A recent piece suggests that the mirror neuron system of the motor cortex (which is activated when imitating others) may serve as the

underlying physiological mechanism behind empathy (Iacoboni, 2009). Trait empathy has a neurological basis in the Mirror Neuron System (MNS) within the Motor Cortex, based upon observed relationships between MNS activity and Trait Empathy measurements. Thus, empathizing is a fundamentally embodied process (Iacoboni, 2009). It is thought that understanding others comes from cognitively imitating their actions. There is apparently scant research hinting at the proposed trait EI-movement link. Present work aims to establish that proposed relationship and fill that gap in the literature.

In this paper, we also propose that the movement of brand logos can tell valuable information about a brand's identity (Henderson & Cote 1998). Logos include textual and/or visual design elements that are descriptive of the type of product/service that brands market. Logos can positively influence brand evaluations, purchase intentions, and brand performance (Luffarelli et al., 2019). Product design characteristics (shape, color and size) and brand design elements (logo shape, color and type font) influence consumer evaluations of products and their perceived benefits. For instance, judgments of the appropriateness of a font (e.g., typeface characteristics) of a logo for a product depend on the congruency between the connotative meaning of the font and the perceived brand personality of the product (Doyle & Bottomley 2006). The logo font that is in line with the associated human characteristics of a brand leads to more positive consumer responses. In another study, compared with symmetrical logos, asymmetrical logos were discovered to be more arousing, leading to higher levels of excitement. As such, individuals perceive asymmetrical logos as more congruent with brands that have exciting personality (Luffarelli et al., 2019). Further, angular brand logos denote conflict and aggressiveness whereas round logos are perceived as harmonious and gentle (Jiang et al., 2015; Zhang et al., 2006). Even cuteness associated with a brand logo was found to produce a more favorable brand attitude (Septianto & Paramita, 2021). This is not surprising given the extant anthropomorphism literature in consumer behaviour. Anthropomorphism is seeing objects, products and logos in human forms (Guthrie, 1993; van Esch, et al., 2021). The tendency to liken non-living objects to living things can be seen as a cognitive and perceptual strategy to make sense of the world around us. Thus, we argue that even movements of a brand logo can be seen as human-like movements and communicate brand meanings (e.g., service quality).

In this paper, we study animated logos which are brand logos moving across the screens of mobile devices usually, in a GIF, Graphics Interchange Format. Majority of movie studio logos are animated. Moreover, TV channels, digital platforms and internet browser brands seem to prefer animated logos. Movement directions and trajectories of such logos may denote different metaphorical meanings to customers. For instance, consumers prefer animated logos moving along a convex up-right trajectory over those moving along either a concave or a linear up-right trajectory when the logos are associated with highly innovative companies (Guido et al., 2016). Thus, it is extremely important for marketers to carefully plan variations in frequency and duration of motion when designing animated logos. Moreover, drag force in brand logos (when a force is applied in the opposite direction to an object in motion) was found to predict positive consumer evaluations of a brand. That is, consumers perceive those brands as trying hard, putting in effort, and hard-working (Baxter & Ilicic 2018). Though motion and force can be depicted in static logos, in this paper, we examine graceful motion that cannot be easily displayed in static logos. The observer should see the continuity of the movement, its control or lack thereof, in order to assess the gracefulness of a moving object.

Following this logic, we suggest that EI of brands as depicted by customer orientation and service quality is legible not only by bodily movements of a company's spokesperson or sales staff but also by the motion observed in a brand's animated logo. That is, graceful and smooth moving logos (vs. ungraceful and jittery moving logos) will be perceived as belonging to companies that are high on service quality and customer orientation. In a meta-analysis (Miao et al. 2019), it was found that EI is significantly and positively related to service quality. It was suggested that one strategy available to firms for improving service quality evaluations is to increase front-line service providers' awareness of their own emotions as well as of the emotions experienced by customers. Perceived EI predicts customer orientation (Rozell, Pettijohn and Parker 2004) and adaptability. That is, dealing effectively, with unpredictable and changing work situations and learning new tasks, technologies, and procedures. Therefore, high EI suggests high customer orientation and how smooth consumer complaints will be handled. We predict that how smooth and graceful a spokesperson, a salesperson and even an animated logo moves will be used as a cue to infer information about a brand's customer orientation.

3 Study 1

The purpose of Study 1 is to test the hypothesis that a target who moves gracefully would be judged as more emotionally intelligent than one who does not move gracefully. Note that all the measures employed in this and following studies are listed in the Appendix.

3.1 Method

Two hundred fifty-three American adults (108 female, 145 male; M_{age} = 38.05 years[2]) from MTurk completed this study for monetary compensation. Participants were asked to view a short (about 30 secs) video clip (see figure 1) in which a male or female (randomly assigned) confederate (face blurred) named Casey engaged in some everyday tasks either gracefully or non-gracefully (randomly assigned). Note that the confederates were trained using the LMA system. Which parts of the body will move (Body), to what direction (space), and the posture (Shape) categories were kept constant across conditions but the Effort aspect was manipulated to affect the grace perceptions. In the graceful (ungraceful) condition, movements were direct (vs. indirect), light (vs. strong), sustained (vs. sudden) and with higher control (vs. low control). Confederates were asked to move as naturally as possible but with a stiffer gait and some lack of fluidity in the ungraceful condition. They performed the following two tasks in this sequence: 1) pouring some water from a jug to fill two champagne flutes, putting the champagne flutes on a tray, and moving the tray to a table located approximately 2 meters away; and 2) moving 10 books from a table to a shelf located approximately 2 meters away and 1.5 meters from the ground. 3) walking around the room in a specified direction.

Participants were then asked to judge the degree to which Casey was emotionally intelligent, using 30 items, such as "Casey is usually able to find ways to control her emotions when she wants to" and "Casey often finds it difficult to see things from another person's viewpoint (reversed)", adapted from the Short Form of the Trait EI Questionnaire (Petrides, 2009), rated on a 7-point scale (1 = strongly disagree, 7 = strongly agree). This instrument was designed to yield a global score to indicate a person's overall trait EI. It has been shown to have good reliability (e.g., αs ranged from .87 to .89 for male and female participants across two studies in Cooper & Petrides, 2010) and predictive validity, with trait EI predicting theoretically

[2] Two participants did not report their age.

related outcomes in the domains of, for example, decision-related emotions and academic performance (Perera & DiGiacomo, 2015; Sevdalis et al., 2007). For the current study, this instrument also showed good reliability ($\alpha = .93$).

To test the validity of the manipulation, participants were then asked to complete two manipulation check items: 1) the degree to which Casey moved gracefully and 2) the degree to which Casey moved smoothly ($r = .83$), rated on a 7-point scale (1 = strongly disagree, 7 = strongly agree).

3.2 Results and discussion

Thirty-five participants failed an attention check question, so their data were excluded in data analyses (including reliability statistics reported above). We first confirmed the validity of the manipulation via a t-test; participants in the graceful (vs. non-graceful) condition judged the target as moving more gracefully (collapsing across the two manipulation check items) in the video ($M_{\text{graceful}} = 5.21$ vs. $M_{\text{non-graceful}} = 4.49$), $t(210.11) = 3.67$, $p < .001$, $d = 0.49$. We then found that when the target moved gracefully (vs. non-gracefully), he or she was judged as more emotionally intelligent ($M_{\text{graceful}} = 4.53$ vs. $M_{\text{non-graceful}} = 4.26$), $t(216) = 2.50$, $p = .01$, $d = 0.34$, consistent to our hypothesis. Running an ANOVA and adding participant gender and target gender as independent variables did not change the effect of graceful movement on perceived emotional intelligence, $F(1, 210) = 6.75$, $p = .01$, partial-$\eta^2 = .03$, albeit there was a main effect of target gender ($M_{\text{female}} = 4.54$ vs. $M_{\text{male}} = 4.28$), $F(1, 210) = 5.80$, $p = .02$, partial-$\eta^2 = .03$. No other significant effects emerged, Fs < 1.22, ps $> .27$.

This study shows that, regardless of gender, a person who moves gracefully is perceived as more emotionally intelligent, having a higher ability to regulate his or her emotions, and understand and experience others' emotions, compared with a person who does not move gracefully.

4 Study 2

The purpose of Study 2 is to test the hypothesis that emotional intelligence would be predicted by gracefulness, with emotional intelligence self-reported by the participants and gracefulness rated by some independent raters.

4.1 Method

This study is a two-part study conducted at a European university. One hundred twenty-one undergraduate students participated in the first part and 82 of them also participated in the second part. Participants completed both parts received partial course credit in a marketing course. Our final sample consists of these 82 participants (38 female, 44 male; M_{age} = 21.94 years).

In the first part, participants were invited to a lab to perform the same tasks in Study 1 and all study sessions were video recorded. In the second part, participants completed the Short Form of the Trait EI Questionnaire (Petrides, 2009), rated on a 7-point scale (1 = strongly disagree, 7 = strongly agree), as a measure of trait emotional intelligence. For the current study, this instrument showed good reliability (α = .88).

Three independent raters, blind to the hypothesis, were asked to judge the level of grace exhibited by the participants. Specifically, for each participant, the raters were asked the following questions: 1) how smoothly did the person move (1 = not at all smoothly, 7 = very smoothly); 2) how much control do you think that the person has in his or her movements (1 = no control, 7 = very much control); and 3) how graceful do you think that the person is (1 = not at all graceful, 7 = very graceful). A separate index of perceived gracefulness was first created by taking the mean of these three items for each rater; reliability, overall, is acceptable (α = .89 for Rater 1, α = .86 for Rater 2, α = .62 for Rater 3). An overall index of perceived gracefulness was then created by taking the mean of the three indices of perceived gracefulness (α = .51). The reliability of this overall index of perceived gracefulness is relatively low, reflecting heterogeneity of judgements across raters. However, this heterogeneity of judgements is expected when assessing level of grace of another person, which can be quite subjective. Yet, it is important to retain the judgements of all raters and hence, this overall index of perceived gracefulness was used in data analyses.

4.2 Results and discussion

Eight participants failed an attention check question, so their data were excluded in data analyses (Including the reliability statistic for the Short Form of the Trait EI Questionnaire reported above). We regressed emotional intelligence on gracefulness and as anticipated, gracefulness predicted emotional intelligence, b = .24, β = .26, $t(72)$ = 2.28, p = .03; participants who were more graceful (as judged by the independent raters) were more emotionally intelligent (as reported by the participants themselves). Adding gender and its interaction with gracefulness

as predictors did not change the association between gracefulness and emotional intelligence, b = .38, β = .42, $t(70) = 2.48$, $p = .02$, and gender (0 = female, 1 = male), $b = 1.45$, β = 1.11, $t(70)$ = 1.32, $p = .19$, and its interaction with gracefulness, $b = -.29$, β = -1.12, $t(70) = -1.36$, $p = .18$, were not significant predictors.

This study shows that, regardless of gender, more graceful people have higher emotional intelligence. In conjunction with Study 1, the findings of Study 2 suggest that a person's graceful movement is a signal of his or her emotional intelligence that others pick up accurately.

5 Study 3

Studies 1 and 2 have established the link between graceful movement and emotional intelligence. In Study 3, we explore some downstream consequences in the marketing domain.

5.1 Method

Two hundred eight American adults (72 female, 133 male, 3 other gender; M_{age} = 28.46 years[3]) from MTurk completed this study for monetary compensation. Participants were asked to view a short (about 70 secs) video clip in which a male or female (randomly assigned) confederate (face blurred) named Casey engaged in some everyday tasks (randomly assigned) (same as Study 1). Participants were then asked the degree to which they agreed that the person in the video would be 1) an appropriate candidate for a salesperson position and 2) an appropriate spokesperson for a brand. Following this, participants were asked to judge the degree to which Casey was emotionally intelligent, using four items, such as "Casey seems to be a person that is normally able to 'get into someone's shoes' and experience their emotions" and "Casey usually finds it difficult to regulate their emotions (reversed)", adapted from the Short Form of the Trait EI Questionnaire (Petrides, 2009). A 7-point scale (1 = strongly disagree, 7 = strongly agree) was used for all items. A principal component analysis was conducted with varimax rotation. This identified two factors with eigenvalues greater than one. The first factor consisted of negatively-keyed items only and the second factor consisted of positively-keyed items only. We believe that this two-factor solution was an arbitrary one reflecting two method factors (e.g., Lindwall et al., 2012), rather than two substantive factors. We then used the same method with the number of factors being extracted fixed to one. This showed that all items

[3] One participant did not report his or her age.

loaded reasonably strongly onto this single factor (.69 to .76). The reliability of this measure was good (α = .71).

Participants were then asked to indicate the perceived adaptability of the brand if the person in the video works as a salesperson using two items: "The brand has an ability to adapt to customer-specific needs"; "The brand is customer-sensitive." (r = .69). Finally, participants were asked to indicate the perceived service quality of the brand if the person in the video works as a salesperson using five items adapted from SERVQUAL – Perception of Service Quality Scale (e.g., "The brand has the customers' best interests at heart"; "The brand gives customers individual attention"; Parasuraman et al., 1991) A principal component analysis was conducted with varimax rotation. This identified one factor with eigenvalue greater than one, with all items loaded strongly onto this single factor (.84 to .91). The reliability of this measure is good (α = .92). A 7-point scale (1 = strongly disagree, 7 = strongly agree) was used for all items.

5.2 Results

5.2.1 Perceived emotional intelligence

Through a t-test, we found that when the target moved gracefully (vs. non-gracefully), he or she was perceived as more emotionally intelligent ($M_{graceful}$ = 4.45 vs. $M_{non\text{-}graceful}$ = 4.17), $t(206) = 2.29$, $p = .02$, $d = 0.32$, consistent to H1 and replicating Study 1. Running an ANOVA and adding participant gender[4] and target gender as independent variables led to only a small change to the effect of graceful movement on perceived emotional intelligence, $F(1, 197) = 3.42$, $p = .07$, partial-$\eta^2 = .02$, and there was a main effect of target gender (M_{female} = 4.51 vs. M_{male} = 4.10), $F(1, 197) = 12.22$, $p < .01$, partial-$\eta^2 = .06$. No other significant effects emerged, Fs < 2.19, ps > .14.

5.2.2 Salesperson suitability judgement and the mediating role of perceived emotional intelligence

A t-test between two conditions revealed that when the target moved gracefully (vs. non-gracefully), he or she was judged as more suitable to be a salesperson for a company ($M_{graceful}$ = 4.81 vs. $M_{non\text{-}graceful}$ = 3.97), $t(201.95) = 4.18$, $p < .001$, $d = 0.58$. Conducting an ANOVA and adding participant gender and target gender as independent variables did not change the effect of movement on salesperson suitability judgement, $F(1, 197) = 12.53$, $p < .001$, partial-$\eta^2 = .06$,

[4] The three participants who indicated "other" for gender were excluded from all analyses involving participant gender.

albeit there was a main effect of target gender (M_{female} = 4.72 vs. M_{male} = 4.02), $F(1, 197)$ = 10.49, $p < .01$, partial-η^2 = .05. No other significant effects emerged, Fs < 1.89, ps > .17. Moreover, using the bootstrapping technique with 5,000 resamples (Hayes 2013), we found that perceived emotional intelligence positively predicted the degree to which the target is judged to be suitable to be a salesperson for a company (β = .55, $t(205) = 9.75$, $p < .001$). Importantly, there was a significant indirect effect of movement on salesperson suitability judgement through the effect of perceived emotional intelligence (β = .09, 95% biased-corrected CI = .0106, .1660; see Figure 2). We conducted this analysis using Hayes's PROCESS macro (Process Model 4; Hayes 2012).

5.2.3 Spokesperson suitability judgement and the mediating role of perceived emotional intelligence

A t-test between conditions showed that when the target moved gracefully (vs. non-gracefully), he or she was judged as more suitable to be a spokesperson for a brand through a t-test ($M_{graceful}$ = 4.20 vs. $M_{non\text{-}graceful}$ = 3.53), $t(206) = 3.32$, $p < .01$, d = 0.46. We then ran an ANOVA with participant gender and target gender as independent variables. This did not change the effect of movement on spokesperson suitability judgement, $F(1, 197) = 5.58$, $p = .02$, partial-η^2 = .03, albeit there was a main effect of target gender (M_{female} = 4.06 vs. M_{male} = 3.63), $F(1, 197) = 4.68$, $p = .03$, partial-η^2 = .02. No other significant effects emerged, Fs < 3.09, ps > .08. Furthermore, using a bootstrapping technique with 5,000 resamples (Hayes 2013), we found that perceived emotional intelligence positively predicted the degree to which the target is judged to be suitable to be a spokesperson for a brand (β = .47, $t(205) = 7.84$, $p < .001$). Finally, there was a significant indirect effect of movement on spokesperson suitability judgement through the effect of perceived emotional intelligence (β = .07, 95% biased-corrected CI = .0103, .1490; see Figure 3). This analysis was conducted employing the Hayes's PROCESS macro (Process Model 4; Hayes 2012).

5.2.4 Perceived brand adaptability and the mediating role of perceived emotional intelligence

We showed that if the target who moved gracefully (vs. non-gracefully) was a salesperson, the brand was perceived as more adaptable employing a t-test ($M_{graceful}$ = 4.66 vs. $M_{non\text{-}graceful}$ = 4.19), $t(206) = 3.46$, $p < .01$, d = 0.48. We then conducted an ANOVA with participant gender and target gender as independent variables and this did not change the effect

of salesperson movement on perceived brand adaptability, $F(1, 197) = 7.04$, $p < .01$, partial-η^2 = .03, albeit there was a main effect of participant gender ($M_{female} = 4.67$ vs. $M_{male} = 4.26$), $F(1, 197) = 6.24$, $p = .01$, partial-$\eta^2 = .03$. No other significant effects emerged, Fs < 1.93, ps > .16. Moreover, using a bootstrapping technique with 5,000 resamples (Hayes 2013), we found that perceived emotional intelligence of the salesperson positively predicted the degree to which the brand is perceived as adaptable ($\beta = .47$, $t(205) = 7.76$, $p < .001$). Importantly, there was a significant indirect effect of salesperson movement on perceived brand adaptability through the effect of perceived salesperson emotional intelligence ($\beta = .07$, 95% biased-corrected CI = .0100, .1517; see Figure 4). This analysis was conducted employing the Hayes's PROCESS macro (Process Model 4; Hayes 2012).

5.2.5 Perceived brand service quality and the mediating role of perceived emotional intelligence

We found that if the target who moved gracefully (vs. non-gracefully) was a salesperson, the brand was perceived as having higher service quality via a t-test ($M_{graceful} = 4.95$ vs. $M_{non-graceful} = 4.48$), $t(206) = 3.32$, $p < .01$, $d = 0.46$. Running an ANOVA and adding participant gender and target gender as independent variables did not change the effect of salesperson movement on perceived brand service quality, $F(1, 197) = 7.95$, $p < .01$, partial-$\eta^2 = .04$, albeit there was a main effect of participant gender ($M_{female} = 4.94$ vs. $M_{male} = 4.57$), $F(1, 197) = 4.22$, $p = .04$, partial-$\eta^2 = .02$. No other significant effects emerged, Fs < 3.22, ps > .07. Furthermore, using a bootstrapping technique with 5,000 resamples (Hayes 2013), we found that perceived emotional intelligence of the salesperson positively predicted the degree to which the brand is perceived as having high service quality ($\beta = .49$, $t(205) = 8.23$, $p < .001$). Finally, there was a significant indirect effect of salesperson movement on perceived brand service quality through the effect of perceived salesperson emotional intelligence ($\beta = .08$, 95% biased-corrected CI = .0095, .1619; see Figure 5). This analysis was conducted employing the Hayes's PROCESS macro (Process Model 4; Hayes 2012).

5.3 Discussion

This study extends the previous studies by demonstrating some downstream consequences of perception of high emotional intelligence induced by graceful movements. A person who moves gracefully is perceived as more suitable to be a salesperson for a company as well as a spokesperson for a brand, compared with a person who moves non-gracefully.

Moreover, if a person who moves gracefully is employed as a salesperson, the brand is perceived as more adaptable as well as having higher service quality, compared with if a person who moves non-gracefully is employed as a salesperson. All of these positive consequences of graceful movements arise probably because of the associated high emotional intelligence as perceived by observers.

6 Study 4

In Study 4, we explore how graceful movement of brand logo might have positive consequences for the brand. Specifically, we anticipate that a brand whose logo moves gracefully (vs. non-gracefully) would be judged as more adaptable. Moreover, a brand whose logo moves gracefully (vs. non-gracefully) would be judged as having higher service quality.

6.1 Method

Two hundred one undergraduate students (124 female, 77 male; M_{age} = 21.83 years) from a European university completed this study for partial course credit in a marketing course. Participants were asked to view a short (11 secs) video of an animated logo of a brand (see figure 6), whose movements were either smooth and controlled (graceful condition), or jittery and less controlled (non-graceful condition), randomly assigned. To test the validity of the manipulation, participants were then asked to indicate the degree to which they agreed with the following four manipulation check items: “The logo moved smoothly”; The logo had a controlled movement”; “The logo moved gracefully”; and “The logo had jittery movements (reversed)”; rated on a 7-point scale (1 = strongly disagree, 7 = strongly agree). A principal component analysis was conducted with varimax rotation. This identified one factor with eigenvalue greater than one, with all items loaded strongly onto this single factor (.74 to .89). The reliability of this manipulation check measure was good (α = .85). Participants were then asked to indicate the degree to which they agreed with the following three statements as a measure of adaptability: “The brand has an ability to adapt to customer-specific needs”; “Generally, the brand is able to adapt to new environments”; and “The brand is customer sensitive”; rated on a 7-point scale (1 = strongly disagree, 7 = strongly agree). A principal component analysis was conducted with varimax rotation. This identified one factor with eigenvalue greater than one, with all items

loaded strongly onto this single factor (.76 to .88). The reliability of this manipulation check measure was good (α = .78).

Following this, participants completed the 22-item SERVQUAL – Perception of Service Quality Scale for perception of service quality (Parasuraman, Berry, & Zeithaml, 1991). SERVQUAL is a widely used instrument to assess service quality. It was originally designed to have five underlying dimensions (tangibles, reliability, responsiveness, assurance, empathy) and respondents have to answer the same 22 items twice, once about expectation of service quality (E) and once about perception of service quality (P). And for each item, a gap score is computed by P – E. The originally proposed five dimensions of SERVQUAL, however, have been challenged as these five dimensions were oftentimes not confirmed (e.g., Buttle, 1996; Lam, 1997; van Dyke et al., 1997; Zhao et al., 2002). For example, Lam (1997) found that SERVQUAL should be treated as unidimensional. Reliability of the unidimensional scale of perception of service quality was good (α = .88). And its predictive validity was demonstrated by having high correlations with a separate overall quality rating (r = .71) and repatronage intention (r = .67). These correlations were also higher than when the gap scores were used to predict these two criteria. In the present research, we used the 22 items as a unidimensional scale to measure perception of service quality (e.g., "When brand promises to do something by a certain time, it does so"; "When customers have a problem, brand shows a sincere interest in solving it"), rated on a 7-point scale (1 = strongly disagree, 7 = strongly agree). The reliability of this measure was good (α = .95).

6.2 Results and discussion

Fifty-nine participants failed at least one of the two attention check questions, so their data were excluded in data analyses (including reliability statistics reported above). We first confirmed the validity of the manipulation via a series of t-tests; participants in the graceful (vs. non-graceful) condition judged the brand logo as moving more gracefully in the video (M_{graceful} = 5.06 vs. $M_{\text{non-graceful}}$ = 3.43), $t(140) = 7.99$, $p < .001$, $d = 1.34$. We then found that when its logo moved gracefully (vs. non-gracefully), the brand was judged as more adaptable (M_{graceful} = 4.53 vs. $M_{\text{non-graceful}}$ = 3.77), $t(140) = 4.32$, $p < .001$, $d = 0.73$, consistent to our hypothesis. We also found that when its logo moved gracefully (vs. non-gracefully), the brand was judged as having higher service quality (M_{graceful} = 4.61 vs. $M_{\text{non-graceful}}$ = 3.99), $t(140) = 4.49$, $p < .001$, $d = 0.75$, supporting our hypothesis.

This study shows that, when a brand uses an animated logo that moves gracefully, it would be judged as having a higher ability to adapt to customer-specific needs and new environments, and providing service of higher quality, than when a brand uses an animated logo that moves non-gracefully.

7 Theoretical and Managerial Implications

There are three major theoretical implications of this research. One, we provide initial evidence for the link between a movement (gracefulness) and a trait (EI), demonstrating that through subtle signs, individuals can convey their level of EI. This finding contributes to the extant research on signaling (e.g., Nesse, 2005). Two, adding to the service research literature, we show that individuals can infer customer orientation of a brand even from the movements of a spokesperson or a salesperson representing that brand. Third, we validate that gracefully moving logos can communicate customer orientation of a brand, contributing to the brand logo literature.

There are also clear marketing implications of this paper. In services marketing, it was reported that high EI displayed by the service provider leads to greater satisfaction with the transaction (Kernbach & Schutte, 2005). EI has the potential to improve current sales performance and enhance long-term customer relationships (Kidwell et al., 2011; Hennig-Thurau et al., 2006). Staff who are responsible for responding to and resolving complaints, service providers such as consultants, salespeople and spokespeople for brands all need to exhibit high EI as a sign that they can perform well in their tasks (Kidwell et al. 2011). Subtle movements of grace can be utilized to tell if a potential employee is a good fit for such a job. Moreover, staff training can incorporate movement training to improve employees' perceived and potentially real EI. Prentice (2019) found that in casinos, dealer EI significantly improves gambler response. As such, she proposes that EI training should be provided to dealers. Moreover, EI should also be assessed when recruiting dealers. We believe that in other retailing settings such as restaurants and hotel or airline check-in counters, smooth moving frontline staff might benefit the service provider, conveying strong customer commitment of the brands. Current research recommends a basic yet effective method for both assessment and training. One other implication is to do with the use of motion in brand logos (e.g., all major Hollywood Film Studios use motion in their logos). While seamless and fluid motions might lead to perceptions of high EI, jerky movements might be perceived as signs of low EI. Moreover, we believe that our findings may be useful in computational modeling of movement, such as in robotics and motion capture. Effective design

of robots requires systems that can capture traits of human and produce autonomous movements and transmit impressions based on the context (see Chuah & Yu, 2021 for a review on human-robot interaction). Pillai et al. (2020) has examined consumers' intention to shop at AI-Powered Automated Retail Stores and discovered that variables such as perceived enjoyment and interactivity are significant predictors of shopping intention of consumers in automated stores. We believe that the movement of these agents while interacting with customers too might be a major determinant of the overall satisfaction with the shopping experience. Graceful vs. ungraceful movements exhibited by the agents might make a difference. Our paper also has implications for influencer marketing. A recent study by Ki et al. (2020) has suggested that attachment and positive emotion elicited by the influencers positively affected the followers, enhancing the likelihood to buy the brands that they suggest. We believe that even the subtle movements of such influencers may convey brand meanings and influence purchasing likelihood of followers. Further, Li et al (2023) proposed that human influencers are more effective compared to virtual assistants due to these transmission of subtle cues via perceived sensory capability and credibility. Finally, we expect that our findings might be employed in social marketing. In an anti-smoking campaign, for instance, high EI and subtle graceful movements may make the person more likable and persuasive.

8 Limitations

First, our findings suggest that control in movements (as depicted through gracefulness) and control of emotions may utilize similar brain regions. Our work is limited to behavioral experiments. Thus, neuroimaging data would be required to confirm this. If this is true, then there is a possibility that movement control training can even be used to enhance EI. Second, research is yet to see how this prediction skill can be utilized to select a strategic alliance or a partner. Our focus in this paper was mainly on consumer behavior. Third, though we suspect that the EI inference drawn from bodily movement cues may be universal, probably as a result of lifetime observation of the association between graceful movements and emotional intelligence, we also predict that the attractiveness of individuals of high EI, as inferred by their graceful movements, may be moderated by culture. This paper used samples only from North America and Eastern Europe, limiting its generalizability. Fourth, current research utilized video clips of movement to elicit emotional intelligence perceptions in subjects. Reducing the real-world

richness of face-to-face interaction to two dimensional representations of moving pictures is a shortcoming of this research. Another limitation of this study is the simplistic logo design that was conceived just to represent movement in its most basic form. Finally, in the animated logo study, we used a generic product rather than a specific one.

9 Conclusion

In four studies designed to explore the human capability to deduct EI of others from cues of graceful movements we provide initial evidence in the existence of one such movement-trait link. We demonstrate a significant deduction of emotional intelligence by subjects through both manipulated and natural gracefulness. Furthermore, the human capability to assign emotional intelligence even extends to non-human entities; in this case, companies which are represented via animated logos with moving objects. We demonstrate that a company whose logo moves gracefully (vs. non-gracefully) is evaluated to be higher both in service quality and adaptation capability.

Strategic evaluation of others has been one of the most crucial processes in the history of homo sapiens. Separating friend from foe, determining with whom to form strategic alliances as well as choosing viable sexual partners have all relied heavily on both verbal and non-verbal communication of all sorts. From simple sounds uttered and long gazes from the basic communication set to signaling and countersignaling from the complex set, human communications span a wide range of methods. Of particular importance within the strategic evaluation of others, an automatic and accurate microsecond evaluation of people around would have been the best tool in the strategic alliances' arsenal in our history. Capabilities linking easily observable characteristics such as physical attributes or bodily movements to crucial but hard to observe traits would prove enormously valuable. We believe that this research is an initial foray into the area of one such crucial movement-trait link. The proposed relationship obviously merits greater understanding.

10 Future Research Directions

There are several future research avenues originating from our research. First, extant literature claims that those salespeople who are high on EI perform better at their tasks (Sony & Mekoth, 2016; Prentice, 2019). A recent piece by Satornino et al. (2022) discusses the role of dark salesperson traits, namely Machiavellianism, narcissism and psychopathy in determining a salesperson's success. More research is warranted to understand the relationships between bodily movements and salespeople characteristics beyond EI, including such dark traits. Second, in this paper, we did not have a specific product category. Product category as well as brand personality might be a critical moderator in the proposed trait-movement link. An exciting brand personality or a product category by nature (e.g. motorbikes) might benefit much from a less graceful, more jittery logo. Likewise, different retail settings may call for different movements of frontline employees. Frontline staff at an amusement park vs. hospital would be expected to move differently. Yet, too much jitteriness might hurt customer orientation perceptions. Third, we used samples from North America and Eastern Europe in our studies. A cross-cultural study is required to understand how gracefulness is perceived in other cultures. Graceful individuals may be judged as more attractive in cultures where emotional expression is less valued (e.g., Japan) than in cultures where emotional expression is more valued (e.g., U.S.A.) (Zahn-Waxler et al., 1996).

References

Ambady, N., Hallahan, M., & Conner, B. (1999). Accuracy of judgments of sexual orientation from thin slices of behavior. *Journal of personality and social psychology*, *77*(3), 538-547.

Aviezer, H., Trope, Y., & Todorov, A. (2012). Body cues, not facial expressions, discriminate between intense positive and negative emotions. *Science* 338, 1225–1229. doi: 10.1126/science.1224313

Bakker, A. B., & Schaufeli, W. B. (2000). Burnout Contagion Processes Among Teachers. *Journal of applied social Psychology*, *30*(11), 2289-2308.

Baxter, S. M., & Ilicic, J. (2018). May the force drag your dynamic logo: The brand work-energy effect. *International Journal of Research in Marketing*, *35*(3), 509-523.

Bamford, J. M. S., & Davidson, J. W. (2017). Trait Empathy associated with Agreeableness and rhythmic entrainment in a spontaneous movement to music task: Preliminary exploratory

investigations. *Musicae Scientiae: The Journal of the European Society for the Cognitive Sciences of Music*. Advance online publication. doi: 10.1177/1029864917701536

Braddick, O., & Atkinson, J. (2013). Visual control of manual actions: brain mechanisms in typical development and developmental disorders. *Developmental Medicine & Child Neurology*, 55, 13-18.

Burgoon, J. K., Magnenat-Thalmann, N., Pantic, M., & Vinciarelli, A. (2017). *Social Signal Processing*. Cambridge University Press.

Buttle, F. (1996). SERVQUAL: review, critique, research agenda. *European Journal of marketing*, *30*(1), 8-32.

Chuah, S. H. W., & Yu, J. (2021). The future of service: The power of emotion in human-robot interaction. *Journal of Retailing and Consumer Services*, *61*, 102551.

Côté, S., Lopes, P. N., Salovey, P., & Miners, C. T. (2010). Emotional intelligence and leadership emergence in small groups. *The Leadership Quarterly*, *21*(3), 496-508.

Cook, J. (2016). From movement kinematics to social cognition: the case of autism. Philosophical Transactions of the Royal Society B: Biological Sciences, 371(1693), 20150372.

Cooper, A., & Petrides, K. V. (2010). A psychometric analysis of the Trait Emotional Intelligence Questionnaire–Short Form (TEIQue–SF) using item response theory. *Journal of personality assessment*, *92*(5), 449-457.

Davis, M., Bartenieff, I., & Paula, F. (1970). Effort-Shape analysis: Evaluation of its logic and consistency and its systematic use in research. *Four Adaptations of Effort Theory in Research and Teaching, New York*.

Doyle, J. R., & Bottomley P. A. (2006). Dressed for the occasion: Font-product congruity in the perception of logotype. J Consum Psychol. 2006;16(2):112–23

Ekman, P. (ed.). (1982). *Emotion in the Human Face*. New York, NY: Cambridge University Press.

Gowen, E., & Hamilton, A. (2013). Motor abilities in autism: a review using a computational context. Journal of autism and developmental disorders, 43(2), 323-344.

Guido, G., Pichierri, M., Nataraajan, R., & Pino, G. (2016). Animated logos in mobile marketing communications: The roles of logo movement directions and trajectories. *Journal of Business Research*, *69*(12), 6048-6057.

Hallett, M., Lebiedowska, M. K., Thomas, S. L., Stanhope, S. J., Denckla, M. B., & Rumsey, J. (1993). Locomotion of autistic adults. Archives of Neurology, 50(12), 1304-1308.

Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford publications.

Henderson, P. W., & Cote, J. A. (1998). Guidelines for selecting or modifying logos. *Journal of marketing*, *62*(2), 14-30.

Hennig-Thurau, T., Groth, M., Paul, M., & Gremler, D. D. (2006). Are all smiles created equal? How emotional contagion and emotional labor affect service relationships. *Journal of Marketing*, *70*(3), 58-73.

Hoppe, S., Loetscher, T., Morey, S. A., & Bulling, A. (2018). Eye movements during everyday behavior predict personality traits. *Frontiers in human neuroscience*, *12*, 105.

Hugill, N., Fink, B., Neave, N., Besson, A., & Bunse, L. (2011). Women's perception of men's sensation seeking propensity from their dance movements. *Personality and Individual Differences*, *51*(4), 483-487.

Iacoboni, M. (2009). Imitation, empathy, and mirror neurons. *Annual review of psychology*, *60*, 653-670.

Japutra, A., Molinillo, S., & Wang, S. (2018). Aesthetic or self-expressiveness? Linking brand logo benefits, brand stereotypes and relationship quality. *Journal of Retailing and Consumer Services*, *44*, 191-200.

Jiang, Y., Gorn, G.J., Galli, M., & Chattopadhyay A. (2015). Does your company have the right logo? How and why circular-and angular-logo shapes influence brand attribute judgments. J Consum Res. 2015;42(5):709–26.

Kernbach, S., & Schutte, N. S. (2005). The impact of service provider emotional intelligence on customer satisfaction. *Journal of Services Marketing*. 19(7), 438–444

Kidwell, B., Hardesty, D. M., Murtha, B. R., & Sheng, S. (2011). Emotional intelligence in marketing exchanges. *Journal of marketing*, *75*(1), 78-95.

Ki, C. W. C., Cuevas, L. M., Chong, S. M., & Lim, H. (2020). Influencer marketing: Social media influencers as human brands attaching to followers and yielding positive marketing results by fulfilling needs. *Journal of Retailing and Consumer Services*, *55*, 102133.

Kluft, E. S., Poteat, J., & Kluft, R. P. (1986). Movement observations in multiple personality disorder: A preliminary report. *American Journal of Dance Therapy*, *9*(1), 31-46.

Koppensteiner, M. (2013). Motion cues that make an impression: Predicting perceived personality by minimal motion information. *Journal of Experimental Social Psychology*, *49*(6), 1137-1143.

Laroche, M., Li, R., Richard, M. O., & Zhou, M. (2022). An investigation into online atmospherics: The effect of animated images on emotions, cognition, and purchase intentions. *Journal of Retailing and Consumer Services*, *64*, 102845.

Lam, S. S. (1997). SERVQUAL: A tool for measuring patients' opinions of hospital service quality in Hong Kong. *Total quality management*, *8*(4), 145-152.

Li, H., Lei, Y., Zhou, Q., & Yuan, H. (2023). Can you sense without being human? Comparing virtual and human influencers endorsement effectiveness. *Journal of Retailing and Consumer Services*, *75*.

Lindwall, M., Barkoukis, V., Grano, C., Lucidi, F., Raudsepp, L., Liukkonen, J., & Thøgersen-Ntoumani, C. (2012). Method effects: the problem with negatively versus positively keyed items. *Journal of personality assessment*, 94(2), 196–204.

Luffarelli, J., Mukesh, M., & Mahmood, A. (2019). Let the logo do the talking: The influence of logo descriptiveness on brand equity. *Journal of Marketing Research*, *56*(5), 862-878.

Luffarelli, J., Stamatogiannakis, A., & Yang, H. (2019). The visual asymmetry effect: An interplay of logo design and brand personality on brand equity. *Journal of marketing research*, *56*(1), 89-103.

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence. *Emotional development and emotional intelligence: Educational implications*, *3*, 31.

Melzer, A., Shafir, T., & Tsachor, R. P. (2019). How do we recognize emotion from movement? Specific motor components contribute to the recognition of each emotion. *Frontiers in psychology*, *10*, 1389.

Miao, C., Barone, M. J., Qian, S., & Humphrey, R. H. (2019). Emotional intelligence and service quality: a meta-analysis with initial evidence on cross-cultural factors and future research directions. *Marketing Letters*, *30*(3), 335-347.

Minshew, N. J., Sung, K., Jones, B. L., & Furman, J. M. (2004). Underdevelopment of the postural control system in autism. Neurology, 63(11), 2056-2061.

Mortillaro, M., Mehu, M., & Scherer, K. R. (2013). The evolutionary origin of multimodal synchronization and emotional expression. *Evolution of emotional communication: From sounds in nonhuman mammals to speech and music in man*, 3-25.

Nesse, R. M. (2005). Natural selection and the regulation of defenses. *Evolution and Human Behavior: Official Journal of the Human Behavior and Evolution Society*, *26*(1), 88–105.

Nobile, M., Perego, P., Piccinini, L., Mani, E., Rossi, A., Bellina, M., & Molteni, M. (2011). Further evidence of complex motor dysfunction in drug naive children with autism using automatic motion analysis of gait. Autism, 15(3), 263-283.

Olivola, C. Y., Sussman, A. B., Tsetsos, K., Kang, O. E., & Todorov, A. (2012). Republicans prefer Republican-looking leaders: Political facial stereotypes predict candidate electoral success among right-leaning voters. *Social Psychological and Personality Science*, *3*(5), 605-613.

Parasuraman, A., Berry, L. L., & Zeithaml, V. A. (1991). Understanding customer expectations of service. *Sloan management review*, *32*(3), 39-48.

Perera, H. N., & DiGiacomo, M. (2015). The role of trait emotional intelligence in academic performance during the university transition: An integrative model of mediation via social support, coping, and adjustment. *Personality and individual differences*, *83*, 208-213.

Petrides, K. V. (2009). Psychometric Properties of the Trait Emotional Intelligence Questionnaire (TEIQue). In J. D. A. Parker, D. H. Saklofske, & C. Stough (Eds.), *Assessing Emotional Intelligence* (pp. 85–101). Boston, MA: Springer US.

Petrides, K. V., & Furnham, A. (2000). On the dimensional structure of emotional intelligence. *Personality and individual differences*, *29*(2), 313-320.

Petrides, K. V., Niven, L., & Mouskounti, T. (2006). The trait emotional intelligence of ballet dancers and musicians. *Psicothema*, *18 Suppl*, 101–107.

Pillai, R., Sivathanu, B., & Dwivedi, Y. K. (2020). Shopping intention at AI-powered automated retail stores (AIPARS). *Journal of Retailing and Consumer Services*, *57*, 102207.

Prentice, C. (2016). Leveraging employee emotional intelligence in casino profitability. *Journal of Retailing and Consumer Services*, *33*, 127-134.

Prentice, C. (2019). Managing service encounters with emotional intelligence. *Journal of Retailing and Consumer Services*, *51*, 344-351.

Prentice, C., & Nguyen, M. (2020). Engaging and retaining customers with AI and employee

service. *Journal of Retailing and Consumer Services*, *56*, 102186.

Rauthmann, J. F., Seubert, C. T., Sachse, P., & Furtner, M. R. (2012). Eyes as windows to the soul: Gazing is related to personality. *Journal of Research in Personality*, *46*(2), 147-156.

Risko, E. F., Anderson, N. C., Lanthier, S., & Kingstone, A. (2012). Curious eyes: Individual differences in personality predict eye movement in scene-viewing. *Cognition*, *122*(1), 86-90.

Rozell, E. J., Pettijohn, C. E., & Parker, R. S. (2004). Customer- oriented selling: Exploring the roles of emotional intelligence and organizational commitment. *Psychology & Marketing*, *21*(6), 405-424.

Salovey, P., & Mayer, J. D. (1990). Emotional Intelligence. *Imagination, Cognition and Personality*, *9*(3), 185–211.

Samochowiec, J., Wänke, M., & Fiedler, K. (2010). Political Ideology at Face Value. *Social Psychological and Personality Science*, *1*(3), 206–213.

Satornino, C. B., Allen, A., Shi, H., & Bolander, W. (2023). Understanding the performance effects of "dark" salesperson traits: Machiavellianism, narcissism, and psychopathy. *Journal of Marketing*, *87*(2), 298-318.

Septianto, F., & Paramita, W. (2021). Cute brand logo enhances favorable brand attitude: The moderating role of hope. *Journal of Retailing and Consumer Services*, *63*, 102734.

Sevdalis, N., Petrides, K. V., & Harvey, N. (2007). Trait emotional intelligence and decision-related emotions. *Personality and Individual Differences*, 42(7), 1347–1358.

Sharma, P., Ueno, A., & Kingshott, R. (2021). Self-service technology in supermarkets–do frontline staff still matter?. *Journal of Retailing and Consumer Services*, *59*, 102356.

Studd, K. A., & Cox, L. L. (2013). *Everybody is a Body.* Indianapolis: Dog Ear Publishing.

Sony, M., & Mekoth, N. (2016). The relationship between emotional intelligence, frontline employee adaptability, job satisfaction and job performance. *Journal of Retailing and Consumer Services*, *30*, 20-32.

van Dyke, T. P., Kappelman, L. A., & Prybutok, V. R. (1997). Measuring Information Systems Service Quality: Concerns on the Use of the SERVQUAL Questionnaire. *MIS Quarterly*, *21*(2), 195–208.

van Esch, P., Arli, D., Gheshlaghi, M. H., Andonopoulos, V., von der Heidt, T., & Northey, G. (2019). Anthropomorphism and augmented reality in the retail environment. *Journal of*

Retailing and Consumer Services, *49*, 35-42.

Yao, Q., Kuai, L., & Wang, C. L. (2022). How frontline employees' communication styles affect consumers' willingness to interact: The boundary condition of emotional ability similarity. *Journal of Retailing and Consumer Services*, *68*, 103082.

Yun, J., Lee, D., Cottingham, M., & Hyun, H. (2023). New generation commerce: The rise of live commerce (L-commerce). *Journal of Retailing and Consumer Services*, *74*, 103394.

Zahn-Waxler, C., Friedman, R. J., Cole, P. M., Mizuta, I., & Hiruma, N. (1996). Japanese and United States preschool children's responses to conflict and distress. *Child Development*, *67*(5), 2462–2477.

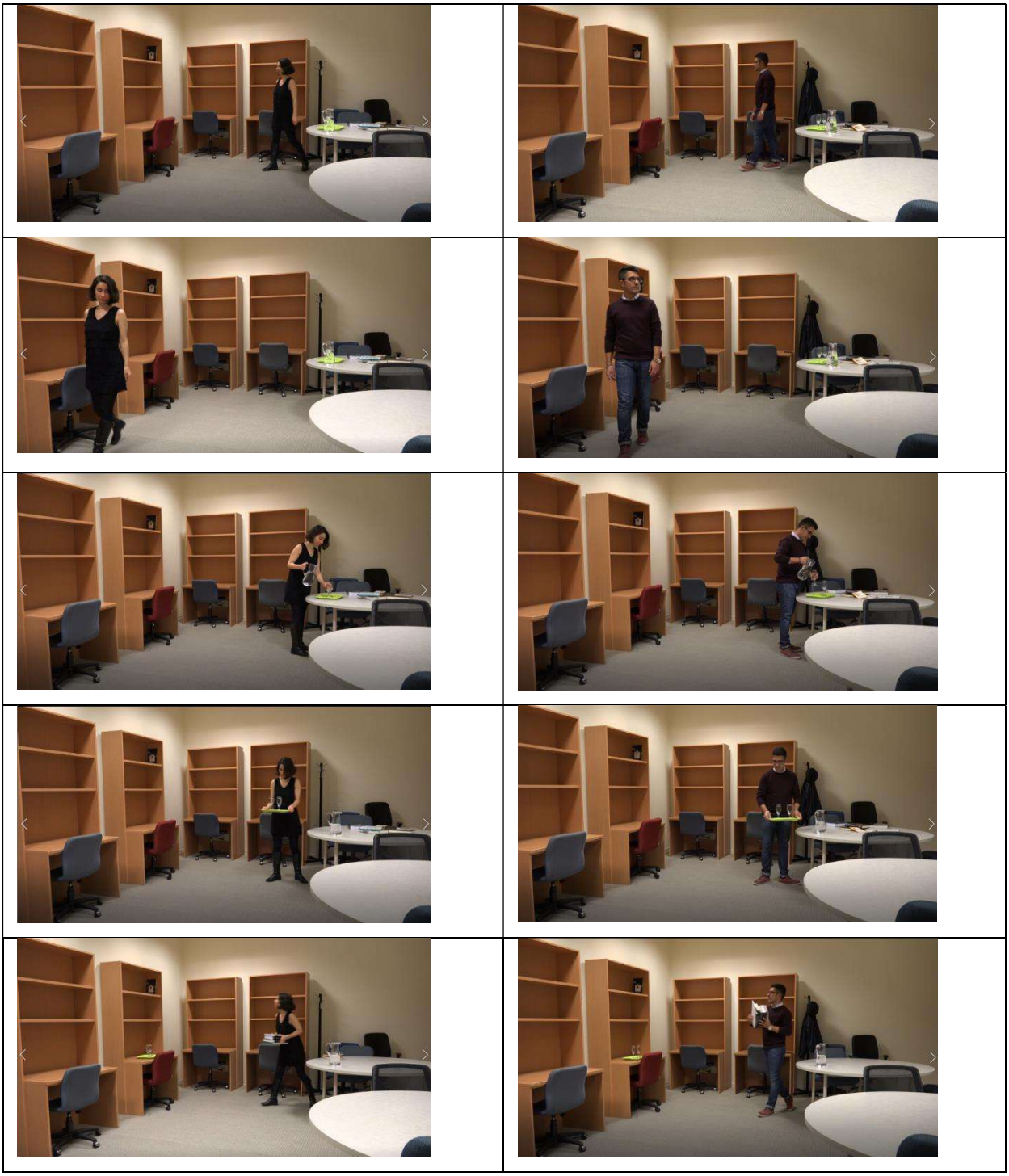
Zhang, Y. L., Feick, L., & Price, L. J. (2006). The impact of self-construal on aesthetic preference for angular versus rounded shapes. Pers Soc Psychol B. 2006;32(6):794–805.

Zhao, X., Bai, C., & Hui, Y. V. (2002). An empirical assessment and application of SERVQUAL in a Mainland Chinese department store. *Total Quality Management*, 13(2), 241-254.

Zwebner, Y., Sellier, A. L., Rosenfeld, N., Goldenberg, J., & Mayo, R. (2017). We look like our names: The manifestation of name stereotypes in facial appearance." *Journal of Personality and Social Psychology* 112, 4, 527.

Figure

Click here to access/download;Figure;figures_GY.docx



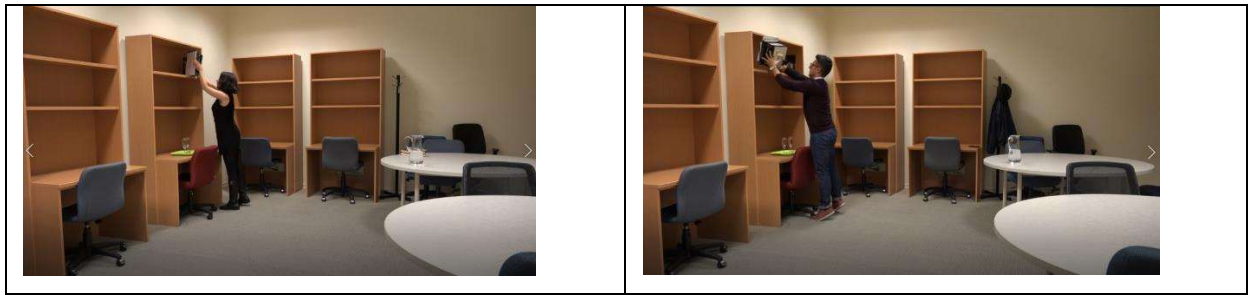


Figure 1. A sample of the actions from the video clip stimuli in study 1

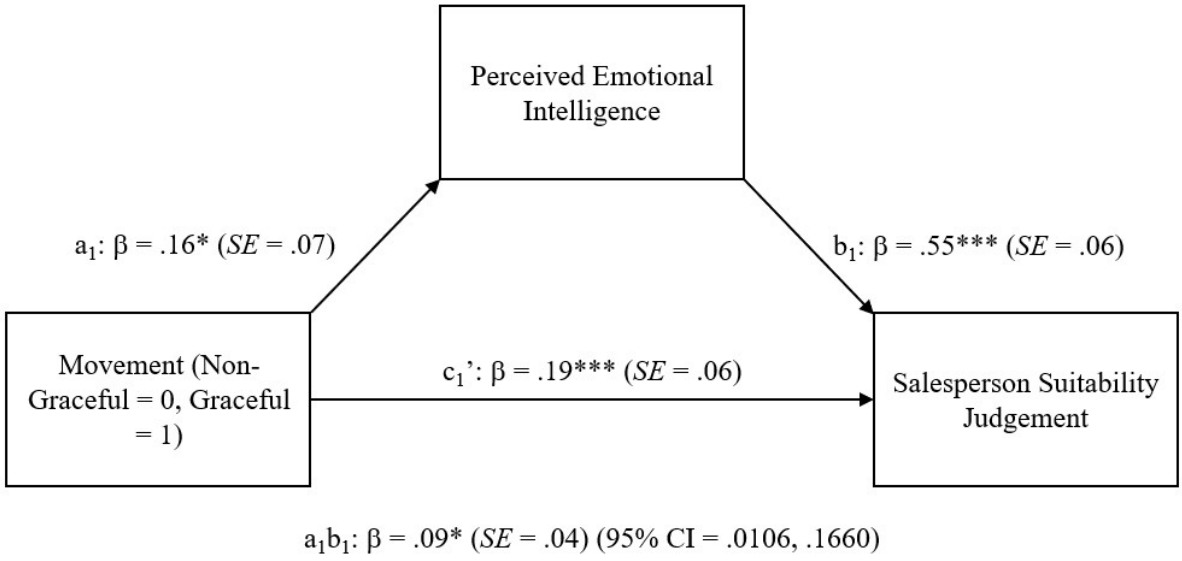


Figure 2. The Mediation Model of the Relationship between Movement and Salesperson Suitability Judgment in Study 3

Note: *$p < .05$, ***$p < .001$

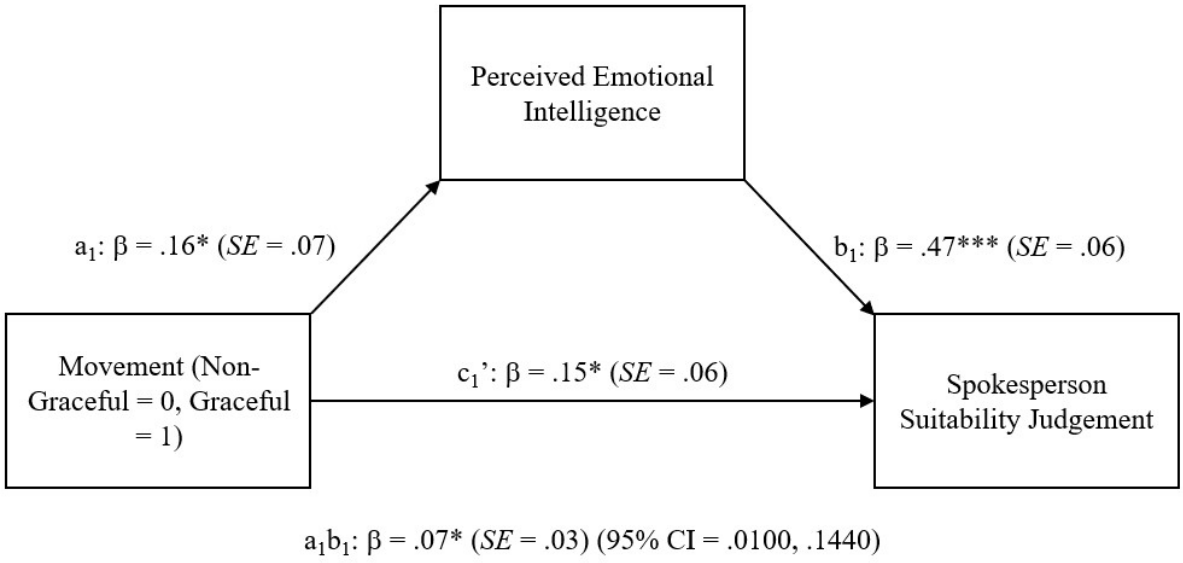


Figure 3. The Mediation Model of the Relationship between Movement and Spokesperson Suitability Judgment in Study 3

Note: *$p < .05$, ***$p < .001$

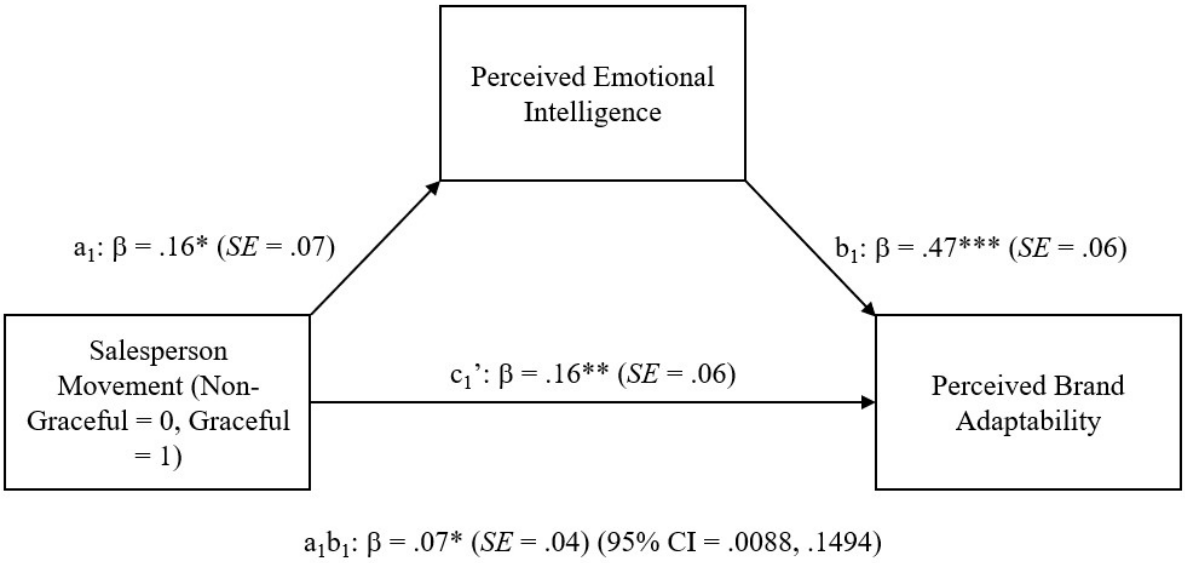


Figure 4. The Mediation Model of the Relationship between Salesperson Movement and Perceived Brand Adaptability in Study 3

Note: *$p < .05$, **$p < .01$, ***$p < .001$

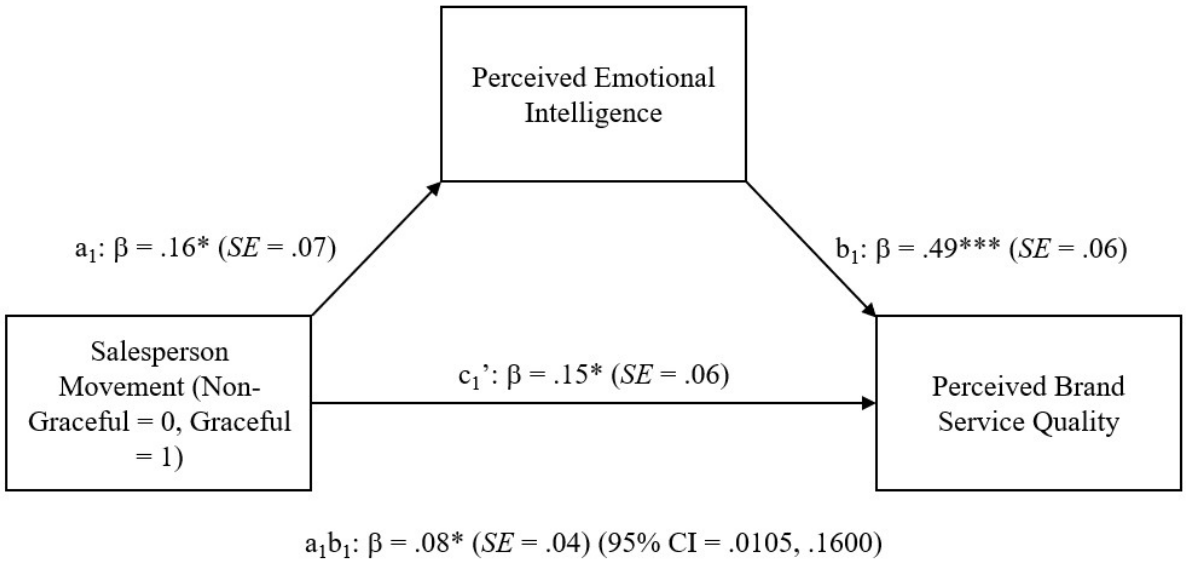


Figure 5. The Mediation Model of the Relationship between Salesperson Movement and Perceived Brand Service Quality in Study 3

Note: *$p < .05$, ***$p < .001$

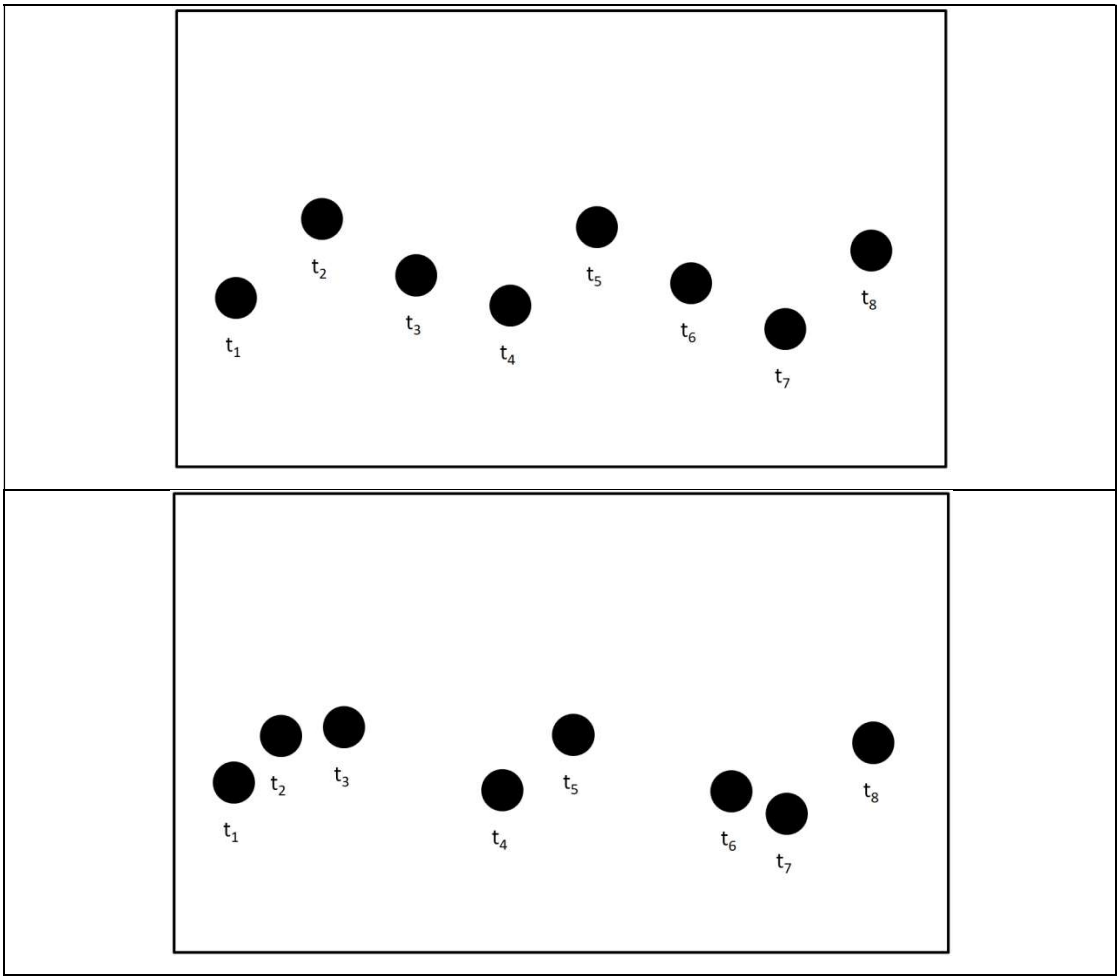


Figure 6: A representation of animated logos used in Study 3. Snapshots in equally spaced time intervals are superimposed to demonstrate the smooth (graceful) movement in the upper panel and jittery (ungraceful) movement in the lower panel.

Dear Editor,

Enclosed is our revised manuscript titled "**Gracefully Yours: Would Snap Judgments of One's Subtle Graceful Movements Lead to Inferences About Their Emotional Intelligence?" (**JJRC-D-23-00541)

The authors whose names are listed immediately below certify that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

Author names:

Kivilcim Dogerlioglu-Demir
Assistant Professor of Marketing,
Ozyegin University, Nisantepe, Orman Sk. No:13, 34794 Cekmeköy/İstanbul, Turkey
Tel:+90-216-564 9983
e-mail:kivilcim.dogerlioglu@ozyegin.edu.tr

Andy Ng
Lecturer in Marketing,
Cardiff University, Aberconwy Building, Colum Drive,
Cardiff, Wales, United Kingdom CF10 3EU
Tel: +44 (0)29 2251 0204
e-mail: NgA4@cardiff.ac.uk

Cenk Kocas
Professor of Marketing,
Sabanci University, Orhanli-Tuzla, Istanbul, Turkey
Tel:+90-216-4839674
e-mail:kocas@sabanciuniv.edu

Click here to access/download
Supplementary Material
Appendix final.docx