Warm Brands: Impact of Empathetic Advertising on Positive Mood Regulation and Brand Relationship Quality

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ABSTRACT

This study aims to leverage consumers' positive moods to optimize the effectiveness of advertising campaigns. It seeks to determine how empathy can be used in advertising as a tool for emotional regulation, helping to establish a deeper and more lasting connection with consumers. An online experiment was conducted for the empirical study of the issue. The hypotheses were tested using structural modeling (via AMOS software) on a sample of 240 participants, and the sampling method adopted was convenience sampling. The results show that the perception of advertising that is congruent with the consumer's positive mood as empathetic stimulates the anthropomorphism of the advertised brand. Furthermore, this anthropomorphism of the advertised brand improves the quality of the consumer's relationship with that brand. However, the positive mood induced in consumers does not seem to stimulate their need for social affiliation or their perception of advertising that is congruent with their mood as empathetic, and the need for social affiliation, in turn, does not tend to stimulate brand anthropomorphism. This research is part of the current trend toward humanizing the customer-brand relationship through AI and paves the way for hyper-personalized and emotionally intelligent advertising. By measuring parameters such as facial expressions, heart rate variations, and vocal tones, integrated technologies (smartphone cameras, connected watches, etc.) make it possible to tailor advertising content to match the user's positive mood. This research goes beyond traditional segmentation criteria (age, gender, marital status) to rely on precise emotional data, enabling highly personalized advertising campaigns. This research reverses the dominant perspective in the literature on empathy in advertising. It shifts the focus away from consumers' empathetic responses to advertising and treats advertising itself as a non-interpersonal empathetic agent, capable of projecting itself onto the consumer to share and maintain their pleasant emotional state. This tends to influence the quality of the consumer-brand relationship.

Keywords: Empathetic advertising, positive mood regulation, anthropomorphism, social affiliation, quality of brand relationship

INTRODUCTION

Today, consumers no longer buy solely for rational reasons, but also—and above all—for emotional benefits. They are interested in the tangible benefits of consumption, as well as the emotional experience that comes with it. The challenge is clear: in a saturated market, emotion and personification become differentiating factors. As a result, modern marketing does not sell a product, it creates a relationship (Hamamouch, 2022). In this relationship, the brand, perceived as a living partner, must understand and respond to the consumer's emotions.

Historically, research has focused primarily on how people regulate negative emotions to cope with negative events, while the regulation of positive emotions has received much less attention (Tugade and Frederickson, 2007). This imbalance reflects the importance placed, in everyday life and in clinical settings, on managing distress rather than maintaining or adjusting pleasant positive emotional experiences (Folkman & Moskowitz, 2004).

However, a range of studies indicate that people actively regulate positive emotions (Tugade and Frederickson, 2007). For example, in a pioneering qualitative study by Gross et al. (2006), participants reported that although they regulate negative emotions more frequently, they also reported and described the use of regulatory strategies aimed at modifying the experience or expression of positive emotions, such as love and pride. Furthermore, hedonistic perspectives suggest that individuals naturally seek to maintain or prolong positive affective states. For example, people often share good news with others to prolong their joy (Tugade and Frederickson, 2007). Research supports this view, demonstrating that happiness motivates behaviors aimed at preserving the positive state (Isen & Patrick, 1983). Wegener and Petty (1994) further explain, according to the hedonic contingency model, that people associate benefits with positive emotions and strategically choose actions or thoughts to maintain or reinforce these experiences.

These findings have broadened the traditional view of emotion regulation to include positive emotions and have raised new questions for exploration. For example: Why do people regulate positive emotions? What strategies do they use to maintain (prolong) or intensify (reinforce) these pleasant states (Tugade and Frederickson, 2007)? It is this aspect of emotional regulation that we focus on in the present study dealing with positive moods.

Theories of mood regulation (Festinger, 1957; Zillmann, 1988), consumer-brand relationship theory (Fournier, 1998), the mechanism of brand anthropomorphization (Fournier, 1998; Epley et al., 2007), and the empathy that can develop between these two interactive partners (Consoli, 2010) served as the pillars for constructing the following research question: **Effect of consumers' perception of empathetic advertising in a positive mood on the quality of their relationship with the anthropomorphized advertised brand.**

To address this issue, our research is positioned within the positivist epistemological tradition, following a hypothetical-deductive approach.

Theoretical development:

Regulation of positive emotions

According to Gross (1998), emotional regulation involves efforts to influence the type of emotions felt, including when they occur and how they are expressed or felt (Gross, 1998). These efforts may consist of amplifying (upward regulation) or attenuating (downward regulation) emotions, whether positive or negative (Parrot, 1993). In addition, emotion regulation processes can occur consciously or unconsciously (Gross, 1998).

The literature indicates that strategies aimed at maintaining or reinforcing positive emotions play a crucial role in achieving adaptive outcomes. While these benefits are appreciable in the short term, positive emotions can also have lasting effects on an individual's well-being. To better understand these short- and long-term effects, it is useful to distinguish between hedonic well-being and eudaimonic well-being (Tugade and Frederickson, 2007). Hedonic well-being refers to the pursuit of short-term pleasure and the enjoyment of positive subjective experiences. In contrast, eudaimonic well-being is associated with long-term fulfillment and encompasses personal development, meaningful relationships, self-acceptance, and a sense of mastery (Ryff & Singer, 1998, 2000). Although these two forms of well-being are distinct, they are interdependent, each with unique determinants and consequences (Ryan & Deci, 2001).

How does regulating positive emotions contribute to hedonic and eudaimonic well-being? One possibility is that regularly experiencing positive emotions—much like exercising a muscle—can have lasting beneficial effects over time (Fredrickson, 2000). For example, cultivating positive emotions on a daily basis (hedonic well-being) can promote resilience and other personal strengths and, ultimately, contribute to long-term fulfillment (eudaimonic well-being). This "exercise" of positive emotions reflects the importance of regulating positive emotions in overall well-being and justifies the tendency of individuals to maintain and prolong this emotional state for as long as possible (Tugade and Frederickson, 2007).

It should be noted that emotional regulation also differs from mood regulation. The latter concerns the management and adaptation of the experience of mood rather than the discrete elements of emotional behavior. Emotions are psychological states s that influence how individuals respond to significant events, while mood or

affect refers to the subjective experience of positivity or negativity in these emotional states (Brave and Nass, 2003). Thus, mood differs from emotion in terms of duration, intensity, and specific evocation. These three differences influence the management of strategies available for regulating moods, as opposed to those available for regulating emotions (Larsen 2000). However, following Forgas's (1992) approach, we can refer to the broad and inclusive term "affect" as both mood (a lasting affective state) and emotion (an intense and short-lived affective state) (Chang, 2011). We therefore refer to "emotional regulation" as "mood regulation," specifically the positive mood of the consumer.

Empathetic Advertising:

Research shows that people often use different strategies to amplify or intensify their positive emotions in everyday life. For example, smiling when feeling sad can help mitigate negative emotions (Ekman, 1989; Gross et al., 2006; Fredrickson & Levenson, 1998). Another approach is to reflect on the benefits of life in order to cultivate gratitude (Emmons & McCullough, 2003). These methods not only intensify positive emotions, but are also effective coping mechanisms in difficult times (Tugade and Frederickson, 2007). Thus, people who believe that their positive mood will dissipate tend to engage in mood maintenance processes to prolong their pleasant affective state (Labroo and Mukhopadhyay, 2009). As a result, a positive mood stimulates expectations that an experience or message congruent (of the same valence) with the mood will make one feel even better (Di Muro and Murray, 2012).

The importance of sharing and understanding the positive emotions of others has long been recognized and discussed by philosophers, scientists, and even religious figures (Morelli, 2015). Recent theoretical and empirical work on positive empathy refers to this phenomenon using different but related terms, such as empathic joy (Smith et al., 1989), reactivity to others' positive emotional disclosure (Gable et al., 2006; Reis et al., 2010), vicarious conditioning (Aronfreed, 1968), or vicarious reward (Mobbs et al., 2009). Thus, positive empathy can be defined as the vicarious understanding and sharing of others' positive emotions (Morelli et al., 2015).

Since empathy involves understanding the emotional state of others, it is therefore based on communication. Stiff and colleagues (1988) postulated that the most frequently manifested display of empathy is communicative, and categorized communicative responses to others as prosocial behaviors.

The role of empathy has been recognized in the appreciation of several aesthetic/emotional experiences: films (Mills, 1993; Oliver, 1993, 2008), novels (Mar et al, 2011), and paintings and sculptures (Freedberg and Gallese, 2008).

How could advertising constitute an aesthetic experience?

By nature, advertising is about informing, entertaining, selling, and sometimes inspiring. Advertising is therefore neither objective nor neutral. It creates images in people's minds. As a result, in order to persuade and impress the target audience, advertising must contain aesthetic elements. Consumers must find something that attracts them in the advertisement in order to be persuaded and seek out the advertised product/brand. Thus, no advertisement can attract its target audience without aesthetic design (Asemah, Edegoh, and Ogwo, 2013). The most likely aesthetic elements in advertising—television advertising in particular—include sound, characters, dance, music, colors, etc. (Asemah, Edegoh, and Ogwo, 2013).

Furthermore, Lee (2012) suggests that aesthetic/emotional pleasure lies partly in the empathic and communal experience between the emotional tone of the stimuli and the mood of the perceiver. According to the author, aesthetic experiences offer a sense of connection and emotional sharing. These experiences signal an empathetic emotional tone, similar to that of an empathetic other. People's preferences for these aesthetic stimuli mimic their preferences for others, insofar as these stimuli can serve as substitutes for interpersonal mood sharing (Lee, 2012). Advertising therefore brings together aesthetic elements that enable it—if well executed and targeted—to fulfill the role of an empathetic aesthetic experience, capable of regulating the emotional state of its target audience.

Quality of Relationship with the Brand (QRM):

BMQR is a diagnostic tool for conceptualizing and evaluating the strength of the consumer-brand relationship (Fournier, 1998). The evaluation of this relationship quality must be based on the manifestations of the experience provided to the consumer by the brand (Fournier, 1998).

BMQ evolves through significant actions on the part of the consumer or the brand, according to the principle of reciprocity on which all relationships are based. As a result, and as in any relationship, the actions of consumers and/or brands can increase QRM, dilute it, or simply dissipate without having any coincidental effect on QRM levels (Fournier, 1998).

Brand anthropomorphism:

Fournier's theory (1998) states that one way to legitimize the notion of the brand-as-partner is to look at how brands are animated, personalized, or humanized. Brands thus become living entities and qualify as partners in legitimate, reciprocal relationships. Brands will therefore play an active role in establishing relationships with consumers, insofar as the latter attribute personalities to the brand based on all the actions it undertakes (Aaker and Fournier, 1995).

The brand is thus anthropomorphized insofar as it is perceived as an intentional agent with abilities and motivations (Kervyn et al, 2012). It consequently becomes a more plausible partner in the consumer-brand relationship (Rauschnabel and Ahuvia, 2014). Aggarwal and McGill (2012) suggest that the role assigned by consumers to a particular brand (similar to a business partner, a community partner, or a friend) influences their motivation to interact with an anthropomorphized version of that brand as well as their subsequent behaviors in response to it.

Thus, the consumer-brand relationship is not merely metaphorical. In certain circumstances, brands can actually meet consumers' interpersonal psychological needs (Dunn and Hoegg, 2014). As a result, the art of giving brands personalities lies in the hands of marketers (the writers) and the minds of target consumers (the readers) who attribute a meaningful human "face" to the brand (Kniazeva, Russell, and Belk, 2010). By attributing to the advertised brand the status of an empathetic agent comparable to an interpersonal other, our work aims to investigate the effect of a specific and innovative advertising technique on the quality of the relationship with the brand, focusing on its role in regulating the target's emotional state.

Induced consumer mood:

Previous research shows that incidental emotions (such as induced mood) influence the evaluation of advertising (e.g. Goldberg and Gorn, 1987), the evaluation of the advertised product/brand (e.g. Axelrod, 1963), as well as preferences for mood-congruent/incongruent experiences (Lee, 2012; Zillmann et al., 1994, 2000, 2002, 2003). However, mood states should not significantly affect evaluations in all cases. The influences of mood can be accentuated or reduced depending on circumstances related to the ambiguity of the situation, the time between mood induction and evaluation of effects, situational factors that promote objectivity and accuracy, and the specific mood itself (Gardner, 2005).

The Need for Social Affiliation

Human beings are naturally engaged in a continuous search for intimate, consistent, and meaningful interpersonal relationships and interactions (Baumeister and Leary, 1995) that reflect a need for social affiliation with others. Any social approach behavior that initiates or maintains social interactions can be considered affiliative behavior (Leroy, 2010).

This is the "need that manifests itself in a tendency experienced by the subject to feel close to someone who is similar to them or who loves them, with whom cooperation or exchanges are pleasant; to please that person, to win their affection; to seek and value the company of others" (Vallerand, 1994).

Hypotheses development

Consumer mood and need for social affiliation:

Interpersonal research suggests that individuals in a negative emotional state are more likely to seek affiliation with others and share their experience with them (Sarnoff and Zimbardo 1961; Schachter 1959).

Psychologists have proven that the ability of affiliation to reduce the discomfort of negative emotions is similar to the ability of empathy/sympathy, rescue, emotional care, or any other form of emotional support provided to stressed or desperate individuals (Hill, 1987a).

H_1: Positive mood **stimulates** the consumer's need for affiliation

Consumer Mood and Perception of Empathetic Advertising

Festinger's (1957) Theory of Selective Exposure to Persuasive Messages and Zillmann's (1988) Mood-Management Theory stipulate that individuals arrange and rearrange their environment to manage their affective states (positive and negative). These environmental arrangements and rearrangements imply that people are able to select stimuli that are likely to affect their moods and modify them as needed (Zillmann, 1988).

Negative experiences that induce people into an unfavorable emotional state promote the desire for emotionally connected, empathetic relationships, both interpersonal and non-interpersonal (Lee, 2012). The desire to feel better may well explain this preference for pleasant stimuli, and the literature on emotional regulation confirms this proposition (see Cohen, Pham, and Andrade [2008]).

Empathy and social support absorb discomfort. When individuals perceive adequate social support, the situation seems less unpleasant, and their lowest mood level seems less negative. People who receive more social support tend to experience a more positive mood (Abro, Klein, and Tabatabaei, 2015).

All of this leads us to the following research proposal:

H2: Positive consumer mood **stimulates** the perception of advertising that is incongruous with their mood as empathetic.

Perception of Empathetic Advertising and Brand Anthropomorphism

The absence of neutral language in everyday life has made it inevitable and virtually impossible to detach oneself from anthropomorphism (Mitchell, 2005). Marketers take advantage of this by using more metaphorical language to make their brands more human and bring them closer to the target consumer (Kogeer, 2013).

For their part, consumers use advertising messages to satisfy their needs and desires, to provide themselves with companionship, to resolve their frustrations and insecurities, or to engage in as a form of escapism and fantasy (Brierley, 1995). These advertisements are capable of eliciting favorable responses and acting as an emotional regulation mechanism for consumers (Kemp et al., 2013): a negative mood stimulates expectations that messages incongruous with the mood will make them feel better (Di Muro and Murray, 2012).

As a result, the use of empathetic language in advertising communications, giving the brand an empathetic interpersonal role similar to that of a provider of social support, tends to stimulate the anthropomorphization of the advertised brand. Thus:

H3: The perception of mood-congruent advertising as empathetic **stimulates** the anthropomorphism of the advertised brand.

Need for Affiliation and Brand Anthropomorphization

Previous research suggests that the desire for social affiliation is a major motivational factor in anthropomorphism (Epley et al., 2007). The need for social affiliation with others and the ability of non-human agents to fulfill this need is the motivational factor of sociality in the theory of Epley et al. (2007). Indeed, this theory shows that individuals who need to affiliate and form social bonds tend to form relationships with "new potential sources of affiliation" (Maner et al., 2007). These individuals then tend to engage in anthropomorphic thinking to satisfy their social needs (Epley et al., 2007).

In a marketing context, research suggests that consumers with a need for affiliation (e.g., chronic loneliness) are more receptive to social cues from human characteristics reflected by brands. This could stimulate successful humanization of these brands, with the ultimate goal of overcoming the unpleasant emotional state resulting from social disconnection (Puzakova et al., 2009). Thus, the following hypothesis is revealed:

H4: Consumers' need for affiliation **stimulates** their tendency to anthropomorphize the advertised brand.

Brand Anthropomorphization and Brand Relationship Quality

Existing research stipulates that for a brand to be a legitimate partner in a relationship, consumers must perceive it as having human characteristics (Aggarwal and McGill, 2012; Fournier, 1998; Puzakova et al., 2009). This suggests that brand anthropomorphism affects the construction of the consumer-brand relationship (Ghuman et al., 2015). Moreover, consumers who think of a brand/product in anthropomorphic terms are less willing to replace it (Chandler and Schwarz 2010).

Hudson et al (2015) note that consumers who are cognitively prepared to see the brand as a partner in a relationship (anthropomorphizing it) are more motivated to interpret their interaction with the brand as interpersonal and thus improve their perception of the quality of their relationship with that brand. The authors predict that the higher the level of brand anthropomorphism by consumers, the more likely it is that interactions will be positively associated with the quality of the relationship with that brand (Hudson et al., 2015). We will therefore test the following hypothesis:

H5: Brand anthropomorphization **improves** the quality of the consumer's relationship with that brand.

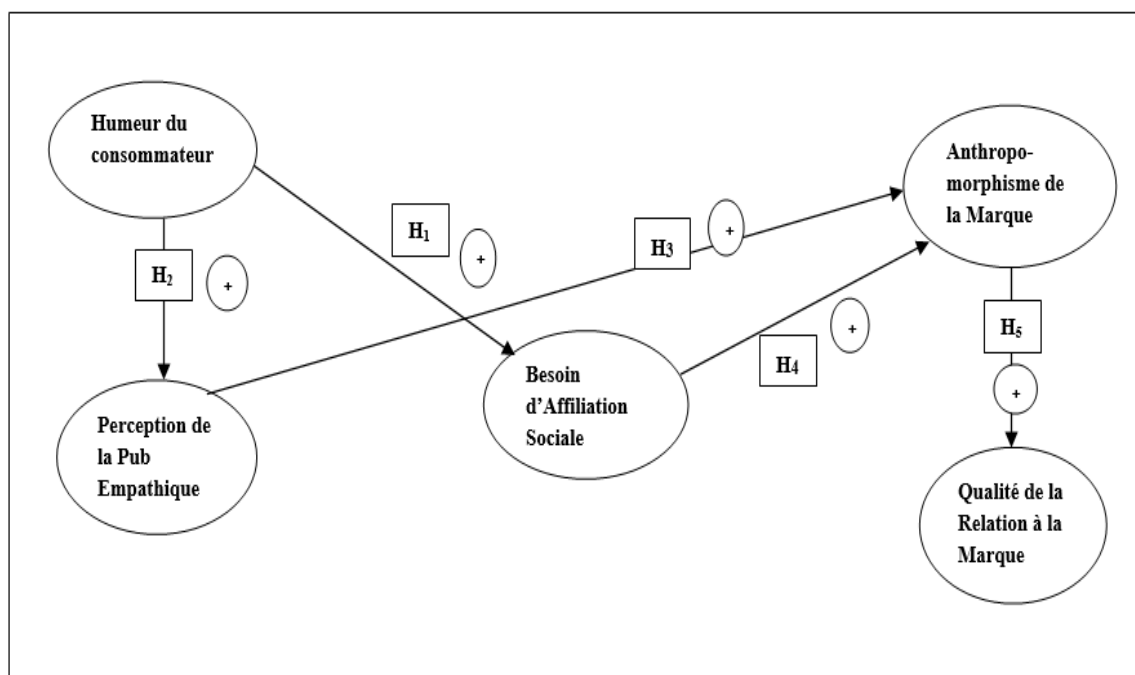The conceptual model for our research is therefore as follows:

Figure 1: Conceptual model

RESEARCH METHODOLOGY

Description of the study

The objective of our empirical study is to test the causal links between the negative mood induced in consumers, the perception of empathetic advertising as an emotional regulator of this mood, the attenuation of the consumer's need for affiliation, the consumer's tendency to anthropomorphize the advertised brand, and the consequences of these processes on the quality of the consumer's relationship with the brand. To this end, the experimental method is appropriate for testing the hypotheses developed. The hypotheses are tested using structural modeling (via AMOS software) on a sample of 240 participants. The sampling method used is convenience sampling.

Conduct of the experiment

There are two main approaches to experimental studies: laboratory experiments and field surveys. In the context of our research, the main managerial field of application is based on an online context. Therefore, to ensure the relevance and usability of the results, it is essential that the target consumer be connected to the Internet. Thus, the online survey appears to be the most appropriate and representative method for the real-world context. Hypothesis testing is performed using structural modeling (via AMOS software) on a sample of 240 participants. The sampling method used is convenience sampling.

Choice of product and brand

Academics and advertising professionals often suggest that the effectiveness of emotional advertising messages depends on the category of the product being advertised. Indeed, several studies suggest that emotional advertising is more effective for hedonic products and low product involvement than for utilitarian products and high product involvement (Geuens et al, 2011). According to Pham (1998), consumers with hedonic incentives to purchase the product—as opposed to those with utilitarian incentives—are more likely to perceive the feelings evoked by the advertisement as relevant. Furthermore, hedonic products can be used as a means of emotion management in that people can consume them to mitigate or cancel out the effect of negative emotions (Kemp, Bui, and Chapa, 2013). This study explores the use of empathetic language in advertising. A hedonic product is therefore ideal for emotion management. Hedonic products, such as food, are often consumed to mitigate negative emotions (Kemp, Bui, & Chapa, 2013). A sample of 50 students listed foods that improve their well-being. Chocolate was among the top five. Derbaix (1995) requires that the choice of brand for the study must respect the absence of a pre-existent affective and cogniti al structure. To ensure this condition, we used an unknown brand.

Mood induction:

The use of films to induce an emotional state has been employed by several researchers in behavioral literature (Fredrickson et al., 2000, Garg, Wansink, and Inman, 2007), and this technique of affect induction has proven effective in previous research (Martin and Lawson, 1998). Films provide audio and visual elements that help modify subjective emotional states and allow participants to focus on discrete emotional states rather than overall affect (Garg, Wansink, and Inamn, 2007). They therefore constitute one of the composite techniques (audio and images) for inducing affect, unlike other induction procedures, which have several limitations: memory exercises, for example, cannot control the intensity of the emotional experience being recalled, or the specific type of emotion experienced, whereas films can control the type of experience each participant undergoes. As for hypnosis, only participants who scored high on hypnotic susceptibility tests are selected (see, for example, Bower, 1981), and these results cannot therefore be generalized (Eysenck and Keane, 1995).

Data collection procedure

All participants should watch a neutralizing video consisting of a documentary on the underwater life of tuna. This is because mood induction would be more effective if all survey respondents were initially exposed to a video that induces a neutral mood. In addition, the use of this neutralizing video makes the objective of the procedure (to induce negative moods) less obvious to respondents (Kelly and Jones, 2012). During the online

experiment, respondents are initially exposed to pre-tested mood-inducing stimuli. They are then invited to watch an empathetic advertisement specially designed and edited for the study. Once the advertisement has been viewed, the respondent completes the rest of the pre-tested questionnaire (see Appendices 1). The mood-inducing video sequences were first evaluated by a panel of experts, 90% of whom judged the video to be sad. They were then tested by 20 respondents selected from the same main population in which our study took place (Owolabi, 2009).

Measurement of variables

To measure induced negative mood, we used the PANAS scales developed by Watson, Clark, and Tellegen (1988). The perception of empathetic advertising is assessed using an adaptation of the scale developed by Plank, Minton, and Reid (1996), the first and only scale initially designed to measure empathy in the field of sales (Delpechitre, 2013). Hill's (1987a) Interpersonal Orientation Scale (IOS) is used to quantify consumers' need for social affiliation. For brand anthropomorphism, we used the three-item scale developed by Epley et al. (2008b). Finally, the quality of the relationship with the advertised brand (QRM) is measured using the condensed version of Fournier's scale (1998), containing nine items.

Research results and contributions

Hypothesis testing and interpretation of results

The psychometric qualities of the measurement scales used in our questionnaire were verified, and the validity of their factorial structure was tested. The first step was to verify the reliability of the measurement scales by eliminating any questionable items, if necessary, in order to purify the scales using exploratory factor analysis (EFA). The new structure of the measurement scales was then confirmed in a second step by confirmatory factor analysis (CFA). Ultimately, the measurement instruments used in our study have satisfactory psychometric qualities (Appendices).

The estimation of the structural model revealed acceptable fit indices. A modification was then made to improve the model fit: the Social Affiliation construct presented a discriminant validity problem. Among the remedies for the non-verification of this constraint, we opted to eliminate the factor most correlated with the others (Levêque and Burns, 2017). In addition, we opted to add covariance links between these errors in the structural model (Akrout, 2010). As a result, the model's fit improved (Appendices).

The following table shows the significance of the structural effects between the study variables:

Table 1: Estimation results and significance of structural effects (regression coefficients)

Hypotheses	Relationship (Structural links)	Standardized regression coefficients (Beta)	Non-standardized regression coefficients	S.E	C.R	P	Hypothesis validation
H1	→ mood Social_Affiliation	0.215	0.141	0.078	1.801	0.072	No
H2	→ mood PercepPubEmp	0.141	0.090	0.077	1.159	0.246	No
H3	PercepPubEmp→ Anthropo	0.579	0.639	0.173	3.684	***	Yes
H4	Social_Affiliation→ Anthropo	0.682	4.248	2.330	1.823	0.068	No

H5	Anthropo$\rightarrow$ QRM	0.862	1.065	0.154	6.921	***	Yes
SE = standard error; C.R = critical ratio; *** p < 0.01							

The estimation results (Table 1) show values |c.r| > 1.96 for the structural links, PercepPubEmp$\rightarrow$ Anthropo, and Anthropo$\rightarrow$ QRM. Thus, only hypotheses H2 and H4 are accepted.

Thus, the perception of advertising that is congruent with the consumer's positive mood as empathetic **stimulates** the anthropomorphism of the advertised brand (H1). Furthermore, this anthropomorphism of the advertised brand **improves** the quality of the consumer's relationship with that brand (H4). However, the positive mood induced in consumers **does not seem to stimulate** their need for social affiliation or their perception of advertising congruent with their mood as empathetic (H1), and the need for social affiliation (H3$_a$) **does not**, in turn, **tend to stimulate** brand anthropomorphism (H4$_a$).

DISCUSSION OF RESULTS

The various conclusions drawn from the empirical part are then compared with the results of previous studies in order to discuss and summarize the theoretical and empirical significance of the results obtained.

Effect of Consumer Mood on their Need for Social Affiliation (initial)

With regard to the first hypothesis, we expected that the positive mood induced in consumers would promote their need for social affiliation (initial), in line with the literature (Schachter, 1959; Uchino and Garvey, 1997; Leroy, 2010). However, the results of our study contradict this: participants' affiliative tendencies were not stimulated by positive affective induction.

The absence of a desire for social affiliation in the case of positive mood induction is also surprising, given that there is a solid body of work linking positive affectivity to sociality (Fredrickson and Branigan, 2005, Watson and Clark, 1992). These results therefore highlight that the effect of affective state induction on social affiliation, described in much of the literature, is not systematic and depends heavily on the emotional situation (Leroy et al., 2010).

This result can be justified by the fact that individuals who are in a good mood and already feel good tend to show weak preferences for absorbing activities (including social affiliation with others). Indeed, this result may be consistent with the literature on persuasive message processing, which states that people in a pleasant mood engage in superficial strategies and tend to process messages with less cognitive elaboration (Clark and Isen, 1982; Schwarz, 1990; Mackie and Worth, 1991). These people report that their situation is satisfactory and that they do not need careful and extensive processing of the message to which they are exposed (Chang, 2011).

The literature provides an additional explanation based on the differentiation between endogenous emotions (emotions with an internal psychological origin triggered by exposure to a sad video) and exogenous emotions (emotions with an external origin, such as electric shocks, painful injections, etc.). A priori, the affective states induced in our study are endogenous rather than exogenous, and the strategies for regulating endogenous emotions differ from those for regulating exogenous emotions. Indeed, according to Leroy et al. (2010), it can be assumed that endogenous emotions may lead individuals to implement methods of affective self-regulation, due to their internal origins. Exogenous emotions, on the other hand, are more likely to lead people to interpersonal emotional regulation strategies, focused on the outside world and society, due to their external origins that can be observed by others (Leroy et al., 2010).

Effect of Consumer Mood on Perception of Empathetic Advertising

The results show that consumers' positive mood does not promote their perception of advertising that is congruent with their mood (cheerful and pleasant) as empathetic. These results do not converge with the literature on emotional regulation, particularly theories of selective exposure to persuasive messages (Festinger, 1957) and mood management (Zillmann, 1988), which stipulate that positive mood stimulates expectations that an

experience congruent with that mood will make one feel better and that this mood- courages the desire for emotionally connected interpersonal as well as non-interpersonal empathic relationships (Lee, 2012).

The divergence between our results and those obtained in previous studies may be due to the mood induction procedure being stopped once the amusing video ends. Once the positive stimulus is removed, some participants may quickly self-regulate from the induced emotional state (Larcom and Isaacowitz, 2009). Thus, the advertisements related to our research, designed to be empathetic, fail to play the concrete role of an emotional regulator (consolidation) of the consumer's positive emotional state.

However, it appears that the positive affective state induced in consumers tends to stimulate their perception of advertising that is incongruent (antipathetic and unpleasant) with their mood as empathetic. This result does not agree with the literature on emotional regulation, according to which people in a good mood tend to seek to maintain that state of mind and are therefore less likely to examine messages that are incongruent with their mood (Festinger, 1957; Zillmann, 1988; Wegener et al., 1995; Di Muro and Murray, 2012).

A low intensity of induced mood may be a likely explanation for this finding. Indeed, the literature defines moods as subjectively perceived affective states that are generalized, pervasive, temporary, and mild, rather than intense emotions (Batra and Stayman, 1990). They are less likely to attract individuals' attention than emotions, although they can influence intentional processes and behaviors (Clark and Isen 1982; Gardner 1985).

Effect of Perception of Empathetic Advertising on Brand Anthropomorphism

For consumers in a positive mood, perceiving advertising that is congruent with their mood as empathetic tends to stimulate their tendency to anthropomorphize the advertised brand. This result converges with our expectations based on the literature. Indeed, the literature on language and cognition states that the choice of language used in advertising influences its effectiveness (Winograd, Cohen, and Barresi 1976) (cited in Kemp et al, 2013).

Thus, the incorporation of specific language targeting consumers' emotional sensibilities can elicit favorable responses and act as a e mechanism of emotional regulation for consumers (Kemp et al., 2013): a positive mood stimulates expectations that a message congruent with that mood will validate that good mood and even make the consumer feel even better (Di Muro and Murray, 2012).

As a result, the use of empathetic language in advertising communications that attributes to the advertised brand the status of an empathetic agent comparable to an interpersonal other stimulates the consumer's tendency to anthropomorphize that advertised brand.

Effect of the consumer's need for social affiliation on brand anthropomorphism

The results for H4 show that when consumers are induced into a positive mood and exposed to empathetic advertising that is congruent with their mood, the need for social affiliation does not tend to stimulate the tendency to anthropomorphize the advertised brand.

This result can be explained by referring to the literature on mood and persuasive processing mechanisms. Indeed, persuasive message processing pathways stipulate that negative mood stimulates central processing of messages, while positive mood inhibits it and instead stimulates heuristic processing (Batra and Stayman 1990; Gardner and Hill 1988; Kuykendall and Keating 1990; Mackie and Worth 1991; cited by Aylesworth and Mackenzie, 1998). Indeed, individuals in a positive mood engage in superficial and less taxing message evaluation strategies (Clark and Isen, 1982; Schwarz, 1990; Mackie and Worth, 1991). These people declare that their situation is satisfactory and that they do not need to elaborate on the message in a detailed and extensive manner.

Effect of Brand Anthropomorphism on the Quality of the Relationship with that Brand

The results relating to the last research hypothesis show that the anthropomorphism of the brand advertised by the consumer improves the quality of their relationship with that brand. This result is consistent with the findings in the literature.

Indeed, existing research suggests that for a brand to acquire the status of a legitimate partner in a relationship, consumers must perceive it as having human characteristics (Aggarwal and McGill, 2012; Fournier, 1998; Puzakova et al, 2009). Furthermore, consumers who think of a brand/product in anthropomorphic terms ( ) are less willing to replace it (Chandler and Schwarz 2010). This suggests that brand anthropomorphism affects the construction of the consumer-brand relationship (Kim et al., 2020). According to Hudson et al (2015), consumers who are cognitively prepared to anthropomorphize the brand as a relational partner are more motivated to interpret their interaction with that brand as interpersonal and thus improve their perception of the quality of their relationship with that brand. Thus, the higher the consumer's anthropomorphism of the brand, the more likely it is that interactions will be positively associated with the quality of the relationship with that brand (Hudson et al., 2015).

Theoretical and managerial contributions

Theoretical contributions

This study makes innovative theoretical contributions to the literature on advertising and its effectiveness in two main areas. First, it goes beyond the simple physical assimilation of brands to humans to explore mental, intentional, and social anthropomorphization, where the brand is perceived as an empathetic and intentional agent capable of managing consumers' emotional states. This reinforces the idea that the consumer-brand relationship can be compared to an interpersonal relationship. Second, it reverses the dominant perspective in previous research on empathy in advertising: instead of focusing on consumers' empathetic responses to advertising, this research examines advertising itself as a non-interpersonal empathetic agent, capable of projecting itself onto the consumer to share and respond to their emotional state.

Managerial contributions

This research highlights the strategic role of artificial intelligence (AI) in the design and dissemination of advertising messages based on consumer emotions. Current technological advances allow companies to go beyond traditional segmentation criteria (age, gender, marital status) and rely on accurate affective data, thus promoting highly personalized advertising campaigns. Integrated technologies, such as smartphone cameras, smartwatches, and biometric sensors, offer unprecedented opportunities to analyze consumers' emotional states in real time. By measuring parameters such as facial expressions, heart rate variations, and voice tones, these tools make it possible to tailor advertising content to match the user's mood and emotional context.

This study contributes to the development of new advertising strategies that integrate emotional technologies to create more engaging, relevant, and tailored interactions for modern consumers. It is part of the current trend toward humanizing customer relationships through AI and paves the way for hyper-personalized and emotionally intelligent advertising.

Limitations and future research directions

The limitations of this research include the duration of the online experiment. Although the survey took only 15 minutes to complete, some participants found the questions too long. However, as each question was linked to a specific measurement scale, it was impossible to reduce the length without compromising the validity of the data prior to factor analysis. Another limitation concerns the translation of measurement scales, which can introduce cultural biases, affecting respondents' interpretation of items and, consequently, the validity of the results.

Future research should expand the investigation of empathetic advertising's regulatory effects to negative mood states (e.g., stress, anxiety), which would provide a more complete picture of its potential across the emotional

spectrum. A particularly valuable avenue would be to examine how this effect is moderated by product type. Specifically, studies could compare the efficacy of emotional appeals for hedonic versus utilitarian products, considering the perceived appropriateness of the emotion to the product category. Relatedly, it would be insightful to test whether individual differences, such as the need for affiliation, or brand perceptions, such as brand anthropomorphism, vary in their influence depending on this hedonic-utilitarian distinction.

Furthermore, the arousal level of the mood being regulated merits attention. Research could contrast the impact of empathetic advertising on low-arousal (e.g., sadness) versus high-arousal (e.g., anxiety) negative states to determine if regulatory efficacy is arousal-dependent.

Critically, investigating these nuanced questions would benefit greatly from employing objective neurological measures (e.g., fMRI, EEG). Such methodologies could move beyond self-report to uncover the neural mechanisms that underlie these proposed effects, offering a more robust and mechanistic understanding

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APPENDICES

Appendix I: Normality Analysis

Variables	Items	Skewness coefficient	Kurtosis coefficients
Perception of Empathetic Advertising	Percepub1	**-0.145**	**-1.318**
	Percepub2	**-0.462**	**-1.048**
	Percepub3	**0.148**	**-1.288**
	Percepub4	**-0.105**	**-1.178**
	Percepub5	**-0.137**	**-1.351**
	Percepub6	**0.200**	**-1.104**
	Percepub7	**0.141**	**-1.304**
	Percepub8	**0.286**	**-1.088**
Perceived Shared Experience	Perceivex1	**0.107**	**-1.413**
	Perceivexp2	**0.150**	**-1.403**

	Perceived exp3	**0.178**	**-1.270**
	Perceived exp4	**0.173**	**-1.478**
Brand Anthropomorphism	Anthropomo1	**-0.493**	**-1.125**
	Anthropomo2	**-0.549**	**-0.996**
	Anthropomo3	**-0.631**	**-0.924**
Brand Relationship Quality	QRM1	**-0.341**	**-1.288**
	QRM2	**-0.679**	**-0.728**
	QRM3	**-0.600**	**-0.800**
	QRM4	**-0.355**	**-1.117**
	QRM5	**-0.352**	**-1.150**
	QRM6	**-0.364**	**-0.952**
	QRM7	**-0.176**	**-1.215**
	QRM8	**-0.685**	**-0.771**
	QRM9	**-0.591**	**-1.022**
Consumer Sentiment	Humposit1	**-0.090**	**-1.541**
	Humposit2	**-0.064**	**-1.401**
	Humposit3	**0.204**	**-1.373**
	Humposit4	**-0.153**	**-1.682**
	Humposit5	**0.304**	**-1.398**
	Humposit6	**-0.409**	**-1.078**
	Humposit7	**-0.177**	**-1.242**
	Humposit8	**-0.003**	**-1.327**
	Humposit9	**-0.630**	**-1.077**
	Humposi10	**-0.453**	**-1.111**
Need for social affiliation (2)	Social Affiliation2	**-1.196**	**0.511**
	Social Affiliation 2	**-1.247**	**0.312**
	Social affiliation 3	**-1.038**	**0.324**
	Social affiliation 4	**-0.744**	**-0.312**

Social affiliation 5	**-1.052**	**0.454**
Social affiliation 6	**-0.872**	**-0.181**
Social affiliation 7	**0.094**	**-1.435**
Social affiliation 8	**0.025**	**-1.410**
Social affiliation 9	**-0.242**	**-1.118**
Social Affiliation 10	**-0.820**	**-0.623**
Social affiliation 11	**-1.177**	**0.678**
Social affiliation 12	**-2.304**	**6.703**

Appendix II: Results of exploratory factor analysis

Appendix I1: Results of the EFA of the consumer positive mood measurement scale (after purification)

Items	Quality of representation (before purification)	Factorial contributions (after rotation)	
		Fact3	Fact4
Strong	0.610	0.738	
Enthusiastic/Passionate	0.748	0.809	
Proud	0.694	0.822	
Vigilant (alert)	0.631		0.734
Attentive	0.839		0.899
Eigenvalue		λ=2.198	λ=1.614
Explained variance		16.908	12.419%
Reliability		0.748	0.675
KMO	0.718		
Bartlett's sphericity test	325.837; p=0.000		

Appendix I2: CFA results for the consumer "need for affiliation" measurement scale in a <u>positive</u> mood after exposure to empathetic advertising (after purification)

Items	Quality of representation (before purification)	Factor contributions (after rotation)		
		Fact1	Fact2	Fact3
Supporting and encouraging friends	0.863	0.904		

Helping others	0.868	0.884		
Interacting/communicating with friends	0.657	0.652		
Enjoying the moment	0.737		0.854	
Receiving support from friends	0.692		0.774	
Focus on maintaining relationships	0.562		0.643	
Clean up	0.913			0.916
Becoming absorbed in tasks	0.639			0.695
Eigenvalue		λ=2.361	λ=2.172	λ=1.397
Explained variance		29.512	27.246	17.465
Reliability		0.871	0.758	0.571
KMO	**0.694**			
Bartlett's sphericity test	**244.700; p=0.000**			

Appendix I3: Results of exploratory factor analysis for the "Perception of Empathetic Advertising" measurement scale

Items	Quality of representation
This advertisement reflects my current feelings	0.672
This advertisement really understood my feelings about my current situation	0.758
I feel like I'm on the same wavelength as this ad	0.604
This advertisement has a lot of insight into how I should make decisions.	0.603
This advertisement seems to sense what I need right now.	0.731
This ad always understands my needs	0.736
KMO = 0.875	
Bartlett's sphericity test: 642.654; p=0.000	
Reliability: α= 0.889	
Eigenvalue: λ =4.105	
Explained variance = 68.417%	

Appendix I4: Results of exploratory factor analysis for the "Brand Anthropomorphism" measurement scale

Items	Quality of representation

This advertised product brand is thoughtful	0.737
This advertised product brand is caring	0.763
This advertised product brand is friendly	0.571
KMO = 0.666	
Bartlett's sphericity test: 144.871; p=0.000	
Reliability: α= 0.771	
Eigenvalue: λ =2.072	
Explained variance = 69.058%	

Appendix I5: Results of exploratory factor analysis for the "Brand Relationship Quality" measurement scale

Items	Quality of representation
She/he would play an important role in my life	0.761
She/he would treat me well	0.659
She/he would do her/his job well	0.696
I could count on him/her	0.696
I would know a lot about him/her	0.597
We would be close friends	0.756
I would have strong feelings for him/her	0.700
I would understand her/him and be willing to understand her/his thoughts	0.667
I would want him/her to keep me company when I feel lonely.	0.713
KMO = 0.937	
Bartlett's sphericity test:χ_2=1182.999; p=0.000	
Reliability: α= 0.945	
Eigenvalue: λ =6.243	
Explained variance =69.37%	

Appendix II: Results of exploratory factor analysis

Appendix II1: Results of the CFA of the consumer positive mood measurement scale (before and after respecification)

Items	Before respecification		After respecification	
	ML estimation	Bootstrap estimate	ML estimate	Bootstrap estimate

	Contrib fact	SMC	Contrib fact	Bias	Contrib factor	SMC	Contrib fact	Bias
Strong	0.595	**0.354**	0.590	-0.005	Retired			
Enthusiastic/Passionate	0.707	0.500	0.707	0.000	0.844	0.712	0.885	0.041
Proud	0.671	**0.450**	0.674	0.003	0.585	0.342	0.585	0.000
Vigilant (alert)	0.789	0.623	0.795	0.006	0.754	0.568	0.759	0.005
Attentive	0.767	0.589	0.775	0.007	0.803	0.645	0.816	0.013
Absolute Adjustment Indices	Chi-square = 129.189; df = 59; p = 0.000; GFI = 0.899; AGFI = 0.845; RMR = 0.309; RMSEA = 0.082				Chi-square = 38.748; df = 29; p = 0.107; GFI = 0.959; AGFI = 0.923; RMR = 0.213; RMSEA = 0.044			
Incremental Fit Indices	NFI=0.817; TLI=0.852; CFI=0.888				NFI=0.923; TLI=0.967; CFI=0.979			
Parsimony Fit Indices	Standardized chi-square=2.190; PCFI=0.672				Standardized chi-square=1.336; PCFI=0.631			
Reliability: Joreskog's Rho								
Positive mood	**0.700**				**0.745**			
Mood_posit2	**0.434**				**0.755**			

Appendix II2: Results of convergent and discriminant validity tests for the consumer mood measurement scale

Dimensions	Before respecification				After respecification			
	VME	Corrél²	Valid conv	Valid disc	VME	Correl²	Valid conv	Valid disc
Positive mood	**0.435**	**0.185**	**No**	**Yes**	**0.521**	**0.194**	**Yes**	**Yes**
Positive mood	**0.608**	**0.185**	**Yes**	**Yes**	**0.601**	**0.194**	**Yes**	**Yes**

Appendix II3: CFA results for the empathy-based advertising perception scale before and after respecification

Items	Before respecification				After respecification			
	ML estimation		Bootstrapping estimate		ML estimation		Bootstrapping estimate	
	Contrib fact	SMC	Contrib fact	Bias	Contrib factor	SMC	Contrib fact	Bias

This advertisement reflects my current feelings	0.744	0.552	0.743	0.001	0.675	0.455	0.675	0.000
This advertisement really understood my feelings about my current situation.	0.769	0.591	0.768	-0.001	0.713	0.508	0.711	-0.002
I feel like I'm on the same wavelength as this ad.	0.715	0.511	0.712	0.003	0.736	0.541	0.734	-0.002
This advertisement has a lot of knowledge about how I make decisions.	0.666	0.444	0.661	0.005	0.697	0.485	0.693	-0.004
This ad seems to sense what I need right now.	0.697	0.485	0.697	0.000	0.692	0.479	0.694	-0.002
This ad always includes my needs	0.623	0.388	0.620	-0.003	0.611	0.374	0.609	-0.002
Absolute Adjustment Indices	Chi-square = 44.7; df = 9; p = 0.000; GFI = 0.936; AGFI = 0.851; RMR = 0.148; RMSEA = 0.128				Chi-square = 7.325; df = 7; p = 0.396; GFI = 0.990; AGFI = 0.970; RMR = 0.57; RMSEA = 0.14			
Incremental Fit Indices	NFI= 0.923; TLI= 0.894; CFI=0.937				NFI= 0.987; TLI= 0.999; CFI= 0.999			
Parsimony Fit Indices	Standardized chi-square (χ_{2}/dl) = 4.96; PCFI = 0.562				Standardized chi-square= 1.285; PCFI= 0.466			
Reliability: Joreskog's Rho	**0.857**				**0.871**			
Convergent validity: VME	**0.495**				**0.495**			

Appendix II4: PCA results for the "Need for Social Affiliation" measurement scale for consumers induced into a positive mood after exposure to advertising

Results	Before respecification				After respecification			
	Estimation with ML		Bootstrapping		Estimation with ML		Bootstrapping	
Items	Contribution factor	SMC	Contrib fact	Bias	Contrib fact	SMC	Contrib fact	Bias
Support and encourage friends	0.854	0.730	0.852	-0.002	0.857	0.735	0.861	0.004
Helping others	0.894	0.799	0.887	-0.006	0.905	0.819	0.896	-0.009

Interacting/communicating with friends	0.625	**0.390**	0.628	0.003	Withdrawn			
Savoring the moment	0.677	**0.458**	0.681	0.004	0.697	0.486	0.709	0.012
Receiving support from friends	0.710	0.504	0.705	-0.005	0.687	0.472	0.685	-0.002
Focus on maintaining relationships	0.613	**0.375**	0.613	0.000	Retired			
Clean	0.794	0.630	0.833	0.040	0.839	0.703	0.914	0.076
Becoming absorbed in tasks	0.556	**0.309**	0.552	-0.004	0.526	0.277	0.519	-0.007
Absolute Adjustment Indices	Chi-square = 65.312; df = 17; p = 0.000; GFI = 0.930; AGFI = 0.852; RMR = 0.132; RMSEA = 0.137				Chi-square=15.437; df=6; p=0.017; GFI=0.977; AGFI=0.918; RMR=0.075; RMSEA=0.87			
Incremental Fit Indices	NFI= 0.888; TLI= 0.857; CFI=0.913				NFI=0.960; TLI=0.937; CFI=0.975			
Parsimony Fit Indices	Standardized chi-square (χ_2/dl) = 3.842; PCFI = 0.555				Standardized chi-square=2.573; PCFI=0.390			
Reliability: Joreskog's Rho								
Altruistic Behavior	**0.847**				**0.873**			
Affiliation_with_Others	**0.709**				**0.647**			
Self_Affiliation	**0.641**				**0.657**			

Appendix II5: Results of convergent and discriminant validity tests for the scale measuring consumers' need for social affiliation after exposure to advertising

Dimensions	Before respecification				After respecification			
	VME	Corrél²	Valid converg	Valid discrim	VME	Correl²	Valid converg	Valid discrim
Altruistic behavior	**0.633**	**0.410**	**Yes**	**Yes**	**0.784**	**0.372**	**Yes**	**Yes**
Affiliation_to_ Others	**0.446**	**0.410**	**No**	**Yes**	**0.486**	**0.372**	**No**	**Yes**
Auto_Affiliation	**0.627**	**0.240**	**Yes**	**Yes**	**0.552**	**0.203**	**Yes**	**Yes**

Appendix II6: CFA results for the brand anthropomorphism measurement scale before and after respecification

Results		ML estimate		Bootstrapping estimation	
Items		**Factor contributions**	**SMC**	**Factor contributions**	**Bias**

This advertised product brand is thoughtful	0.751	0.565	0.750	-0.001
This advertised product brand is thoughtful.	0.738	0.545	0.737	-0.001
This advertised product brand is likable	0.800	0.640	0.804	0.003
This advertised product brand is thoughtful.	0.747	0.558	0.746	-0.001
Absolute Fit Indices	Chi-square = 4.9; df = 2; p = 0.86; GFI = 0.990; AGFI = 0.959; RMR = 0.055; RMSEA = 0.076			
Incremental Fit Indices	NFI= 0.988; TLI= 0.978; CFI=0.993			
Parsimony fit indices	Standardized chi-square (χ_2/dl) = 2.45; PCFI = 0.331			
Reliability: Joreskog's Rho	**0.855**			
Convergent validity: VME	**0.578**			

Appendix II7: Results of the CFA of the brand relationship quality measurement scale before and after respecification

Results	Before respecification				After respecification			
Items	ML estimation		Bootstrapping		Estimation by ML		Bootstrapping	
	Cont fact	SMC	Cont fact	Bias	Cont fact	SMC	Cont fact	Bias
She/he would play an important role in my life	0.751	0.564	0.747	-0.004	0.767	0.588	0.763	-0.004
She/he would treat me well	0.796	0.633	0.794	-0.002	0.831	0.691	0.829	-0.002
She/he would do her/his job well	0.640	**0.410**	0.635	-0.005	Retired			
I could count on her/him	0.740	0.547	0.738	-0.002	0.711	0.505	0.709	-0.002
I would know a lot about her/him	0.566	**0.320**	0.566	0.000	Retired			
We would be close friends	0.781	0.610	0.780	-0.001	0.793	0.629	0.792	-0.001
I would express strong feelings for her/him	0.767	0.589	0.769	0.002	0.748	0.558	0.748	0.000
I would understand him/her and be willing to understand his/her thoughts	0.669	**0.448**	0.666	-0.003	Retired			

I would like her/him to keep me company when I feel lonely	0.710	0.504	0.704	-0.006	0.702	0.493	0.696	-0.006
Absolute Adjustment Indices	Chi-square = 81.931; df = 27; p = 0.000; GFI = 0.931; AGFI = 0.886; RMR = 0.102; RMSEA = 0.088				Chi-square = 19.773; df = 9; p = 0.019; GFI = 0.975; AGFI = 0.942; RMR = 0.068; RMSEA = 0.068			
Incremental Fit Indices	NFI= 0.931; TLI= 0.936; CFI=0.952				NFI = 0.975; TLI = 0.977; CFI = 0.986			
Parsimony Fit Indices	Standardized chi-square ($\chi_{2/}$dl) =3.034; PCFI=0.714				Standardized chi-square ($\chi_{2/}$dl) = 2.197; PCFI = 0.592			
Reliability: Joreskog's Rho	**0.904**				**0.860**			
Convergent validity: VME	**0.296**				**0.577**			