

HOW ATTACHMENT AFFECTS HAPPINESS IN THE HUMAN- IVA RELATIONSHIP

**Sandra Maria Correia Loureiro, Iscte-Instituto Universitário de Lisboa and
Business Research Unit (BRU-IUL)**

**João Guerreiro, Iscte-Instituto Universitário de Lisboa and Business Research Unit
(BRU-IUL)**

For further information, please contact Sandra Maria Correia Loureiro, Associated professor, Iscte-Instituto Universitário de Lisboa and Business Research Unit (BRU-IUL) (sandramloureiro@netcabo.pt)

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Description: The current study investigates how the level of human attachment to IVA drives their engagement and happiness. The level of attachment is determined by users' perceptions of IVA's autonomy, competence, and relatedness.

EXTENDED ABSTRACT

Research Question

Despite the growing number of IVAs in the market and their prevalent use in various contexts (e.g., households, work, study), few studies have attempted to explore how users or consumers interact and relate to these devices. Most studies have focused

on explaining acceptance of smart devices using technology acceptance models, such as TAM, UTAUT (e.g., Venkatesh, Thong & Xu, 2012; Ashfaq et al., 2020).

The role of engagement in AI has also been studied in terms of consumer behavior (Perez-Vega et al., 2021), in the use of robots (Huang and Rust, 2021), or in personalized engagement (Kumar et al., 2019). However, there is no evidence of how such a relationship between consumers and IVAs can turn into a happy exchange driven by a close relationship. Consequently, the current paper has the following research question: How the level of consumers' relationships with IVAs, manifested in attachment strength, may affect their engagement with these devices, which leads to consumer happiness. Attachment (Bowlby, 1980) and engagement theories will be used to develop the conceptual model. The analogy of the relational bond between humans is drawn upon to conceptualize consumers' attachment (bond) to IVAs.

Method and Data

The data were collected from citizens of the United States (USA) through Amazon's Mechanical Turk. The scales employed to measure the constructs of autonomy, competence, relatedness, and attachment strength were adapted from Thomson (2006). Customer Engagement was based on So et al. (2014). This study deals with authentic happiness by measuring the meaningfulness of a human-IVA experience, the emotional component and personal fulfillment, based on Bhattacharjee and Mogilner (2014). The questionnaire was prepared to minimize recall and common method bias through a memory message, commitment reinforcement and attention.

Of a total of 259 questionnaires received, only 222 were eligible due to excluding those with missing values, inconsistency, or extreme outliers. Almost half the participants

(48%) use Amazon Alexa, followed by Apple Siri (28%) and Google Assistant (17%). A large number (46,8%) have owned their personal voice assistants for more than two years. With respect to frequency of use, 37.4% of participants answered “Every day”, followed by “2 to 3 times a week” (24.8%). The least selected answer was “Less than once a month” (6,3%), which indicates that most participants use these devices frequently.

Summary of Findings

Autonomy is negatively associated with attachment strength ($\beta = -0.151$, $t = 2.538$, $p < 0.05$), but competence ($\beta = 0.155$, $t = 3.399$, $p < 0.001$) and relatedness ($\beta = 0.647$, $t = 11.815$, $p < 0.001$) are positively associated with attachment strength. Human-IVA engagement fully mediates between attachment strength and happiness. The direct effect of attachment strength on happiness ($\beta = 0.853$, $t = 41.556$, $p = 0.212$) is not significant.

We determined the direct effect of each of the four dimensions of human-IVA engagement on happiness. The findings show that identification is the only dimension that does not exert a significant effect on happiness ($\beta = 0.030$, $t = 0.392$, $p = 0.695$).

The results of the direct effects of the control variables reveal that they do not have a significant effect on Human-IVA engagement. However, they also reveal that household size strengthens the relationship between attachment strength \rightarrow Human-IVA engagement and time owning the IVA tends to weaken the relationship between attachment strength \rightarrow Human-IVA engagement.

We considered IVA usage and duration and frequency of IVA usage as control variables due to their potential effect on the level of interaction and knowledge about IVA, which can affect human-IVA engagement. None of these variables showed a significant relationship with engagement.

Statement of Key Contributions

This research adds to the academic marketing discipline by demonstrating that (1) self-determination theory supports the attachment strength between IVA and humans through autonomy, relatedness, and competence, (2) human-IVA attachment strength contributes to humans feeling more confident, closer to IVA and more effective in their lives, and (3), human-IVA engagement exercises a significant mediation effect between attachment strength and happiness.

For IVA managers and societal stakeholders, the current research shows that human-AI engagement is a fundamental piece in achieving a happy relationship via attachment. Therefore, developers and brands must work to create AI agents that can create bonds with consumers and promote an enthusiastic relationship that captures their attention during the exchange. For example, given that absorption is an important determinant of a happy relation, brands should ensure that the relationship enables consumers to forget everything around them during the relationship to be completely focused on the dialog with the IVA. Enthusiasm is also an important characteristic to promote happiness. For example, consumers will soon have IoT-enabled appliances that can capture their daily routines. Using personalized patterns, AI-agents can be much more aware of how to engage with consumers by offering a personalized experience.

References are available upon request