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Interacting with AI-Enabled Wearables Enhances Symbolic Self-Augmentation and Increases Motivation to Pursue Goals

Rafael Wagner*

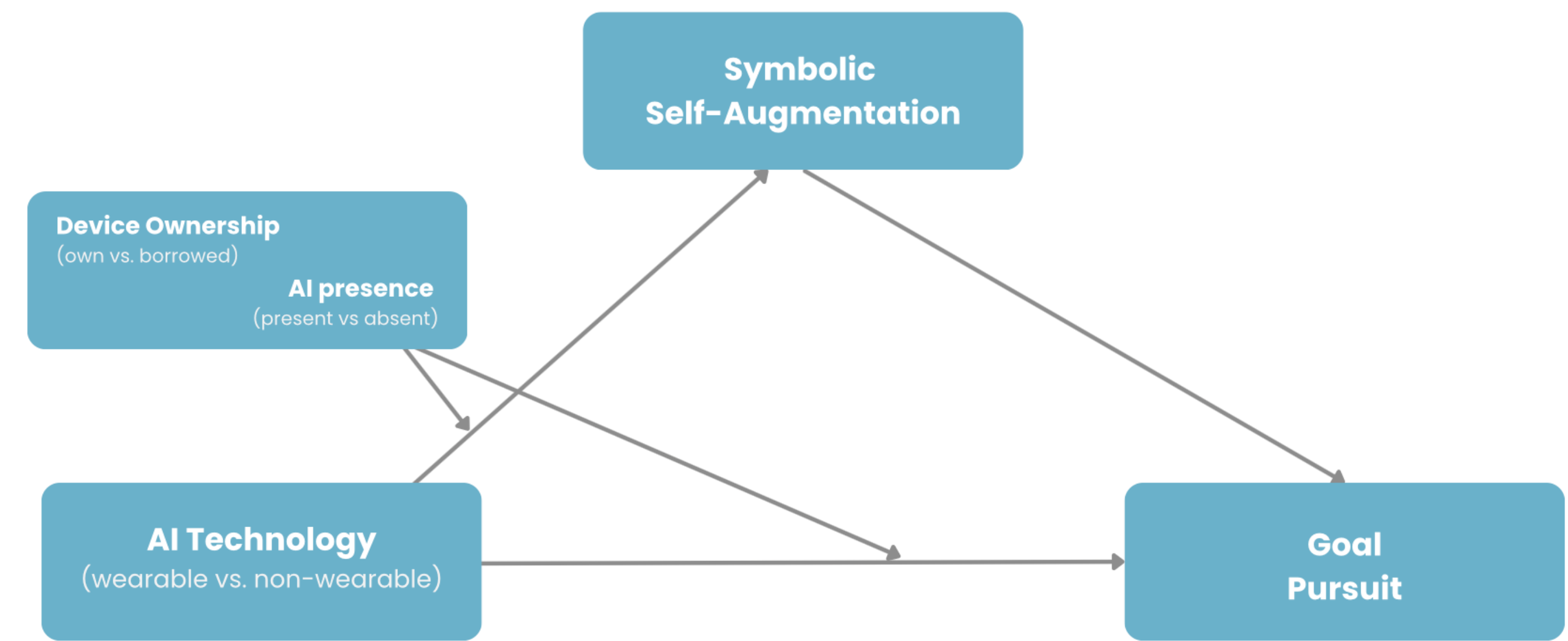
NOVA Information Management School (NOVA IMS), Universidade Nova de Lisboa, Campus de Campolide, 1070-312, Lisboa, Portugal.

INTRODUCTION

Smart wearables are commonly promoted as functional aids, yet their symbolic impact on consumer motivation remains underexplored. We ask: Can interacting with AI-enabled wearables enhance users' motivation to pursue goals—and if so, through what mechanisms and conditions?

Drawing on assemblage theory and encloded cognition, we introduce the concept of self-augmentation—a symbolic process through which intelligent, embodied, and personally owned devices enhance users' perceived capability for goal pursuit. Across six studies (text mining, experiments, and quasi-experiment), we find that motivation increases only when all three conditions (i.e., AI integration, wearability, and ownership) are present.

This research contributes to consumer behavior theory in three ways. First, we extend assemblage theory (e.g., Novak & Hoffmann, 2018; Hoffmann & Novak, 2019) by showing that devices can augment rather than merely extend the self, transforming the consumer-tech relationship into one of perceived empowerment. Second, we reconceptualize encloded cognition (Adam & Galinsky, 2012), demonstrating that smart technologies—unlike garments—create emergent symbolic meaning that enhances agency. Third, we provide empirical evidence for a micro-level, real-world form of technological self-enhancement, bridging mainstream consumer tech and transhumanist ideas (Mende et al., 2023).



METHODS AND MATERIALS

Multi-method approach:

Study 1A: Text mining analysis of 5,380 Amazon reviews shows that users of AI-enabled wearables express significantly higher motivation to pursue goals than users of non-AI devices, controlling for novelty, rating, brand, and price.

Study 1B: A pre-registered experiment (N = 181) demonstrates that AI-enabled wearables increase motivation via self-augmentation, compared to identical devices without AI. Motivation and behavioral interest (email opt-in) were both significantly higher in the AI condition.

Study 2: Participants assigned to a wearable AI vs. a non-wearable AI condition performed more goal-directed behavior (breathing task), reported greater effort, and experienced higher self-augmentation, confirming the importance of embodiment.

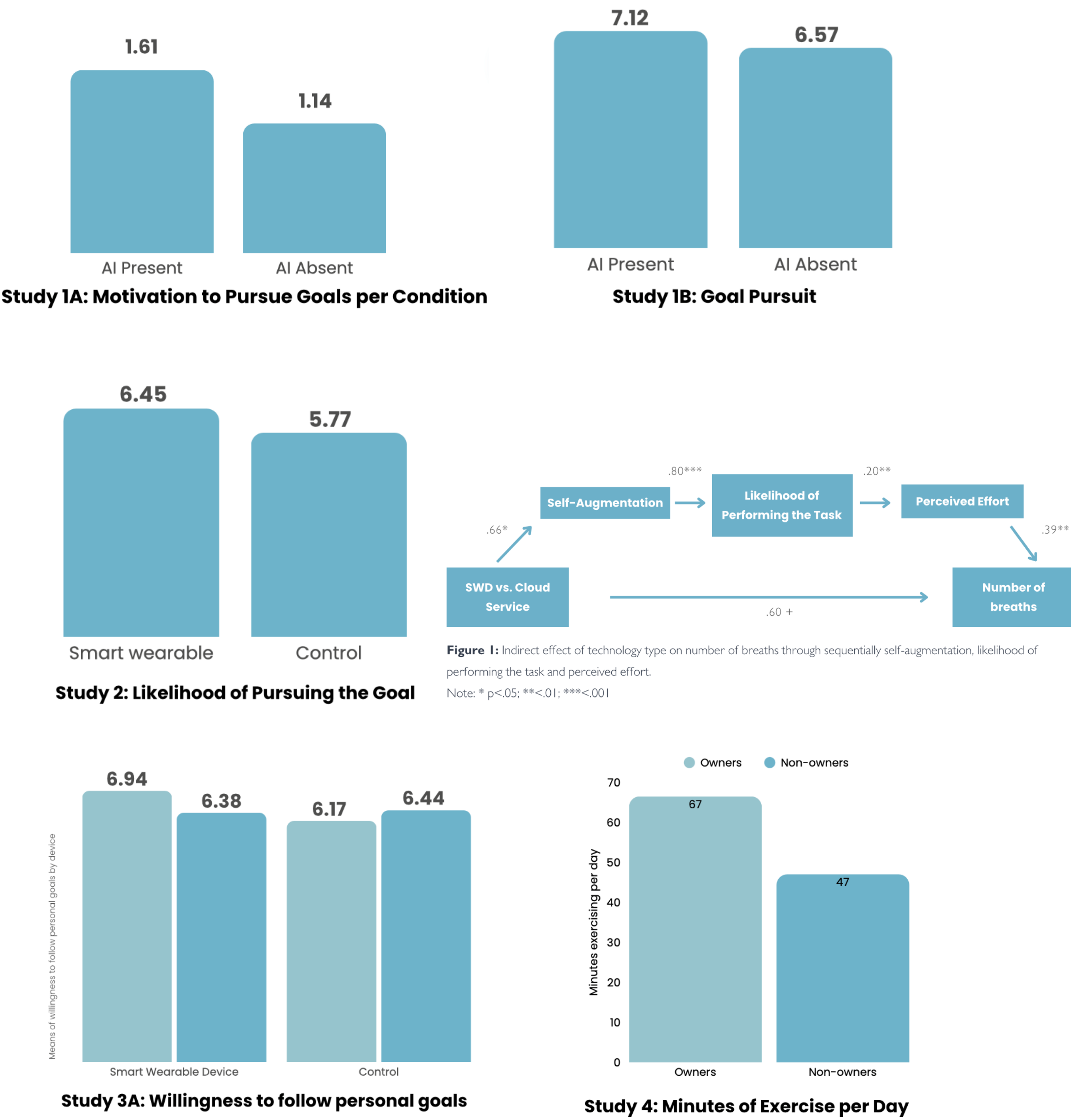
Studies 3A and 3B: Two 2x2 experiments (N = 383 and N = 372) show that ownership strengthens the motivational effect of wearable AI. Only when users personally owned the device did wearability increase self-augmentation and goal-directed motivation.

Study 4: Quasi-experiment (N = 166) comparing real owners and non-owners of smart wearables shows that owners exercised more. Results held using both Heckman correction and propensity score matching, supporting real-world behavioral impact.

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RESULTS



DISCUSSION & CONCLUSION

Many consumers struggle to stay motivated in pursuing personal goals. This research shows that smart wearables—equipped with an AI, wearable, and personally owned—can symbolically enhance users' perceived capabilities, leading to greater motivation to pursue goals. Across six studies, we introduce self-augmentation as an underlying mechanism: the belief that integration with AI wearables improves one's ability to achieve goals.

Our findings contribute to assemblage theory and extend encloded cognition, demonstrating that meaning transfer can emerge not only from static garments, but from interactive technologies whose symbolic power depends on user perception and relational context. These devices act as perceived partners in goal pursuit.

For practitioners, our findings suggest that marketers and developers should emphasize symbolic empowerment over technical precision. Positioning wearables as identity-augmenting companions rather than mere trackers, may better sustain user engagement. In addition, promoting ownership cues (e.g., personalization, exclusive insights) is relevant, as non-owned devices (e.g., access-based models) may dilute motivational effects.

While our research focuses on motivation, future studies could explore possible downsides, such as over-reliance on devices or self-blame when goals aren't met. Examining how self-augmentation varies across different abilities (e.g., emotional vs. physical) or contexts (e.g., healthcare, productivity) could also broaden the impact of this work.

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*This research is also co-authored by Diego Costa Pinto (NOVA IMS), Diogo Hildebrand (CUNY, Baruch College), Gurpreet Dhillon (UNT), Natália Pacheco (IPAM) and Marcia Herter (ISEG).

