What Makes It Mine? Exploring Psychological Ownership over Human-AI Co-Creations

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ABSTRACT

As generative AI (GenAI) rapidly evolves, human-AI collaboration emerges as a prevalent new working style. However, within this collaborative pipeline, multiple stakeholders are involved besides the user and the system itself, raising controversy around ownership over co-creations. In this paper, we explored everyday users' sense of ownership toward human-AI co-creation, aiming to provide insights for practitioners on future GenAI design to enhance user experience. We identify three primary factors associated with people's perception of psychological ownership towards human-AI co-creation and systematically analyze individuals' approaches to assessing these factors. The findings serve to inform strategies for facilitating an appropriate sense of ownership for productive and safe usage of GenAI tools.

CCS CONCEPTS

• **Human-centered computing → HCI theory, concepts and models**.

KEYWORDS

Ownership, Digital Ownership, User Perception, Human-AI Collaboration, Human-AI Co-creation

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1 INTRODUCTION

The integration of AI technology has catalyzed transformative changes across different industries around the world. Particularly in the context of computer graphics, generative AI (GenAI) tools, such as Midjourney[1], Stable Diffusion[2], and DALL-E[3], represent systems capable of producing new content in various forms of media based on machine learning algorithms [4] in response to user prompts, allowing to iteratively adjust both the content and the style of the outputs. These tools have opened new horizons for human-AI collaboration, creating a massive market [5] and attracting vast numbers of users, including professional artists through the market's acceptance and value of these creations[6].

The collaborative nature of the output creation raises many ethical challenges [7, 8], among which the question of proper allocation of ownership over the creative outcomes remains particularly controversial. The question of ownership is further complicated by the involvement of multiple stakeholders, e.g. data owners, AI developers, and AI companies. For instance, the involvement of owners of training data utilized by GenAI models [9] raises significant issues related to copyright and intellectual property rights, like authorship, fair uses, and moral rights [8]. Moreover, GenAI service providers can control the behaviour of the tool, data collection, and data use [10], contributing to the ownership dynamics.

The concept of ownership can be considered from two conceptually distinguished perspectives [11, 12] - legal ownership, enforced by law, and psychological ownership, reflecting the sense of possession over the target. To develop legal frameworks for AI-generated works, researchers explore the key issues in copyright law and proprietary rights that arise at different stages of artificial creativity [13]. However, the effective design of GenAI tools requires an understanding of not only legal but also psychological ownership over the co-creations. The importance of psychological ownership as a sense of possession toward a tangible or intangible target[14] for the tool design is grounded in several considerations. First, it contributes to the service use patterns due to its dual cognitive-affective nature of psychological ownership, i.e. one's cognitive ownership awareness through the intellectual perception of the target is tightly coupled with an emotional component of ownership [14, 15]. Furthermore, the support of the appropriate sense of ownership prevents legal issues, particularly given that people tend to unconsciously appropriate others' ideas as their own [16]. Correspondingly, psychological ownership is increasingly recognized as one of the key aspects for fostering productive and safe usage of GenAI tools [17].

Previous research demonstrates the heterogeneous structural characteristics of the construct psychological ownership across various domains [14, 18–20], e.g. the dimensions of self-identity (as an aspect of a "representation" of an owner), autonomy (the ability to independently initiate decisions and actions), self-efficacy

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(reflecting the competence to perform a task and to control the target), etc. However, while the construct of psychological ownership has been studied in diverse domains [21–24], the understanding of the sense of ownership over human-AI co-creations and their differences from human-human collaborative co-creations is still in the very early stages [25–27].

To contribute to the understanding of the structure of psychological ownership in Human-AI collaboration, in this paper, we investigate the factors associated with the development of people's sense of ownership over human-AI co-creations. We collected 24 Reddit discussion threads, comprising 152 individual posts from 101 unique users, and thematically analyzed these data to identify the factors systematically discussed in relation to the sense of ownership. We found three major themes of such factors: (a) Involvement, including (a.1) Originality of the Co-creation and (a.2) Level of Contribution; (b) Sense of Infringement; and (c) Notion of Legal Agreements, stated as the perceived consensus of ownership written or determined in the legal documentation. We then analyzed our findings in the context of the five structural dimensions of psychological ownership suggested for digital possessions [20]. We discuss how discovered factors reflect the structural dimensions of psychological ownership and propose the corresponding design considerations for the development of GenAI artistic tools.

2 RELATED WORK

Psychological ownership refers to a state where individuals form a psychological bond with objects, leading them to perceive these objects as "theirs" [28–30]. The key to distinguishing psychological ownership from legal ownership lies in its dual cognitive-affective nature, as proposed by Pierce et al[14, 15]. Psychological ownership involves both the intellectual acknowledgment of an item as one's own and a deep emotional connection to it[15]. This duality demonstrates that psychological ownership extends beyond mere legal entitlements, encompassing feelings of attachment and personal value[14, 31]. For example, exploring the emotional component of ownership, Beggan [28] showed that individuals tend to assess an item more positively when they perceive it as theirs. Furthermore, psychological ownership is widely recognized as a multidimensional construct [14, 18, 19]. Originally [14], the dimensions that impact the extent to which an individual experiences psychological ownership included self-efficacy, belongingness, and self-identity, which was later expanded to include territoriality [18], accountability [18], autonomy [19], and responsibility [19].

In the digital realm, discussions around ownership have surged as technologies continue to integrate into people's daily lives. Digital products encompass a wide range, from a combination of a physical configuration with digital features like mobile phones to completely intangible entities such as e-books, streaming music, or other online services. Watkins et al. [32] have elucidated the complexity of ownership over digital virtual goods, arguing that ownership and possession are distinct in this context, with digital ownership often fragmented, as users' access to digital products must typically agree to legal contracts that often grant only partial usage rights. Micken et. al [23] further explored the way consumers access and interact with digital offerings, highlighting differences in ownership, access, and control, as well as the dynamics among these concepts between users and product firms. Zhu and Cho [24] outlined the relationship between ownership and access, revealing that participants' perceived importance of digital rights correlates with consumers' ownership perceptions. However, their work evaluates the ownership perception through rights to possess, such as rights to use, to manage, and to transform, focusing more on the behaviours reflected by ownership perception, rather than the development of psychological ownership. Similarly, Kiburi et. al [33] delved into smartphone ownership among individuals with opioid use disorders in low- and middle-income countries, finding significant associations with employment status, education level, and substance use. However, their study primarily focused on identifying factors that affect the "physical" possession of digital products rather than the personal "affection".

In their early work, Kuzminykh and Cauchard [20] Synthesized literature on digital possessions and suggested that five structural dimensions of ownership should be particularly considered within the technological domain: (a) **Self-Identity** when the target becomes an extension of one's identity, representing personal values or characteristics[34–36]. (b) **Self-Efficacy** reflecting one's belief in their ability to control and effectively use the target, emphasizing mastery and competence[35, 37]. (c) **Autonomy** reflecting one's independence to make decisions regarding the target[35–37]. (d) **Territoriality** reflecting the owner's instinct to mark and defend the target as one's own, safeguarding against perceived threats or infringement[34, 35]. (e) **Accountability and Responsibility** reflecting a sense of duty to care for the target and related performances, and be accountable for its outcomes[35, 36].

Currently, the ownership over specifically digital co-creations has been explored predominantly from the legal ownership perspective [8, 13], particularly in light of controversy associated with difficulties in distinguishing the content produced by GenAIs and humans[38]. However, some examples of early interest in the understanding of psychological ownership over co-creations include research by Diakopoulos et al. [39] who found that creators often perceive psychological ownership after they felt they made substantial changes to previous work, echoing the relationship between one's investment and perceived ownership [15]. In the recent work, Draxler et al. [26] explored the attribution of writing ownership and found the "AI ghostwriter" effect, where people often attribute ownership to the AI when using personalized AI-generated texts, but do not formally claim AI as the author. Similarly, an interview study with automatic journalistic content-creating organizations showed that algorithms are not seen as authors; instead, credit is attributed to journalistic organizations or individuals involved in algorithm development [27].

Despite our current limited understanding of the nature of psychological ownership over human-AI co-creations, there is a growing recognition of its importance for designing AI applications. For instance, Chung et al. [40] identified AI challenges related to conflicts of territory, where AI sometimes overwrites what users have manually created or edited in the collaborative process, potentially diminishing users' sense of control over the system. Similarly, studies by Chang et al. [25] showed the worries of GenAI users regarding the sense of ownership, especially concerning the novelty of the works, and demonstrated the associated practices, e.g. using Google image search on generated artworks to ensure originality.

Correspondingly, Weisz et al. [17] suggest facilitating users' sense of ownership as one of their guidelines for designing AI applications to foster productive and safe usage. Indeed, we see diverse efforts in incorporating sense of ownership into tool designs. For example, to enhance users' sense of involvement in the co-creation process, Wu et al. [41] designed a working pipeline encompassing a prompt weighting tool with real-time modelling feedback to let users rate which output image suits best their input text. Bennet et al. identified four aspects of autonomy in HCI, including Self-Causality and Identity, Experience and Materiality, Time-scales, and independence or Interdependence[42], prompting discussions on how GenAIs should be designed to balance agency and autonomy for human benefit. While some scholars, like Reframer[43], advocate for designs for agentive AIs to support a bi-directional exchange of creativity, other scholars, e.g. Sarkar [44], argue that AI should be viewed solely as a tool or an instrument, given the manual labour involved in its operation.

Human-AI co-creation challenges not only traditional notions of creative ownership but also the ownership of digital possessions. The role of AI in augmenting, extending, or even challenging human creativity makes it a unique creation collaborator but necessitates a discussion on ownership attribution to parse out how humans formulate and determine a sense of ownership over collaborative outcomes with non-human entities. Thus, in this work, we investigate the self-reported factors associated with the development of psychological ownership over human-AI co-creations.

3 METHOD

To investigate the factors associated with psychological ownership, we collected public online forum discussions focused on people's perceptions of digital ownership regarding human-AI co-creation. We chose to collect discussions and rationale provided in natural conversations within online discussions, to better capture the breadth of potential factors and the diversity of public responses triggered by these discussions. We then thematically analyzed the collected data following the qualitative thematic analysis outlined by Braun and Clarke [45], as thematic analysis focuses on capturing and interpreting participants' experiences, perceptions, and views.

3.1 Data Collection

The data was sourced from Reddit[1], an online platform for news aggregation, content rating, and social forum discussions. While content submission is restricted to registered users, Reddit's privacy policy ensures that much of the information shared on the platform is publicly accessible, even to non-account holders. As stated by Reddit, by using the services, the registered users are sharing the information created publicly and freely. As a result, the posts extracted from Reddit represent publicly available information contributed by users.

We searched for the relevant content utilizing a predefined set of key search term combinations, including but not limited to, "ownership" and "human-AI co-creation," "ownership" and "AI-generated art/text/work," "ownership" and "in human-AI collaboration," among other synonymous expression combinations. Our final dataset included 24 discussion threads, comprising 152 individual posts. Within these posts, 101 users were identified by their usernames, and user accounts associated with eight single posts were deleted, giving approximately 101 unique users contributing to these discussions.

[1]https://www.reddit.com/

3.2 Data Analysis

The analysis was performed predominantly by two graduate-level authors trained in qualitative coding. The coding was conducted collaboratively, followed by consultation with the additional members of the research group to address any disagreements. The two researchers participated in the initial coding process, each individually extracting themes from the data. Each post was assigned an order number, and then, using an online open-sourced grouping tool, the numbers from 1-152 were randomly assigned to four groups, each group with 38 unique numbers. One researcher analyzed the posts associated with numbers from the first and third groups, and the second researcher - the posts from the second and fourth groups. The themes were then iteratively discussed, restructured, and organized hierarchically. Once the coding scheme was completed, each researcher re-coded the responses according to the finalized code book for reliability by switching the post groups. The coding process was conducted through Nvivo 14.

4 RESULTS

Our analysis surfaced three main themes of factors associated with developing users' sense of ownership towards human-AI co-creations, which are **(a) Involvement**, defined as the contributions input in the process of creating co-creations by different parties, including both from the human side and AI itself; **(b) Sense of Infringement**, refers to the psychological feelings of violating one's rights aroused during the process of creating co-creation or caused by the final output results (i.e. the co-creation pieces); **(c) Notion of Legal Agreements**, stated as the perceived consensus of ownership written or determined in the legal documentation, such as copyright law or service term contract. The construction of people's psychological ownership over human-AI co-creation is illustrated in Figure 1.

4.1 Involvement

We first found that, when considering the sense of ownership, people systematically discuss the amount and the quality of involvement during the co-creating process from AI Users (who prompt the AI to perform and produce the co-creation), Owners of Training data (whose work has been fed to the AI to train the model), and AI Owners (either AI developers who create the model or the service providers).

There are two sub-themes that have been identified within the theme of Involvement: **(a) Originality of Co-creation**, which reflects the presentation of transformation or uniqueness in the co-creation, and **(b) Level of Contribution**, which is defined as the degree of effort committed to the process of creating.

4.1.1 Originality of Co-creation. We found that people often discuss the originality of co-creation as a sub-factor contributing to

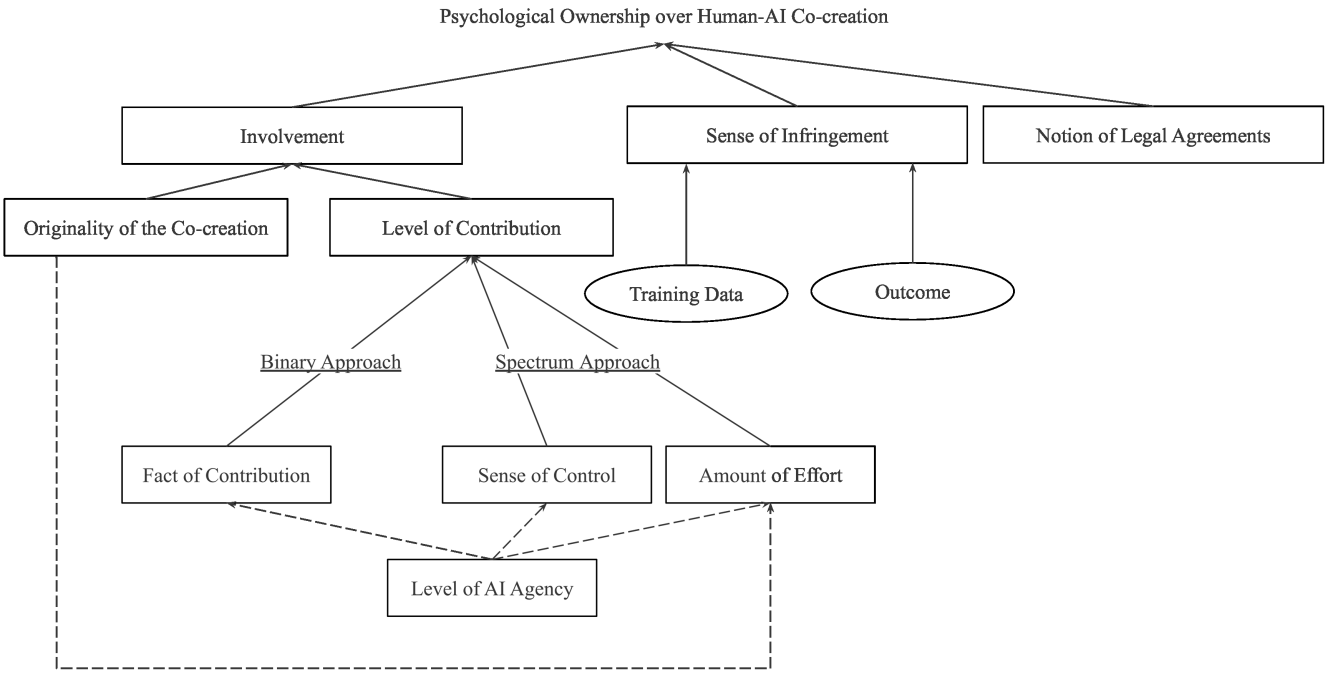

Figure 1: The Development of People's Psychological Ownership over Human-AI Co-creation

determining human involvement. As exemplified by one commentator, *"Pressing a button on a camera (an analogy made by the commentator) isn't the thing that gives rise to copyright… There needs to be the 'personality' of the author present within the work to meet a 'threshold of originality.'"* People perceive that a person legitimately owns a piece of creation if it reflects one's original idea, suggesting an extension of self-identity.

However, sometimes, people use this factor as an indicator to evaluate the sufficient amount of effort for a user to qualify as the owner of a co-creation, e.g. *"There is no copyright on the 'pure' AI creation, as there is no creative human input. But if you add said input by modifying the artwork sufficiently, then you might receive copyright for your version of the artwork."* Thus, in this case, the commentator assesses the adequate amount of effort by evaluating if the co-creation shows the user's originality, further determining whether the level of contribution makes the user the owner of the co-creation.

4.1.2 Level of Contribution. The level of contribution is another crucial sub-factor in the determination of one's involvement. When people assess the Level of Contribution, two approaches emerge from the data. The first, **Binary Approach**, refers to perceiving the ownership based on whether there is a contribution or not from a specific involved party: *"[I]f an entity uses an artist's work and gets income from it, then a % of that money should go to the artist. [W]e can argue about the %, and it should be flexible anyway."* People adopting this approach assign ownership to every party that they feel has any contribution to the creating process, including human parties and AI itself. In this case, the commentator argues that the owners of training data share ownership over the human-AI co-creation to some extent due to their input contribution.

The second approach is the **Spectrum Approach**, which means people perceive ownership not purely based on the fact of the contribution, but the sufficiency of the contribution: *"If you modify the image/text/code after enough, I think it might be [qualified] enough to say that work is copyrighted."* When people use this approach to perceive the sense of ownership, they advocate two measurements to assess the level of contribution: **the Sense of Control in the Process** and **the Amount of Effort**. The sense of control in the process is measured by whether AI users perceive that the decisions made can influence or predict the outcome, e.g. *"I think it'd depend on how much control the prompt gives you, but no one knows."* On the other hand, the amount of effort is measured by users' time spent or steps involved in the process reaching a certain threshold: *"If you fix a certain amount of generated stuff using your own skills, thus doing some labor-then you are the author. The 'amount' is [questionable], but for now[,] anything, that was created by a prompt - not yours. You don't own it."*

Interestingly, when people talk about the level of contribution, they seem to assess how much AI is involved by referring to the perceived **Level of AI agency**. In other words, people determine AI involvement based on whether they see AI as a tool used by people or more as an anthropomorphic entity that possesses certain human characteristics during the creation process, e.g. *"A crucial point*

here is that AIs are not doing anything very different from humans. Humans, in their lives, see art. And when that human produces art, their prior experience of art contributes to their new work." From the data, we found that the higher the AI agency perceived by people, the less the human involvement will be valued, potentially due to the more AI engages in the process, the less human autonomy one can feel and the less effort an individual can devote.

However, comments show that it is possible that an AI is perceived as both a tool and an anthropomorphic entity from the same person's perspective. For example, one person argues that collaborating with AI to produce work is like *"... giving your prompt to a human[,] and them painting something..."* Therefore, AI users should not hold ownership since they do not contribute to the creation. The commentator further states that AI owners should have ownership of the co-creation because *"... the software cannot hold the copyright...[,]"* so that an AI is ultimately a property possessed by the original service provider who may willing to release certain rights through a legitimate term contract, suggesting that the assessment of the level of contribution is complex and subjective.

4.2 Sense of Infringement

Our analysis showed that the sense of infringement can be triggered, first, based on **Training Sources**, i.e. people think the use of training data might infringe on the data owners' rights: *"I think ultimately judges will rule that anything made via an AI that had copyrighted data in its training will result in the output not being eligible for copyright."* Also, it can be associated with the **Outcome**, when people are concerned that the co-creation piece resembles the pre-existing works: *"I don't think corporations like Disney will allow the prompt 'cartoon mouse with white gloves' to spit out Mickey mouse and ultimately be copy written by the prompter. "*

Notably, the contributing factor of originality of the co-creation plays a significant role when people assess the infringement. However, there is a nuance between these two factors. The difference can be revealed by the following two examples: *"I think ownership should relate the 'unlikelihood' that another person would create what you do. The more unlikely it is that another person would make equivalent design choices, the more you should own it,"* and *"In terms of the [Mickey] mouse thing, if the output has elements of something that is protected, then that is infringing and Disney can sue."* The first quote shows that originality reflects the perception of personal identity, whereas the second quote shows that the sense of infringement reflects the consideration of violating consequences, which might be associated with the feeling of accountability.

Some commentators indeed question the ownership attribution concerning accountability and make statements which challenge the current blurriness over whose responsibility for the potential negative consequences brought up in such human-AI collaborative context, e.g. *"Today AI is just software. But if your automated AI self-driven car hits a human, [whose] fault is that?... I'm not buying a car that can hit someone and [they're] gonna blame me..."* Even though our data do not reveal the consideration of accountability as a significant factor, it is worth noticing such a point of view since responsibility and accountability is an essential dimension that constructs and/or reflects one's sense of ownership.

4.3 Notion of Legal Agreements

Our data demonstrates that many people perceive a sense of ownership based on external validation, such as what they think the copyright suggests, e.g. *"I think ownership should go to the person who entered the prompt. This is the most reasonable option and tracks most closely to the way copyright currently works,"* or what is stated in the term contract, e.g. *"If you create it through some service, then it's written in the terms of that service. Usually owned by that service and licensed to you."*

Although the notion of legal agreements tightly bonds with the concept of legal ownership, in the current legal space, there has not yet been a concrete and clear regulation made to guide individuals in a human-AI collaborative environment[46, 47]. Therefore, the statements about legal agreements in the data are not facts but people's perceptions. The data can only reveal that when assessing digital ownership, people sometimes rely on outside authoritative validation to support their argument. Also, people often use the terms "ownership," "authorship," and "copyright" interchangeably in the context, while these terms have nuances in explanations and interpretations.

Moreover, when people perceive ownership concerning the notion of legal agreements, they might take the originality of the co-creation and level of contribution into account, as the factor of involvement applied in many legal cases when determining ownership attribution.

5 DISCUSSION

In this paper, we explored the factors contributing to the development of the users' psychological ownership over human-AI co-creations. There are three major factors including (a) Involvement, (b) Sense of Infringement, and (c) Notion of Legal Agreements, and for involvement and sense of infringement, there are different approaches for assessment and determination. The results highly reflect the five dimensions of psychological ownership consolidated by [20] from a literature review across the psychology and HCI domains, serving as additional argument for the significance of the discovered factors in shaping people's perceptions of ownership.

For instance, in the context of a human-AI collaborative environment, when people perceive ownership, they consider the originality of the co-creation, reflecting the ownership dimension of *Self-identity*. From the user's perspective, the sufficiency of the transformation or the adequacy of uniqueness reflects their creative power and remarks one's involvement; therefore, contributing to constructing the sense of ownership. From the points of view of the training data owners or other creators, they approach the conversation from a different angle and question the potential infringements caused because of the lack of originality, which tights to another dimension of the development of psychological ownership later discussed in this section. The perception of *Self-efficacy* seems to mirror the creation process rather than the workpiece itself, i.e. whether people believe they have the competence to control how the outcome is produced. Our study found, for instance, that for AI users, the sense of control is a key indicator of the level of contribution, i.e. adequate user contribution should be considered in the way that decisions made during the process can influence or predict the outcome. Due to the characteristics of GenAI, the dimension

of *Autonomy* is essential to the discussion of ownership perception, as AI encompasses traits of humanness in terms of creativity. Indeed, we found that when people account for AI involvement in the discussions of perceived ownership, they rely on the level of AI agency, perceiving AI as a tool, an anthropomorphic entity, or somewhere in between. The dimension of *Territoriality* was often reflected in the concern of infringement based on its training source and the outcome. People often mentioned that the credit of owners of training data should somehow illustrated in the process to clarify the perceived psychological ownership to avoid the claim of territoriality over the target from training data owners.

Understanding users' sense of ownership is crucial for improving the current AI systems to enhance user experience, which is directly reflected in Weisz et al [17] suggestion for AI systems to promote users' sense of ownership, as it appears to be able to encourage the interaction between the user and the system, thus, fostering the productivity of the tools. Beggan [28] identified the "ownership effects" through a set of studies, showing that people find a target more attractive when they think they own it. Although some studies explored users' sense of ownership in AI applications [25, 40–43], they often focus only on partial aspects of psychological dimensions and lacked a comprehensive understanding in specifically human-AI collaborative use cases. Yang et al [48] systematically explored the role of psychological ownership and corresponding ownership markers in collaborative working environments, however, the study limits its findings to human-human interactive group workspace. By exploring the factors that contribute to the development of the sense of ownership and people's corresponding approaches to assessing these factors allows us to bridge the research gap and provide potential direction for practitioners to enhance the user experience by fostering an appropriate sense of ownership towards human-AI co-creations.

Firstly, we suggest providing users with transparent information about the data collected and used to facilitate a better assessment of creations' originality and reduce concerns about infringement arising from training data, as highlighted in the work by Chang et al. [25]. To implement this, AI systems could incorporate features that allow users to access detailed metadata about the training data used for generating human-AI co-creation, including its sources and how it was utilized in the model. This transparency empowers users to clarify the distinction between contributions from other parties engaged and users, thus, enhancing users' sense of ownership, particularly in terms of manifesting their self-identity. Moreover, from the perspective of the training data owners or other creators, attributing credit to them can be effective in marking their territoriality regarding their input in co-creations. Also, for AI owners, assigning partial contributions to owners of training data facilitates the fair usage of AI tools[8].

Second, AI systems should incorporate mechanisms to manifest higher level of users' involvement, as the level of contribution serves as a key indicator of ownership. For instance, the prompt weighting tool designed by Wu et al. [41] in their human-AI collaboration pipeline exemplifies a method for enhancing users' sense of ownership by promoting the sense of control in creation. Nonetheless, our study reveals that assessing the level of contribution involves multiple considerations, including the fact of contribution, the sense of control in the process, the amount of effort, and the level of AI agency. For instance, to address users' amount of effort, AI tools could implement a feature that tracks and visualizes the users' input iterations throughout the co-creation process, such as, having a form of progress timeline that displays each iteration during the process alongside the users' input prompt at each stage, visualizing users' involvement and contribution.

Additionally, people generally do not attribute ownership to non-human entities[27]. Despite AI sometimes being viewed as possessing anthropomorphic traits in terms of its creativity[43], in practice, designers and developers should re-enforce the instrumental characteristics of AI to amplify human autonomy in the creation process. Guo et al [49] identified the impact of using AI assistants in creative work on people's perception of psychological ownership. Across all conditions, interacting with an AI assistant significantly reduces the users' sense of ownership over their ideas compared to ideating alone, and they advocated careful design considerations for future AI-supported brainstorming tools. Hence, we suggest that AI tools should reduce the system's perceived humanness. For instance, practitioners may limit the use of conversational output by GenAI systems to interact with users when drafting user experience content.

Moreover, to mitigate conflicts between AI agency and human autonomy[40], AI systems should prioritize transparency and user control in interaction design. For example, AI systems could provide users with granular control over the creative process, allowing them to customize parameters based on preferences. Additionally, the system could offer explanations and justifications for its creative decisions, increasing users' sense of control.

Furthermore, given that laws and policies around the topic of ownership over human-AI co-creations are still evolving [46, 47], AI systems should implement robust legal frameworks to protect users' rights and facilitate fair collaboration considering ownership attribution. This could involve incorporating licensing pipelines with owners of training data and other creators to ensure fair use and prevent the sense of infringement; thus, building the human-AI collaborative environment and fostering the community.

In this paper, we explore the factors associated with psychological ownership over human-AI co-creation and propose the suggestions above to promote users' sense of ownership, particularly regarding system design. However, the interpretation of these factors remains open to scholars within the domains, and the design suggestions that we made in this section are some potential directions that could be further explored.

6 LIMITATION

Although our study provides valuable insights into the future GenAI design and development, there are limitations to consider. First of all, our study relied on data from Reddit may not capture the full diversity of perspectives, as users from a single platform may not represent the general population. Second, the relatively small sample size of 152 posts from 101 unique users limits the generalizability of our findings. Third, the analysis of qualitative data relied on researchers' subjective points of view, and alternative interpretations of findings could exist. Future research around the topic should consider larger and more varied data sets to enhance the robustness of our results. Despite these limitations, this work contributes

to understanding people's perception of psychological ownership towards human-AI co-creation and offers design recommendations for AI practitioners regarding fostering users' sense of ownership when collaborating with AI systems.

7 CONCLUSION

The comprehension of psychological ownership over digital possessions remains at an early stage. In this paper, we focus on delineating the associated factors influencing individuals' development of psychological ownership of human-AI co-creations given the intensive integration of AI into daily production poses challenges to traditional creative processes. By examining user-generated discussions on the topic, we identify three main factors affecting people's perception of ownership, i.e. (a) Involvement, (b) Sense of Infringement, and (c) Notion of Legal Agreements. Furthermore, we elaborate on the varying approaches individuals employ in evaluating these factors and attributing ownership. The results of our work provide a systematic point of view for understanding people's development of the sense of ownership toward this specific target, and insights for future researchers to improve user experience regarding heightening the sense of ownership of the outcome in a human-AI collaborative environment.

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