Identity Amplification: A Human-centered Approach to Designing AI

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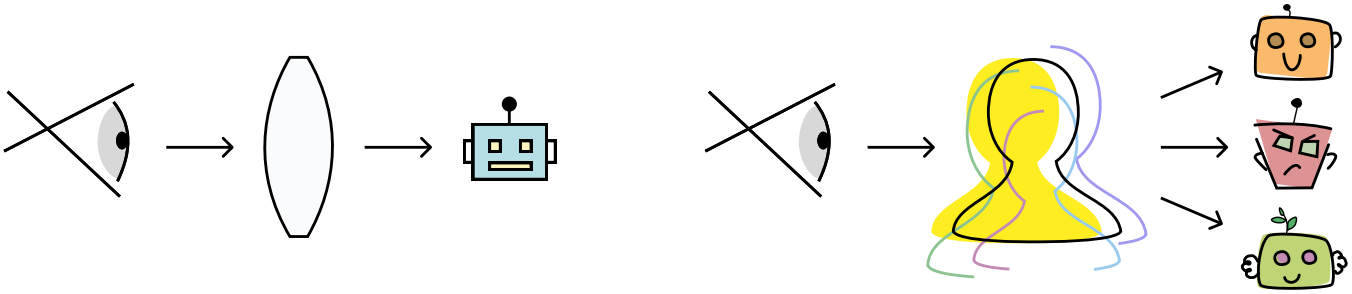

Figure 1: Traditional design approaches (left) often lead individuals to consider their perceptions through a single, implicit lens. Identity Amplification (right) invites individuals to look at AI systems and related values through multiple identities, encouraging them to examine how their diverse identity perspectives shape their values, experiences, and interpretations of AI systems.

ABSTRACT

With the rapid rise of AI tools and popularization of LLMs in the mainstream, mindful and intentional human-centered design is more important than ever. We propose *Identity Amplification* to supplement current human-centered design practices for AI systems. Our identity-based approach leverages the multifaceted nature of individuals by encouraging the surfacing of different perspectives within oneself. In explicitly acknowledging this complexity, our approach extends design considerations and supports the development of AI systems more attuned to the richness of human experience through amplifying an individual's multiple identities. In this work we describe how Identity Amplification can make progress toward designing beyond the user, to the community and society levels, as well as open a call to the research community to consider multiplicity of identity in developing these complex AI systems.

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CCS CONCEPTS

• **Human-centered computing** → **HCI design and evaluation methods**.

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1 INTRODUCTION

With the recent rise of large language models (LLMs), AI has become increasingly ubiquitous in both consumer and corporate usage and development [10, 41]. Industry investment continues to surge, reflecting the desire to keep up with trends and be at the forefront of this technological revolution [41]. Consequent to this wide proliferation, the integration of AI tools and systems has had a reach beyond traditionally tech-dominated spaces, permeating into a broad range of communities and domains. AI is playing a leading role in shaping a variety of different industries, ranging from luxury goods to visual art to playwriting to the medical field and beyond. This brings opportunities for new creativity, problem solving, and social impact, but it also raises urgent questions of how we design these complex systems.

The risks of AI are not the same as those of other previous technologies. Generative AI systems can flatten or misrepresent

minority groups [54], homogenize cultural expression, and diminish nuance [1]. These effects are amplified when design processes treat users as singular or static, reducing the richness of lived experience to demographic categories. Prior work has sought to address these, among other, challenges through design guidelines [55] and community-based participatory approaches [40]. Yet AI solutions and their development are often complex, much like the problems they aim to solve, and often present a new wealth of issues. Moreover, existing methods rarely provide an orientation to account for the multiplicity of perspectives that individuals themselves hold.

We introduce *Identity Amplification* as a human-centered design approach that leverages the multiplicity of self [8] to elicit more nuanced perspectives from participants. As an approach, it provides both a conceptual contribution, offering a framework for understanding how identities can be surfaced and activated in design processes, and a practical contribution, suggesting methodological strategies, such as identity-based priming and structured activities, that can be adapted by designers and researchers. We emphasize the role of Identity Amplification as a guiding orientation rather than a prescriptive method, while also demonstrating how it may be operationalized in practice and extended across user, community, and societal levels of design for AI.

This approach rests on the premise of multiplicity of self - the notion that each individual embodies a wide range of identities, values, and roles that shape how they see the world. By emphasizing these different parts of the self, Identity Amplification provides richer insights into how people think about AI systems and how we should design with these considerations in mind. Ultimately, this work shows how leveraging the wide range of perspectives people hold within themselves can help us design more nuanced, equitable, and sustainable human-centered AI systems. This is an approach that can help us also collectively understand the direction that we want to bring AI toward, something that is becoming increasingly important with the wide proliferation of these powerful systems.

The contributions of this paper are:

(1) An identity-based design approach, Identity Amplification, that leverages multiplicity of self and allows for varied perspectives when designing human-centered AI
(2) Recommendations on how to operationalize this design approach
(3) Foundation to bridge user, community, and society levels of design through considering multiple identities

This methodology can help us further define and understand the breadth and space of values and themes surrounding AI tools (e.g., privacy, surveillance). Our approach aims to go beyond the user, seeking to design at the community and societal levels. This work shows how we can leverage multiplicity of self, the constellation of perspectives we hold within ourselves, to better understand how we view technology and how we wish for it to shape society. Consequently, we may design better tools through better understanding human sentiments toward existing technologies as well as informing how we develop new ones. This approach helps us fill some of the gaps in prior work as well as bridge the divide between user, community and society levels of human-centered AI.

2 RELATED WORK

Our work builds on three major threads of research. First, we draw on human-centered design approaches for AI, which articulate principles and methods for aligning systems with human values. Next, we explore HCI research that engages identity and multiplicity in design, often through personas, participatory design, or value tensions workshops. Finally, we present theories of identity from psychology that describe multiplicity of self and demonstrate how activating different identities can shape cognition and decision making. While these works provide strong foundations, none offers a systematic method for eliciting and incorporating the multiple, sometimes contradictory, perspectives that reside within a single individual. Identity Amplification extends this body of work by combining insights from psychology and philosophy into design practice, offering a framework to surface multiple identities within individuals for use across user, community, and society levels. We describe these three areas and then explain how we bridge the gaps.

2.1 Existing Human-centered AI Design Methodologies

The HCI community has developed a variety of approaches to ensure that emerging technologies align with human values. Notably, Value Sensitive Design (VSD) provides a long-standing theoretical and methodological foundation for embedding values into technology design [7, 15]. Foundational work in guidelines for human-AI interaction has articulated key principles for designing effective and intentional AI systems [3]. More recent work has offered design principles tailored for generative AI applications [55], while others have emphasized the role of participatory and community-based practices to increase representation in design processes [40]. These efforts underscore the importance of designing AI systems intentionally, yet they primarily focus on surfacing group-level values or externalized perspectives. As a result, they often overlook the multiple, sometimes contradictory perspectives that individuals themselves carry. Moreover, as McGrath's classic framework on research methodology reminds us, all methodological approaches rest on normative trade-offs that privilege certain forms of knowledge while constraining others [42]. Current design methodologies for AI are no exception - by emphasizing consensus oriented or collective values, they risk sidelining the plethora of inner tensions, conflicts, and situated negotiations that describe how individuals feel about and interact with AI technologies.

2.2 Identity in HCI and Design

HCI research has also considered identity and multiplicity directly. Personas, for example, are widely used to represent user groups; recent work has emphasized the importance of accounting for multiple identities in persona construction [39]. Coenraad et al. have used participatory design with youth to support reflection on and enactment of emerging identities [11], while workshops have been developed to help designers navigate value tensions in collectively speculated futures [25]. Other work by Gordon et al. [21] explores incorporating dissenting voices into machine learning models, highlighting the subjectivity of lived experience when working with AI system. Speculative and phenomenological methods have also been used to elicit nuanced perspectives on user experience, surfacing

subjective and embodied dimensions often missed by conventional approaches [28]. Collectively, these studies highlight the significance of identity in design, but focus on community identities or interpersonal contexts, rather than systematically eliciting and leveraging multiple perspectives from within a single individual.

This body of work resonates with critical computing traditions that have long interrogated how identities and power relations are represented in design. Feminist HCI emphasizes pluralism, participation, and self-disclosure as key qualities for technology design [5], intersectionality highlights how overlapping systems of oppression shape lived experience and identity [13], and postcolonial computing calls attention to the cultural and geopolitical situatedness of technology development [31]. While, like our work, these approaches emphasize the importance of resisting essentialist or universal framings of identity, they typically operate at the level of groups, communities, or structural critique. Our work complements this trajectory by offering an approach for systematically eliciting multiplicity at the level of the individual.

2.3 Psychological Frameworks for Identity

Outside HCI, psychology offers a rich body of theories that conceptualize the self as multiple. Bromberg's notion of the "multiplicity of self" frames individuals as composed of many relationally activated selves [8]. Possible selves theory [38, 45] emphasizes identities we hope, expect, or fear to become, while social identity theory highlights how group membership shapes self-concept [52]. Narrative identity research describes how life stories are constructed and reconstructed over time [27], and values have been shown to operate as predictors of identity and action [30]. Empirical work demonstrates that thinking about multiple identities can increase creativity and cognitive flexibility [16, 17]. Across these theories, the self is never singular, rather it is prospective (possible selves), relational (social identity), storied (narrative identity), and value laden [30]. This literature suggests that individuals harbor a wealth of perspectives that can be intentionally elicited through framing and priming - an insight that has yet to be systematically integrated into HCI design methods.

2.4 Bridging the Gap

Together these works reveal both promise and gaps. Human-centered AI design methods focus on values and participation but do not address multiplicity within the individual as a means to inform broader community and society findings and insights. HCI research acknowledges identity and diversity but treats identity predominantly at the group or demographic level. Psychology demonstrates that individuals themselves embody multiple perspectives based on the identities they hold with meaningful implications for creativity and decision making. By combining these insights, Identity Amplification provides a new conceptual bridge, enabling designers to incorporate insights from exploring the elicitation of multiple identities into the design of AI systems.

3 FORMATION OF THE APPROACH

Identity Amplification is informed by various prior works in HCI and design (see Section 2: Related Works), a wealth of literature review in adjacent spaces (i.e., psychology and philosophy), and the authors' experiences with corporate collaborators and pilot participants. This approach is further inspired by intersectional work in psychology and philosophy that explores self-concept and identity, as well as multiplicity of self and perception, respectively. These theoretical foundations are complemented by the authors' multi-year collaborations with corporate partners and formative pilots with art students, which have provided opportunities to validate and iterate on the approach in practice.

In the subsections that follow, we detail the identity frameworks and pluralist philosophical orientations that inform Identity Amplification and explain how we iterated to build strategies for eliciting multiple perspectives from individuals.

3.1 Identity Frameworks

We utilize a range of identity frameworks that come from various areas of identity psychology. Identity is defined as one's sense of self defined by (a) a set of physical, psychological, and interpersonal characteristics that is not wholly shared with any other person and (b) a range of affiliations (e.g., ethnicity) and social roles [2].

3.1.1 Possible Selves. Markus and Nurius introduced the idea of possible selves which "function as the personalized carriers (representations) of general aspirations, motives, and threats and of the associated affective states" [38]. They present three possible selves: the self we are likely to become, the ideal self we would like to become, and the self we are afraid of becoming. This work also describes role models as possible selves to be emulated and hypothesizes that emotions are linked between these possible selves. For example, disappointment is a discrepancy between our actual self and our ideal self. We use this to design prompts that ask participants to imagine perspectives from their hoped for or expected selves. Additionally, we drew inspiration from the Oyserman and Markus [45] questionnaire as a basis for the sample questions we ask (see Table 1).

3.1.2 Social Identity. Social identity theory lays out the premise of group membership where individuals define themselves and are defined by others as a member of said group [52]. Given that different parts of us are activated at different times and within different communities, social identity provides rich grounds for exploring multiple identities. We adapt this by asking participants to take the perspective of a group membership that matters to them.

3.1.3 Values as the Core of Identity. A value is a concept which pertains to goals, transcends situations and guides selections or evaluations of behavior or events ordered by relative importance [30]. Values are identity predictors [30], thus we ask participants about their values to encourage new perspectives of an AI tool. We elicit values to uncover perspectives that might not emerge in more role-based identity framings.

3.1.4 Narrative Identity. Narrative identity proposes that one's identity follows "a narrative structure, realized in and through social interaction" [27]. Personal narratives are created by the individual and are reconstructed following events that occur in their life. Master narratives are pushed upon an individual externally, such as a national identity narrative that is pressed upon young people by the country they were born in. We encourage participants to

tell micro-stories about future AI use to surface narrative framings as inspired by other literature [56].

3.1.5 Relationships and Perspectives. Bromberg quoted Sullivan, stating "for all I know every human being has as many personalities as he has interpersonal relations" [8, 51]. Utilizing this framing, we propose questions that ask participants to consider a relationship that they hold dear and with that relationship in mind, ask them questions pertaining to the design of an AI tool. One such question might ask the individual to adopt the stance of a significant relationship (e.g., answer from the perspective of a parent or student) when reflecting on AI tools and design tasks.

3.1.6 Self-Attitudes. Kuhn and McPartland introduced a "Twenty Statements" framework, where participants were presented with 20 lead up statements starting with "I am ..." for the participant to then fill in [34]. It was observed that participants began by entering "consensual references", which are groups which are of commonsensical knowledge, including 'girl' or 'from Chicago'. However, after exhausting these, participants began writing "subconsensual references", which require interpretation to be precise, or are comparisons to other people. These included 'pretty good student', 'too heavy', and 'interesting'. These subconsensual references offer an opportunity for the participant's own types of identity that are not supported by the previous frameworks.

3.2 Philosophical Grounding

In addition to traditional HCI research and psychology frameworks on identity, our work is largely inspired by philosophical explorations of phenomena, perspective, and multiplicity of self. We further delve into how the lens through which we view the world greatly influences the output and at times can be more telling than the condition or object we are viewing itself. We further describe the philosophical groundings for seeking multiple perspectives through inducing and eliciting multiple identities within oneself.

3.2.1 Phenomenological Lenses. Kant distinguished between the noumenon (things as they are in themselves) and the phenomenon (things as they appear through our categories of understanding) [33]. Traditional user research methods carry with them an implicit default lens that shapes what aspects of identity are captured. Traditional surveys and interviews often reinforce this default, leaving other facets of the self uncaptured. Our approach seeks to elicit new lenses, alternate phenomenal frames, through which different dimensions of identity may come into view. AI design often assumes that user perspectives are unitary and can be captured in a single "phenomenal" response. But just as Kant argued that reality is mediated by categories of perception, a person's relationship to technology is mediated by multiple identities and lenses. This is further supported by work on ontologies in HCI by Haghighi et al. [26], which demonstrates how different ontological framings surface divergent possibilities in design, underscoring how each lens shapes what becomes visible and what remains hidden. For AI design, this means that eliciting only one perspective risks flattening identity into a one-dimensional account of experience. By designing for multiple frames, we can surface the layered and sometimes contradictory ways individuals relate to technology.

3.2.2 Perspectivism. Kant reminds us that our access to the self is always mediated by a lens and Nietzsche extends this further - there is no single lens that captures truth, but rather a plurality of perspectives, each revealing different dimensions while concealing others [43]. Our elicitation method builds on this perspectivist stance, inviting participants to articulate identity through multiple framings rather than through a singular, default mode of capture. For example, a participant might view an AI assistant differently when speaking from the perspective of an educator versus that of a student - both perspectives are valid, but neither alone captures the whole picture, and they may even be in contradiction with each other. In designing human-centered AI, this means resisting the assumption that there is one "ground truth" or definitive user perspective. Identity Amplification deliberately elicits multiple coexisting framings, offering designers richer, more nuanced insights than a single perspective could provide.

3.2.3 Multiplicity of Self. Hesse's vision of the self as a dynamic manifold rather than a monolithic whole also informs our approach. Where traditional instruments assume a static, implicit identity, Hesse portrays identity as a chorus of many selves, each surfacing differently depending on context. In Steppenwolf [29], he extends this vision with the image of the "Magic Theater", a place where countless selves are unlocked like rooms, each containing different moods, games, or seasons of life. This metaphor resonates with our approach, eliciting multiple perspectives can be understood as inviting participants to "enter different rooms" of their self, surfacing voices that are otherwise hidden.

Identity Amplification draws from this orientation by designing elicitation techniques that invite such plurality, treating multiplicity as a resource rather than a distortion to be resolved. For example, a participant reflecting on an AI system may articulate different concerns when speaking as an artist, a parent, or a citizen of the world - each voice expresses part of the individual's identity. In designing human-centered AI, this means resisting the urge to collapse diverse perspectives into a single "representative" account, and instead creating space for contradictions, tensions, and the coexistence of many selves. Furthermore, eliciting multiple identities is not merely about cataloguing contradictions, but also about expanding the range of orientations - from fear to play, critique to joy - that can shape how individuals engage with technology.

> "... every ego, so far from being a unity, is in the highest degree a manifold world, a constellated heaven, a chaos of forms, of states and stages, or inheritances and possibilities."
> *Hermann Hesse, Steppenwolf, 1927*

3.3 Iteration with Collaborators

The development of Identity Amplification was not only theoretically informed but also iteratively shaped through engagement with diverse collaborators. Following a process loosely akin to grounded theory and thematic analysis [6, 9, 20, 49], we read widely across HCI, psychology, and philosophy, took analytic notes, and engaged in reflective discussions to synthesize recurring themes. These were gradually distilled into methodological scaffolds that we refined through cycles of trial and feedback.

We tested and iterated these ideas in multiple applied contexts. With a large luxury conglomerate, we conducted interviews around values and roles, followed by a group workshop that explored how different identities shaped participants' perspectives on AI. With a major automotive parts manufacturer, we facilitated sessions oriented toward societal-scale problems, using Identity Amplification as a frame for eliciting perspectives. We also piloted the method with a group of artists, whose responses underscored the need for scaffolding to move beyond default, field-specific framings of identity and toward more expansive, plural accounts of self.

Across these collaborations, we adopted a co-design stance, proposing techniques, listening to participants' needs, and iterating methods. This process allowed us to validate the flexibility of Identity Amplification across very different settings -commercial, industrial, and artistic- and to refine it as a framework that can operate across levels of user, community, and society.

Building on these theoretical, philosophical, and practical foundations, we now articulate the guiding concept behind Identity Amplification and the conditions for its use. We emphasize that this approach is a guiding orientation rather than a prescriptive method, intended to enrich design practice with more nuanced, multi-perspective insights.

3.4 Conceptual Orientation

As aforementioned, the purpose of using Identity Amplification is to garner more nuanced, richer, and broader user insights that can then be used to inform community and society-centered approaches, as well as be used to extrapolate to these levels. This framework is necessary to account for the nuanced lived experiences and perspectives that individuals carry within them, treating them indeed as multiplicitous beings rather than singular points.

When we do traditional surveys and interviews, often we ask questions from singular framings "e.g., how do you feel about AI being used in the classroom", but this really doesn't capture the wealth of feelings that one may feel about the topic. Some methods try to address this by introducing different framings, scaffolding, and approaches that get at more nuanced storytelling [35], but still the plethora of perspectives living within the individual often remain hidden, barring some exceptions of individuals who may be further attuned to their multiplicity. We propose providing additional scaffolding exactly to support this sort of reflection and perspectivism. This way, rather than users or participants reporting a snapshot of one of their perspectives from one part of themselves, they may report more comprehensively how they feel about the situation. For example, "From the perspective of the most important relationship in your life, being a mother, how do you feel about AI in the classroom?" may elicit a very different response than "From the perspective of making late-night edits to your CHI paper, how do you feel about AI in the classroom?". We extend this to consider that the context is important because of the identity and role that the individual takes on, more so than the circumstance, particularly given that the individual often does embody multiple and contradictory perspectives.

4 IDENTITY AMPLIFICATION IN PRACTICE

While Identity Amplification is fundamentally a conceptual orientation, it can be concretized into design practice through certain methodological decisions and techniques. In this section, we outline key design considerations, illustrate possible methods of implementation, and show how the approach can operate alongside existing frameworks. Our goal is not to prescribe a single method but to provide scaffolding that enables richer, multi-perspective engagement.

4.1 Design Decisions

Based on our literature review, iterations with collaborators, and formation of this approach we identify three design dimensions that shape how Identity Amplification can be enacted: the medium of priming, identity selection, and the degree of identity embodiment. We consider some of the trade-offs and possibilities for future exploration and manifestation of this framework.

4.1.1 Medium. We consider the substrate through which the identity priming takes place. Namely, it could be via text, audio, video, or even environmental stimuli. For instance, audio background soundtracks could prime cultural or affective identities (e.g., Italian music to elicit an Italian identity, soothing nature sounds to elicit a calmer state). Along these lines, graphical or video priming could accompany sound with different visuals that place the participant further in the context of their primed identity. Finally, environments could also be changed to elicit specific identities. For example, immersive spaces with physical props and even scent could be used in the priming process [44].

4.1.2 Predefined vs Open-ended. We also consider the difference between identity selection as predefined or open-ended for the participant to describe. Predefined lists can reduce participants' cognitive load and enable comparability across responses, but they also risk constraining expression, since concise lists inevitably fail to capture the full range of possible identities. Conversely, open-ended descriptions allow for participants to surface more authentic identities, but may not feel like a well-defined task, and rather one that is too widely scoped. Additionally, it could become difficult to code the findings to make broader conclusions and draw generalizable insights. A possible compromise may be a mix of the two: providing certain identities as predefined, or some as predefined categories with examples, and then allowing individuals to reflect on their identities themselves. A hybrid approach, providing illustrative categories while also leaving space for self-definition, balances these trade-offs and supports reflection. As Marsden and Pröbstor note, self-description often yields richer insights by giving participants a "looking-glass perspective" [39].

4.1.3 Embodiment and Engagement. Finally, elicitation varies in the degree to which participants embody and engage with a particular identity. At one end of the spectrum, minimal engagement may involve lightweight prompts such as selecting an identity from a list or briefly acknowledging a role (e.g., "as a writer..."). Such approaches are fast, low-effort, and useful when breadth of coverage is prioritized. On the other end, deeper embodiment requires participants to inhabit an identity more fully through sustained

reflection, narrative construction, or role-play. For example, participants might be asked to write a short story, imagine a future scenario, or speak from the perspective of an identity in dialogue with others.

Our early pilots suggest that deeper forms of engagement may produce more nuanced perspectives, but they also demand greater time, participant comfort, and facilitation. The extent to which the depth required to elicit meaningfully nuanced insights is yet to be explored and may vary greatly based on context. Consequently, a key design decision lies in calibrating the level of embodiment to the goals and constraints: lighter techniques can be effective for scaling across many participants, while deeper methods may be better suited to contexts where depth and richness of perspective are more desirable.

4.2 Techniques and Methods

Identity Amplification can be operationalized through a range of methods, each enacting the core cycle of priming an identity, inviting participants to embody it, and eliciting perspectives from that stance (see Figure 2). While the underlying structure is consistent, the medium and context of application shape how richly perspectives are surfaced. Below, we outline several ways to apply the framework, ranging from individual techniques to collective settings. Utilizing the psychology literature outlined in Section 3.1: Identity Frameworks, we also propose a set of example questions and framings (See Table 1).

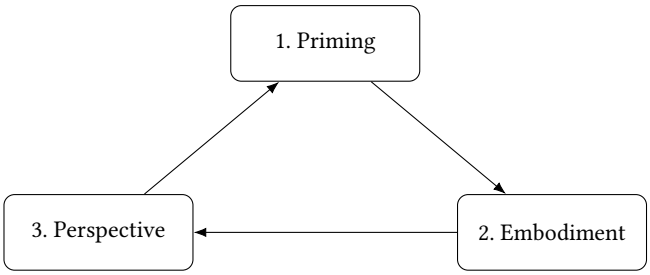

Figure 2: Identity Amplification Cycle. We begin by priming the individual with an identity, then they embody the identity, then they provide their perspective from that grounding.

4.2.1 Surveys and Interviews. Surveys and semi-structured interviews provide the most direct implementation of the Identity Amplification cycle. Participants are first primed with a prompt, then guided to adopt that identity, and finally asked to give their perspective on a technology from this stance. This method fits well with and complements traditional survey and interview techniques. Furthermore, it is comparable across participants, and suitable for both in-person and online studies. However, it offers limited depth compared to more immersive forms of identity engagement.

4.2.2 Journaling. Another method for implementing Identity Amplification is through journaling. This allows for slower, self-paced engagement with multiple identities - potentially even consistently over extended periods of time. Participants can respond to prompts in writing or with audio-reflection, returning over time to elaborate or reflect. Identity Amplification could be scaffolded here with lightweight LLM-based suggestions or prompts that nudge participants to inhabit different roles. Journaling is well-suited for contexts where privacy, depth, and sustained reflection are prioritized.

Literature Inspiration	Priming	Identity
Relationships ∝ Perspectives (Bromberg, 1996)	What is the most important relationship in your life?	Considerin relationshi
Possible Selves (Markus & Nurius, 1986)	Next year, you expect to be: Next year, you want to avoid:	From the p you expect From the p you are avo
Social Identity (Tajfel & Turner, 2004)	What group are you a member of that is important to you?	As a memb
Values as the Core of Personal Identity (Hitlin, 2003)	What is a value you believe is important?	With this v
Narrative Identity (Whitty, 2002)	Write a story about how you would like to see yourself in the next 10 years.	In 10 years'
Self-Attitudes (Kuhn & McPartland, 1954)	I am ... (×20)	Considerin

Table 1: Literature-inspired prompts for identity and perspective taking.

4.2.3 Chatbot. Conversational agents can act as interviewers, guiding participants through the Identity Amplification cycle in real time. This method offers scalability and adaptivity, as bots can probe deeper or adjust framings based on responses. Additionally, participants may feel more psychological safety engaging with sensitive parts of their identity with a chatbot rather than with a human interviewer. This technique also provides opportunities for participants to "dialogue" with their own multiple identities. However, bot-mediated elicitation requires careful design to avoid leading participants or flattening nuance through scripted prompts, or a myriad of other AI risks.

4.2.4 Photo-Elicitation. Building on psychological work with visual prompts [22], photo-elicitation uses images to surface identities and affective associations. For example, a participant might be shown a family photo or cultural artifact and then asked to adopt the perspective linked to that identity. This technique leverages memory and narrative recall, making abstract roles feel more concrete. Its strength lies in evoking identities that are difficult to articulate through language.

4.2.5 Workshops. We also foresee the use of Identity Amplification in group settings, such as community workshops. Here, participants bring multiple identities into dialogue with others, surfacing

tensions and resonances across individuals. Group dynamics can amplify social identities (e.g., being part of a professional community) or highlight divergences within shared roles. Workshops also generate artifacts, such as notes, sketches, or role-play scenarios, that can be revisited later to track how identities shift across time and context. While more resource-intensive, this format uniquely highlights how individual multiplicities seed collective negotiation.

4.2.6 Interaction with Artifacts. Across all modalities, artifacts of engagement (e.g., journals, interview transcripts, workshop sketches, or photo collections) play a crucial role in Identity Amplification. This resonates with the tradition of cultural probes, which introduced evocative artifacts into participants' everyday lives to provoke reflection and surface aspects of identity, values, and experience that might not emerge through direct questioning [18]. They allow both participants and researchers to trace how perspectives evolve across different identities and over time. Returning to these artifacts can deepen reflection, reveal continuity or contradictions, and support longitudinal analysis of identity multiplicity.

4.3 Techniques as Scaffolds

These modalities are not prescriptive recipes but scaffolds. Designers can adapt, combine, or hybridize them depending on context. What remains central is the orientation: treating multiplicity as a resource, and using methodological choices that surface, rather than flatten, the richness of human perspectives. In all cases, the methodological choice is less about which technique to use, and more about how to best leverage multiplicity of identity as a design resource to better understand the span of user and collective perspectives.

5 DISCUSSION

In this discussion we outline how Identity Amplification extends beyond a conceptual contribution. We consider its implications at three levels: designing specific technologies (e.g., agents and learning tools), supporting human reflection and collective dialogue (e.g., deliberative democracy, self-efficacy), and extrapolating to societal-level insights. Across these levels, the orientation toward multiplicity opens new design possibilities.

5.1 Applications to Technology Design

Identity Amplification offers concrete opportunities for informing the design of specific AI technologies. In particular, it can help designers move beyond static, one-dimensional representations of users to create more dynamic, multifaceted systems. We highlight two domains where this potential is particularly salient: the design of agent personas and the personalization of learning tools.

5.1.1 Defining Agent Personas. Agent design often relies on simplified personas (e.g., "the student", "the caregiver", "the advisor") that risk reproducing stereotypes or flattening complex experiences. Identity Amplification provides a structured way to generate richer, multi-perspective personas by eliciting and layering different identities within individuals. Rather than treating a student as only a learner, for instance, Identity Amplification can surface how their role as a peer, friend, or family member shapes their interactions. Relatedly, research on generative agents demonstrates how multi-character simulations benefit from richer internal models - Identity Amplification can provide a human-centered method for defining these models, grounding them in authentic and plural lived experiences. Recent work on social simulacra and generative agents has explored how large language models can populate virtual environments with autonomous, lifelike characters that interact with each other and with humans [46, 47]. While these systems demonstrate the potential of multi-agent simulation and the creation of personas has thoughtful grounding, the personas they instantiate are nevertheless often under-specified, relying on surface-level roles or designer-imposed scripts. Identity Amplification offers a complementary, human-centered approach: by systematically eliciting multiple identities from real participants, designers can ground agent personas in the plural, sometimes contradictory perspectives that shape human behavior. This can result in simulated agents that are not only more realistic but also more diverse in their orientations, providing richer, more inclusive testbeds for social interaction research and more responsive companions for end-users.

In short, our approach helps designers move from "flat bots" toward agents that are rounded, contextually aware, and more representative of the people they aim to simulate. This has implications for work such as GPTeach [37], where agents are used to simulate students for teacher training. In this case, more nuanced personas could better represent the diverse ways students approach learning and the surrounding relationships.

5.1.2 Personalized Learning and Metaphors. Identity Amplification also suggests new possibilities for personalization in learning technologies. By eliciting different identities, designers can tailor learning tools not only to a learner's abilities but also to the metaphors, narratives, and roles through which they make sense of knowledge. Research in the learning sciences has long emphasized the role of identity in shaping motivation and engagement [19]. Building on this, Identity Amplification provides a systematic way to elicit the metaphors and roles that resonate with different facets of a learner's self. For example, Jentner et al.'s work on narrative generation with minions, sheep, and fruit [32] illustrates how playful metaphors can reframe learners' relationships with material. Identity Amplification provides a systematic way to uncover which metaphors resonate for a particular learner by engaging different aspects of their identity (e.g., as a gamer, swimmer, or aspiring scientist). In doing so, Identity Amplification can move learner personalization toward identity-aware reframings that make learning experiences more meaningful and empowering.

5.2 Applications to Human Development and Interaction

Beyond uses in designing explicit emergent AI technologies, Identity Amplification also holds promise for supporting human growth, reflection, and interaction beyond the immediate context of AI design. By surfacing multiple, sometimes contradictory perspectives within individuals, our approach can serve as a tool for introspection, dialogue, and empowerment. We highlight three domains: reflection, deliberative democracy, and learner self-efficacy [4]. We believe that Identity Amplification is a powerful approach for helping design tools to facilitate progress in each of these domains.

5.2.1 Reflection. Eliciting multiple perspectives is not only useful for design, but also for personal reflection. When individuals engage with prompts that activate different identities, they are encouraged to surface tensions among values, roles, and aspirations that might otherwise remain implicit. This process, whether in structured interviews or journaling exercises, can help people recognize contradictions in their own thinking and identify deeper sources of alignment. In this sense, Identity Amplification may also function as a form of scaffolding for introspection. It creates space for individuals to articulate the plurality of their own experience and make sense of value conflicts. Such tools uniquely center the individual's multiplicity as a resource rather than a barrier.

5.2.2 Deliberative Democracy. Reflection on multiplicity also extends to interactions with others. Deliberative democracy research emphasizes the importance of surfacing assumptions and fostering mutual understanding across disagreement [14, 23, 24, 36]. Identity Amplification offers a method for doing so by helping participants see how their own positions shift depending on identity framings, and how this might also be true for others. Imagine the case where two individuals might share the same underlying value, but the manifestation is different and is sufficiently obfuscated to make it seem that there are incompatible values at play. Consider Fred and Romy who both self-report valuing growth. Fred is eager to use ChatGPT to help them grow. Romy is apprehensive about using ChatGPT because they're concerned it will limit their growth. Both hold the same underlying value, but their interpretation of the use of ChatGPT is not in agreement. What appears to be an irreconcilable disagreement is actually a divergence in how the same underlying value is framed. By systematically eliciting such differences, Identity Amplification can help participants identify common ground and recalibrate their understanding of others. This approach could thus serve as a tool for communication and translation in deliberative settings, reducing polarization and opening possibilities for consensus.

5.2.3 Stereotype Threat in Learners. Stereotype threat poses a persistent challenge in education. Notably, when negatively stereotyped identities are made salient, learners often experience reduced performance and disengagement [48]. Prior work has shown that affirming positive identities can help mitigate these effects and improve outcomes [12, 53]. Identity Amplification offers a complementary approach by systematically eliciting multiple identities and encouraging learners to engage with empowering facets of themselves. For example, consider a woman in a predominantly male CS class. In situations where gender identity is made salient, she may experience stereotype threat. Through Identity Amplification, she could be invited to reflect on her perspective not only as "a woman in CS", but also as a mentor to younger students, a problem-solver, or a creative thinker. By amplifying these identities, our approach may help learners reframe challenges through lenses that highlight self-efficacy [4] and agency, helping combat stereotype threat.

5.3 Extrapolation to Societal Level Trends

A central aim of this work is to expand human-centered AI beyond the individual user to the community and society levels. We argue that the multiplicity within individuals offers a microcosm of the tensions, contradictions, and pluralities that shape collective life. Rather than treating individuals as fixed data points to be aggregated into averages, Identity Amplification invites us to view each person as containing a constellation of identities, values, and perspectives. By studying this internal diversity, we can gain insight into the dynamics that also emerge at larger scales.

This orientation suggests an alternative to normative large-scale simulations that flatten difference into single trajectories. Just as societies contain overlapping and sometimes conflicting groups, individuals themselves embody competing values and roles. The characteristic facets, identities, and values of an individual may be structured just like individuals who then form communities, which then form society/ies.

As Bromberg's work on the multiplicity of self reminds us [8], individuality and collectivity are not opposed but mutually constitutive. To further support this, he cites Theodore Sturgeon's *More than Human* [50]:

> "Multiplicity is our first characteristic; unity our second. As your parts know they are parts of you, so must you know that we are parts of humanity."
> *Theodore Sturgeon, More than Human, 1953*

Our main thesis surrounding this claim is that by doing this kind of analysis of the individual we can extrapolate further and say something about society. This higher level is multidimensional, and therefore by better understanding our own individual multifaceted compositions we can better zoom out. In taking a step back we can maintain individuality and keep a regard for the wide variety, and not simply normalize. In sum, Identity Amplification offers a pathway to societal-level design insights that maintain nuance rather than normalize, and that treat the richness of individual selves as a resource for imagining more diverse and inclusive futures.

5.3.1 Unearthing Individual Value Tensions to Explore Collective Tensions. Along the lines of extrapolating individual level insights to societal level ones, we believe that exploring individual-level value tensions can inform us about community and society level value tensions. While we do not claim a direct mapping, examining the contradictions within a single person can reveal the trade-offs and negotiations that later surface in collective deliberation. Prior work has shown that individual tensions can serve as seeds for group dialogue and speculative work for implication design [25]. In work with our collaborators, we found that individual-level multiplicities indeed seeded and illuminated collective negotiations of values. For example, in interviews with a clienteling project manager at a large luxury conglomerate, we uncovered a recurring tension between relevancy and novelty. In subsequent workshops with the larger team, this same tension reappeared across multiple participants, shaping discussions and guiding collective decision-making.

These findings suggest that attending to the multiplicities within individuals is not merely a matter of richer user research, but also a strategy for anticipating societal-scale debates, as well as wider value definitions and negotiations. Identity Amplification can help surface tensions early, before they harden into polarized group positions, providing designers with opportunities to reframe, mediate, or design for negotiation. In this sense, the multiple voices within

individuals can act as microcosms of the plural voices within society, offering a valuable orientation for both AI design and broader social inquiry. Moreover, we believe these values and tensions could help inform the larger space of values at the society level.

6 LIMITATIONS

There are a few factors that could impact the quality and quantity of the perspectives we elicit. Namely, one's personal attunement with themselves could impact the ability to embody these different parts of self. Further factors such as varied life experiences could also increase or decrease the number of elicited perspectives, due perhaps to having more or less experiences or being more or less set in one's "default" beliefs. These challenges arise both from the nature of identity work itself and from the contexts in which the approach has so far been tested. Below we outline several important considerations.

6.1 Difficulty Embodying Nuanced Identity

In a pilot with student artists we found that some participants had difficulties embodying these more nuanced parts of their identity. Further, we discovered that there may be some amount of unlearning or relearning regarding identity, as some participants had very specific preconceived notions of identity. Given that our approach is non-normative and breaks down some of these prior assumptions, we suggest adding further scaffolding and warm-up techniques to help assuage the difficulties of interacting with identity.

6.2 Risk of Traumatic Recall

Another consideration for this approach is the risk of eliciting traumatic experiences. The methodology we propose is not meant to explore or understand participants' lives, but to get them to consider their own experiences as a means to get new perspectives on AI tools and technologies. However, when asking personal questions, especially narrative identity ones, there exists the danger of eliciting traumatic or unpleasant experiences which may be harmful to the individuals. We recommend extra care placed around the psychological safety and well-being of the participants while using this approach.

7 FUTURE WORK

Given the conceptual foundation of our work and its contribution as a new framing for human-centered design, we see several compelling directions of interest for future work. These span from further empirical studies and implementation of this approach to the exploration of broader implications. Below we outline directions that we believe can extend, challenge, and refine this approach.

7.1 Empirical Studies and Validation

Our contribution is predominantly a conceptual approach to supplement existing design methodologies. While our work with industry partners and within academia has provided us with practical grounds for this approach, we believe controlled and comparative studies are required to further evaluate effectiveness and test which identity frameworks are most generative in which contexts.

7.2 Extensions to Other Contexts and Domains

As explored in Section 5: Discussion, Identity Amplification suggests promise as an approach that may help us design emergent AI systems. Specifically, this approach could be used to build more nuanced, culturally sensitive, and rounded AI agents, personalized learning tools use identity priming to help students engage differently with material, or to combat stereotype threat, and a myriad of other high-impact applications.

7.3 Societal Implications

Beyond AI tutors or agents, could this framework surface richer perspectives and help us reconcile values and goals in the development of AI in other domains like healthcare, sustainability, or civic technology?

Can multiplicity within individuals indeed serve as a microcosm for societal tensions, helping us anticipate conflicts or tradeoffs at scale? How can Identity Amplification be combined with community-based design practices or deliberative democracy frameworks to inform collective decision-making? Is it possible to design large-scale participatory processes (e.g., with LLMs or social platforms) that preserve nuance rather than flatten it?

7.4 Open Questions

Finally, we close by highlighting some of the broader, more speculative questions raised by this work. What does it mean to design for multiplicity rather than consensus and how might this paradigm shift affect how we think about design? Can we create societal-scale design methods that, instead of normalizing, welcome contradiction and plurality? How can we ensure that the uniqueness of individual perspectives is preserved, even as we scale up to collective insights?

8 CONCLUSION

AI systems are rapidly shaping how people live, learn, and work, yet their development and deployment are riddled with serious challenges to society. This paper introduces Identity Amplification as a conceptual and methodological orientation for human-centered AI design. By treating multiplicity of self as a design resource, we provide scaffolds and techniques that help researchers and practitioners elicit plural, nuanced perspectives from individuals.

Rather than presenting a prescriptive method or a full empirical evaluation, our contribution lies in articulating a new design orientation and illustrating its adaptability across diverse contexts. Identity Amplification complements existing human-centered approaches by resisting reductive framings of identity, highlighting contradictions and tensions, and expanding the space of perspectives that inform design.

We call on the HCI community to explore how designing for multiplicity can enrich critical engagements with technology. In doing so, we can begin to create AI systems that acknowledge the richness of human identity, resist flattening difference, and open space for more equitable and sustainable futures.

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