Reimagining Misuse as Creative Practice: Impressions and Implications of Usage Norms on Digital Artists

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Abstract

Digital artists use creativity support tools guided by their ideas of "intended use" and therefore "misuse"—but what does misuse mean in creative practice? To discover what constitutes misuse and what creative contexts call for misuse, we interviewed 20 expert creative practitioners across eight visual art disciplines. We identify five sources of normativity which form conventions of misuse: traditional practices, educational institutions, industry norms, online communities, and tools themselves. We surface why artists defy norms and misuse creative software by exploring how software apathy affects tool engagement, how tool genealogies and personal histories impact artists' practices, and how artists prioritize practical and professional needs during the creative process. Alongside traditional definitions, we offer artists' individual perspectives on what misuse means and its relevance to their creative practice. By understanding artists as "mis-users," we present an opportunity to revise how we design for using and misusing creativity support tools.

CCS Concepts

• **Human-centered computing** → **HCI theory, concepts and models**; • **Applied computing** → **Media arts**.

Keywords

misuse, interpretive frameworks, creativity support tools, visual art

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1 Introduction

With the widespread use of computational tools for creative and artistic work across diverse disciplines and media, creative practitioners can have an intimate but sometimes fraught relationship with software. While tool developers can exert power and communicate ideas of intended use through interface design [36], *how* creative practitioners use tools may not always align with the visions of developers. Within other domains of HCI research, these gaps between developer intent and user behavior are sometimes attributed to problems of learnability [33], usability [43], a failure to meet user needs [45], or a mismatch in user expertise [50]. However, given the flexible and evolving nature of the creative domain, where unexpected or surprising outcomes are often desired [35], we hypothesize that circumstances beyond software interface design also motivate unexpected tool use. Moreover, the rise of digital art communities and industries as sites for learning and developing a creative practice also point towards social [32], cultural [27], and economic influences on tool usage from beyond the interface. The non-linearity and open-endedness of creative processes [48, 56] further complicate how tool developers, HCI researchers, and creative practitioners understand normative ideas of what their practices, tools, and communities ought to be. We find that all of these rich aspects of cultural, personal, and normative understanding of creative practice are tightly bound with the concept of "proper use," and so also with "misuse." The distinction between "use" and "misuse", however, is a matter of how behaviors are perceived against varying norms; in practice, "use" and "misuse" can be the same set of actions, interpreted in different contexts and by different practitioners. Given their subjective nature, then, how should we understand the roles of "use" and "misuse" in creative practice? How might practitioners' normative understandings of the "use" and "misuse" of their tools inform their practices, and vice versa? What might paying attention to "misuse" reveal about practitioner values, contexts, and behaviors?

To answer these questions, we interviewed 20 expert creative practitioners across eight visual art domains to investigate (1) how creative practitioners perceive misuse in their creative practice and (2) the contexts in which this misuse occurs. While grounded in visual art practices, our findings on misuse in creative practice comment holistically on creative practitioners, their tools, and their social, cultural, and economic contexts, providing lenses on misuse which clarify each of these dimensions. By examining ways in

which tools influence creative practitioners' beliefs of misuse, we envision a direction of HCI research that studies how practitioners misuse tools just as thoughtfully as it studies how they use them.

This paper contributes an understanding of what creative practitioners perceive as misuse and why creative practitioners misuse their tools. Through a thematic analysis of misuse among 20 creative practitioners, we derived five major sources of normativity cited by artists to define misuse. Across the widespread impact of these norms, we discovered three main contexts which cause practitioners to defy norms and misuse tools: software apathy, preserving practice genealogies, and practical needs for artist-audience transactions. Finally, from practitioners' interpretations, we present seven themes of what misuse personally means to artists, including perspectives lacking belief in misuse at all.

We discuss recommendations for creativity support tool (CST) research that encourage a more inclusive vision of creative "use" motivated by artist-centered perspectives on what contexts and influences of power construct misuse. Furthermore, we consider how HCI researchers can refocus their definition of tool users and usability to engage, rather than passively accept, the institutional, social, and cultural influences that our misuse study finds core to practitioner experiences. We conclude by reflecting on the political work and creative potential of misuse.

2 Related Work

Research on CST usage has largely focused on single-context tool affordances, domain-specific needs, and further enabling novices and experts rather than behaviors which exist outside of or counter to developer intentions [20, 21, 49]. In our study, we explore the term "misuse" as a behavior of creative practitioners towards creativity support tools. We position our findings in connection to qualitative literature studying CST use and research on the design and practice of appropriation in hacker and DIY communities.

2.1 Understanding Creative Tool Use and Practitioners

This work aligns with previous studies of CSTs that look beyond the technology to investigate how external contexts [14] and values [35, 44] influence users. For example, Chung et al. consider how artists fit CSTs into their existing support networks [11], while Nicholas et al. argue CSTs should amplify existing expert strategies [42]. We build on work investigating the intersection of power and CSTs [36] to consider how power dynamics create perceptions of "correct" tool use, and subsequently misuse, in creative practices, while also recognizing the agency "users" are capable of as "makers"—as agents capable of more than simple "use" [51]. This study uses a lens of misuse to extend existing research that considers creative practitioners' perspectives, values, and processes in HCI.

2.2 Misuse, Appropriation, and Hacking

This paper takes the stance that misuse is a *normative* concept: misuse implies proper use. We draw on Ahmed's interpretation of "use" to include both something one does but also a relation and a stance: "Use is a relation as well as an activity that often points beyond something... to use something points to what something is for" [3].

This work investigates both dimensions: not only understanding why artists use or misuse tools, but also their perceptions of usage norms, providing a diversity of artist interpretations of perceived misuse.

One interpretation of misuse familiar to HCI is appropriation, which Eglash defines as the adaptation or reinvention of products [17]. Appropriation is not only an opportunity for technical innovation, but also a movement away from institutionalization, signaling a democratization of design. Researchers have explored how designers appropriate limited tools in collaborative workplaces [47, 60]. An interpersonal understanding of appropriation considers communication as a means to share use cases [31] and as the purpose of appropriation itself [52]. While researchers have proposed ways to design for appropriation [5, 16, 40, 57], Dix points out this is an oxymoron: that we might allow, not expect, unexpected use [15]. This work examines how, why, and in what contexts practitioners appropriate their tools, especially to resist authority. Studies of appropriation that center creative practitioners include those that identify the "everyday creativity" present when households [59] or communities adapt objects in unexpected ways. Salovaara et al. explore appropriation as a fact of our daily lives as simple as using a phone as a mirror [53]. Participants in LARPs [54] and steampunk communities [4] introduce unexpected technologies, using appropriation as a vector for creative exploration and personal empowerment. In contrast, this work centers creative practitioners' own perceptions regarding their own appropriation of authoring tools.

Hacking and DIY are often discussed as forms of appropriation which focus on transformative or additive adaptation: opportunistic practices [25] defined not only by their methods but also their communities and values [10]. Post-consumer reuse, for instance, can transfigure e-waste into a robust and affordable design resource [39]. Galloway suggests these practices are a way to "reclaim authorship and ownership of technologies and the social and cultural worlds in which we live" [22]. We draw inspiration from this literature to identify and understand behaviors along similar veins of reclamation and opportunity.

Central to concepts of "appropriation" and "hacking" is normativity: a notion of "standard" to stand against. Previous work has explored methods such as disassembly [37], destruction [18], breakdown [29], disorientation [8], ambiguity [23], and counter-functionality [46] to reveal the opportunities for empowerment and moments of playfulness possible when engaging with alternatives to standard practices. Costanza-Chock's work on design justice highlights the political dimension of misuse as a form of empowerment and possibility for self- and collective governance, as distinct from technosolutionism [13]. We build upon this prior work that challenges normativity in design, considering the kinds of normative tensions that surface in creative practice.

3 Methods

Studies on use often focus on needfinding and usability, structured to identify pain points and subsequently develop technology to meet those needs [34]. In contrast, this study adopts a different strategy to target *misuse*. Rather than gathering evidence to propose solutions, we conducted contextual inquiries and interviews to elicit

#	Age	Gender Identity	Primary Practice (Years of Practice)	Software Tools (Years of Experience)	Type of Artist
P1	23	Woman	Illustration (10-20)	Procreate (3)	Hobby artist
P2	25	Non-binary	Illustration (10-20)	Procreate (2.5)	Part-time freelance/self-employed, educator
P3	21	Woman	Illustration (6-10)	Procreate (5)	Part-time freelance/self-employed
P4	24	Woman	Illustration (6-10)	Procreate (6)	Full-time freelance/self-employed
P5	31	Non-binary	Illustration (10-20)	Clip Studio Paint (6)	Hobby artist
P6	23	Woman	Illustration (6-10)	Clip Studio Paint (2.5)	Hobby artist
P7	36	Non-binary	Illustration (6-10)	Clip Studio Paint (1), Photoshop (7), Cinema4D (7)	Full-time freelance/self-employed
P8	21	Woman	Illustration (6-10)	Photoshop (8)	Part-time freelance/self-employed
P9	38	Man, Non-binary	Animation (10-20)	Dragonframe (13), After Effects (20), Blender (8)	Full-time freelance/self-employed, educator
P10	56	Woman	Animation (20+)	Dragonframe (15)	Full-time in creative field, educator
P11	32	Woman	Animation (6-10)	Animate (14), After Effects (10), Rive (1)	Full-time artist in non-creative field, part-time freelance, educator
P12	24	Man, Woman, Non-binary	Graphic design (3-5)	InDesign (5)	Full-time in creative field, part-time freelance
P13	22	Man	Graphic design (3-5)	Photoshop (4), Illustrator (4)	Full-time in creative field, part-time freelance
P14	21	Woman	Photography (3-5)	Lightroom Classic (4), Photoshop (5)	Part-time freelance/self-employed
P15	54	Man	Photography (20+)	Corel ASP (3)	Hobby artist
P16	22	Man	Film making (6-10)	DaVinci Resolve (2)	Part-time freelance/self-employed
P17	37	Man	Film making (10-20)	Premiere Pro (2), Final Cut (15)	Full-time freelance/self-employed
P18	21	Woman	Game design (6-10)	Unity (5)	Part-time freelance/self-employed
P19	23	Man	Type and layout design (1-2)	Robofont (1), InDesign (3)	Hobby artist
P20	23	Woman	UX design (3-5)	Figma (4)	Hobby artist

Table 1: Self-reported study participant demographics from survey.

interesting behaviors and beliefs from practitioners, and to form a critical and generative perspective on creative processes, rather than to identify pain points.

3.1 Participants and Recruitment

We conducted interviews with 20 creative practitioners across eight visual art domains who use CSTs. Participants were based in the United States (15), Canada (1), Australia (1), New Zealand (1), Ireland (1), and Portugal (1). 11 identify as women, six as men, and five as non-binary or genderqueer; participants were able to report more than one gender identity. The mean participant age was 28.9 years old. See Table 1 for details on each participant's age, gender identity, practice, tools, and occupation. Participants were recruited from the authors' existing networks and social media outreach (Reddit, Facebook, Instagram, X) and were selected through screening survey responses for a diversity of age, practice, tools, and creative skill level. Our goals with this design were to (1) recruit for breadth to observe behaviors across a variety of practices, (2) recruit for depth with selected practices (illustration, animation) in order to compare within them, and (3) prioritize experienced and expert practitioners, with a minimum of one year of experience in their practice, to focus on developed processes and perspectives.

3.2 Interview Protocol

We developed a semi-structured interview guide with a set of required questions, prompts for contextual inquiry [7], and optional questions. Each interview was conducted remotely over Zoom, with one or both of the first authors, and recorded and transcribed for analysis. During the interview, participants shared their screens to demonstrate and describe their processes. Participants were asked to prepare one or more works for screen sharing. We asked questions regarding their practice and influences and discussed specific observations to confirm our understanding of participant behaviors and responses. Interviews lasted 73 minutes on average. Participants were compensated for their time with a $20 USD gift card. All participants consented to a recorded interview, to sharing their workspace and artwork during the study, and to potentially being contacted later for media records release, under their terms, for any artwork or screen captures they allowed us to use in this paper. The study was approved by our institutional review board.

The largest portion of each interview session was framed broadly around a contextual inquiry to understand participants' practices. For this initial portion, we did not explicitly introduce the term "misuse," to avoid eliciting existing negative connotations or imposing the idea of an established "misuse" definition. We asked participants about their background in creative practice, to show us a workspace, and to walk us through their process, while noting down and probing into any parts of creative practice that participants indicated as unorthodox or improper, e.g. when participants used descriptors like "weird," "wrong," "poor practice," or "cheating." This allowed us to naturally elicit participants' ideas of good and bad practice within their software processes to uncover what they constitute

as misuse. We then explicitly introduced the term "misuse" in the last twenty minutes of the interview and discussed points of self-perceived incorrect or non-normative software use which arose during the contextual inquiry, the origins of these perceptions, as well as what "misuse" personally meant to practitioners.

3.3 Coding Process

We conducted an inductive thematic analysis [9] of the video recordings and transcripts, guided by these research questions: (1) *What do creative practitioners perceive as misuse?* and (2) *In what contexts does creative misuse occur?* After each interview, the author who directed it wrote a theoretical memo to document initial impressions of themes and participant behaviors. Each of the first authors coded 10 of the 20 interviews in two passes using MaxQDA [1]. The first pass was an open coding phase where we associated short phrases or keywords with segments of the transcripts. In the second pass, we formed themes from these initial codes. Finally, we swapped interviews and coded based on the second pass themes, ensuring that both first authors coded each interview. Authors met three times during the interview period to share codes and iterate on the larger themes and findings conceptualized from the data. We ended data collection after reaching theoretical saturation [24].

3.4 Author Positionality

Both first authors of this study are expert artists who have personal experience with the content discussed in the findings, and five of the six authors maintain traditional and digital creative practices. We brought our perspectives as artists and backgrounds in creative practice to participant interviews and our interpretation of the data.

4 Findings

Our interviews revealed practitioners' experiences with misuse through their creative processes, personal genealogies, and external influences. We first offer an overview of five sources of normativity which structure participants' perceptions of misuse as non-normative behavior (4.1). We trace opportunities for perceived misuse through practitioners' software-apathetic creative processes (4.2). We identify past experiences and cultural histories (4.3) as well as external constraints (4.4) shaping practitioner values. Finally, we explore personal impressions of misuse in practitioners' creative processes (4.5). As we explore contexts around misuse, we work within shifting definitions for misuse that may contradict between practitioner definitions, collective norms, and across various sources of normativity; this subjective friction demonstrates how perceived misuse is complicated by competing and evolving standards.

4.1 Sources of Normativity Influencing Individual Perceptions of Misuse

Drawing from Li et al.'s definition of normative ground as a structure that unavoidably shapes a tool user's ideas, goals, and actions [36], we present five categories of influence on participants' perceptions of norms and standards: traditional practices, educational institutions, industry, online communities, and tools themselves. Practitioners most commonly cited these five categories when revealing who or what structured their beliefs of "correct" creative
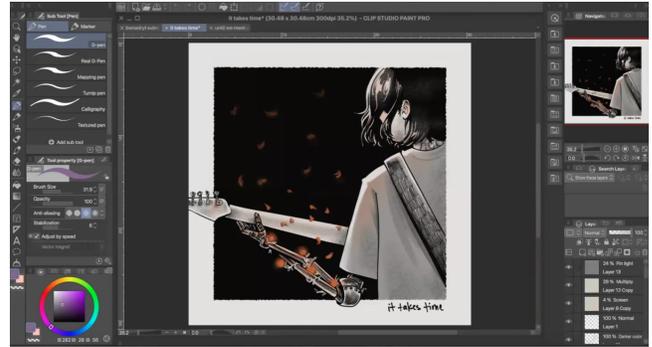
Figure 1: P6's illustration style, where they replicate the feeling of traditional sculpting techniques in Clip Studio Paint by beginning with a black solid fill and carving out shapes using the eraser tool.

software use. Some practitioners indicated the authority these categories had by discussing their non-normative use as "sacrilegious" (P12) or "embarrassing" (P2, P20). In section 4.2 and below, we broadly define misuse as a creative practice against these five artist-reported sources of normative authority.

4.1.1 Traditional Practices. Nine of 20 digital artists (P1, P2, P6, P9, P10, P11, P12, P13, P14) spoke on their backgrounds in traditional art, which continued to inspire their process, techniques, and aesthetics. Participants P1, P2, P6, P10, and P12 cited traditional art practices as an influence in what procedures they employ in their art-making, as well as a cultural canon that the art community could draw values and inspiration from.

For instance, one of P6's digital illustration styles involved "etching" away filled-in sections with the eraser tool to create lines and shapes (Fig 1), which they compared to "carving out" the subject while sculpting. They discussed how: "the 'correct process' kind of thinking ... comes ... from the traditional process... I think people will emulate it in digital forms." In this way, practitioners mimicked these traditional art methods and styles when developing processes for creative software.

P2 shared that although the relative newness of digital art allowed more freedom in defining one's own process and style, mixed applications of digital and non-digital illustration might receive criticism. "Traditional" art forms, in P2's opinion, contained "more academic and ... institutionalized rigor" than digital art mediums, which are still developing a comparable "canon," and learning them requires contending with a significant "canonical weight." P2 also discussed how audiences may judge digital paintings based on the values of traditional painting, regardless of whether the practitioner has traditional training.

Even when digital tools offer techniques and styles not possible or convenient in non-digital practices, traditional art experiences and impressions appear to set strong norms for how practitioners "should" use software and how digital art is assessed.

4.1.2 Educational Institutions. 10 of 20 participants (P1, P2, P4, P7, P10, P11, P12, P13, P14, P20) described how educational institutions imbued impressions of legitimacy into the processes and tools

they taught students to use, even for those who did not attend art programs themselves.

For instance, P20 described the impact of their introductory courses on their 3D modeling practice, feeling the need to "try, at the very least, to uphold those very basic foundational standards." Because these courses were their first exposure to creative software, failing to meet these requirements seemed to make future work impossible: "If I don't uphold those standards, then as things get more complicated, how am I going to survive?"

P2 and P10, who are both art educators, shared that their curriculum often determined which software tools and practices students adopted, even if better alternatives for a student's individual needs existed. For instance, P10 described Adobe's subscription model as "really problematic" and felt concerned that because they had to teach it, students would feel obligated to use Adobe tools exclusively in the future.

P4, a full-time art vendor who did not attend art school, initially did not seriously consider an art career because they "always thought you had to go to an art school to be considered an artist." They would hear older artists they admired "reiterat[e] what their professors were saying" on social media. When students echo their learnings to peers, they extend the reach of educational standards past the walls of institutions, establishing norms of what kind of artist or art-making can be legitimate.

For these participants, formal arts education carried standards of which tools to use and how to use them, regardless of whether they had personally been a student.

4.1.3 Industry. 10 of 20 participants (P4, P11, P12, P13, P14, P16, P17, P18, P19, P20) described industry standards as largely non-negotiable in choosing software as a current or aspiring creative professional. For participants situated within industry, creative processes and outcomes were influenced by a combination of client needs (P13, P20), company-specific practices across and within teams (P11, P13), and the exclusive trends and culture of the industry as a whole (P12, P19).

P13 expressed the importance of using Adobe Photoshop and Illustrator as industry standard tools. This was particularly important during collaboration, as feedback will "always be in the Photoshop or Illustrator ecosystem." Similarly, P18 felt motivated to move on from making games in PowerPoint and Adobe Flash to an industry-accepted tool like Unity in order to develop "more official" games. Widely enforced industry tool expectations can make individual work illegitimate and collaborative work impossible if a practitioner chooses an alternate tool.

While operating within these norms, practitioners expressed frustration over how the companies building tools control and limit their creative practice. P12 described how Adobe's cloud-based products which manage resource access and collaborator sharing "dictate" correct use, preventing users from being able to "do whatever you want." These forces of control create "a monopoly within the industry and within ways of making" (P13), generating a "vacuum" interested only in consumerist topics (P12).

Industry standards impose restrictions on what tools and modes of use are acceptable for both current and aspiring creative professionals, which allows the companies behind those tools to control the shape of creative practice.

4.1.4 Online Communities. 18 of 20 participants engaged in online communities, finding peer support (P4, P17, P18), educational resources (P1, P4, P5, P6, P7, P9, P11, P13, P17, P18, P19, P20), and inspiration (P2, P4, P17, P18) that informed their own practice. Some participants (P4, P8, P11) also encountered pressures and norms surrounding tools, process, and artistry formed by their online communities.

12 of 18 participants self-reported learning from online communities, including community forums for specific creative practices, videos or blogs, and resources or tools shared by peers on social media. These online resources collectively establish norms of "correct" use.

Participants were inspired by observing other creators' processes for both their aesthetic style and tool use. Participants watched speedpaints (time lapsed screen recordings of the artists' canvases) even though many of these videos were produced for entertainment and not explicitly educational. P11 felt frustrated about the declining practice of accurately portraying creative processes: "A lot of artists... share [their process] very superficially... like the Instagram reels of 'watch me paint this.' They're just erasing and wiping to the new stage. But that's not how you actually did this." By sharing heavily-edited processes under the pretense of being informative, artists can impose unrealistic, performative expectations for what creative practice looks like. At an extreme, these videos might imply that anything other than effortlessness is a result of misuse.

Outside learning resources, online communities can be a source of encouragement from other artists. P4 felt inspired to draw by a Twitter group chat where fandom artists organically discussed illustration ideas. Similarly, P18 appreciated online communities as a place to find creative collaborators and "one of the best parts" of their practice. When artists connect positively online, they have the opportunity to develop shared ideas about practice, as well as their own ideas of what kinds of use are standard or exciting.

In contrast, P8 explained how online communities could exert negative pressure by easily producing "an echo chamber of sorts." Growing up, they saw others online saying "you need to use this [tool]," leading them to believe they were "not an artist" without conforming to these expectations. P11 also expressed that artists on social media cast judgment on certain processes. For example, "a lot of rhetoric on art Twitter or art TikTok and Tumblr" claims that using 3D models as drawing reference is "cheating." As P12 summarizes, "my art practice has been dictated by what other people have said is acceptable," in large part due to the rise of online art forums.

Online platforms can be a site of inspiration and community, while at the same time imposing pressure and expectations. Through both positive and negative interactions, online spaces form norms around how tools ought to be used and how to misuse them.

4.1.5 Tools Themselves. Nine of 20 participants (P6, P7, P8, P9, P10, P11, P12, P18, P20) discussed how they perceived intended use based on how companies designed and marketed their tools.

P9 described an awareness of how companies will "design" and "build" software for a certain purpose. They discussed how Adobe Animate "was initially built by Macromedia as a [...] graphical web design development software" and became an animation suite "by accident, not by design," when animators discovered that frame by

frame animation was possible within the software. P8 described how they "make use of a tool for anything other than its intended purpose," noting how Photoshop is "mainly used for editing photos but everyone [uses it] for drawing or digital art." P20 said, "I'm assuming [the creators] make the software for whatever its intended purpose is... but as a consumer of that product... I could use it for whatever I choose to if it meets the needs."

Some participants (P17, P18) shared that they look to interface design to perceive a tool's intended purpose. P18 wanted to draw assets for their animations within Adobe Flash, but realized that the software developers were designing for users to import assets from other programs in the Adobe ecosystem because the drawing tools available in Flash were extremely limited. P17 felt that Clip Studio Paint "is more made for illustration" while Photoshop is "more for photo editing," despite sharing many similar features, because the respective interface designs allowed certain features to be more or less visible.

Through industry fit, company marketing, or interface design, these participants perceived an "intended use" from the developers of their creative software, which guided their perceptions of what their tools were "designed" to do.

4.1.6 Misuse as Defiance of Sources of Normativity. Practitioners' artistic processes are shaped by norms imposed by sources of authority, including but not limited to traditional practice, educational institutions, industry, online communities, and tools themselves. With this understanding, we broadly define **misuse as behavior that defies one or more sources of normativity**. In the following sections, we adopt this definition to identify contexts in which misuse occurs and explore participants' personal interpretations of misuse.

4.2 Software-Apathetic Creativity through Misuse

While developing their practices, participants demonstrated misuse when their creative goals were more important than normative standards around software choice or use, expressing apathy towards software. Whereas Hsueh et al. presented creative tools as interacted *through*, and not *with* [28], for software-apathetic expert practitioners, misuse is creative work *despite* tools. When tools misalign with artists' creative needs, artists engage in misuse to maintain creative practices de-influenced by the tool's normative ground [36].

Learning software for creative work is an idiosyncratic, incremental process: 13 of 20 participants described their learning as "experimenting," "working it out over time," and using "trial and error," rather than following rigid educational structures. As P19 recalled, learning creative software necessitates "fiddl[ing] with things until you figure out how to do it;" experimentation engenders misuse whenever the practitioner-specific process of "figuring it out" misaligns with sources of normativity such as educational tutorials or developer manuals. Because artists favor tinkering over "reading the manual" [58], they prioritize the artistic needs of their active projects or overarching practice, rather than worrying about using software "correctly."

Once practitioners identify which parts of a tool are useful to their practice, they are often apathetic about exploring further; 16

of 20 participants engaged with software as-needed, or "at the bare minimum." Although lack of use is not inherently misuse, intentionally restrained engagement can be perceived as resistance against the pressure artists feel to constantly "take advantage" of every digital convenience and resource at their disposal. Practitioners engage in misuse when they refuse to learn new, "better" methods and opt for their personal, alternate processes.

For some, "staying in [their] comfort zone" (P4) or "not digging in" their tools further (P19) felt adequate to their creative practice despite what sources of normativity might urge. For example, P2 shared how despite downloading many custom Procreate brushes from artists online, they preferred the habitual comfort of the default brush "99 percent of the time." Slower and manual alternatives to streamlined digital processes can also be "fun:" P1 expressed how they did not explore Procreate's blend modes in part because they enjoy the physical motions of drawing the effect themselves, "even if [they] don't get it right the first time." Demonstrating restraint towards software can even be a key part of one's creative practice, as P10 described the importance of "not us[ing] everything... just because I can," preserving the "hand of the animator" in defiance of industry expectations to move digital animation towards realism. Tool developers design features to establish easier, more flexible, or otherwise better ways to create digital art [55]; artist-created resources and industry norms similarly create community standards of how digital art could or should look. However, practitioners have reasons outside the tool that make them unconcerned with these methods that are ostensibly "better." Pursuing comfort, fun, or creativity through manual processes becomes misuse when practitioners resist the technical solutions and creative directions that sources of normativity present.

Similarly, practitioners looking to expand their software mastery through community resources are motivated by their creative goals, rather than an adherence to software norms. Eight of 20 participants (P3, P4, P7, P13, P14, P16, P17, P19) reported learning techniques from forums and YouTube channels, such as videos on how to achieve specific color grading styles in Lightroom (P14). They sought out these tutorials to help them meet their expressive goals within the confines and norms of a tool. Community resources also encouraged misuse: P16 explained how a tutorial made by industry film editors encouraged them to "break the software" by repeatedly layering audio effects to create unexpected, "disorienting" sounds. Misuse is an opportunity for artists to regain control of tools despite standards of use. Framing these practices of software apathy as misuse centers creativity and problem-solving as foundational parts of artistic practice that are not necessarily tool-prescribed solutions or normative best practices.

4.3 Artist Genealogies as Anchors in Misuse

Creative practitioners bring their personal histories, values, and experiences—their artistic *genealogies* [19]—to their practices. We explore how participants' emotional attachments to tools and the habits they form, alongside their values, communities, and personal histories, are strong motivations to use different tools, or standard tools differently.

4.3.1 Existing Attachments to Previous Tools and Process. 11 of 20 participants described drawing from their history of tool use and

previous practices to inform their choice of tools, techniques, and desired features for future projects. These prior attachments led to misuse when practitioners' long-used tools were no longer the "standard" tool within that practice, or when practitioners developed habits which clashed with conventional use in new tools. These participants engaged in perceived misuse by choosing this "comfort tool" over others, especially when they performed tasks outside the intended use of the tool [41].

Participants P5, P6, P12, and P19 consistently only used one tool for their practice(s) and adjacent tasks. For instance, P12 used Adobe InDesign for everything, from print layout to creating graphics and websites, after a friend initially taught them how to use InDesign for school club work. P5 and P6 exclusively used Clip Studio Paint, including for graphic design and other image editing tasks, despite having access to Adobe Photoshop. Calling Clip Studio their "comfort zone," P5 expressed that they "would only open up Photoshop if there's something that [they] just can't do in Clip Studio," even after saying that some features in Clip Studio were comparatively "not very robust." By adhering to one tool, practitioners misuse by making suboptimal tooling decisions.

Participants (P2, P7, P8, P9, P11, P14, P19) described replicating their understanding of tool interfaces and features in tools they picked up later on. P8 first learned their "hack" for making exact selections using the settings in FireAlpaca before continuing to use it in Adobe Photoshop. P9 tried to produce the same results regardless of software, even if some software designs were less conducive to those results than others, asserting that "there are predictable results within an unpredictable interface." By porting their process from one tool to another, practitioners misuse when they rely on their old processes even when the new tool's features and interface are not designed to be used that way.

Beyond tool-specific histories, participants (P1, P2, P6, P9, P10, P11, P12, P13, P14) drew on their diversity of experiences; when different practices carried contradictory norms, choosing one set of norms was perceived misuse. For example, nine of 20 practitioners with backgrounds in traditional art spoke of combining techniques and mixing media across traditional and digital practices, not using the unique affordances of digital tools. P1 reflected that they "still treat digital tools very much like [they] do with traditional tools, which is maybe a downside [...] I oftentimes almost solely rely on the brush and the eraser, and the color palette." Similarly, P9 pushed back against the clean and smooth effects that characterized digital tools: "I also have learned to try to not hide the smears and smudges that it takes to make my work. In fact, I think that often… showing those smears or revealing the human trace, and leaving the fingerprints and leaving the roughness, is what makes my work appealing."

Participants (P2, P5, P7, P13, P15, P19, P20) broke norms by transferring their past learned practices to their current ones. For example, P7 described their process of using "smart-object"-based compositions, as a unique result of their history as a designer at a lapel pin company: "I've walked people through my process before and done tutorials [...] I will sometimes look at the feedback and it's like 'This is not helpful. It's just too weird and idiosyncratic.'" Despite the existence of institutionally-approved software or standardized company processes, these norms can become idiosyncrasies when applied to a different creative discipline.

4.3.2 Personal Histories and Communities.
Creative practitioners' adherence to norms is disrupted by their trust for personal contacts, community teachings, and long-held practices. Practitioners find contexts for misuse when they place these personal histories above established sources of normativity.

Practitioners rejected conventional tools (P5, P6, P10, P15) and teachings (P3, P9, P10, P11, P12, P14, P16, P18) in favor of guidance from friends, family members, and peers. P5 and P15 described receiving creative software from others as the main motivator for their tooling decisions; P6 traced their history of tool choice as parallel to that of a friend, who taught them how to pirate Adobe Photoshop and later encouraged them to buy Clip Studio Paint as an alternative. P18's unconventional use of PowerPoint for game development originated in formative creative experiences playing with their older sibling as a child, before gaining an awareness of "professional" game development norms.

Looking beyond tool selection to the creative process, P9 emphasized the importance of "comparing notes" with other animators and "[picking] their brains." P14 recalled sitting down with another photographer and walking through each others' processes: "And that's how I knew, oh, everyone has their own little thing that they do." Because teaching occurs on an informal, individual basis, shared usage behaviors contain individual idiosyncrasies which may contradict normative use. Knowing that collaborators, role models, and teachers shared in their "incorrect" usage mitigated stigma around misuse for participants.

4.3.3 Artist Social Values and Ethics.
Practitioners misuse software when their social values and politics lead to piracy and other technical interventions, or rejecting industry norms to choose alternative, sometimes less technically suitable tools. 14 of 20 participants were frustrated about the costs and subscription models of industry standard software. Participants expressed discontent with the norm of a select few "industry standard" tools allowing these tool companies a monopoly over creative software and the freedom to increase costs (P7, P8, P9, P10, P12, P13, P14). The struggle of seven participants (P2, P4, P6, P7, P12, P17, P18) to obtain creative software contributed to their desire for accessibility. P6 said, "I think they are charging too much, especially for young kids, right? I was like 15, 16, but I still wanted to make stuff. How was I gonna do that when I had to pay so much [with] no income?" P12 faced similar challenges as a child, and is now supportive of online repositories which promote free alternatives to industry standard tools in order to increase access.

Participants' strong advocacy for financial accessibility often motivated them to pirate industry standard software or encourage piracy within their communities (P2, P3, P6, P7, P12, P13, P18), as well as praise tools released by smaller, ostensibly more "artist-centered (P9)" developers with one-time payment models (P1, P2, P3, P4, P5, P6, P9, P16). "I don't really feel bad not paying for Photoshop," P7 said.

While participants expressed a desire to not financially support or use these tools anymore, none of the professional participants we interviewed were actually able to misuse by *choosing* another tool, due to professional requirements from companies or clients, or a reliance on the tool for their creative practice. Beyond financial

need, practitioners' misuse-ful actions and attitudes were also tied to their social values and politics.

Five of 20 participants' contentions with the ethics of AI text-to-image generators and their impact on artist communities clashed with the norms of using industry standard software, many of which have adopted AI features. P8 showed us their long-outdated version of Adobe Photoshop, which they refused to update because they did not want to see the AI features: "When I select something the generative prop thing will show up, and I'm like, that's disgusting, and I don't want that." P7, P12, P14, and P16 also shared that their poor opinion of AI features led them to feel wary towards or avoid software that offered AI tools, even if that software was asserted as the norm for their creative practice.

4.4 Realizing Practical Needs through Misuse

Misuse can result from external circumstances imposing restrictions on creative work. In addition to personal goals, practitioners must fulfill the practical requirements introduced by time constraints, collaboration and client work, and content creation. Misuse arises when practitioners feel that addressing these needs is more important than "correct" software use, or when new expectations for correct use disagree with other sources of normativity.

For P9, P11, and P16, misuse meant taking short-cuts to meet strict time constraints. During a stop-motion animation project, P9 had to "cheat a lot of things" digitally to achieve high-quality work despite pipeline constraints. While waiting for physical sets to be built, they used 3D models to block scenes; when asked last-minute to change the project's aspect ratio, they digitally extended the background instead of resetting the physical backdrop. P9 opted for time efficient routes, acknowledging that they were not "good practice."

11 of 20 practitioners (P1, P2, P3, P7, P8, P11, P13, P14, P16, P19, P20) shared that mess and disorganization are an inevitable part of their workflow. For P13, the ability to work rapidly without concern for neatness is critical: "there's a crucial little window where, if I feel a jolt of inspiration, organization is not important to me at all." This short-lived "window" validates instances of reactive misuse where artists work quickly without concern for norms of "tidiness" [58]. On the other hand, working with clients and collaborators requires practitioners (P8, P13, P14, P15, P20) to organize, even when it is burdensome. P20 expressed pressure "to have everything really neatly organized" to avoid miscommunication and embarrassment from employers. For P13, choosing to align with client expectations led to using Photoshop as a staging room: at the end of their design process they would import to Photoshop to present a clean, easy-to-view interface to clients (Fig 2 and 3).

P3 and P5 revealed that, as content creators who share videos and streams of their art-making process, they modified their behavior to produce a more appealing viewing experience. When screen recording Procreate for Instagram Reels, P13 says, "I don't zoom in and out at all. I don't touch the canvas." The expectations set by an audience or employer can shift the constraints and norms shaping artists' behavior within their tools; misuse occurs when practitioners choose to forgo expected use to better meet audience standards, making them better equipped to find solutions for conflicting requirements, expectations, and pressures.
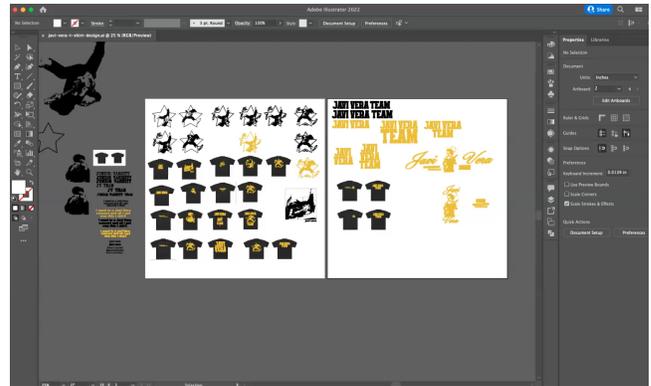

Figure 2: P13's Adobe Illustrator workspace during the unorganized phase of design. Assets are unlabelled and positioned on (or sometimes outside of) the art boards as they are made.
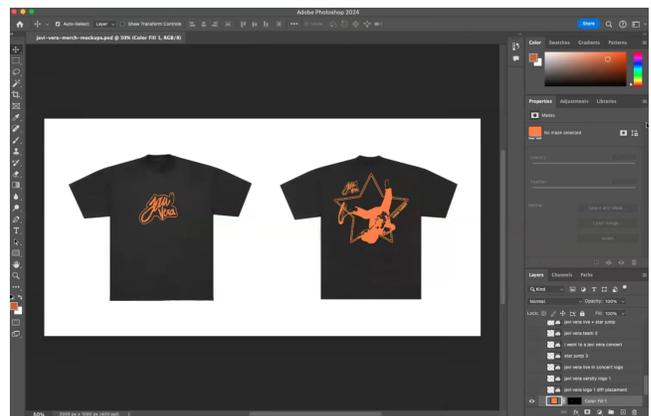

Figure 3: P13's designs from Figure 2, now imported and cleaned up into Adobe Photoshop as a presentation tool. Each set of designs is named and placed in its own folder, so its display can be easily toggled for the client.

4.5 Practitioner Impressions of Misuse

This section considers practitioners' personal impressions, perceptions towards, and language around misuse in creative practice. As with misuse impressions suggested by conventional norms, these impressions can operate in tandem or at odds with each other to complicate the larger landscape of what misuse can be.

4.5.1 Misuse as "Unintended" Tool Use. As we saw in Section 4.1.5, some practitioners interpreted misuse as an "unintended" (P8, P9, P10, P20) or "unintentional" (P20) use of a tool and its features, referring to the software developer's or company's original intent for how artists would employ the tool. Nine of 20 participants (P6, P7, P8, P9, P10, P11, P12, P18, P20) suggested that tool developers have their own defined intention and agenda for how their tools are used, and that using them in alternate ways, even if the tool affords alternate usages, constituted misuse. P9 and P18, for example, characterized use of Macromedia Flash for game development and animation as misuse because they asserted the software's original

purposes as web design and development. While we explored how tools themselves can imply intended use patterns through their marketing, manuals, and interface design, participants did not always explicitly cite these factors. As P10 simply put, "[misuse is] using a tool for anything other than its intended purpose." For some practitioners, the existence of this "intended purpose" is a given, and any deviance is misuse.

4.5.2 Misuse as Illegal or Immoral. For nine of 20 participants (P2, P3, P5, P7, P12, P13, P14, P16, P19), the term misuse brought illegality to mind. Three participants (P5, P7, P13) described misuse as violating copyright law in their creative practice, e.g. by using digital assets without a license. Recalling their illegally obtained copy of Adobe Photoshop, P2 connected "misuse" to the illegality of piracy and the defiance of the developers' intentions for users to access the official version.

P14, P16, and P19 described digital tool use they found immoral as misuse, despite a lack of explicit laws. P19's initial reaction to the word 'misuse' was to mention AI art tool developers and users, where a tool is trained on data without consent from the original artists. Similarly, P14 considered selling their photographs of models for AI training data as misuse because "that's a privacy issue," even if they held ownership over the photographs.

For some practitioners, misuse was not tied to a specific tool or feature, but to the ethics of the artist's outcomes. P3 said, "You could use it to Photoshop your passport details, or tax fraud, but it's not really the software's fault."

4.5.3 Misuse as Suboptimal Tool Choice. Four of 20 participants (P2, P7, P18, P19) expressed shame, embarrassment, or humility when they used software uncommon to their communities, not industry standard, or not up-to-date with the latest features. P19 felt shamed by other practitioners for using a free, general-purpose software while others purchased specific tools for that practice. P18 used a 3D camera feature in Sony Vegas as their chosen tool for motion graphics, describing the feature as "really junk and really way worse than Adobe After Effects," despite preferring it. Choosing a "worse" tool was considered misuse by participants, especially when they had the financial means to purchase a "better" tool promoted by community and industry norms.

4.5.4 Misuse as Creativity through Breakage. Five of 20 participants (P9, P10, P15, P16, P17) described misuse as "breaking" software by using it in unconventional ways and considered this breakage essential to creativity. For P17, misuse was a sign of expertise: "Someone who really can navigate the depth of a software and know it all by heart, and take it, and just break [...] make it do things that it's not even expected [to do]," while P10 expressed wishing that they "knew [...] the software through and through, so that [they] could misuse it." P16 and P20 described a more literal breakage: using unconventional input to produce glitches. P16 created a "disorienting, weird sound" for their film by layering an effect over an audio file twenty times; P20 used a video file with audio software to create non-deterministic visual noise. Practitioners were excited by misuse through intentional breakage; P16 said it was "a good thing that things are being misused, because that leads to a lot of new stuff that hasn't been seen before." They further proposed that "a lot of great discoveries can come from using the software incorrectly,"

suggesting that in creative practice, "incorrect" use allows artists to achieve novelty.

4.5.5 Misuse as Fun and Fulfilling. Eight of 20 practitioners (P1, P6, P10, P11, P16, P17, P18, P19) described misuse as fun and fulfilling, especially with respect to creative processes that were considered breakage, unnecessarily difficult, or deliberately idiosyncratic and convoluted. Speaking about their unconventional animation process, P10 said: "It could be really difficult, but also really satisfying, right?" P11 enthusiastically described misuse as "MacGyver[ing]", saying "it feels cool to just hack." As an enforcement of norms, misuse often carried negative emotions. In contrast, misuse as intentional subversion or a relishing of process can be a source of enjoyment, pride, and play.

4.5.6 Misuse as a Nonexistent Construct. Eight of 20 participants (P3, P4, P6, P7, P8, P11, P13, P18) abandoned the idea that misuse exists altogether, believing that if something is feasible in a tool, it cannot be misuse. They rejected the idea that working against established norms creates misuse, retaining confidence in their own practices.

For instance, P4 believed there was no "right way or wrong way," while P3 said, "It's not like you can misuse the software itself [...] because it's just there to help you." P6, P13, and P18 did not recognize a cause for misuse because they did not experience their tools as restraining or uncooperative in any way. P13 said, "I've never run into a situation where [...] Photoshop, or Illustrator, is not gonna let me do this. It's always been achievable." When standard tool usage failed to meet their needs, P11 and P13 did not view innovative, unconventional use as "misuse" but *necessary* use. Subsequently, if they could not achieve their creative needs, P11 and P13 considered this their own "fault" and a limit of their imagination, rather than a shortcoming of the tool.

4.5.7 Misuse as Impossible with Creative Freedom. Eight of 20 participants (P4, P9, P13, P14, P15, P16, P19, P20) prioritized personal process-making and outcomes over an awareness of norms in their usage, suggesting that the creative nature of art-making gave any process the license to be valid use. Regarding developers' feelings and intentions about their tools after distribution, P13 said, "If [developers are] releasing that to the world, and people are buying it, then I feel you're allowed to do whatever you want with it." Other participants echoed this emphasis on the practitioners' needs and intentions, with P1 remarking, "Everyone's got a different way to get to that finish line." P9 and P16 emphasized the highly collaborative nature of their work and relative modernity of their disciplines (animation and film-making). Norms in these disciplines, they said, are more easily scattered by the multi-media, patchwork processes of ever-changing tools and collaborators.

5 Discussion

Through studying misuse, we uncovered new perspectives on digital artists and creative practice. Our participants broadly interpreted the term "misuse" as incorrect or negatively connoting behavior; describing "misuse" brought about shame, guilt, and embarrassment. We observed **use and misuse as the same set of motions in practice, cast under the light of cultural norms and judgments** about developer intention or correctness. Researchers often

discover artists' salient software needs through studying "use" and "usability." In contrast, inspecting "misuse" revealed behaviors and needs of artists that might have otherwise gone unnoticed: prioritizing artistic outcomes with software-apathy, adhering to personal practice histories rather than new techniques or technologies, and camouflaging process to preserve the legitimacy of consumer transactions.

Studying misuse illuminates experiences that may be emotionally invalidated and complicated by norms within digital art, including those imposed by researchers and tool designers themselves. Practitioners grapple with tensions between conflicting sets of norms across disciplines, and with the need to feel empowered, rather than stigmatized, for unconventional tool preferences. The answers to our research questions, of (1) what constitutes misuse for artists and (2) what circumstances cause them to misuse, equip us to explore research opportunities that complicate the boundaries of use and misuse: How can we as technologists empower artists to engage in their diverse and often necessary creative behaviors? How can we help artists re-imagine their misuse as unique, imaginative, and capable creative practice?

5.1 Misuse to Guide Usability Research

For researchers to understand the complex and messy reality of artistic practice, we argue that they must acknowledge the broader contexts within which artistic practice occurs. Focusing exclusively on the moment of tool use, no matter how deeply, may fail to address the network of social, cultural, economic, institutional, and moral values that shape creative work. We echo Malafouris in his call for experiments to consider context [38]: "the failure of most experimental designs to capture the *relational character of creative agency*... fails to consider the analytical implications of context and interaction" [emphasis added]. In contrast, conducting research with the angle of "misuse" has made these findings possible: **misuse makes visible the implicit networks that artists operate within by exposing standards we may otherwise take for granted**. Behaviors are perceived as misuse when they oppose convention and norms, allowing researchers to bring those conventions into sharper focus [8]. Misuse is, in itself, a form of creative practice as intrinsic to a tool as "proper use."

We encourage researchers studying CSTs to reflect on their role in shaping creative practice as non-neutral, power-wielding agents within broader networks of influence. We urge computer scientists to see themselves as more than tool designers and to adopt a more holistic and interdisciplinary approach to their work. To wholly research tool use is to look beyond designing tool interfaces and digging into these users' storied contexts: for example, the current landscapes of creative education and industry attitudes; the politics of tool access, usage purposes, and distribution; the social networks and community movements which form a practitioner's personal network and its associated practice culture. HCI researchers can expand their definition of tool use and usability work to encompass the study of these context-building influences on creativity, not as auxiliary to tool interaction design but as, in fact, core to understanding the experience of creativity support tool usage. In Sections 5.2 and 5.3, we explore how researchers might put these practices into action by broadening our understanding of which artists are

"worth" studying and enumerating research recommendations from our findings.

5.2 Adapting User Groups through Misuse

While CST interventions and studies often focus on a single level of professionalization [30] (i.e. industry artists, novices, hobbyists, etc), our findings indicate that expert artists of all positions are impacted by the normative force of use from social, cultural, and collective sources. We found that "hobby artists" (like P19, P20) practicing outside of academic or professional contexts still orient their processes around widely circulated educational practices and industry standards. As researchers and tool designers, by applying these general categories in our work, we also codify and contribute to restricting norms of what kind of artist maps to which tools, tool behaviors, and processes.

We reaffirmed that artists have idiosyncratic processes [35] and behave outside conventional norms, but these under-studied behaviors are sometimes hidden because of stigma—can we apply this insight to how we approach user models, and consider what users we could expand to study outside of normative artist categories and definitions? We might strive to study artists not as users most eagerly defined by "professional" practice, but other holistic qualities that greatly influence their practices: artists with a long ancestry of previous tools, artists whose process is presented to an audience, artists whose practices evolved from other media. What insights could we gain by studying artists through non-normative user models?

5.3 Research Recommendations from Studying Misuse

Although we highlight the importance of misuse as an artist behavior to be supported rather than stifled, we do not attempt to provide recommendations "for misuse," nor to encourage researchers or designers to fixate on facilitating "misuse," as such an approach would fail to appreciate the holistic nature of use illustrated by our participants. Rather, we imagine our findings as starting points for researchers to develop a more inclusive dialogue of what creative "use" can be. In addition to being designers and developers (4.1.5), technical HCI researchers may contribute as creative educators (4.1.2), community builders (4.1.4), tool distributors, or practitioners themselves. We implore computer science researchers to contribute their technical expertise to positively shaping "use," disrupting norms, and legitimizing "misuse."

5.3.1 Interdisciplinary Engagement with Norms. In Section 4.1, we identified five sources of normativity which structure practitioner understandings of "use" and "misuse." We suggest that researchers examine these normative grounds as helpful starting points to explore in their own studies of use and misuse to better understand what shapes creative practitioners' processes and behaviors. Even when research is not explicitly concerned with exploring misuse, we ask researchers to understand their responsibility not just as tool developers but as people who could empower artists, a role that requires considering all influences that inform creative practice. These influences come from systems beyond creative practice and

are well-studied across a variety of fields within [12, 13] and outside HCI. Empowering artists requires understanding what normative grounds constrain their creativity. We encourage researchers studying any aspect of tool use to incorporate interdisciplinary knowledge into their work, seeking intentional cross-disciplinary collaborations and drawing from research in fields such as sociology [6] or anthropology [38] to bring more insight into "use."

5.3.2 Encouraging Tool Exploration through Community Resources. In Section 4.2, we found that artists express software apathy and minimally explore tools before realizing their creative visions. When faced with obstacles, however, they do seek out software-specific and goal-oriented community resources to discover creative possibilities. To better study artistic tool adoption, researchers ought to expand their focus beyond the tool toward these broader online creative communities. Software-specific educational materials created by and for practitioners can address needs in the context of creative goals more effectively than documentation or in-tool prompts. Given the normative power of online communities (4.1.2), supporting these diverse community voices may also help legitimize practices that may otherwise be perceived as misuse, shedding a positive light on unique user-developed behaviors.

5.3.3 Leveraging Personal Histories. In Section 4.3, we traced how artists' personal histories affect software use. Specifically, Section 4.3.2 describes how practitioners value recommendations from individual friends, family members, and peers to the point of misuse, defying conventions in favor of their trust in personal connections, while Section 4.3.3 revealed the impact of artists politicized by financial and ethical issues that digital art communities face. By examining artists' relationships and morals, researchers might be better equipped to explore artists' tool use while respecting their existing support networks [12]. While studying these idiosyncratic histories may appear counter to goals like generalization and scalability, we argue that personal genealogies are a useful and necessary entryway to understanding what artists value in their tools and who or what influences these values.

5.3.4 Bridging External Constraints. In Section 4.4, we described how practitioners alter their creative processes in response to external constraints of audience visibility and collaboration. Factors controlled by external stakeholders such as industry clients (4.1.3) impose additional unavoidable pressure on creative practitioners. To support artists' creative problem-solving strategies in the face of constraint, researchers might shift their goals from solutionism to artistic empowerment. Rather than responding to external constraints with additional tool constraints, researchers might empower flexible behavior *despite* these restraints.

5.3.5 Minimizing Harmful Misuse. While many of our findings and recommendations embraced the creative and generative nature of misuse, Section 4.5.2 finds that some practitioners perceive some misuse as harmful, especially when it jeopardizes privacy, legality, or their personal morals. Particularly in a growing landscape of research in AI-enabled creativity, we urge researchers to prioritize transparency and communication with artists to build trust and alleviate concerns about harmful misuse. Researchers should collaborate with industry in the direction of digital safety for all creative

stakeholders, setting an industry standard (4.1.3) for accountability and protected use. We encourage researchers to emphasize the importance of practitioners' ethics when studying use, adopting a mindset of minimizing harm: to practitioners, to collaborators, to clients, and to audiences.

5.4 Misuse through Power-Shifting and Queer Lenses

In this section, we interpret our findings through lenses of *misuse as power-shifting* and *misuse as queer use*, contextualizing the social and political work of misuse within existing literature.

5.4.1 Misuse as Power-Shifting. When creative practitioners engage in misuse, their movement against norms and standards signals a shift in who or what holds power during creative practice. Li et al. suggest that "empowerment might focus on how creative practitioners *appropriate* software abstractions to their own ends" [emphasis added] [36]. We add to this call, adding misuse alongside appropriation as an alternate strategy towards negotiating power relationships. As discussed in Section 2.2 and demonstrated by participant impressions of misuse as "unintended" (4.5.1) and "breaking" (4.5.4), we imagine misuse not as synonymous with appropriation, but as both encompassing and bringing new meanings. If appropriation is the adaptation of a tool for a task outside its intended use, misuse might be the work to establish new norms of "intended use" for a tool. While appropriation might be seen as an extension of "power-to"—enabling a practitioner to accomplish something they could not before—misuse could be seen as an extension of "power-over," as a practitioner shifts for themselves the normative authority held by a tool or community to their own practices through their (mis)use. Misuse can be a way for practitioners to center their own practices as "normal," against external normative frames.

While practices of hacking, DIY, and appropriation are united through community and shared values [10], we found that practitioners sometimes experienced misuse in isolation due to necessarily idiosyncratic techniques learned from their artistic histories (4.3), or to achieve practical results (4.4). Although all participants were expert practitioners, focusing on misuse surfaced an attitude of self-criticism, observed as self talk suggesting they could, or should, improve their practice, such as embarrassment over using sub-optimal tools (4.5.3). We propose misuse as an alternative lens through which one can reframe progress. Rather than interpreting limited tool engagement as a failure of the user, misuse is proof of user adaptability and control over a restricting set of tools. Instances of techniques spreading through both community resources and personal contacts point to the possibility of communities which celebrate and legitimize the individualistic nature of creative software misuse.

5.4.2 Misuse as Queer Use. By imagining misuse as not just a kind of behavior but an orientation towards or opinion of use, we see parallels between misuse and queerness, which similarly makes visible "proper" or "standard" behavior and calls it into question. As Ahmed writes, "To make use a question is to inherit a feminist and queer project of living differently" [3]. In this sense, the "proper" use of something is not a given, but is rather a normative standard, one in

which there always exists a rebellion, a workaround, a way to make do. For us, casting queer use as misuse is not simply an intellectual exploration but rather a reflection of the concrete circumstances of our lives. (We call attention to the queer representation within this study, in that five of the six authors are queer and five of the 20 participants self-identified as non-binary or genderqueer). As queer people, making-do, working around, and rebelling against "proper," assumed standards is an inherently *political* act. As a political question, misuse contests what work our tools "ought" to do, and for whom. Reflecting on the lessons of our study, following misuse might mean making authority visible—exposing a passive default as an imposed standard. It is in this sense that misuse makes possible the deconstruction and dismantling of things built only for some.

The reality of misuse, as we have found, is rarely romantic or overtly revolutionary. Rather, misuse is often born out of habit (4.3.1) or necessity (4.4). Like the everyday rebellion of existing as a queer person, misuse can become so ordinary that it becomes invisible, precisely because misuse can be necessary to make do. The lesson of misuse as queer use is that this ordinariness does not diminish its importance, nor its political potential: "A queer politics does involve a commitment to a certain way of inhabiting the world, even if it is not 'grounded' in a commitment to deviation" [2]. If misuse is a possibility inherent in creative practice, we offer "misuse as queer use" as a commitment to exploring and living out those possibilities.

6 Limitations and Future Work

Two major limitations to this study were time and depth. More longitudinal observation of practitioners would allow researchers to identify misuse behaviors as they occur within actual practice. Increasing depth would entail studying practitioners within their cultural, political, and social contexts through ethnographic methods and long-form, multi-session interviewing.

As artists are a diverse and idiosyncratic group, it is difficult to quantify a "representative" number of participants for our study. Given this diversity, we might expect research on new participants to yield additional findings. While we did reach theoretical saturation [24] in our analysis, new qualitative research can always reveal new findings and greater nuance.

While our findings did not touch on visual art in particular, our participants were all visual artists. Future work could explore misuse across different media, understanding how different cultures of practice, technical requirements of the medium, or cultural connotations change misuse perceptions and contexts. Additionally, only two participants we interviewed self-identified as disabled artists. Previous work in HCI has focused on the unique ways that disabled technology users appropriate or misuse technology not designed for them [26]. We believe understanding this perspective is a crucial part of misuse unfortunately unrepresented in our study.

Finally, all of our participants were English-speaking and based in Western countries, largely the United States, and our findings may reflect these values. Future work would benefit from studying creative practice in non-Western countries. Expanding beyond Western cultures would elicit different principles, practices, and sources of normativity, revealing alternate interpretations of creative misuse.

7 Conclusion

Through interviews with 20 expert creative practitioners, this paper reveals that beyond the interface of a tool, the boundary between use and misuse is influenced by a multitude of cultural factors: educational institutions, traditional practices, industry norms, and online communities. Deeply personal experiences shape artistic practices and misusing tools is a way practitioners have more control over their creative processes. Creative practitioners misuse tools when they misalign with their personal and cultural histories and workflows, when it feels more comfortable and familiar than "using" them, or when external criteria make "use" inefficient or impossible. Considering creative practitioners not only as users, but also mis-users, opens up possibilities of honoring, rather than smoothing out, the wrinkles that define artistic practices.

Acknowledgments

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