THE ELEMENTS OF MAKING: A SOCIAL PRACTICE PERSPECTIVE FOR EVERYDAY CREATORS

Isabelle RISNER [iD] [1], David GAUNTLETT [iD] [2], Mary Kay CULPEPPER [iD] [3, *]

[1]School of Media, Arts and Design, University of Westminster, Campus, Watford Rd, Harrow HA1 3TP, London, United Kingdom
[2, 3]School of Creative Industries, Toronto Metropolitan University, 350 Victoria Street, Toronto, ON M5B 2K3, Canada

Abstract. In contrast to behavioural approaches that attempt to explain creativity, social practice theories commonly emphasize aspects of the material world that shape and reproduce how people engage with them. How might social practice theory clarify how making affects millions of hobbyist creators – and what makes making matter to them? This article examines the theoretical work tying creativity to social practice. It then reports on a project in which small groups of everyday creators in the United Kingdom (n = 95) gathered in workshops to discuss their experiences and opinions regarding the materials, meanings, and competences of making. A model-making research method instigated peer discussion revealing both individual and shared accounts of practice. The data indicated that participants, regardless of practice, experienced creating as an ongoing performance providing many benefits that promote personal and societal transformation. With our graphic iteration of the elements of making, we assert that the meanings these makers attached to their various *do-it-yourself* practices were underscored by the materials they worked with and the competences they built in creating.

Keywords: affordance theory, creativity, everyday creators, makers, social practice theory, socio-material culture.

Introduction

What do hobbyist do-it-yourself (DIY) creators – people whose leisure pursuits range from making music to building repurposed wood furnishings or taking photographs and sharing them on social media – get out of making? More broadly, what does their making make of them?

At first glance, these lay musicians, builders, and photographers are hardly a monolithic group; even within a single project, their skills might range from beginner to adept

to semi-professional. Regardless of specialty or inclination, however, these makers – who also call themselves amateurs, tinkerers, DIYers – are among the millions of people plying their practices in North America, Europe (European Commission, 2022) and, of course, everywhere else.

Their commonalities, more than their differences, call for closer examination. Everyday creative activities done by ordinary people are central to social links and relationships in society (Gauntlett, 2018). In a time when citizen innovation is identifying solutions to problems in sustainability, education, and food provision (Nicholls & Ziegler, 2019; Ziegler, 2017), the value of the ideas and products that come from amateurs have, at times, surpassed the contributions of domain experts (Amabile, 2017).

Understanding the potential of amateurs to solve enduring problems depends on understanding what everyday creators glean from making. The field is responding with a fresh stream of inquiry. For the most part, these inquiries concentrate on creativity assessment. For example, new research on everyday creators includes ranking the creativity of specific pursuits (Silvia et al., 2021) and types of everyday creative personality (Yu et al., 2021).

Examining the sociocultural resources that assist everyday creators in their pursuits could pave the way for discoveries regarding some of the most significant problems of our time. To that end, exploring the resources people use to be creative (Ingold, 2013) could be proved at least as illuminating as investigating personal skills. Indeed, looking at everyday creativity from a less anthropocentric perspective permits a view of how practices dictate people's choices, products, and meaning-making. Given its stance that things, technologies and infrastructures offer agencies of their own that affect human responses, social practice theory emphasizes how materiality and performance intersect to influence the lived experience of making (Risner, 2013).

As a part of a multi-country initiative that explored social, cultural, technological, economic and psychological dimensions of the digital DIY movement in Europe (European Commission, 2022), the present qualitative research aimed to investigate sociocultural aspects of DIY creativity. This article reports findings from an ethnographic project in which groups of everyday creators in England, United Kingdom (UK) (*n* = 95) gathered in workshops around the country to discuss their experiences of making. The focus of the discussions centered on the tools and materials that allowed and sometimes motivated them to create. Their insights informed the answers to our research questions: How does making affect you? Does making matter?

We propose that their reflections suggest interdependent elements of practice and creative platforms – including online and offline, materials, processes, skills, knowledge, social relationships, and mental states – which constitute and enable the performance of making. The makers' collective insights inform a theoretical structure we propose for visualizing how materials, competences, and meanings intersect in practice.

A rationale for the cross-disciplinary theoretical components supporting this work begins by focusing on the nature and implementation of everyday creativity. Its definition and the idea that making – and reflecting on making – is at the heart of creative identity and reinforced through everyday practices. These precepts point towards our choice of practice-centric modes of method and analysis.

1. Theories of practice

Practices are separately and simultaneously entities and performances (Schatzki, 1996; Shove & Pantzar, 2007; Warde, 2005). Practices display interrelated elements that are relatively consistent. As performances, they must be "done", and multiple performances ensure their ongoing replication. Patterns of performances can alter practices (Shove & Pantzar, 2007) because the people and systems that perform them react to the social networks around them. These recursive performances can eventually change the nature of the entities and even of the practices themselves. Makers are vectors of a practice (Shove et al., 2012), and people who work in various media – as everyday makers often do – can transmit multiple practices. For the makers in our workshops, practices routinely feed off each other during the pursuit of each craft.

In one of the most straightforward models illustrating the elements of practice, Shove et al. (2012) outline a simplified scheme of interdependent elements from social practice systems theories by Schatzki (2001, 2002) and Reckwitz (2002). Their model comprises three broad types:

– Materials: "Objects, infrastructures, tools, hardware and the body itself" (Shove et al., 2012, p. 23) occupy a central role within practice theory. From actual materials to infrastructures supporting practice, an emphasis on materiality is consistent with participant accounts of practice;

– Competences: "Multiple forms of understanding and practical knowledgeability" (Shove et al., 2012, p. 23) encompass know-how, background knowledge, and understanding. From a making perspective, competence includes propositional knowledge – formal accounts of performing various kinds of making activities – and tacit experiential knowledge, such as the progressive bodily skill with a particular material transformation that makers develop over time. Competences also emerge in approaches to making, such as collaboration and peer-to-peer learning;

– Meanings: "The social and symbolic significance of participation at any one moment" (Shove et al., 2012, p. 23) requires assigning meaning to the emotions and motivations a maker brings to the performance. Some relevant meanings include the potential longer-term significance (and benefits) of participation in collaborative practice and improved social relations or economic benefits.

The way these types relate to one another suggests that practices are dynamic, susceptible to emergence, change, or outright extinction, depending on sociocultural aspects such as fashion, technology, and economics that link their defining elements. Therefore, practices coevolve as the interdependent parts change and shape each other, ultimately altering the meaning of one or more of the practices involved. When these informal links develop, the allied practices – often based on locality and coincidence – can be considered bundles (Shove et al., 2012).

A simple example of how links and bundles form comes from the case of Canadian home baker Lorraine Lee, who used her husband's new photo-etched wood rasp to zest an orange. This substitution led to the development of the million-selling micro-plane grater (Price, 2022). As the standard woodworking tool in time became essential to the home kitchen, the link strengthened. In this case, a tool's transliteration connected divergent performances for practices and practitioners alike.

The implication is that practices and the institutions that support them can cross-pollinate. Makers do the same for practices whenever they encounter materials, engage with skill, and reflect on meanings (Culpepper, 2018). However, the links between practices and practitioners can be eased or even broken due to changing sociocultural conditions; Shove et al. (2012) recount the boom/bust history of the hula-hoop as an example. As such, the climate for practice – it could also be called the climate for creativity (Ekvall, 1996) – can be said to constrain and enable practices and makers alike.

1.1. Affording creativity

Given the aforementioned socio-material direction in creativity study, delineating the climate for creativity is relevant to this discussion. Affordance theory, initially cast in ecological psychology to describe "the complementarity of the animal and the environment" (Gibson, 1986, p. 56), usefully describes the contours of creative climate. Some 40 years past its inception, fields as diverse as robotics (Jamone et al., 2018), economics (Zelizer, 2011), and urban design (Marcus et al., 2016) use this theory to describe those things in an organism's environment that can help or hinder it as it goes about its actions.

While some creativity theorists (notably Glăveanu, 2012, 2017) proposed psychosocial models clarifying how affordances function in individuals, Moeran (2016) envisioned how creative affordances occur in circuits and relate to each other. His schema complements the "practice" in social practice theory. He explores how time, space, money, tools and materials, social networks, and representation connect to demark the myriad enabling and inhibiting conditions for creativity.

Indeed, the social practice perspective suggests that affordances affect how practices define the rules and resources for making and how practitioners connect and disconnect from their practices. As environmental resources, affordances reside in objects, situations, or people and reveal themselves through encounters (Ingold, 2013; Withagen & van der Kamp, 2018). The resulting "rich landscape of affordances" (Rietveld & Kiverstein, 2014, p. 325) in which practice and practitioner coexist suggest the possibility of emergence, disappearance, and persistence arrayed in making. As Moeran describes it,

> "each affordance is entangled in the others to such an extent that the only way out of their enmeshment would seem to be to refer to them all by an overarching <…> concept like 'creativity'" (2016, p. 59).

1.2. Addressing creativity in practice

Even so, Moeran and other creativity researchers devising models featuring affordance theory acknowledge that it alone cannot explain creativity. Instead, its utility lies in contextualization. As Pilotta notes, "Creativity is both the realization of the focal self and of the field of events, the realization of both the particular and the context" (2020, p. 452). Indeed, the relationship between creativity and affordances connects the performance of making to the socio-material environment. In other words, context is the relationship's contribution to social practice theory.

This line of thinking enhances Gherardi's contention that the social and material suffuse practice, something that she sees as "a mode of ordering, rather an ordered product, an epistemology rather than an empirical phenomenon" (2017, p. 39). The action and implied reflection necessary for such a direction accommodate creative affordances and the essence of everyday creativity for the makers in our study. In *Making Is Connecting*, Gauntlett defines everyday creativity as

> "a process which brings together at least one active human mind, and the material or digital world, in the activity of making something which is novel in that context, and is a process which evokes" – at some point at least – "a feeling of joy" (2018, p. 87).

To be sure, not everyone can experience that feeling. Glăveanu and Tanggaard (2014) explore the ramifications with their typology describing promoted, denied, and problematic creative identities filtered through a prism of creative affordances and encounters with others. In their estimation, a promoted creative identity aligns with positive values the person and their social networks ascribe to creativity. Similarly, that identity is denied when a person or their networks attribute negative traits to creativity, when the person's recognition of creative affordances is forestalled, or a gatekeeper restricts access to the field. Problematic identity lies somewhere in between, when creativity is troubling or difficult for the person or the people around them but not necessarily forbiddingly so. The viewpoints of artists surveyed by Daniel (2021) suggest that even deep-seated identities may be subject to change.

Indeed, as conflicted as these types appear, people have multiple identities – even creative identities – and the extent to which they are promoted, denied, or problematic rests on context (Glăveanu & Tanggaard, 2014). Given the domain specificity of creativity (Pretz & Nelson, 2017), a person's creative identity as a knitter, for instance, might not transfer to one as a home-brewer. That said, creativity fosters the potential that allows for change; given sufficient reading of affordances (including time for making and reflection and representation), the knitter might feel creative making beer, and add that chapter of everyday creative action to their creative narrative.

2. Methodology

Because the literature surrounding social practice theory had yet to explore a range of everyday creators in a qualitative research project of this scope, we devised a constructivist approach to semi-structured workshops where participants could make things, reflect on their experiences, and discuss their practices. Our experience as amateur creators and as designers and leaders of similar workshops in academic and commercial settings (Gauntlett, 2007) guided our expectation that this making-discussion format yields more potentially revealing discussions than direct interviews, questionnaires, or surveys. Our familiarity meant we understood the limitations this approach presents regarding time, logistics, and labour. For example, it was necessary to coordinate venues in nine cities, recruit participants for each session, and plan, execute, and analyse each workshop individually. Nonetheless, we felt this effort uncovered rich and insightful data that might not have emerged with another method.

The institutional review committee of a university in the UK approved this project. The workshops took place during the second half of 2016 at venues associated with local making

communities, such as hackerspaces, makerspaces, and collective work studios. Working with the host venues to recruit participants, we determined to take an inclusive view of the term "maker" to involve as wide a range of everyday creators as possible. Invitations to take part were circulated through social media and *Eventbrite* listings. All workshops were open to the general public, who responded to a call for adults who identified as makers to take part in workshops using simple tools to create things, discuss making practices, and share ideas.

While the participants responded to a call for "makers", they recounted a wide variety of traditional craft practices, including sewing, knitting, painting, woodworking, ceramics, and jewelry making. However, many described pursuits less readily identified with traditional craft, such as electronics or computer programming. Furthermore, some maintained one type of practice, while others took part in several. Some with professional roles, such as occupational therapists or teachers, engaged with making through their work. Others were occasional hobbyists. Some created at home or in a private studio, and others were active in community-based collectives.

The workshop design drew upon the precepts of *Lego Serious Play*, a consultancy method in which adult participants are encouraged to build metaphors of feelings and experiences using *Lego* and then discuss and reconnect and change the objects created. We have found this a productive device that enables people to discuss issues and feelings and to connect by sharing and exchanging ideas (Gauntlett, 2007). We adapted the essence of this approach for the workshops using a more diverse array of equipment, including buttons, bells, plasticine, pipe-cleaners, playdough, wool, scissors, pens, and paper.

Each session started with introductions of the project and the researchers. The participants signed consent forms granting permission to take photographs and audio-record discussions and understood that the resulting images and quotes would be anonymized. In total, we made more than 350 photographs and 20 hours of recordings.

Typically, the workshops lasted under two hours and had around 10–12 participants, though 21 people attended the largest session. Facilitators led small groups of participants through a series of multistep 5- to 8-minute activities, with specific instructions at each step. Participants then took turns explaining what each of them had made and why; group discussions followed. For example, in the first round, the makers were asked to devise something that represented "the creative thing you like to do and how you feel when you are doing it". Then they were led through a series of four creative exercises making models that described in metaphor some aspect of their practice. They elaborated on how their practices relate to the world. Towards the end of the workshop, they explored their collective visions of maker culture by combining the different things that they had made through a process of suggestion and negotiation.

2.1. Data analysis

Transcribed workshop recordings and images were stored in qualitative software for analysis. Participant names were masked. We chose thematic text analysis (Braun & Clarke, 2006), using a deductive approach to the data for coding and generating themes that reinforced the project's social practice theoretical framework. Additionally, we logged process notes and personal observations throughout the analysis. An independent peer reviewer periodically assessed our transcripts and notes as the investigation progressed.

3. Results of research

Despite the variety of circumstances, all the participants self-identified as makers and readily discussed their practice, even in cases where it was inactive. Their perceptions indicate that they share some understanding of "making practices". Further, these sessions suggest that participants often identified initially with a specific practice to an extent (*e.g.*, "I tend to work with wood") that manifests a sense of collective nature and identity. Such collective knowledge reinforces the contention by Shove et al. (2012) that each micro practice has a body of practitioners, standards, and collectively understood procedures, norms, and knowledge that tally skill and experience.

That said, the edges of these practices were often blurred and overlapping, and boundaries were typically messy. Many participants carried on various modes of making and talked about what they made in the past or hoped to make in the future. Some reported that they sometimes engaged in quick and simple projects for fun and at other times took on complex and challenging projects that furthered their experience and development within a defined making practice. Perhaps unsurprisingly, their discussions concerned experiences, processes, technologies, feelings, and attitudes about making in general, with no apparent sense of boundary or hierarchy between practices.

3.1. Drawing out themes

In trying to make sense of these individual but similar experiences, we looked at the makers' models and metaphors to develop the five most prominent themes as a set of archetypes of making. These reflected participants' answers to the research questions about how making affects them and whether making matters. Images of the models illustrate our examples. Although we named their models for clarity, the following descriptions and quotes are directly drawn from participants. Furthermore, each characterization incorporates more than one participant's views, drawing on dialogues from multiple workshops and individual models and metaphors.

3.1.1. Theme: creativity, self-expression, and creative problem solving

Participants found that building confidence through social interaction – and acquiring a sense of achievement at having accomplished a making task – were critical personal benefits (Figure 1). That skill can become part of identity was mentioned by several participants. Indeed, acquiring skills was seen as an end in itself, and skilful making was highly valued. At the same time, they saw developing skills as a route to improvement. One maker said they offer a "tangible sense of you improving yourself". Another reported that acquiring a skill "gives you a way of understanding yourself and your ability to grow".

Several participants described what it is like to concentrate on a task at hand and forget the outside world. Some people explained how they derive enjoyment from pursuing a challenging project for its own sake. Others described the benefits they experienced from this single-minded approach to making tasks. "Making makes me feel calm and like I am in control and getting everything organized", one participant said.

Figure 1. The fish thing (source: created by authors)

The model in Figure 1 is a symbol of feelings about creativity and creative practice. It is intentionally flamboyant to contrast with the appearance of commercial goods and emphasizes that creative expression is crucial for making.

3.1.2. Theme: implications of using tools and materials

Participants often spoke of their desire to use materials efficiently and some makers took pride in using what was at hand to find new solutions. They expressed sensitivity towards material affordances, and a thrifty attitude about working with them. Makers also ascribed an enhanced value to their products, valuing the work that had gone into producing them (Figure 2).

The extent to which making challenges consumer culture was a frequent topic. One participant said, "I value something more if I've made it myself". Another explained the satisfaction gained from having made and then living with several pieces of furniture, including a desk, a coffee table and a shelf from the wood recycled from an old bed. They saw benefits in choosing to make items themselves, the validation from selling hand-made items, and making a connection to individual customers. When asked by the moderators how making can improve society, they spoke of their own experiences with frugality, appreciating the value of the things they made, and of stemming consumerism with DIY practices. "Making is profound ownership", one said and added: "You truly own the things you make".

Figure 2. The authentic tree (source: created by authors)

This model in Figure 2 illustrates the importance to the group of making things with "real" materials, sustainability, and the rejection of readymade items.

3.1.3. Theme: connecting with and through digital dimensions

Workshop participants frequently described the Internet-enabled dynamic of sharing, changing, and extending practice (Figure 3). "Most of my ideas come from seeing something online", said one participant. "Something will make me think, 'That's a really cool technique or that's a really nice design'. Then I think, 'What I could do with that?'". Another described their process, which started with canvassing others' ideas online:

> "And then you start to prototype and end up with your own thing that you can then share. An idea that started as something you were drowning in may end up as something you can sell, something that has changed your practice, or you have shared around the world".

Some participants saw digital capabilities as positive extensions of themselves. For instance, one maker created a figure with a bionic arm, calling it "the most amazing workshop tool that will make me the perfect craftsman and maker of things". Another, whose practice involved writing computer code, saw it as "something you can express yourself with and not just something you look at on a screen. Instead, it can be embodied as something that you feel or listen to".

As noted earlier, participants complimented resources such as *YouTube*, online hobbyist forums, and tutorials for teaching specific aspects of their practices. For example, one participant commented that online culture promotes problem-solving exchanges: "You can very quickly piggy-back on the work that someone else has done". That said, several participants noted the limits of piggy-backing – primarily distinguishing good advice from bad and spending an excessive amount of time searching for relevant information – though they did recognize the serendipity that can occur online. Makers frequently saw social media in a similarly mixed fashion.

Once it is shared with the community, this digital model in Figure 3 can shift shape and emphasis, typifying the changeability of digital data.

Figure 3. The remix creature (source: created by authors)

3.1.4. Theme: knowing through collaboration, sharing, and peer-to-peer learning

Participants identified with networks of specialists and communities of amateur makers. They said that working within a supportive community builds comfort because projects in progress can be shared, even if incomplete or imperfect (Figure 4).

The motivations varied for establishing collaborative connections and working as part of a community. Some participants wanted to develop face-to-face social relationships in the "real world", while others spoke of community in online and offline affordances. They enthusiastically noted the new possibilities inherent in recently developed facilities such as library makerspaces.

In the workshops, accounts of collaboration and peer-to-peer learning often shared digital and physical elements. Participants regularly praised the affordances wrought by *YouTube* and forums and tutorials teaching specific aspects of making.

Standing for open-source knowledge and learning new skills, the model in Figure 4 represents connecting with other makers in the broader community.

Figure 4. The giant bridge (source: created by authors)

3.1.5. Theme: meanings, motivations, and making

A fundamental tenet of social practice theory is that practices only exist when elements of materials, competence, and meanings come together, and participants discussed various broader meanings attached to their making practices. For some makers, the primary motivations were potential environmental or economic benefits. For others, social affordances and representational ones, such as personal well-being or creativity for its own sake, took precedence.

However, some key elements recurred and seemed central to the makers' direct experience of the performance of practice. For example, they linked creative making practice and enjoyment, associating it with creativity. Makers also talked about "flow" or described similar experiences of being "swept away" with their practices. Many also valued the social connectedness they experience as a part of a making community. Participants also connected creativity to childhood experience, and making in adulthood helped them regain lost playfulness and creativity.

Figure 5. The village community (source: created by authors)

Representing working multidisciplinary teams to share knowledge and skills, the model in Figure 5 portrays how people overcome barriers by incrementally improving outcomes.

Discussion

This project sought to examine how various makers felt their creative practices affect them and whether making matters. Our method of conducting workshops and asking participants to build metaphorical models of their experiences and aspirations (Gauntlett, 2007) could be considered a practice-within-a-practice. It yielded rich data that underscored the precepts of meanings, making, and materials regardless of whether they were producing traditional crafts or working digitally. These makers were aware of the creative affordances their practices engendered and spoke knowingly of how they intertwined.

More to the point, their workshop-made models symbolize how creative affordances act as "active counterparts" (Risner, 2013, p. 122) in making practices, bearing with them myriad potentialities and agendas. As makers bring into existence new outcomes and uses of creative affordances, they create new meanings about what it is to create, enable the transference of tools and techniques between practices, and bring new competences within the scope of practice.

In building their connections through making, they are working within bundles of practice. Taken together, the makers' comments and their models compose the arrangement of meanings, materials, and competences outlined by Shove et al. (2012):

- As they spoke of *meanings*, they often focused on making as a form of creative self-expression. Being everyday creators connected them to a community of like-minded makers who could offer support and inspiration. They often valued the things they made more highly than objects they could buy readymade. While they often experienced "frustration" with projects or processes, participants, by and large, had a positive attitude toward mistakes, viewing them as learning opportunities. The majority of these makers saw creative pursuits as a source of enjoyment and fun;
- *Materials* were a frequent topic of discussion as participants, first spoke of those they most often worked with, then expanded the issue to include those they might someday pursue. They discussed the role of platforms for creativity, from traditional ones such as potter's wheels and looms to digital tools such as code and keyboards. Though they did not use these particular words, makers also explained how creative affordances – time, space,

money, tools and materials, social networks, and representation – acted as socio-material factors whose potential could enable or limit their engagements with practice;

– Making requires skilled *competences*, and participants described how these are shared. Makers indicated that competence in specific fields could carry over to others, and they often linked their approaches to competence to the meanings of making. In particular, creative problem solving, the progressive acquisition of skill, and sharing knowledge through collaborations and peer-to-peer learning, were seen as ongoing competences with materials.

These experiences and views confirm that making is a triadically reciprocal mix of inter-related elements that depend upon each other and coevolve as they mutually shape and re-produce through performed practice. Figure 6, our model of the elements of making, depicts the intersection of these elements.

Meanings, materials, and competences intersect in the Figure 6 in the performance of practice.
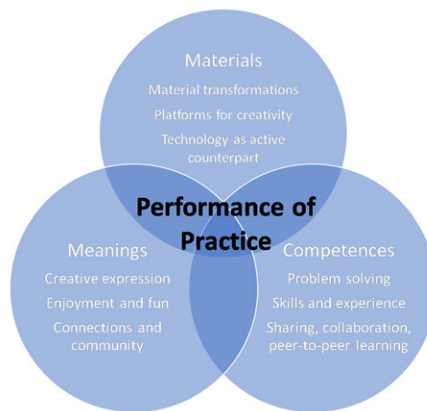

Figure 6. The elements of making (source: created by authors)

Tracking connections

Social practice theory contends that competence is an integral element of practice rather than a quality that an individual brings to practice. Our model elaborates on this, proposing that competence develops and strengthens through the performance of practice. For the makers in our study, competence builds confidence that influences meanings such as well-being, com-munity, and authenticity. Their comments underscore the role of practice in promoting creative identity (Culpepper & Gauntlett, 2021; Glăveanu & Tanggaard, 2014). Competence also relates to how makers choose and adapt materials. Experienced makers knew the hallmarks of quality in their media and spoke of strategically managing their resources. Furthermore, it often leads to satisfaction – in tools and materials as well as finished products (Salvia, 2016).

The other elements had similar diffusions. Three additional strands of comments emerged from the analysis, adding depth to them, suggesting that the elements of making are inextri-cably linked. Meanings and competences merged when makers described what they saw as the positive lure of creativity, with its promise of self-expression, enjoyment, and immersion.

They valued the skills they built because they allowed them to get outside of themselves and replicate childhood freedom. The camaraderie of other makers also allowed the makers to blend meanings with competences. They recounted how making alongside others (and sometimes collaborating with them) supplied fellowship, tutorials, and support simultaneously. Makers readily recognized that new creative affordances, such as evolving making technologies and Internet-based platforms, actively extend the possibilities for practice by extending competence-building problem solving and collaboration. They also allowed that sharing work and ideas online was a way to enhance their social networks.

Moreover, a love of materials was clear from the makers' remarks as they comingled materials with meanings. They saw their creative products as valuable, which sometimes spurred them to conserve their resources out of respect for their tools and materials and a desire to save money. Many spoke of the fragility of creative affordances (Moeran, 2016), noting the relationships between making and time, money, tools and materials, social networks, and the representation inherent in the standards and norms of their practices. In so doing, they were giving voice to the way affordances interact, just like the elements of practice.

Amplifying Gherardi's (2017) observation of the social and material influence of practice, Paek (2019) described the interplay between individual creators and their social networks. We find the interplay deepened by the near-fractal ways that people perceive making. The interconnectedness also conceptualizes how socio-material culture influences people's actions and reinforces their identities as makers. Could these same insights have been uncovered with a more conventional, person-centric theoretical orientation or a different ethnographic method? For us and this study, the benefit of social practice theory and our method, which capitalizes on the reflexivity that arises from making, was apparent: They helped us separate the forest of making from the trees of individual practices.

Strengths and recommendations

We contend that this project builds on existing social practice theory in reporting themes voiced by the breadth of everyday creators who participated in it. Participants insightfully spoke about the effect of the circumstances and affordances surrounding their practices. We hold that the depth of their comments validates our decision to conduct workshops, a choice that highlighted the reflexivity central to making. More to the point, we maintain that the strength of the method – and the resulting robustness of the data – derives from the process of inviting people to consider their practices as they make something, and then discuss their creations (Culpepper & Gauntlett, 2021; Gauntlett, 2007).

As mentioned earlier, this was an exploratory research project, and it is beyond its scope to make claims about its generalizability. New quantitative studies working within social practice could perhaps establish the generalizability of the elements of making *vis á vis* everyday creators or assess the elements' applications to makers who work in specific media. Such directions could benefit those who study leisure and art as well as consumerism and sustainability. New qualitative work, particularly in participatory, decolonizing, and activist frameworks, could capture fresh thinking about social practice theory from practitioners whose voices are seldom heard in academic research.

Conclusions

The constituent parts of the elements of making are a clear perspective on an endeavour that means a great deal for many people. For example, the model illustrates that in the performance of making, consumption and production combine in the practice of creativity. Consumption thus emerges as an active, engaged and creative participatory component that stresses frugality and authenticity for our participants.

This article began by laying out the case for employing a social practice orientation to explore how makers experience their pursuits. It proposed that social practice theory can broker new understandings of how makers engage in their pursuits, use socio-material affordances, build competences, and create meanings by their actions.

The method facilitated these insights and encouraged participants' free exchange of ideas. Working with simple, malleable materials that did not duplicate their preferred media provided them with a platform for constructing metaphorical models. In turn, the models allowed participants to think while they made. When they talked about their models, they were also expressing their thoughts about their practices. We contend that the reflection built into the process allowed for thoughtful comments about the nature of making. They provided nuanced and thoughtful answers to our research questions: How does making affect you? Does making matter?

The perspective of social practice theory brought to our method a heightened sense of how making *is* a practice, whether the resulting products are traditional or cutting-edge, physical or virtual. It turned out to be an effective way to survey the common social, material, and cultural aspects these makers encountered in practice. The method was also valuable for illuminating how making as a practice has changed as its socio-material countenance keeps pace with developments in technology.

Ultimately, the participant-made models cleared the common ground for the expression of individual and group meanings. An unexpected benefit was that they helped reinforce the centrality of making and material objects in social practice theory. Indeed, the approach contextualizes the stories behind these models and reflects the values these participants found important. For instance, creative competences such as problem-solving and peer-to-peer learning were standard making practices described and found across different types of making. These led to our conclusion that they are intrinsic to the practices described rather than qualities that makers may bring to the practice.

Meanings such as finding joy, flow, and community in practice were also shared elements. In their telling of their models' stories, these makers saw making as an ongoing performative way of life, providing abundant personal benefits. We also noticed that they viewed making as a vehicle for personal and societal transformation, seeing their actions and products taking place alongside other transformative social practices.

Our research suggests that using this theoretical orientation to isolate and describe elements of practice provides a mechanism for establishing common elements that clarify the dynamics of interrelated changes in meanings between practices. There are necessarily shortcomings to this and any ethnographic method – for instance, analysis inevitably involves categorizing and assigning rank, and qualitative data are rarely discrete. That said, in terms of expanding theoretical understanding, the method appears to match up with the theory, and our analysis provides new thinking about how makers, processes, and products intersect in practice.

Funding

References

Amabile, T. M. (2017). In pursuit of everyday creativity. *Journal of Creative Behavior, 51*(4), 335–337. https://doi.org/10.1002/jocb.200

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Culpepper, M. K. (2018). "Yeah, That's What I Am Now": Affordances, action, and creative identity. In L. Martin & N. Wilson (Eds.), *Palgrave handbooks. The Palgrave handbook of creativity at work* (pp. 107–124). Springer Nature Switzerland AG. https://doi.org/10.1007/978-3-319-77350-6_5

Culpepper, M. K., & Gauntlett, D. (2021). Inviting everyday creators to make, think, and talk. *Thinking Skills and Creativity, 42*. https://doi.org/10.1016/j.tsc.2021.100933

Daniel, R. (2021). Exploring creativity through artists' reflections. *Creativity Studies, 14*(1), 1–17. https://doi.org/10.3846/cs.2021.11207

Ekvall, G. (1996). Organizational climate for creativity and innovation. *European Journal of Work and Organizational Psychology, 5*(1), 105–123. https://doi.org/10.1080/13594329608414845

European Commission. (2022). *Digital do it yourself: Results.* https://cordis.europa.eu/project/id/644344/results

Gauntlett, D. (2007). *Creative explorations: New approaches to identities and audiences.* Routledge. https://doi.org/10.4324/9780203961407

Gauntlett, D. (2018). *Making is connecting: The social power of creativity, from craft and knitting to digital everything.* Polity Press.

Gherardi, S. (2017). Sociomateriality in posthuman practice theory. In A. Hui, Th. Schatzki, & E. Shove (Eds.), *The nexus of practices: Connections, constellations, practitioners* (pp. 38–51). Routledge.

Gibson, J. J. (1986). *The ecological approach to visual perception.* Routledge.

Glăveanu, V. P. (2012). Habitual creativity: Revising habit, reconceptualizing creativity. *Review of General Psychology, 16*(1), 78–92. https://doi.org/10.1037/a0026611

Glăveanu, V. P. (2017). *Thinking through creativity and culture: Toward an integrated model.* Routledge. https://doi.org/10.4324/9781315135625

Glăveanu, V. P., & Tanggaard, L. (2014). Creativity, identity, and representation: Towards a socio-cultural theory of creative identity. *New Ideas in Psychology, 34*, 12–21. https://doi.org/10.1016/j.newideapsych.2014.02.002

Ingold, T. (2013). *Making: Anthropology, archaeology, art and architecture.* Routledge. https://doi.org/10.4324/9780203559055

Jamone, L., Ugur, E., Cangelosi, A., Fadiga, L., Bernardino, A., Piater, J., & Santos-Victor, J. (2018). Affordances in psychology, neuroscience, and robotics: A survey. *Institute of Electrical and Electronics Engineers Transactions on Cognitive and Developmental Systems, 10*(1), 4–25. https://doi.org/10.1109/TCDS.2016.2594134

Marcus, L., Giusti, M., & Barthel, S. (2016). Cognitive affordances in sustainable urbanism: Contributions of space syntax and spatial cognition. *Journal of Urban Design, 21*(4), 439–452. https://doi.org/10.1080/13574809.2016.1184565

Moeran, B. (2016). Anthropology and business: Crossing boundaries, innovating praxis. *The business of creativity: Toward an anthropology of worth*. de T. Waal Malefyt (Series Ed.). Routledge.

Nicholls, A., & Ziegler, R. (Eds.). (2019). *Creating economic space for social innovation*. Oxford University Press. https://doi.org/10.1093/oso/9780198830511.001.0001

Paek, K.-M. (2019). The transformative potential of creative art practices in the context of interdisciplinary research. *Creativity Studies, 12*(1), 183–197. https://doi.org/10.3846/cs.2019.9701

Pilotta, J. J. (2020). Kinesthesia: The creative condition for health communication. *Creativity Studies, 13*(2), 449–459. https://doi.org/10.3846/cs.2020.12696

Pretz, J. E., & Nelson, D. (2017). Creativity is influenced by domain, creative self-efficacy, mindset, self-efficacy, and self-esteem. In M. Karwowski & J. C. Kaufman (Eds.), *Explorations in creativity research. The creative self: Effect of beliefs, self-efficacy, mindset, and identity*. J. C. Kaufman (Series Ed.) (pp. 155–170). Elsevier Inc. https://doi.org/10.1016/B978-0-12-809790-8.00009-1

Price, W. (2022). One of the world's most popular kitchen tools was a complete fluke. *Gear Patrol*.

Reckwitz, A. (2002). Toward a theory of social practices: A development in culturalist theorizing. *European Journal of Social Theory, 5*(2), 243–263. https://doi.org/10.1177/13684310222225432

Rietveld, E., & Kiverstein, J. (2014). A rich landscape of affordances. *Ecological Psychology, 26*(4), 325–352. https://doi.org/10.1080/10407413.2014.958035

Risner, I. (2013). *The Integration of digital technologies into designer–maker practice: A study of access attitudes and implications* [PhD/Doctoral Thesis, University of the Arts London]. London, United Kingdom. https://ualresearchonline.arts.ac.uk/id/eprint/8760/1/Risner-PhD-thesis-2013.pdf

Salvia, G. (2016). The satisfactory and (possibly) sustainable practice of do-it-yourself: The catalyst role of design. *Journal of Design Research, 14*(1), 22–41. https://doi.org/10.1504/JDR.2016.074782

Schatzki, Th. R. (2001). Introduction: Practice theory. In Th. R. Schatzki, K. Knorr Cetina, & von E. Savigny (Eds.), *The practice turn in contemporary theory* (pp. 1–14). Routledge.

Schatzki, Th. R. (1996). *Social practices: A Wittgensteinian approach to human activity and the social*. Cambridge University Press. https://doi.org/10.1017/CBO9780511527470

Schatzki, Th. R. (2002). *The site of the social: A philosophical account of the constitution of social life and change*. The Pennsylvania State University Press. https://doi.org/10.1515/9780271023717

Shove, E., & Pantzar, M. (2007). Recruitment and reproduction: The careers and carriers of digital photography and floorball. *Human Affairs, 17*(2), 154–167. https://doi.org/10.2478/v10023-007-0014-9

Shove, E., Pantzar, M., & Watson, M. (2012). *The dynamics of social practice: Everyday life and how it changes*. SAGE Publications. https://doi.org/10.4135/9781446250655

Silvia, P. J., Rodriguez, R. M., Beaty, R. E., Frith, E., Kaufman, J. C., Loprinzi, P., & Reiter-Palmon, R. (2021). Measuring everyday creativity: A Rasch model analysis of the Biographical Inventory of Creative Behaviors (BICB) scale. *Thinking Skills and Creativity, 39.* https://doi.org/10.1016/j.tsc.2021.100797

Warde, A. (2005). Consumption and theories of practice. *Journal of Consumer Culture, 5*(2), 131–153. https://doi.org/10.1177/1469540505053090

Withagen, R., & Kamp, van der J. (2018). An ecological approach to creativity in making. *New Ideas in Psychology, 49*, 1–6. https://doi.org/10.1016/j.newideapsych.2017.11.002

Yu, H., Zuo, Sh., Liu, Y., & Niemiec, Ch. P. (2021). Toward a personality integration perspective on creativity: Between- and within-persons associations among autonomy, vitality, and everyday creativity. *The Journal of Positive Psychology, 16*(6), 789–801. https://doi.org/10.1080/17439760.2020.1818810

Zelizer, V. A. (2011). *Economic lives: How culture shapes the economy*. Princeton University Press. https://doi.org/10.23943/princeton/9780691139364.001.0001

Ziegler, R. (2017). Citizen innovation as niche restoration: A type of social innovation and its relevance for political participation and sustainability. *Journal of Social Entrepreneurship, 8*(3), 338–353. https://doi.org/10.1080/19420676.2017.1364286