Gear Culture Methods: Materialising Intra-Actions and Fetish Relations

Eliot Bates

CUNY Graduate Center, USA / ebates@gc.cuny.edu

Abstract

Gear cultures are a novel kind of social formation around specific kinds of fetishised objects (e.g., recording studio equipment, digital cameras, guitar pedals, espresso machines, synthesisers, overclocked computers, mechanical keyboards). Gear typically represents technologies that nominally were made obsolete by software simulations or mass market commodities but that gained new meanings, uses and practices through transnational networks of online/offline users. After surveying proto-gear culture literature within several fields, this article presents a flexible but generalisable multi-mode, multi-sited methodology for the ethnographic study of 'intra-action' and 'agential realism' (Barad, 2007) and the 'agency configurations' concept (Erofeeva, 2019). Gear cultures research has raised salient questions about how we study agency and gendered social formations while attending to the irreducible materiality of gear—within multi-platform social media engagement and a YouTube influencer economy, in trade shows, and in local/regional meetups and gear societies.

Keywords: Gear, Gear Cultures, Agential Realism, Technology Users, Fetishisation

Introduction

Every May, along with an S-Bahn train full of electronic music instrument enthusiasts, I depart from Berlin's Wühlheide station and walk 1.6km through tall trees alongside dense undergrowth to reach Superbooth: the largest music trade-show festival in the world. An estimated 9000 people, local and international visitors alike, come to Berlin's Wühlheide Park for three days to stroll around the FEZ Berlin—Europe's largest children's centre, and during the rest of the year a site for boy and girl scout retreats, circus camps and other children-focused events. (Adult) attendees are united by a shared love for hardware synthesisers, particularly *modular* synthesisers. Servicing their desires are over 220 exhibitors and forty stage performance acts, ranging from sole-proprietorships who design specialty gadgets, small to medium businesses with international distribution for their instruments, knob and component manufacturers and representatives of the MetalPhoto® process for printing graphics on aluminium to make the highly scrutinised front panels of technologies, to European distributors and retailers, solo performers, and live electronic musical groups (Figure 1). Running between all of these are over three dozen YouTube content creators who make a living

This work is licensed under a Creative Commons Attribution 4.0 International License

doing gear demos, gear reviews, gear interviews, and gear-focused tutorials. Broadcasting live during the event is SooperRadio, a radio station sharing yet more interviews and news about the most exciting new technologies to be found among the many exhibition tents or trade show booths. Several hundred attendees every year crowd into a basement room, armed with soldering irons, to experience one of the twelve assorted DIY synth-making workshops.

Superbooth accommodates multiple ideas about play, from reliving childhood camping trips to county fairs to summer beachside techno festivals; from prospective users playing with electronic instruments' knobs and faders to prospective instrument designers playing with new interfacial possibilities. But Superbooth is more than just a site of play, it is the major B2B networking site, and product staging here can determine the subsequent success or failure of a product on the market. The event's reach is far greater than the 9000-odd in-person attendees, as the more than 1000 YouTube videos produced annually at or about the event reach tens of thousands of additional aficionados for these very specific kinds of technologies, and each of the dozens of synthesis-themed message forums and Discord servers creates dedicated threads or channels just for discussing Superbooth.

That this event—and nearly twenty smaller trade-show festivals in other North American, European and East Asian cities—are thriving, indicates something about the contemporary socio-material-economic worlds that connect gear makers with gear users with gear intermediaries and with gear itself. At the more than twenty trade-show festivals at which I have undertaken participant observation, the one consistent conversational subject matter is gear: making gear, using gear, gassing for gear (a neologism derived from GAS, gear acquisition syndrome), fomo (fear of missing out) on purchasing gear, anthropomorphising gear, loving one's own gear, lusting after other peoples' gear, fantasising as-of-yet uninvented gear, and theorising gear (Figure 2).

This vignette depicts one of many instances of social formations built around particular kinds of gear. But what *is* this gear stuff, and what are these gear socialities? What makes gear a fruitful focal point for technology studies? To the extent that gear and gear socialities represent something new

Figure 1. Superbooth 2024, inside the FEZ Berlin. Photo by the author.

Figure 2. Gear displays at Superbooth 2024. Photo by the author.

or underdocumented, what methods might be suitable for their analysis? This article will begin by investigating *gear* as it emerges in the late 1990s in several unconnected fields of practice, before introducing the *gear culture* concept for theorising durable, large-scale social formations organised around categories of gear. While analyses of gear by that name are novel, the subsequent two sections respectively analyse proto-gear accounts within user studies literature, and proto gear-culture narratives within studies of technology-focused communities of practice. The remainder of the article will discuss the field research, audiovisual documentation, and discourse analysis methods and techniques that have been useful for gear and gear cultures research.

Gear

While the term gear has historically been applied to things ranging from professional equipment to toothed wheel mechanisms to drug paraphernalia, in the context of several nascent technology interest communities the term came to refer to specific kinds of coveted technical objects, a subset of the objects that were part of some technology-dependent field of practice. Starting in the mid 1990s we begin to observe arguably new patterns in technological user discourse and practice organised around specific but disparate kinds of technical objects, including recording studio equipment, guitar pedals and amplifiers, hi-fi systems, synthesisers, digital and film cameras and lenses, video equipment, overclocked computers, RC planes, and espresso machines (and from the 2000s, mechanical keyboards, too). The 'use' of any of these categories of gear most likely conjures creative activities like playing music, taking photos, or producing videos; 'leisure' activities like playing video games or flying RC planes; or artisanal culinary activities like espresso making. But in all the aforementioned cases the gear was being used in new ways too: rigorously tested against other examples of the same gear, opened up to be forensically analysed for its constitutive electronic and mechanical components, in many cases 'modded' by end users, and bought and sold on dedicated secondary markets. Though these new uses may sound like solo activities, the wide discussion of them indicated that these practices presented numerous social opportunities, too. Therefore,

those objects or classes of objects that became gear had transcended obvious uses and use value, accruing new uses, especially in becoming new fulcrums for sociality.

Research that recognised gear as an important and distinct category of technical objects began in the field of music studies. Analyses of the contemporary use and users of objects including recording studio equipment, guitar pedals and amps (Herbst and Menze, 2021; Brounley, 2022), and synthesizers (Bates, 2022, 2023, 2026a), represented a new approach to the study of music's materialities, but they drew upon prior, disparate small-scale studies of technology users of various kinds. The largest scale of these gear studies, the Gear Cultures project, began as an investigation into the less documented stories about audio recording equipment and the resurgence of interest in the analogue during a time when digital technologies were allegedly rendering older technologies obsolete (Bates and Bennett, 2025). The authors found that within audio recording-adjacent milieux, since 1995 the *gear* designation had become a supercharged term, reserved for select objects (e.g., the most expensive hardware microphones, mixing consoles, and equalisers, but *not* software plugins or computers or patchbays) that were fetishised in multiple ways, rather than representing the most widely used tools of the trade (Bates and Bennett, 2020).

While scholarship had demonstrated the complex and entangled *origins* of sound reproduction technology in mediate auscultation (Sterne, 2003) and aural letters for business and legal purposes (Thompson, 1995), this and subsequent literature appeared to assume that audile technologies had undergone 'closure' (Pinch, 2008: 473-474) or 'concretization' (Simondon, 2017) and today were used solely for their stated purposes: (re)producing sound. Not long after commencing field research, however, the Gear Cultures researchers encountered the first two of many research problems: much of the recording studio gear that was encountered was *not* being used for recording music and sound but for numerous other purposes—e.g., for forensic testing, for shootouts, for museums, for acting as space-intensive props in university music departments—and thousands of people socially identified themselves in relation to gear more than to the activities the gear was typically associated with. A parallel study into hardware modular synthesisers indicated similar phenomena at play (Bates, 2026a), as did a more cursory examination of message forums and trade shows around the aforementioned, dissimilar categories of non-musical technical objects that were also routinely called 'gear' (Troitski and Bates, 2024). Regardless of which gear-related social formation was being analysed, there were obvious widespread practices of personifying the objects by describing them as pseudo-humans (especially with sexualised language), and attributing to them powers typically thought of as human (e.g., creativity, inspiration, competence) (Bates and Bennett, 2022).

For a technology to become promoted to the category of gear requires the objects to be fetishised in one or more ways: 1) as low-ticket luxury goods where the artisanal labour necessary for their crafting is valued (Marx, 1996; Bourdieu, 1984: 220); 2) as objects related to Veblen goods that facilitate and/or inculcate conspicuous consumption (Veblen, 1899; Baudrillard, 1998); 3) as objects that are intended to exert power at a distance on other gear users and perhaps to impress outsiders (Pels, 2023; Pietz, 1987); and 4) as sexual fetishes and objects of erotic desire that stand in for those excluded (typically in male-dominated gear cultures, the missing women) from technology user spaces (Fuller, 2015: 127). While it is straightforward to figure out *which* objects are treated in this manner—certain objects inspire thousands of online posts and considerable adoration expressed in a language reserved only for gear—a key research problem is assessing *what* the specific fetish power (or powers) might be and *how* power works. But regardless of which fetishisation modes are employed for a specific category of gear, the fetish power is a defining element of human social relations between gear users, and the gear is treated as an active participant in these social relations.

In light of Karen Barad's (2007: 232) agential realist argument about apparatuses being "laborers that help constitute and are an integral part of the phenomena being investigated" , gear obviously had *some* role in helping constitute these social phenomena. When users fetishise

their technologies to transform them into gear, and when gear's fetish power is leveraged to influence social relations, the identities and materialities of gear, of the gear user, and of gear-centred sociality are simultaneously enacted. Only by making 'agential cuts' (Barad, 2003: 815) can we claim to clearly delineate gear, gear user, and gear sociality from each other.

One depiction of gear-in-action frames a cryptic short video from January 2024, that Canadian YouTuber Dan Olson, who releases popular long-form video essays under the monikers FoldableHuman and Folding Ideas, posted exclusively for his Patreon subscribers. Entitled *Gear Autobiography*, it was born from a meditation on the equipment other YouTubers use to produce their content, including theories about why such equipment might be prominently depicted in videos rather than left as the invisible apparatus of content production. Olson was in the thick of co-producing a 77-minute feature nominally about fellow YouTuber James Rolfe (better known as Angry Video Game Nerd, and one of the first viral YouTube stars in the 2000s). Olson's accompanying email newsletter about his videos included the following passage:

> But as I tweeted about James' gear from my basement office, surrounded by various bits and bobs of equipment totalling a substantial amount of money it triggered an insecurity in me, not only about my own vulnerability to Gear Acquisition Syndrome (which I absolutely am weak to), but a deeper fear of self-delusion: to what degree are my own purchases fantasy aspirations? What did I get because it fixed a material problem, and what did I get purely because it made me feel more like a "real filmmaker"? (email to subscribers, 20 Jan, 2024).

Gear Autobiography, and the feature-length video essay *I Don't Know James Rolfe* that followed, are the most personal works Olson has ever released. They construct the biographical narrative specifically around the gear choices, and gear uses, that punctuate the person's life—whether Olson's or Rolfe's (Folding Ideas, 2024a, 2024b). While object biographies have by now become an established writing genre (Kopytoff, 1986; Hyysalo et al., 2019), *gear autobiographies* like these are different: they blur our perception of who the cyborg protagonist may be (Haraway, 1991), while depicting the aspirational pathways successful YouTube content creators take as beset by syndromes, delusions, and excesses of fetishised gear along the way. Olson's video is not alone, as YouTubers ranging from James Hoffman (coffee gear) to Red Means Recording (synthesiser gear) to Peter Coulson (fashion photography gear) have produced numerous related auto-ethnographic, gear-theoretical works that contrast the YouTuber's specific relationships with gear with their perceptions about others' normative user-gear relations.[1] In other words, gear autobiographies may start with a personal experience, but end up making generalisations about gear fetishisation in general.

Gear cultures

While studying the many sites where gear was made, staged, used, and discussed, Bates and Bennett (2025) observed that gear sociality developed consistent patterns that then persisted over years. Concomitant with the new patterns in user discourse and practice, since the late 1990s, competing, massive online communities each dedicated to the users of one specific kind of gear began to form.[2] On newsgroups, message forums and subsequently newer kinds of social media platforms, specialist technical languages for describing specific objects circulated much more than ever before. But the online milieux were also sites for generating unique local argot unfamiliar to outsiders, including novel technical and pseudo-technical terms (i.e., technobabble), languages for describing aesthetic/affective phenomena including feelings towards equipment, and words for delineating the most dedicated users and connoisseurs of technological objects.[3] Interest spiked in attending trade shows where these specialised objects were staged (as we saw with the opening Superbooth vignette), and some passionate users found ways to craft whole careers dedicated to serving a user community—either by running an influential website, publishing reviews and demos and manuals, hosting events, or setting up shops for aftermarket parts that could be used to 'mod' the objects. The degree to which certain 'power users' posted and participated suggested that these specialised online user communities had

become the key social milieu for many, even a 'total way of life' for some, but unlike preceding local technology-user clubs (such as camera and ham radio clubs, synth user groups, and computer-building events) these communities were now transnational in scope, some having grown, by the end of the 2010s, to hosting hundreds of thousands of people. The technological object in question differed, but in all these communities, conversation revolved around one matter more than anything else: *gear*. Bates and Bennett (2020) coined the *gear cultures* concept to describe these durable, transnational, online and offline communities organised around specific categories of gear.

In some regards, gear cultures represent the evolution and maturation of niche technology-specific interest groups, such as ham radio technical cultures (Haring, 2007), software user clubs (Théberge, 1997), pirate radio activist networks (Dunbar-Hester, 2014), camera clubs (Flusser, 2000: 58), Southern California lowrider car cultures (Chavez, 2012), or the maker movement (Wasielewski, 2017; Hepp and Schmitz, 2022). They extend the fascination specialist workers have with "beautiful" technical objects, part of what Siciliano (2016) terms 'aesthetic enrolment,' from professional domains to many kinds of sites ranging from bedrooms to trade shows to online platforms. Though they may overlap, they are quite distinct from music and fashion-oriented subcultures (Hebdige, 1979; McRobbie, 1980) and scenes (Straw, 1991), in part since the focus is on the objects used to make or do things more than on the outcomes—creative or otherwise—of their use. Moreover, gear sociality, far from resisting capitalism (something regularly attributed to subcultures) amps up capitalist consumption and commodity valuation to a matter of individual virtue. Why do hundreds of thousands of people now choose to coalesce around gear objects, more than around the activities (music, noise, sound art, photography, videography, pulling espresso shots) that gear are intended to facilitate?

Although gear cultures are organised around certain classes of technical objects, a potential trap for the prospective researcher is to assume that gear represents fully concretised, stable, and/or discrete technical objects with superficially obvious properties—the 'objects with affordances' trope (Pentzold and Bischof, 2019). Gear cultures are powerful and compelling to participants because gear is still subject to interpretation, can be ascribed new meanings, and is capable of being used in novel ways. In this regard, gear is what happens to technologies when they move beyond the *prescriptions* with which they were initially designed and garner new user-generated *scripts*—plans for action (Akrich, 1992). But, in gear cultures, human bodies, too, are open to being reconfigured and reconceptualised through engagements with objects, and social identities are prone to change. These are not separate processes of change: the changes to material objects and human bodies/identities simultaneously articulate each other through processes legible as *intra-action* (Barad, 2007: 33).

Hence, gear cultures research, while ostensibly focused on crafted objects, at some point must stop regarding those objects *as* objects, and analyse instead the processes of subjectification and objectification that transpire within webs of relations between gear, gear users, and the spaces of gear cultures. Regarding space and place, gear culture participants are platform jumpers, shifting the locus of their activity between different kinds of social media sites and numerous offline spaces (including trade shows, studios, and makerspaces). Gear representations, too, jump contexts, moving from traditional (print) media to social media to gear staging events to being the user's owned objects in the user's personal 'man cave,' 'bunker,' or 'womb' (Bates, 2012). Gear cultures can be found in many spaces, but no one place encompasses the full range of cultural activity, rendering single-sited ethnographic studies problematic.

Slippages in technology and user studies: proto-gear accounts

The extant scholarship on technological use and users contains many moments of slippage and excess, where the technologies transcend their alleged normative use cases and become used and regarded in novel ways that produce new kinds of meanings and practices. This appears to be especially so when technologies become associated with strong feelings: love and hate (Gomart

and Hennion, 1999), desire (van der Velden and Mörtberg, 2011), rejection (Cassidy, 2016). Some slippages and excesses are presented as anomalies, as the idiosyncrasies of one user, others as nostalgic feelings, rather than as phenomena worthy themselves of in-depth analysis. At what point should such anomalies inflect the central theories and conclusions that the authors make, and be considered both definitional of the technology's scripts and use, and central to the sociality where these technologies are important objects?

Take, for example, Trevor Pinch and Frank Trocco's (2002) *Analog Days*, a paradigmatic SCOT (social construction of technology) case study. While most of the book chronicles men with varying relations to synthesisers, one chapter is devoted to Suzanne Ciani, an acclaimed synthesist from the 1960s-70s, who spoke evocatively about her relationship with her Buchla instrument: "I was too emotionally attached, and, frankly, I was having a nervous breakdown, because when the thing was broken, I was broken. I was so attached to it that when it didn't work, I didn't work" (Pinch and Trocco, 2002: 169). The descriptions of Ciani's synthesiser as "her partner, co-worker, and courtesan" (Pinch and Trocco, 2002: 165) diverge from those of the other interviewees. It is unclear if the male interviewees were asked about their emotional attachments to their devices and if they felt the same. More pertinently, none of this materialised in the theory outlined in the conclusion (frames, liminality, boundary objects). The reader is asked to regard *Ciani* in a specific way, rather than updating their perceptions of what *a synthesiser* is or does, or by extension locating these specific material-affective-semiotic aspects and potentials in the authorially constructed liminal worlds.

The sociological concepts of boundary object and script/inscription/de-scription describe certain aspects of such meanings and practices after they accumulate, and represent one useful starting point for analysing gear. Susan Leigh Star, in her sole-authored and collaborative scholarship, regarded *boundary objects* to be "objects for cooperation across social worlds" that have sufficient interpretive flexibility "both to travel across borders and maintain some sort of constant identity" (Bowker and Star, 1999: 15–16). Boundary object research methodologically builds upon a grounded theory approach towards studying work and practice, to arrive at an ecological understanding of the people, objects, and institutions in which practices transpired (Timmermans, 2015: 3). Madeleine Akrich's dramaturgical consideration of the *scripts*, *inscription*, and *de-scription* of technical objects also looks at phenomena that contain some degree of interpretive flexibility, but her concern instead is to show how 'sociotechnical facts' can be turned into 'technical objects' that then serve as 'instruments of knowledge' (Akrich, 1992: 221). Both concepts show the benefits of ethnographically studying technical objects within specific milieux, and both require the scholar to not assume that the object's identity is encapsulated in the most obvious use cases. They can provide partial accounts of gear, and of individual relations to gear. However, neither provides a language or framework for assessing novel and changed social groups where such objects have a central importance. What fandoms or communities of practice might exist around some boundary objects, and how do technical scripts and inscriptions affect user sociality in such cases?

Whereas scholars in STS, sociology, philosophy and consumer studies have productively shown how many individuals develop attachments to objects, whether those are the 'knowledge objects' of technoscience (Knorr-Cetina, 2001), the 'affective objects' in the technologies of care (Latimer and Lopez Gómez, 2019), those artefacts subject to 'virtue ethics' (Puech, 2020), or the 'epistemic consumption objects' of twenty-first century consumerism (Zwick and Dholakia, 2006), this work in general has downplayed or ignored how widespread patterns in the fetishisation of particular kinds of technologies lead to new, large-scale social formations. In such work, especially that derived from ANT approaches, when the concept of 'the social' surfaces it may circumscribe little more than a few individuals and a single technological object that temporarily cohere into a network/ensemble/assemblage—for example, the scientists huddled around Bruno Latour's (1987) inscription devices. If we attempt to scale this up, we're left with thousands of dyadic attachment-relations that resemble the 'imagined community' of nations as theorised

by Benedict Anderson (1991), where the media of print capitalism conveys an illusion of human-human connections that do not materially exist. But as the opening trade-show festival vignette demonstrates, thousands of people routinely do come together to share sentiments, practices, and attachments to just one category of gear. Gear cultures research, then, reconciles gear autobiographical accounts based on the micro-sociological analysis of attachments vis-à-vis a concern for "preferences, passions, effort, agencies and aesthetics" (de Laet et al., 2021: 806), with the anthropological study of emergent cultural groups.

Slippages in communities of practice: proto-gear culture accounts

Within existing user studies are sporadic proto-gear culture accounts. Whether we consider ethnomethodological analyses of third-wave coffee shops that show "how customers and employees orient to [high end coffee] equipment and how the equipment facilitates and even arguably militates social interaction" (Manzo, 2014: 3), or the "connectivity network" relationships and "material scaffolds" that "govern" the social aspects of makerspaces (Cenere, 2021: 143-144), researchers have attributed agency to crafted objects of many kinds within culturally specific yet transnational social formations. I will discuss two case studies: the users/use of overclocked computers, and those of audio equipment (of various sorts).

Several practices for 'modding' (modifying) home computers, including the use of specialised cooling products and 'overclocking' (including the customisation of BIOS settings for computer motherboards and CPUs and RAM), help maximise the speed of a user's computer, and are especially attractive when high performance can be attained for a low cost. Technology modding is a familiar thread in the literature on the interpretive flexibility of technologies, whether the Zimbabwean water pump (de Laet and Mol, 2010), the Ford car engines turned into farm machinery (Kline and Pinch, 1996), or the repurposed government surplus equipment that became ham radios (Haring, 2007: 57–58). But the ethnography of overclocking has revealed that the communities that build and mod computers have developed their own argot with an extensive novel repertoire of affective terminology, some popularised by full-time tech bloggers who focus on these practices (McFedries, 2008), some coined on dedicated message forums (Beer and Burrows, 2010). Beyond the intrinsic interest in exploring computer hardware, overclocking is a significant ancillary practice for different communities of practice ranging from distributed computing projects (e.g., SETI@home, Folding@home) to collective gaming events such as LAN parties.[4] Vickie Curtis, in her study of Folding@home users, notes, "Folding@home gives them the opportunity to push their hardware to the limits, while also contributing to something worthwhile… Most respondents enjoy being involved in a larger community working towards a common goal" (Curtis, 2018: 8). So far, it would be easy to assume that that this "common goal" pertained to citizen science initiatives such as analysing astronomical data or protein folding. But the most active teams of users named and defined themselves after fandom interests such as "gaming, science fiction films, writers, or comics" (Curtis, 2018: 8). Indeed, "one of the largest and most successful teams in Folding@home is Brony@home" (Curtis, 2018: 5)—referring to predominantly male fans (Bronies) of the toy and cartoon series *My Little Pony* (Robertson, 2014).

In a related vein, Fatima Jonsson and Harko Verhagen concluded that one Swedish Lan Party they attended went far beyond gaming activity or overclocking techniques to constitute a "total experience as it is in effect a massive stimulation of players' senses and emotions" (Jonsson and Verhagen, 2011: 140). The sensory aspect they documented most was the DJing of techno music at loud volumes to create a nightclub-like party atmosphere: one that allowed gaming, not dancing, to be a main social activity. Knowing that collective participation in overclocking can be the gateway to Brony fandom or to alternative geek nightclubs suggests the need for greatly expanded research questions and ethnographic methods when investigating overclockers' many other connected social milieux, whether message forums, tech and Tumblr blogs (McCracken et al.,

2020), or consumer electronics shows. They also suggest that studying the materialities and argots and 'technical cultures' (Haring, 2007) of fandoms can result in a much richer and more nuanced understanding of why the participants do the things that they do.

Revisiting Pinch and Trocco's (2002) social construction of synthesisers, while they analysed some of the social activity between engineers and distributors and famous musicians (especially as it pertained to the 'invention' and 'success' of the technology), they inadvertently continued a long tradition of depicting lone women as "oddities and exceptions to the rules" (Bliss, 2013) and in doing so ignored social valences such as gender or other forms of social identity formation in general. This contrasts with recent literature on audio technologies that frames gendered discourses and practices as being intrinsic to print media representations of the devices, not solely to the subjectivity of individual users. As Kelli Smith-Biwer shows regarding 1950s advertisements for a different kind of audio technology, the record player tonearm, "the blurry gendering of tonearm ads is the residue of the postwar home audio industry becoming masculine, as marketing strategies explicitly shifted from depicting music in the home as a nontechnological, feminised pursuit to a masculine hobby" (Smith-Biwer, 2022: 340). Jonny Trunk (2024**)** collected four decades of audio technology advertisements, publishing *Audio Erotica* as a compendium of multinational efforts on the part of audio equipment manufacturers of various sorts (but especially home stereo equipment) to visibly eroticise gear. Thus, the conversion of just one kind of gear to sexual fetish resulted in contradictory kinds of sexual fetish.

These examples clearly articulate widespread individual attitudes that many have towards pieces of audio equipment. Certainly, sex sells, but these associations continue to persist long after the advertising trope faded out. For example, Alex Annetts, after conducting extensive discourse analysis on professional audio technology magazines in the 2010s and correlating this with specialist message forum discussion, recognised the specific social consequences of this, concluding that "the dominant, masculine gender-script of audio technology discourse… privileges the participation of a largely homogeneous demographic" (Annetts, 2015: 4). Tara Rodgers similarly demonstrates how the visual depiction of the musicians of electronic music festivals helps to perpetuate a 'hegemonic masculinity' in the demographics of participants (Rodgers, 2015: 11), much as Leslie Gay (1998) demonstrates around the discursive practices of New York rock guitarists/bassists in the 1990s. Therefore, one primary script of audio technologies, since 1950 if not earlier, has been for constructing and (re) producing social identities—especially gendered subjectivities. Seen in this light, Ciani's entanglement with her synth seems not at all fringe; rather, it is a paradigmatic case of women working at the vanguard of cutting-edge technologies (Hicks, 2018). Moreover, these works foreshadow Maria Rentetzi's prompt: "If things are so closely linked to the human way of life, if they determine it and are the result and cause of human action and thought, why do we rarely question the relation of things to gender, a fundamental human condition?" (Rentetzi, 2024: 15).

Gear culture methods

While gear culture is a theoretical term, it also represents a middle-range methodological approach (Hine, 2007). Gear cultures research has the potential to shed light on contemporary entanglements that fail to be accounted for by existing approaches and paradigms. These entanglements include technological objects that have been subject to powerful transformations, people of heterogeneous backgrounds for whom these objects are meaningful, and new sociocultural formations that contain the objects and people. As Annemarie Mol and John Law noted in their introduction to a book on complexity, we need "other ways of relating to complexity, other ways for complexity to be accepted, produced, or performed" (Mol and Law, 2002: 6). And while gear cultures, like many sociotechnical formations, appear entangled and complex from the outside, participants in these spaces do not necessarily perceive their gear relations as being complex—even when writing gear autobiographies. The agential cuts made in applying gear culture methods, then, might represent a partial disentanglement (Giraud, 2019), yet stop

short of ever purifying the subjects and objects. In their prior gear culture research, Bates and Bennett (2025) approached gear cultures via five different access points—gear, users, socialities, culture, limit cases—each of which necessitated a unique set of data and methods. These five are neither sequential nor discrete, as findings at each access point can usefully inflect work at the others. After summarising the access points, I will cover two additional methodological dispositions that can be applied towards all.

Gear. To document any specific gear episteme, it is useful to correlate what the gear empirically is with what people *think* it is, covering synergies and divergences in aesthetic, formal, material, and technical understandings of the technological objects. While this sometimes mirrors the technical language and practice of the engineers who develop these objects, terminological meanings may differ, as may the formal, aesthetic, and technical evaluations. In one sense, this stage consists of assessing boundary objects' style and morphology and their rendering in discourse, but considered at both the personal/individual level and at collective level. In another sense, this stage amounts to a reception ontology of the technological object (Gell, 1998) containing the widest range of assessments and perceptions—including many that might be regarded by some as being factually inaccurate (as was the case with the technobabble mentioned above). One bountiful source for gear reception is gear message forums; these contain many dedicated threads where users ruminate on their own definitions of gear, which present copious material for varied forms of discourse analysis including the assembling of dictionaries and sociopolitically oriented term-usage genealogies (Foucault, 1998: 369–391). Since gear's power perpetuates when objects continue to accrue meanings and practices and attitudes, the endpoint of this process is never an object with 'closure' (Pinch, 2008: 473-474), but instead the ever-growing web of phenomena and definitions and perceptions that precede the making of 'agential cuts' (Barad, 2007: 333–334).

Users. Gear is powerful in part due to the many ways that it can be approached and used; documenting this necessitates blowing up the concept of 'user' to document the widest range of individual/collective engagements with and attachments to gear. This may start with the scripts (Akrich, 1992) envisioned by the designer and those accrued by advertising and trade show promotion (Wernick, 1991; Andreae et al, 2013), but it extends to novel uses conceived in the social reception, too. Since gear consists of sensuous objects that are experienced in multi-sensory ways—through their look, feel, haptics, sound, and possibly smell and taste—included within 'use' are the embodied dispositions of users. Here, approaches from sensory ethnography (Pink, 2015) can contribute to a greater understanding of the experiences and effects of user intra-action with technical objects (Barad, 2007). If, as Paulo Magaudda (2011: 15) suggested, "materiality bites back", then gear also *touches* back and *gazes* back, judging the user for its attention or neglect. Therefore, sensory ethnography here accounts not just for bodies sensing objects, but for the object subjectivisation / individualisation that forms part of the haptics of encounters (Parisi, 2018). Through mixed-mode research it may be possible to correlate in-person ethnographic findings with an analysis of the affective and sensory vocabularies that users employ to describe their embodied experiences with gear. However, many details may never come to light if the research is restricted to user engagements with intact objects. Many surfaces (including less obvious ones such as printed circuit boards or typically concealed internal parts) may serve as kinds of interface and as sites of play, depending upon a user's intra-action with the object. Interfacial analysis (of gear's surfaces, materialities, texts, and morphologies) correlated with narratives of fetishistic desire is essential for accounting for these key intra-actions. Additionally, since much of the power of gear arises when personal agency has been delegated to objects (Latour, 2013), this sensory account of technological use/users extends to an empirical consideration of the many *agency configurations* (Erofeeva, 2019) in which users and gear find themselves.

Socialities. Many types of social formations, online and offline, form around and about gear, and each comes to have its own social interac-

tional modes. While objects matter somewhat in many kinds of social formations (e.g., clubs, scenes, subcultures, laboratories), within gear cultures specifically people assign objects a much more significant subject role as the centre of events and conversations alike. In short, if the crafted object was not there, the human social interactions would not happen. But how are technologies tasked with organising sociality, and how does this relate to or differ from the sociology of attachments? To understand this necessitates documenting the fetish power of gear, how the fetish works, what the fetish power is used for, and who is able to leverage gear's fetish power (Pels, 2023). Fetishes are leveraged to exert power on behalf of someone, meaning that these fetishistic relations benefit some and not others. Understanding the mechanisms of this foundational force in gear-social relations is a primary task for analysing the social ordering of gear culture spaces, whether those are message forums and Discords, reblogs or YouTube comment sections, or in-person events like Superbooth. Regarding the economic aspect of fetishes, gear's social formations as studied so far are systems of conspicuous consumption that (re)produce striations of social status based on regimes of connoisseurship (Veblen, 1899; Baudrillard, 1998). In this light, social status within gear cultures in some regards mirrors the differing relations that users/members have with gear. Research from this third vantage point has already utilised ethnomethodological approaches, yielding promising results concerning the social ordering of gear-centric workplaces (Manzo, 2014).

Culture. The above could be widely applicable to user studies (Oudshoorn and Pinch, 2003), which always must account (to an extent) for objects, users, and social aspects. But for this all to become sensible as a gear *culture* requires demonstrating the durability of the social formations, and the kinds of relations that people have with objects—especially when gear becomes meaningful enough that many people stake their personal identities on belonging to the social formation. This access point, the one least explored in prior studies, entails an ethnographic analysis of these social formations, going beyond the material culture and human-object relations to include a gear culture's history, mythology, jokes, visual culture, and values. All this may be well documented within the gear culture itself, especially by members of online platforms or attendees of in-person events who designate themselves as resident historians. Such amateur historians document the most important message forum threads, trade show turning points, salient memes, local argot meanings, and member-produced visual art; they may additionally take on a role as educators who impart this cultural heritage to 'newbies' (those who have recently joined the gear culture and may be unfamiliar with its lore). Another telltale sign is the proliferation of people who hold full-time jobs dedicated to supporting the gear culture. Though the number of gear makers may increase to match the increased market for products, more pertinent here are the lives, worldviews, and actions of gear reviewers and demonstrators, of web hosts and app developers, of gear modders, and of content creators and event organisers; long-form, semi-structured interviews, so far, have been the primary data and method for studying these (Bates, 2026a). These dedicated participants, along with online platform 'power users' (i.e., the most prolific posters) and the resident historians, have an especially strong role in determining the culture's values and interactional norms. All this points to the benefits of analysing the cultural aspects of gear cultures through the full range of ethnographic fieldnotes strategies (Emerson et al., 2011) and field-based participant-observational methods of cultural anthropology (Gupta and Ferguson, 1997).

Limit cases. It is not difficult to find evidence of ramped up sociality around many kinds of technical objects. For every gear category I mentioned before, as well as for many other object categories that attained sufficient interest to become the subject of dedicated online platforms (e.g., camping equipment, sewing machines, bicycles, model trains, typewriters, hydraulic cars—any of which future research may reveal to be the locus of a gear culture), an excess of discourse can be analysed by various means to determine individual attitudes and practices alongside social norms. Since the reception ontology of gear is enrichened when

it accounts for the widest range of perceptions, it would be counterproductive to employ a set of methods likely to distil this down into a homogenised, predictable gear account that ignores the outliers. In this light, the fifth access point pertains to targeted theoretical sampling strategies and consists of finding and analysing limit cases (also known as deviant cases, see Rapley, 2013) and norm-defying social groups related to the gear culture. For example, for gear cultures (such as those around recording studio gear) that appear to be predominantly shaped by a hegemonic masculine frame, women- and gender-expansive user networks served as contrasting case studies (Sokil, 2022; Pras et al., 2023). For gear cultures that were typically hierarchically organised with clear 'leaders' and 'followers' (e.g., regional and online synthesiser communities), subgroups that embodied affinity group or participatory-democratic structures complicated the norm, allowing the researcher to differentiate those aspects that are intrinsic to the gear culture as a whole from those specific to a single community or network within the broader gear culture (Bates, 2026b).

Throughout research and within each of the five access points, there can be significant benefits in employing photo/video documentation and visual anthropological methods (Ruby, 2000; Pauwels, 2015), albeit with the caveats that broadly apply to photographs and film that serve as ethnographic material (Ruby, 2005).[5] The recording studio and synthesis gear culture case studies yielded, combined, over 12,000 original photos, which were useful for descriptive purposes, for sharing and building rapport with interlocutors, and as initial stimulations for experimental sensory ethnographic techniques that were later conducted via participant observation. Several more specific techniques provided a benefit at various stages in prior gear cultures research. Since pictures and videos of gear serve as vital conversational prompts and currency within gear cultures, gear culture researchers have participated in normative and helpful ways by sharing their photographs with others. Relatedly, using such media within a 'photo-elicitation' (or video-elicitation) stage before semi-structured interviews provided a more open-ended and

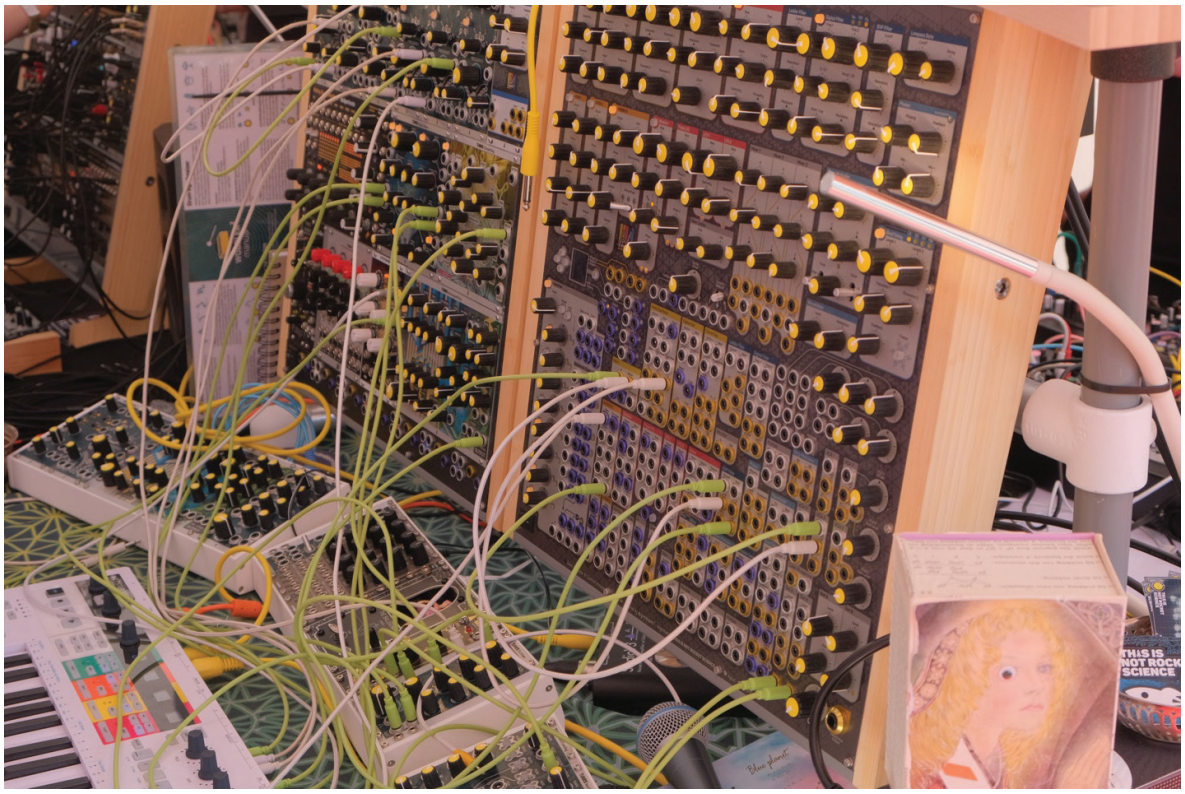

Figure 3. The TiNRS Fenix IV semi-modular synthesiser interface, on display at the Superbooth trade show. Photo by the author.

less theoretically overdetermined experience for interviewees (Buckley, 2025). Elicitation photos of gear events helped to determine which technology stagings succeeded or failed in eliciting the sentiment that the objects were indeed gear and worthy of fetishisation. Since the aforementioned 'sensory ethnographer' (Pink, 2015) aspects required the researcher to become more attentive to their interlocutors' embodied dispositions, experiments with images attempted to render visible the multi-sensory experiences people describe having with gear—regardless of whether "good" photographs or videos are ever produced (Leon-Quijano, 2022). And finally, pictures attempting to convey the sensuous aspects of the object surfaces that are sites of user-object intra-action, can help in producing more precise descriptions of the morphology and materiality that inculcate the fetish quality of gear, which in turn represent the material foundations of gear culture mythologies and histories (Figure 3).

While gear cultures are not only *discourse networks* (Kittler, 1990), their online manifestations present an unprecedented amount of textual discourse that can be analysed through various means—potentially tens of millions of posts on a single message forum alone.[6] Quantitative analyses using the Natural Language Toolkit (NLTK), including semantic parsing and sentiment analysis, present opportunities for mixed-mode research on large text corpuses, albeit with caveats. Finding that many users 'smh' or 'rotflmao' over a 'noob's' botched attempt to circulate 'gear pr0n,' reveals that gear culture argot has linguistic crossovers with the algorithm-evading algospeak found on TikTok (Steen et al., 2023) and reddits/forums, or with communities such as 4chan (Coleman, 2014), where deliberate yet inconsistent misspellings of terms (leetspeak, aka 13375p34k) are compounded by unintentional 'mistakes' made by second-language speakers. When many of the posts in a thread are unparsable in this manner, it lessens the utility of extant language models and dictionaries, and increases the margin of error for statistics derived from them. Thus, it becomes essential to manually assemble a glossary and usage guide for gear speak. When attempting to understand the role and usage of sexualised language for describing gear (e.g., 'true gear slutz' who get a 'boner' for 'sexy gear'), Bates and Bennett (2022) manually coded 28,000 posts from the thread gearslutz.com before conducting intensity sampling on a few multi-year 'epic gear threads.'[7] Their results showed how such language, interspersed with gear and non-gear imagery, had a central role in the turn-based flow of conversations, and how the sexualisation of technologies represented one mode of fetishism—one that ramps up the discourse's extremity as a strategy for boundary maintenance (Jones et al., 2020) on message forums and in the gear culture writ large. Contrary to their initial hypothesis that this represented 'word play,' in coding 'epic' threads for power moves made within turn-based communications, they found that gear performance represented instead a game with strict rules (Graeber, 2015), since the limited range of acceptable metaphors could only be applied to a very limited range of acceptable gear objects: those who claimed the wrong technology to be 'sexy' were laughed at. This example shows how gear's discursive complexity, where a single adjective might be functioning as an empirical descriptor and/or as a feeling and/or as an aggressive assertion of in-group/out-group distinctions, invites the use of multiple coding schema.

Conclusion

This article responds, belatedly, to Kim Fortun's (2012: 452) call to address 'discursive gaps' and 'discursive risks' in the ethnography of technology. While many studies have considered the forces that led to technologies becoming 'successes,' far less studied are the cultural formations around unconventional, novel uses of technologies. Considering that many gear categories (e.g., studio equipment, synths, cameras, espresso machines) represent professional tools that ostensibly should have been made obsolete by cheaper gadgets or by affordable software tools that do similar things, studying gear has the potential to shed light on the affective dimensions (Ahmed, 2014) of widespread attachment to technologies. In gear, we see how the in-scription of new meanings and practices on boundary objects through processes of fetishisation, result in new cultural formations that include gear as active participants. Since

gear culture participants make such strong valuations about what counts as gear and what does not, researchers need to understand the valuation systems that are used and the nuances of the fetishistic thinking that permeate the culture, albeit without falling into the material-hermeneutic trap of 'methodological fetishism' (Appadurai, 1986: 5).

The ontological fuzziness and indeterminacy arising through the pervasive fetishisation practices mean that gear cultures provide ideal sites for experientially observing and experimentally testing two theoretical premises from relational ontology: the intra-active nature of relationality (Barad, 2007) and the *agency configurations* concept (Erofeeva, 2019). Much of my discussion of gear/gear culture methods can be generalised as a set of experiments with where, when, and how to make agential cuts: in gear performances of many sorts, in the body's multisensory experience, in affective reactions to these, and/or in the reception of experiences and performances in social milieux. In other words, experimental ethnographic methods drawing upon sensory ethnography, defetishisation, visual anthropology and discourse analysis can provide access points to the novel configurations of human-gear intra-action that in aggregate have increasingly become the fulcrum of cultural life in the twenty-first century.

Acknowledgments

Support for this research was provided by a PSC-CUNY Research Award from The City University of New York. The author would like to thank the anonymous peer reviewers for their meticulous and valuable feedback on earlier versions of this paper.

References

Ahmed S (2014) *The Cultural Politics of Emotion*. 2nd edition. Edinburgh: Edinburgh University Press.

Akrich M (1992) The De-Scription of Technical Objects. In: Bijker WE and Law J (eds) *Shaping Technology/ Building Society: Studies in Sociotechnical Change*. Cambridge: MIT Press, pp. 205–224.

Anderson B (1991) *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. London: Verso.

Andreae M, Hsu J and Norcliffe G (2013) Performing the Trade Show: The Case of the Taipei International Cycle Show. *Geoforum* 49: 193–201.

Annetts A (2015) *Masculinity and Gear Fetishism in Audio Technology Community Discourse*. Ph.D. Dissertation. Anglia Ruskin.

Appadurai A (1986) *The Social Life of Things: Commodities in Cultural Perspective*. London: Cambridge University Press.

Barad K (2003) Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter. *Signs: Journal of Women in Culture and Society* 28(3): 801–831.

Barad K (2007) *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham: Duke University Press.

Bates E (2012) What Studios Do. *Journal on the Art of Record Production* 7.

Bates E (2022) La musique dans les cultures tech. La synthèse modulaire en temps de Covid-19. *Cahiers d'ethnomusicologie* 35: 225–243.

Bates E (2023) Feeling Analogue: Using Modular Synthesisers, Designing Synthesis Communities. In: Cottrell S (ed) *Shaping Sound and Society: The Cultural Study of Musical Instruments*. New York: Routledge, pp. 54–73.

Bates E (2026a) *Patching Pandas: The Paradoxes and Promises of Modular Synthesis Gear Cultures*. Forthcoming.

Bates E (2026b) Livestreaming a Doitocracy: Platform-jumping Participatory Practices in Modular Synthesis Gear Cultures. *Convergence*. Prepublished January 2026.

Bates E and Bennett S (2020) From audio technologies to gear fetishes. In: *Audio Engineering Society Convention*, AES Virtual Vienna, 2 June 2020.

Bates E and Bennett S (2022) Look at All Those Big Knobs! Online Audio Technology Discourse and Sexy Gear Fetishes. *Convergence* 28(5): 1241–1259.

Bates E and Bennett S (2025) *Gear: Cultures of Audio and Music Technologies*. Cambridge: The MIT Press.

Baudrillard J (1998) *The Consumer Society: Myths and Structures*. London: SAGE.

Beer D and Burrows R (2010) Consumption, Prosumption and Participatory Web Cultures: An Introduction. *Journal of Consumer Culture* 10(1): 3–12.

Bliss A (2023) Invisible Women. *The Wire*. April. Available at: https://www.thewire.co.uk/about/contributors/abi-bliss/abi-bliss_invisible-women (accessed 14 December 2025).

Bourdieu P (1984) *Distinction: A Social Critique of the Judgement of Taste* (tran. R Nice). Cambridge: Harvard University Press.

Bowker GC and Star SL (1999) *Sorting Things Out: Classification and Its Consequences*. Cambridge: The MIT Press.

Brounley DM (2022) *That Sound in your Head: Guitar Tone Values in the Entrepreneurial Age*. Ph.D. Dissertation. Stony Brook University, Stony Brook, NY.

Buckley L (2025) Photo-Elicitation. In: Cox R and Wright C (eds) *Routledge International Handbook of Visual Research Methods in Anthropology*. Abingdon: Routledge, pp. 127–133.

Cassidy E (2016) Social Networking Sites and Participatory Reluctance: A Case Study of Gaydar, User Resistance and Interface Rejection. *New Media & Society* 18(11): 2613–2628.

Cenere S (2021) *Making in the Making: Performing New Forms and Spatialities of Production*. Milano: FrancoAngeli.

Chavez MJ (2012) *The Performance of Chicano Masculinity in Lowrider Car Culture: The Erotic Triangle, Visual Sovereignty, and Rasquachismo*. Ph.D. Dissertation. University of California, Riverside.

Coleman G (2014) *Hacker, Hoaxer, Whistleblower, Spy: The Many Faces of Anonymous*. London: Verso.

Coulson P (2024) It's Not All About the Gear. 29 February. YouTube video. Available at: https://www.youtube.com/watch?v=sw3tTnPxSAM (accessed 24 July 2025).

Curtis V (2018) Patterns of Participation and Motivation in Folding@ home: The Contribution of Hardware Enthusiasts and Overclockers. *Citizen Science: Theory and Practice* 3(1): 1–14.

de Laet M and Mol A (2000) The Zimbabwe Bush Pump: Mechanics of a Fluid Technology. *Social Studies of Science* 30(2): 225–263.

de Laet M, Driessen A and Vogel E (2021) Thinking with attachments: Appreciating a generative analytic. *Social Studies of Science* 51(6): 799–819.

Dunbar-Hester C (2014) *Low Power to the People: Pirates, Protest, and Politics in FM Radio Activism*. Cambridge: The MIT Press.

Emerson RM, Fretz RI and Shaw LL (2011) *Writing Ethnographic Fieldnotes*. 2nd ed Chicago: The University of Chicago Press.

Erofeeva M (2019) On Multiple Agencies: When Do Things Matter? *Information, Communication & Society* 22(5): 590–604.

Flusser V (2000) *Towards a Philosophy of Photography* (tran. A Mathews). London: Reaktion Books.

Folding Ideas (2024a) *Gear Autobiography*. 19 January. YouTube unlisted video (Accessed: 4 January 2025).

Folding Ideas (2024b) *I Don't Know James Rolfe.* 19 June. YouTube video. Available at: https://www.youtube.com/watch?v=b3gZOt1Lo4A (Accessed: 4 January 2025).

Fortun K (2012) Ethnography in Late Industrialism. *Cultural Anthropology* 27(3): 446–464.

Foucault M (1998) *Aesthetics, Method, and Epistemology* (ed. P Rabinow; trans. J Faubion). Essential works of Foucault, 1954-1997. New York: New Press.

Fuller G (2015) In the Garage. *Angelaki* 20(1): 125–136.

Gay LC (1998) Acting up, Talking Tech: New York Rock Musicians and Their Metaphors of Technology. *Ethnomusicology* 42(1): 81–98.

Gell A (1998) *Art and Agency*. London: Clarendon.

Giraud EH (2019) *What Comes After Entanglement? Activism, Anthropocentrism, and an Ethics of Exclusion*. Durham: Duke University Press.

Gomart E and Hennion A (1999) A Sociology of Attachment: Music Amateurs, Drug Users. *The Sociological Review* 47(1): 220–247.

Graeber D (2015) *The Utopia of Rules: On Technology, Stupidity, and the Secret Joys of Bureaucracy*. Brooklyn, NY: Melville House.

Gupta A and Ferguson J (eds) (1997) *Anthropological Locations: Boundaries and Grounds of a Field Science*. Berkeley: University of California Press.

Haraway DJ (1991) *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York: Routledge.

Haring K (2007) *Ham Radio's Technical Culture*. Cambridge: The MIT Press.

Hebdige D (1979) *Subculture: The Meaning of Style*. London: Methuen.

Hepp A and Schmitz A (2022) The Limits of the Maker Ideology: Local Makerspaces, Experimental Practices, and COVID-19. *Continuum* 36(2): 199–213.

Herbst J-P and Menze J (2021) *Gear Acquisition Syndrome: Consumption of Instruments and Technology in Popular Music*. Huddersfield (UK): University of Huddersfield Press.

Hicks M (2018) *Programmed Inequality: How Britain Discarded Women Technologists and Lost Its Edge in Computing*. Cambridge: The MIT Press.

Hine C (2007) Multi-sited Ethnography as a Middle Range Methodology for Contemporary STS. *Science, Technology, & Human Values* 32(6): 652–671.

Hoffman J (2022) *Buying A Vintage Espresso Machine*. 27 February. YouTube video. Available at: https://www.youtube.com/watch?v=6Kv1e00rCbc (accessed: 24 July 2025).

Hyysalo S, Pollock N and Williams R (2019) Method Matters in the Social Study of Technology: Investigating the Biographies of Artifacts and Practices. *Science & Technology Studies* 32(3): 2–25.

Jones C, Trott V and Wright S (2020) Sluts and Soyboys: MGTOW and the Production of Misogynistic Online Harassment. *New Media & Society* 22(10): 1903–1921.

Jonsson F and Verhagen H (2011) Sensing Game Play: Exploring Computer Game Play in a Game Café and a Mass LAN Party. In: *2011 16th International Conference on Computer Games (CGAMES)*, Louisville, KY, July 2011, pp. 134–141.

Kittler FA (1990) *Discourse Networks 1800/1900* (trans. M Metteer and C Cullens). Stanford: Stanford University Press.

Kline R and Pinch T (1996) Users as Agents of Technological Change: The Social Construction of the Automobile in the Rural United States. *Technology and Culture* 37(4): 763–795.

Knorr Cetina K (2001) Postsocial Relations: Theorizing Sociality in a Postsocial Environment. In: Ritzer G and Smart B (eds) *Handbook of Social Theory*. London: SAGE Publications, pp. 520–537.

Kopytoff I (1986) The Cultural Biography of Things: Commoditization as Process. In: Appadurai A (ed) *The Social Life of Things*. Cambridge: Cambridge University Press, pp. 64–94.

Latimer J and López Gómez D (2019) Intimate Entanglements: Affects, More-than-human Intimacies and the Politics of Relations in Science and Technology. *The Sociological Review* 67(2): 247–263.

Latour B (1987) *Science in Action: How to Follow Scientists and Engineers Through Society*. Cambridge: Harvard University Press.

Latour B (2013) *An Inquiry into Modes of Existence: An Anthropology of the Moderns* (trans. Catherine Porter). Cambridge: Harvard University Press.

Leon-Quijano C (2022) Why Do 'Good' Pictures Matter in Anthropology? *Cultural Anthropology* 37(3): 572–598.

Magaudda P (2011) When Materiality 'Bites Back': Digital Music Consumption Practices in the Age of Dematerialization. *Journal of Consumer Culture* 11(1): 15–36.

Manzo J (2014) Machines, People, and Social Interaction in 'Third-Wave' Coffeehouses. *Journal of Arts & Humanities* 3(8): 1–12.

Marx K (1996) *Capital: A Critique of Political Economy, Vol 1* (ed. F Engels; trans. S Moore and EB Aveling). London: Lawrence & Wishart.

McCracken A, Cho A, Stein L and Neill Hoch I (2020) *a tumblr book: platform and cultures*. Ann Arbor: University of Michigan Press.

McFedries P (2008) Of geeks, Modders, and Overclockers. *IEEE Spectrum* April 20.

McRobbie A (1980) Settling Accounts with Subcultures: A Feminist Critique. *Screen Education* 34: 37–49.

Mol A and Law J (2002) Complexities: An Introduction. In: Law J and Mol A (eds) *Complexities: Social Studies of Knowledge Practices*. Durham: Duke University Press, pp. 1–22.

Oudshoorn N and Pinch TJ (2003) *How Users Matter: The Co-Construction of Users and Technologies*. Cambridge: MIT Press.

Parisi D (2018) *Archaeologies of Touch: Interfacing with Haptics from Electricity to Computing*. Minneapolis: University of Minnesota Press.

Pauwels L (2015) *Reframing Visual Social Science: Towards a More Visual Sociology and Anthropology*. Cambridge: Cambridge University Press.

Pels P (2023) *The Spirit of Matter: Religion, Modernity, and the Power of Objects*. New York: Berghahn Books.

Pentzold C and Bischof A (2019) Making Affordances Real: Socio-Material Prefiguration, Performed Agency, and Coordinated Activities in Human–Robot Communication. *Social Media + Society* 5(3): 1–11.

Pietz W (1987) The Problem of the Fetish, II. *RES: Anthropology and Aesthetics* 13: 23–45.

Pinch T (2008) Technology and Institutions: Living in a Material World. *Theory and Society* 37(5): 461–483.

Pinch T and Trocco F (2002) *Analog Days: The Invention and Impact of the Moog Synthesizer*. Cambridge: Harvard University Press.

Pink S (2015) *Doing Sensory Ethnography*. 2nd ed. Los Angeles: Sage.

Pras A, Brereton J and Ambrose K (2023) Unveiling the Female Ear. *Journal of the Audio Engineering Society* Conference Paper 12(September).

Puech M (2020) Attachment to Things, Artifacts, Devices, Commodities: An Inconvenient Ethics of the Ordinary. In: Wiltse H (ed) *Relating to Things: Design, Technology and the Artificial*. London: Bloomsbury Visual Arts, pp. 31–42.

Rapley T (2013) Sampling Strategies in Qualitative Research. In: Flick U (ed) *The SAGE Handbook of Qualitative Data Analysis*. London: SAGE, pp. 49–63.

Red Means Recording (2025) *Consumerism in Music Technology Sucks*. 12 April. YouTube video. Available at: https://www.youtube.com/watch?v=X-8oggi0_p8 (accessed 24 July 2025).

Rentetzi M (2024) Introduction: Gendering Things. In: Rentetzi M (ed) *The Gender of Things: How Epistemic and Technological Objects Become Gendered*. London: Routledge, pp. 1–20.

Robertson VLD (2014) Of Ponies and Men: My Little Pony: Friendship is Magic and the Brony Fandom. *International Journal of Cultural Studies* 17(1): 21–37.

Rodgers T (2015) Tinkering with Cultural Memory: Gender and the Politics of Synthesizer Historiography. *Feminist Media Histories* 1(4): 5–30.

Ruby J (2000) *Picturing Culture: Explorations of Film & Anthropology*. Chicago: University of Chicago Press.

Ruby J (2005) The Last 20 Years of Visual Anthropology: A Critical Review. *Visual Studies* 20(2): 159–170.

Siciliano M (2016) Disappearing into the Object: Aesthetic Subjectivities and Organizational Control in Routine Cultural Work. *Organization Studies* 37(5): 687–708.

Simondon G (2017) *On the Mode of Existence of Technical Objects* (trans. C Malaspina and J Rogove). Minneapolis: Univocal Publishing.

Smith-Biwer K (2022) "The Silent Partner": Tonearms and Modular Masculinities in U.S. Midcentury Hi-Fi Culture. *Journal of the Society for American Music* 16(3): 319–342.

Sokil A (2022) *The Hums: Feminist Listening and Gendered Affects in Music Production and Audio Engineering in Canada*. Ph.D. Dissertation. University of Toronto.

Steen E, Yurechko K and Klug D (2023) You Can (Not) Say What You Want: Using Algospeak to Contest and Evade Algorithmic Content Moderation on TikTok. *Social Media + Society* 9(3): 1–17.

Sterne J (2003) *The Audible Past: Cultural Origins of Sound Reproduction*. Durham: Duke University Press.

Straw W (1991) Systems of Articulation, Logics of Change: Communities and Scenes in Popular Music. *Cultural Studies* 5(3): 368–388.

Théberge P (1997) *Any Sound You Can Imagine: Making Music/ Consuming Technology*. Hanover: Wesleyan University Press.

Thompson E (1995) Machines, Music, and the Quest for Fidelity: Marketing the Edison Phonograph in America, 1817-1925. *The Musical Quarterly* 79(1): 131.

Timmermans S (2015) Introduction: Working with Leigh Star. In: Bowker GC, Timmermans S, Clarke AE and Balka E (eds) *Boundary Objects and Beyond: Working with Leigh Star*. Cambridge: The MIT Press, pp. 1–12.

Troitski A and Bates E (2024) Grid Culture. In: Teboul E, Kitzmann A and Engström E (eds) *Modular Synthesis: Patching Machines and People*. London: Routledge, pp. 205–224.

Trunk J (2024) *Audio Erotica: Hi-Fi Brochures 1950s-1980s*. London: Fuel.

van der Velden M and Mörtberg C (2012) Between Need and Desire: Exploring Strategies for Gendering Design. *Science, Technology, & Human Values* 37(6): 663–683.

Veblen T (1899) *The Theory of the Leisure Class: An Economic Study in the Evolution of Institutions*. New York: MacMillan Company.

Wasielewski A (2017) *Made in Brooklyn: Artists, Hipsters, Makers, Gentrifiers*. Winchester: Zero Books.

Wernick A (1991) *Promotional Culture*. London: Sage.

Zwick D and Dholakia N (2006) The Epistemic Consumption Object and Postsocial Consumption: Expanding Consumer-Object Theory in Consumer Research. *Consumption Markets & Culture* 9(1): 17–43.

Notes

1 See, for example, James Hoffman's (2022) *Buying A Vintage Espresso Machine* which compares espresso machines with investments in fine art, Red Means Recording's (2025) *Consumerism in Music Technology Sucks* which reflects on the relation between manufacturers and consumers and content creators, and Peter Coulson's (2024) *It's Not All About the Gear* which aims to defetishise camera gear for aspiring fashion photographers.

2 As of the writing of this article, the primary modular synthesis message forum ModWiggler.com had more than 50,000 registered members, the largest pro audio forum Gearspace.com had 450,000 members, and the various digital photography forums collectively had more than 500,000 members. This does not include nonregistered lurkers, or the many thousands of attendees at professional trade shows themed around the same gear category who are not members of the online forums.

3 For example, in professional audio gear cultures 'soundstage,' 'micro-dynamics' and 'femtosecond jitter' are technobabble exemplars; while highly specialized test equipment may be able to measure digital audio jitter to that degree of precision, the colloquial usage refers not to such test equipment but instead to the hypothesized 'spaces between the samples' in digital audio.

4 A Lan Party is an event where attendees bring their personal computers to a central location to be connected via a LAN (local area network) for the purposes of collective gaming.

5 It is not always ethically appropriate to do photography. My photography was done at events that provided a blanket disclaimer that by entering the event attendees consented to being photographed, and/or that provided media badges. In less public spaces, I only photograph if it's part of the normal way others are interacting there.

6 At the time of writing, Gearspace.com (pro audio gear) had more than 15m posts, overclock.net (overclocked computers) more than 28m, and dpreview.com (digital photography gear) had more than 45m.

7 Siciliano (2016: 697) discussed the presence of similar sexy discourses in technology-centric studio environments in Los Angeles.