2023

A Qualitative Method for Investigating Design

Jessica Silbey
Boston University School of Law

Mark P. McKenna
University of California, Los Angeles

A QUALITATIVE METHOD FOR INVESTIGATING DESIGN

Boston University School of Law
Research Paper Series No. 22-34

October 20, 2022

Mark P. McKenna
UCLA Law School

Jessica Silbey
Boston University School of Law

A Qualitative Method for Investigating Design

Mark P. McKenna and Jessica Silbey

(forthcoming in *Handbook on Empirical Studies in Intellectual Property Law*, ed. Estelle DerClaye, Edward Elgar Publishing 2023)

Intellectual property scholarship has recently taken notice of the increasing legal and economic importance of design. Once a relatively minor focus, especially as compared to the other objects of intellectual property and technology law, design is now on many scholars' radar, particularly following the multi-billion dollar global dispute between Apple and Samsung.[1] But despite design's growing legal and economic significance, relatively little is known (by legal scholars and policymakers) about designers or the design process.

That lacuna is particularly striking in light of the empirical turn in modern intellectual property scholarship. Legal scholars have studied a number of creative communities in recent years, in order to understand the economic and structural factors that shape the nature and direction of those communities' creative practices and the role of intellectual property and other legal regulation in shaping output. But those studies ignored designers and focused on communities and practices relating to the types of innovation or creative output that we typically either associate with utility patents or with copyright. This chapter describes our study of designers, which we recently carried out to fill that scholarly void. We particularly focus here on our qualitative interview methodology, which allowed us to shed light on some of the persistent puzzles in design law.

One obvious challenge to a study of "designers" is to determine how that category should be defined. That challenge presented our first line of inquiry. The design literature generally identifies certain design disciplines (traditionally focusing on industrial design and graphic design, and later UI/UX design), and a few design fields defined by industry (automobile design and fashion design, primarily). But our sense from our initial research, which our interviews

[1] In the United States, that litigation included a trip to the Supreme Court on an issue having to do with the calculation of design patent damages. Samsung Elecs. Co. Ltd. v. Apple Inc., 580 U.S. 53 (2016) (holding that "article of manufacture," as used in Patent Act provision governing damages for design patent infringement, encompasses both a product sold to a consumer and a component of that product).

have confirmed, was that those categories are no longer exhaustive and are evolving. As we describe more below in our methods section, identifying the relevant categories of designers and design work is essential for stratifying our interview data set and selecting interviewees. Only by doing that could we produce a thick description of the field on which to base hypotheses about, for example, the communities' motivations, values, and structural mechanisms as related (or unrelated) to design law.

Relatedly, our initial research suggested that "design" work was taking place in increasingly diverse contexts, and as a result, "designers" held a wider range of positions within organizations. We hypothesized that understanding the status of designers within their organizations and the changing nature of their roles within their places of employment would help to further identify and explain the various features of design and designers in complex production chains, and thus also the role (or absence) of design law in that structure.

Our second line of inquiry focused on the design process itself. Design literature commonly refers to the design process in terms of problem solving. We sought to understand from the designers whether the literature reflected their understanding of the process and if so, what "problem solving" means. Because intellectual property law tends to highlight certain types of problems (particularly "technical" or "utilitarian" ones), and to associate those kinds of problems uniquely with utility patent law, we wanted to understand how designers conceptualized "problems" and what it meant to them to solve those problems. We also hypothesized that designers' self-conception as "problem solvers" might shed light on their professional identities, the roles they perform in companies and for clients, and the institutional or legal help or hurdles they faced while pursuing their work.

Further to the question of professional identity, we wondered how, if at all, designers' conceptions related to problem solving would map onto the relevant legal categories, or to the conceptions of other actors whose institutional organization are influenced by intellectual property regulation (e.g., entertainment industries, pharmaceutical companies, the computer industry). Intellectual property's typical protagonists are "writers," "musicians," "sculptors," "scientists" or "engineers." But those identities are rapidly changing, and many "sculptors" today call themselves "designers," many "writers" describe their work as "information architecture," and visual artists are "graphic designers." New forms of creativity and innovation are constantly emerging in the digital age. We were therefore interested in how old and new professional

identities within the design fields were interacting with more typical understandings of intellectual property laws and their application as a plausible way to understand the origins (and possible solutions) for the challenges in the overlap between design law, copyright, trademark, and utility patent law.

Our third line of inquiry followed from the second. Design literature commonly identified the integration of form and function as a primary goal of design. We aimed to learn from designers and their organizations what "integration" means in this sense. This is a particularly important line of inquiry because intellectual property doctrine attempts in various ways to *separate* form from function, precisely to allocate different aspects of design to different intellectual property regimes. And as any student of these doctrines is well aware, they are among the most difficult in all of intellectual property law. We sought to understand the relationship between "integration" and the goals and outputs of design practice as partially coincident with, or possibly resistant to, intellectual property law rules. We thought better understanding what "integration of form and function" means to designers might shed some light on some of these trenchant doctrinal puzzles that IP lawyers face.

Finally, we hoped to learn what designers and the organizations they work for regard as successful (or even "excellent") design. At the doctrinal and institutional level, intellectual property law claims to abjure qualitative standards beyond the low metrics required for protection.[2] But in studying design literature, we understood that design practice (like many professional fields) has its own standards driven by field leaders, educational institutions, and market trends. We sought to understand from designers what those standards are and how they are measured and evolve. To our mind, this line of inquiry seemed essential to understanding how to evaluate the success of design regimes themselves, which purportedly exist to promote the progress of design. Relatedly, we sought to better understand how the metrics for evaluating good design compare to those used to evaluate more conventional subject matter of utility patent and copyright. We thought doing so would tell us something about the plausibly unique (or overlapping) role design patent law might play in our intellectual property regimes.

I. Our Method

A. Why Qualitative Research

[2] Originality and fixation for copyright; novelty, non-obviousness and utility for patent law; distinctiveness for trademark; and non-obviousness, novelty, and ornamental for design patents.

Our qualitative empirical study of "design" is based on a semi-structured interview method. Although our four lines of inquiry are informed by legal and design literature, court cases, and statutory law, our original contribution derives from the empirical data we collected and analyzed using a non-representative sampling of interview subjects stratified among variables relevant to the questions under investigation, which we describe in more detail below.[3] This qualitative empirical analysis complements any legal doctrinal or policy analyses. Our aim was to broadly investigate the legal and popular meaning of "design" outside "intellectual property law," e.g., other than through court decisions and statutes. This method presumes that relevant creative communities engaging in "design" can help situate and maybe also explain or illuminate the legal categories and doctrinal rules that present persistent problems within the intellectual property doctrine by grounding an explanation of "design practice" in their lived experience.

Generally, lawyers, legislators, and legal scholars are more familiar with textual and doctrinal analyses and close readings of cases and statutes. Qualitative empirical research is less familiar as a method of analysis and way of producing knowledge about law because it remains rare in legal studies. And collecting the data is time-consuming and costly. Nonetheless, qualitative research is vital for understanding the significance and variation of lived experience that law affects. It complements and enriches (and can be especially useful when combined with) quantitative research, which remains the dominant empirical research method in legal scholarship today. Qualitative methods

> develop insights about the underlying forms and dynamics of the phenomenon under study. Unlike quantitative research in which researchers seek to generate precise estimates based on a sample that can be generalized with estimated degrees of error to a larger population, qualitative researchers seek 'analytic generalizations' that attach meaning, rather than measurement, to the phenomena observed.[4]

[3] *See* Jan E. Trost, "Statistically Nonrepresentative Stratified Sampling: A Sampling Technique for Qualitative Studies," *Qualitative Sociology* 9 (1986): 54-57.

[4] Pamela Stone, *Opting Out: Why Women Really Quit Careers and Head Home* (Berkeley, California: University of California Press, 2007), 243, 248.

In other words, qualitative research is useful to identify and explain situated knowledge (i.e., actors' experiences and interpretations) about a particular object, practice, or field, e.g., "what is design work for which companies are hired?" and "what is design excellence that companies seek to achieve?" Qualitative studies identify variations in these interpretations, events, and behaviors through data that is "densely textured, locally grounded, meaningful to the subjects themselves."[5] A hallmark of qualitative research is developing the categories and their explanations from within the narrative structures that interviewees provide and that can be further analyzed in other studies, both qualitative and quantitative.

Another reason to use a qualitative research method is that narratives and popular concepts are explanatory and justificatory tools in the constitution of law and culture. Qualitative field research collects actors' accounts of their lived experiences, which in this study reveals how designers develop and make sense of their professional identity and work as "design" work in the larger context of creative and innovative business ecosystems. A systematic analysis of the data offers explanations of what counts as "design," what is a "problem" to be solved, what is "excellent design" and how that definition and standard has evolved over time. If we are interested in understanding or more precisely defining design work as it relates to the legal regulation of designed objects and the structure of firms that engage in design as they relate to intellectual property law, these interviews provide direct and varied evidence from the individuals whose businesses and professional practice are implicated by the law of design. Understanding the diversity in the field and the themes that might connect or explain the variations within the field is a critical first step to evidence-based law-making and law-reform.

B. The Qualitative Research Method for Investigating Design

Qualitative research starts with hypotheses based on lines of inquiry, which we outlined above in Section 1. Those hypotheses are grounded in the literature and a general understanding of the field. They are also necessary to structure the initial stratification of interviews and selection of categories of questions.

The qualitative researcher aims to identify a comprehensive set of relevant variations in the studied experience or practice that relate to the practice's functions or roles in the lives of

[5] Jack Katz, "Ethnography's Warrants," *Sociological Methods and Research* 25 (1997): 391-423, 392.

those under study. They do so in order to test the hypotheses and generate alternative ones.[6] To get there, the researcher identifies the population to be studied and the key dimensions that are likely to generate distinctions in the experience under analysis. This "stratifies" the population into relevant sub-groups within those dimensions. Talking with people across many sub-groups increases the chances of identifying relevant variations and achieving comprehensiveness in the explanation of the phenomena. Having a complete set of variations may be impossible, but the goal is to discern as full a set as possible. The researcher has done so when they reach "saturation"—the point when the most recent interviewees are providing accounts that align with previous accounts.[7]

Qualitative work will not lead to a statistical measure of correlations among variables or a mathematical test of causal inference. But a core benefit of qualitative interview-based research, and the key reason qualitative methods are superior for the questions we explore in this study, is the ability to generate diverse, multifaceted variables relevant to study further and nuanced explanations of those variables that aggregate and interact to form the basis of complex social phenomena.

For the design case study, we interviewed twenty-four designers between 2018 and 2020. We began our interviews with designers who had a long history in the field and could tell us about their experience of the changing nature of the design profession and design work. This helped us identify and clarify as foundational particular design disciplines (industrial design and graphic design, for example) and settings in which designers worked (legacy design firms or "consultancies", such as IDEO and FROG, and early in-house design teams, such as in the automobile industry). Those initial interviews led to others (in the "snowball" sampling method) and the categories began to grow and evolve.

We sought to interview designers with experience in a range of different industries and who designed for different markets. We ultimately interviewed designers with experience in at least 8 different contexts: automotive, household goods, user-interface, fashion, graphic design, medical and technological devices, service-based design, and landscape design. We also interviewed designers who were working in different organizational settings. Some were in-

[6] Mario Luis Small, *'How Many Cases Do I Need?'*, Ethnography 10 (2009): 5-38. In contrast to quantitative methods, interview research does not use a random sample nor does it provide a measure of the frequency that variations appear.
[7] *See* Small, *supra* note 8, at 25–28 (explaining the concept of saturation).

house at firms that have major design components (such as OXO, Facebook, and Whirlpool); others were solo designers with their own brands and products. We also interviewed designers who work (or have worked) in design consultancies. As is common, many people had diverse experiences in different work settings – moving from consultancies to in-house, and vice-versa – and so they could compare these settings. Designers with decades of experience could also describe changes in design practice over time. We sought to interview both young, emerging professionals as well as experienced designers.

As it turned out, many designers work across the disciplinary categories or have developed expertise in more than one area. Some started in graphic design, for example, but are now focusing on UI/UX and "motion design." Others started in industrial design but primarily work on branding strategies and service-based design. We learned that many designers today consider interdisciplinarity and boundary blurring essential to excellence in design and thus, despite expertise in a particular sub-field (in medical devices, for example, or user-interface design), many reject disciplinary categories, although not all do. Automotive designers tended to identify most strongly with their category, though even some auto designers had applied their skills in other industries. For example, one of the automotive designers we interviewed ultimately left that industry and worked designing appliances. Identifying variation like this – starting with common themes and then hypothesizing the existence of exception to the themes – is part of the rich generativity of qualitative research.

By about the fifteenth interview, after speaking with designers from all the categories at various stages of their career, we were hitting the saturation point. The same themes were arising in each interview; we were hearing very similar accounts of disciplinary boundary-crossing and the centering of design work in more and more diverse businesses. Designers were using the same words to describe the nature and practice of design work, and the designers started even referring to each other and to the firms or businesses we had already visited. For legal scholars, it resembled to us the point at which the case law research starts becoming self-referential. There were exceptions, of course. We had a sense that automotive designers would stand out, and they did, because they were some of the first high-status designers in the design field. But even they provided accounts of design practice generally that resembled in meaningful ways the professionals at Whirlpool and IDEO, for example.

We kept interviewing, however, well past this saturation point. We stopped at twenty-four, although we would happily do more (and may still!). Based on the qualitative methods research, however, we believe we have enough cases to defend the validity of the variables we assert are relevant to understanding what "design" means to designers and how that explanation implicates the questions with which we are concerned to better understand and help inform the evolution of intellectual property law. [8]

C. The Interview Process and Data Analysis

Most interviews lasted between one and two hours. Each relied on an approved IRB protocol for the semi-structured interview, which allowed us to standardize across all the interviews. But the protocol also allowed deviation and follow-up when necessary to clarify potential contradictions or dig deeper into apparent idiosyncrasies or parallels. Interviewees could elect to be on or off the record. We use pseudonyms when quoting off-record interviews, and the biographical details for confidential interviews are more generalized to protect anonymity. All of the interviews were recorded and transcribed by a professional transcriber. We conducted most of the interviews in person until the COVID pandemic lockdown in March 2020, when we finished the last few interviews over Zoom.

We are happy to share our interview protocol with readers who seek more detail than is provided below. But, in general, we asked questions centering on the four lines of inquiry described above. Our interview outline was organized by themes, with both open-ended and specific, fact-based questions. It is important when doing interview-based qualitative work to ask both open-ended and specific questions to generate the variability that qualitative research seeks. So, for example, we asked questions such as "how did you become a designer" and "what kind of educational or work background is typical for a designer today?" We asked about how designers are situated within their firms, how they understand the role of design within their organization, with whom they interact collaboratively and at what stage of the organization's productivity.

We also asked questions about the sorts of projects and problems designers understand themselves to be addressing. We asked about client relations, both actual and ideal. And, crucially, we asked for specific examples that would ground the more general and abstract

[8] *See* Small, *supra* note 5, at 25–28 (explaining the concept of saturation)

discussions, which often added nuance and complication to their statements about design work. We probed success stories and some more difficult or less successful relationships (asking why they were difficult or unsuccessful). We asked especially about each interviewee's specific design process: what are their steps, are the steps the same for any client or project, how do they build teams and why, and how do they know when they are done?

We heard a lot about background field research, which was often observational (sitting in restaurants or watching people use kitchen utensils), and about looking for inspiration in adjacent or far-flung spaces. We followed up with questions about copying and influence, seeking to understand what kind of borrowing and iteration was expected and whether novelty or originality was a relevant standard. We asked questions about how designers add value to the overall project and what skills are particular to designers that complement the other professionals on the team, always asking for examples as we probed the answers. We were particularly interested here in the ways the designers characterized the value they added and the process, as distinct from the value added by other skilled professionals (e.g., management consultants, lawyers, finance or business developers).

We were also very interested in the designers' perceptions of the relative roles of aesthetics and functional utility in their design work, and so whenever those concepts came up, we would ask for clarification and examples. We also asked about what kinds of problems were *not* design problems – e.g., which problems would be sent to engineering, or to business, for example.

We asked many questions about change over time, asking the designers to reflect on past practices and educational models and how those are the same or have changed. We sought explanations for the centrality of design to so many fields today, and of the goals of designers both for clients specifically and for themselves as professionals. We asked each of our interviewees what counts as "design" and how they evaluate the quality of design—and in particular, how they identify "excellent design." As the design field is evolving, are the metrics for excellence also changing? If so, how? Were those metrics for excellence part of how designers discuss their work? Where do these metrics come from, if they exist? Near the end, we always asked if there were impediments to doing excellent work and what, if anything, they would change about the design profession. We also always asked them to describe the cutting edge of design work today: where is design innovation and where is it headed?

As we conducted interviews and read transcripts, and then re-read and analyzed the transcripts, we revised our understandings and interpretations of the phenomena under study. Interview analysis follows several steps. First, after each interview, we write a two- to three-page memo summarizing the interview. The memo includes any notes we made during the interview, a description of notable stories or quotations from the interviewee, and a list of overarching themes from the interview. Memos are often co-drafted and shared to produce a common framework of the ongoing analysis. As often as possible, we endeavored to write these memos together at the end of an interview day.

Second, we both read the interview transcripts closely. We studied the interviews at the level of language (word choice, narrative structure, and content) and at the level of conceptual themes, which are drawn from reading across the transcripts and from the literature in the relevant fields (photography or design practice, for example). We then generated a list of code words developed deductively from preliminary findings and inductively from the emergent language, repetitions, narrative structure, and conceptual themes contained in the interviews.

Third, we read the transcripts again to code them, first by hand and then using a system developed as a team using Excel. (At this point our team included a research assistant who was also a law student with both qualitative and quantitative coding skills from her undergraduate studies. Brittany Von Rueden was an essential member of our coding team with whom we discussed the codes, their application, and their analysis using the Excel software. She developed the Excel coding tables that allowed us to analyze the transcripts as an entire data set.) Coding allows us to search and sort the data by code or any other category we establish. Coding together and interpreting the interviews as a research group enhances intercoder reliability, which is critical to the descriptive and interpretive validity of qualitative empirical analysis.[9] Where we coded differently because of differences in interpretation, we discussed and resolved the differences. By its very nature, working with qualitative data is an interpretive process. Nonetheless, strong consensus can be achieved by regularly sharing coding on a common text and thus collectively developing common parameters for interpretation. The coding software allow for combining, segregating, and sorting of all three data sets according to chosen categories.

[9] For a discussion of intercoder reliability, see Joseph A. Maxwell, "Understanding and Validity in Qualitative Research," *Harvard Educational Review* 62 (1992): 279-300, 287–291.

In the end, a qualitative study must respect (through close reading and interpretation) the language used in interviews as a source of meaning and purpose. The validity of the interview data depends on how much of the interview responses reliably describe recognizable practices, whether the descriptions are sufficiently thick to be credible, and whether the theoretical interpretations are sufficiently grounded in these and comparative data.[10] For this reason, quoting the interviews at length is necessary for final publications, so that readers can assess the interpretation of the accounts for themselves.

We did our best to emulate the methods of well-regarded and robust qualitative interview studies in order to assure optimal validity. Quality of interviewing matters a lot. We conducted all the design interviews as a team to facilitate careful listening and questioning in a conversational style building from a trustworthy context.

> "The more discursive, conversational style of the interview affords opportunities to prompt respondents to explain seeming oversights and inconsistencies, which serve as consistency or reliability checks of sorts. These same in-depth techniques are also well suited for getting underneath the superficial, socially desirable, or conventional responses people give when accounting for their behavior because the depth of information generated allows the researcher to detect deeper levels of meaning that the respondent herself may not be aware of, but which reveal underlying motivations that conventional or initial accounts belie."[11]

Despite our confidence that the interviews were robust and probing, our interpretations are necessarily suggestive rather than exhaustive. Qualitative work by its nature generates hypotheses about social phenomena. We have written one article so far with preliminary interpretations of the data.[12] Based on feedback we have received on that article, we are working on additional papers that will look more deeply into some of the other variables within the data that we think shed light on the complex and evolving phenomenon of design's ascendancy in the digital age. What follows is a loosely organized list of some of those variations already described in our publication, and some not yet analyzed in depth but which we plan to explore in future articles.

II. Empirical Findings

[10] Matthew Miles and A. Michael Huberman, *Qualitative Data Analysis* (Thousand Oaks, California: Sage Press, 1994), 245-285.
[11] Pamela Stone, *supra* note 3, at 254.
[12] Investigating Design, Pitt Law. Review (forthcoming 2022)

The below-listed items are illustrative and not exhaustive. We aim here only to provide examples of the textured data and sample analyses to demonstrate early output of the above-described methodology.

A. Professional Identity: Who is a Designer?

In our interviews, we asked questions about design education, career trajectories (planned and unplanned), and the distinction between designers and other skilled professionals. Older designer described design school as competitive and grueling, with focus on renderings (form giving), where the premium outcomes were jobs in automotive or industrial design. Some older designers also started out in graphic design and developed skills in marketing. The educational trend over the decades, however, was to move away from these disciplinary categories and to focus instead in both design education and skill-building on research methods, interdisciplinarity, and working in teams. Being a "designer" has more to do with *how* you work than what you make. That way of thinking affects the shape of firms, the place of designers in firms, and the nature of clients. Here are two examples from the data:

Here is one explanation of this phenomenon from an IDEO executive who preferred to stay anonymous.

> "There's a deliberate sort of shifting of realizing that as we can incorporate different types of people and different disciplines, we can tackle different types of problems, so originally like we're hired to like design the thing, you know, the product, and we team up to be able to do that, and that's a subset of like, you can imagine, engineer, designer, electrical engineer, a software engineer, but as we start to realize that we can actually have a bigger impact if we can also think about, you know, the brand, we can also think about the packaging, we can also think about the website and the communications and the app and all the other things that surround the experience, then we can design a more holistic experience and therefore have a broader impact, right? So that's how it's, in my sort of experience, that's how we went from sort of designing things to designing experiences, right? Holistic experiences. Because, and then, you know, the next part of it was then, oh, and are the organizations that we're working with capable of sustaining, maybe going into a new, completely new business, or a new way of working? Like our work maybe creates, the outcome of our work could be a new product or service, but it could also be sort of launching a completely new business that the organization is not necessarily capable of doing as they exist today.

A different design leader provides another variation on how design education has morphed to become more interdisciplinary or "blurry" and from that to produce new

specializations within businesses. Here, Michael Rock is responding to our question "where do you think the design field is going, if you had to predict?"

> I think this blurriness is the condition that we're gonna live in now, and what I predict is that there won't be a kind of central activity. And so an example I would use is that in some ways if I went to business school in 1950, I'd do very little math when I was there. I would be doing management theory, and HR theory, and a whole bunch of things like that. Sometime starting in the '70s, business school co-opted math, and it became a kind of major part of their program, right? I find the same thing's happening with design now.
> I think design's being folded into the language of business, and I think that they're probably more quick to capitalize on it to a certain extent. … So I think that in some ways I see it just being absorbed into these, that it becomes software, or a kind of part of the language of these different activities somewhat, and therefore the individual components of graphic design will start to exist as kind of proficiencies in themselves. So, and we already see it happening, like so there's a whole very robust profession of font designers, for instance, who are doing digital font design for all different kinds of things, right? And that's become a subset of graphic design, which is very specialized, and has its own set of softwares as tools, own set of contractual relationships, own set of kinds of clients, challenges they're dealing with, something like that, and that's now become very specialized. I think each one of these things will start to have its own, you know, organization somehow. … [And] I think it's gonna make [design] difficult to teach …, because you have to say what's the value of a general education in design anymore? Like do you, is getting a graphic design degree meaningful at this point? Or would you just go immediately into one of the other things, and I think you see that right now, where people are going into UX design, or something like that, you know, it's really a standalone profession now, you know, and it has its own kind of curriculum and pedagogy and way of thinking about it, and it's starting to have its own history.

The increasingly common definition of design and designers in methodological terms generates an optimism and open-endedness to the professional identity, so much that some designers talk about "design futures" or "speculative design" as a field (where designers are imagining things and processes of the future in a utopian kind of way). And other designers describe designers, and especially the movement toward "human-centered" design, as an essential antidote to late-stage capitalism and environmental destruction.

Here is Laura Forlano, who describes an evolution of design practice this way:

> [When] I first arrived in 2011, the majority of the projects were communication design of some sort. So they would take complex problems, like a health care system, or whatever, and then they would go do the user research, and then they would visualize and map and represent those things in a way that helped make

> sense of it, right? So that was very common. Now in more recent [years] we've had a lot more projects that are physical prototypes, partially because … I've been trying to get people to do these more speculative projects, and speculative design, which is a different field of design that overlaps much more with art … there's an overlap between the design and the futurism space. So then there are others that are arguing for like futures and design. … speculative design is intended to be a critical practice. So it's a critique of the world. And it's posing different kinds of questions towards alternative possible futures."

More often, the designers were not describing "speculative future" practice in the way Laura does, but instead were explicitly describing ethical design practices and ways in which the work one does as a designer and for a client actually improves human welfare in light of challenging materialities of everyday life, such as unsustainable waste production, poverty, and health outcomes. Here is Jay Newman of Jump Associates describing that process as pursuing the "big why" for his company and his client's company.

> Now we happen to like, as a conscious capitalist company, right? like, we happen to love the fact that like growth has two meanings in our world, there's deep economic growth that is interconnected to like the growth that comes at the individual level, and certainly like a billion dollars of value might mean like big returns, but it also might mean a billion dollars of impact on a local community, right? Or, you know, a billion people lifted out of poverty. So these things are all interconnected into each other, I think. That's the place we start our--, we start with that bigger why for the organization, like who are you and why do you exist? And we often hope to bring our clients along the same types of questions.

Importantly, designers are not management consultants or finance executives. Neither are they marketing professionals, although designers commonly work with all of those people. Designers have common backgrounds in design research and industrial design, and to some extent in traditional and modern aesthetic practices. But the precedent for their contemporary work is broader, and constraints on their work less, than might be expected. This leads to very wide impact for clients.

B. The Evolution of Design Work

The designers in our study described an earlier time in which designers primarily conceived of themselves as form-givers, skilled artists or sculptors who would create models of a new car, washing machine, or font type. Today, the designers describe their work much more holistically. As is evident from the above quote, modern designers consider themselves to be

designing "experiences." And, importantly, human-centered design work begins not with the object but with the lives of the real people who will be using the object or the service. This means that designers learn to act like anthropologists and sociologists, studying people and situations as much as they study form and utility. They don't know what they are going to produce because their research into the situation their client has asked them to study may turn up creative solutions or responses that are surprising. This kind of human-centered research is grounded in sociality and emotion as well as feasibility.

Michael Kahwaji, at Whirlpool, talks about the move from being a "form-giver" to understanding human needs.

> People think industrial designers are form-givers, and that's all we do. 'Oh, here, can you make this look pretty?' No, we believe that we're connected directly to the consumer. We understand their needs, their emotions, so it's psychology, it's marketing, it's engineering. So the engineering part of industrial design is not necessarily solving the exact functional mechanics of it, although some of our designers are tilted towards that, and others are tilted more towards the sensory experience they want. So I don't know how I'm going to make this shelf work, but the action that this shelf needs to do is slide back, move up, and then slide back again, because that's what my consumer needs."

Ann Marie Conrado, who teaches and practices design, described this human-centered approach in terms of her work for the U.S. dairy industry. Seeking to promote the consumption of milk in particular, Ann Marie explained that her job was to first understand the culture of milk consumption.

> I went in, we spent time with people, you know. And so the first part of the design process now is driven by ethnography. Right? … it's go where people are, go where people are doing the things, observe them, engage them in the process of eating and drinking or preparing food. We went to five different metropolitan areas that had close relationships with the outer suburbs, so we could go to rural and metropolitan within a short drive. We went to each of those places, we talked to people in every one of those places. We had a sit-down interview like this followed by a second visit with some sort of engagement. … with one person, we watched him like smoke meat for four hours, because that was his passion. Another person, I got up and I was there at 6 am so she could make five different lunches for all her kids, and make all these mini meals for the whole day. Another person, I went with her to our coop, because that's her favorite place in the world. I wanted to see the activities around food and drink that excited them, you know, that they were passionate about.

Understanding the consumer or the culture and activities surrounding the human phenomenon sought to be "designed" is critical to the success of the outcome. So when Lee Moreau, a designer then at Continuum, described the success of the Swiffer, a newly designed object, he characterized the success in terms of the experience it produced through its designed form.

> "We are creating new experiences. The Swiffer is … what the Swiffer does, which is magical, is it creates a new behavior, and the new behavior is, instead of every six weeks, I mean everybody says they clean their kitchen floor once a week, they fucking don't. They fucking don't. They do it once every six weeks if they have to, if it's that bad, and if they have company coming. What it does is it changes the behavior. It enables a behavior, which is I'm just gonna, once or twice a week, tidy up a bit, it actually cleans the stuff off your floor, because it has the technology in those towelettes, … so it's very effective, and you feel a sense of accomplishment. You take that dirty thing off, and you're, "Ewww," and you put it in the trash, and you know it works. It shows you that. So that behavior change is really what the Swiffer enables. It's just that to get that feeling you have to buy a Swiffer, and you have to do it, but the product is just enabling this feeling of accomplishment, and what we're enabling is the sense that people who value the cleanliness of their floor because they feel it's a reflection of themselves…"

George Aye, who may have been one of the most senior and well-known designers we interviewed, described the evolution in design work "away from the tangible." He describes moving from tangible materials to digital materials, and ultimately to people.

> I'd say it [design work] moves away from the tangible. The value of aesthetics is still present, no matter, I haven't found it to be diminished. But the material choice and the execution is very, very different. So instead of executing on the finish of let's say, how smooth or rough the product is, literally, like the surface texture, it's going to be completely different of a question if it's only pixels on a screen, versus whether it's a product you hold in your hand. … it's just a completely different language, and there was an emerging practice around how did you design screens and interactions alongside how do you design people interacting with other people, which is service design. So you break it down to say what are the materials that I have control of as a designer? It used to be plastic and metal, plastic, metal, wood. Then it became pixels and their movement. And then you end up with people, which I think is the hardest one. Designing people and their behaviors.

One way designers conceptualize this way of thinking about who designers are and what designers do is that they are "problem finders" not "problem solvers." Based on the fluidity and

hybridity in their skills and teams, designers spend more time defining and understanding "the problem" as a way of understanding the people and the situation their client has hired them to address. There were so many examples of this process throughout the interviews, but here are just two: A brand and design professional at OXO said the company's "true magic … is when we solve problems people don't realize are problems until we solve them."[13] Alissa Rantanen, a young designer at a medical device company, explained the process of opening up of the "problem" to reveal new opportunities in the context of medical devices in the following way.

> "Out of research we have opportunities that are not prescriptive, they don't say 'You should do this solution.' They're much more open-ended, of 'The opportunity is better traceability.' And then the design staff takes a look at that says, 'Ok. How do we improve traceability? Well, we can look at grocery stores and see how they do that. We can look at how other people handle inventory management.' We can leverage all this, come up with a bunch of ideas … bounce ideas off of each other with the client, and then ultimately filter out what doesn't align with the client's capabilities or vision."[14]

Critical to the design "problem finding" process is going outside the narrowly-defined particular field (here medical devices) and locating analogous systems or solutions in unrelated places, such as in grocery stores or factories. This broad search for problems and their solutions expands the scope of design practice and expertise and resists compartmentalization and hierarchy.

C. Design Work Today: The What, How, and Who For?

Because designers see themselves and their work in these unique, methodological terms, design has extremely broad application. Indeed, from the designers' perspective, what they do and who they do it for is virtually limitless. We interviewed landscape architects who consider themselves environmental impact designers; we interviewed web designers who consider themselves designers and facilitators of better communities and family relations. We even interviewed designers at a legacy design firm who were hired to redesign the first-year curriculum at Boston College.

Designers may be more ubiquitous today than in decades past, and their clients more diverse. But they are also careful to explain how they are not engineers, or business consultants, or marketing professionals. The design method – the way they work with iterative prototyping and qualitative research, the interdisciplinary teams and hybrid skill-building across aesthetics,

[13] Interview with "Kate", Marketing and Design Professional, OXO, in N.Y.C, NY (December 11, 2018).
[14] Interview with Alissa Rantanen, Design Manager, Insight Product Development, in Chi., Ill. (February 5, 2018).

social science, engineering or manufacturing, and business strategy – is what makes designers designers. Even those designers who made household objects of beauty (like drinking glasses or lamps) in studios under their own names described their work in this way.

We were intrigued by the desire by most of the designers to describe an ethics or value-centered approach to design work that they say also distinguishes their work from other professionals. (Whether this is true as a matter of fact is another question.) The designers believe they are addressing real human needs, and seek to have meaningful impact. We probed these answers with some skepticism because, we thought, how do they know they aren't just manufacturing and selling new desires rather than addressing true needs? The responses were illuminating and varied. Some of the answers follow:

A younger designer working in-house developing medical devices explained:

> "I really appreciate aesthetics, and look and feel, and beautiful things, and that's part of my passion. But I do not want to do something superficial. Because I don't think this world needs more junk, for lack of a better word. ..., the ideal is some balance ... and something that I know will have a real impact."[15] A more seasoned designer working at a small consultancy said that for him "the main anchor of solving the problems is we go find the needs that people have, we don't go look for wants that people have."[16]

But others were a bit more skeptical and self-critical. Here is George Aye again, perhaps the most critical within our interview data.

> "Designers have a unique ability to address a need, … or, and maybe in my case, driven by discovering needs. When you present the thing that you think is valuable, ideally being paid for it, it makes people go 'Huh, I didn't know I needed that, but now I want it.' Now what's been troubling about it for a long time is that ability to identify a need and then visualize this thing that you found to be really compelling was mostly in service of corporations, … a client who says, 'We need to sell more here.' Right? … I'm over it, and I think it's a house of cards, because the people who are describing those needs are perversely incentivized to benefit from the need response, I'm gonna discount the validity of that need. So it tends to be true that people's needs have been met as in like, 'I feel bad about myself, and now through this product, I feel slightly better,' whether the product is Instagram, or that product is, you know, a new iPhone. I certainly appreciate all the things that I've bought, has met those mostly I'd say needs that were about self-perception, or even just, even something that's more practical, just like, it's more convenient to do it this way. … I'm not denigrating making beautiful things, there's so much value in that. ... Where it bothers me is

[15] Interview with Alissa Rantanen, Design Manager, Insight Product Development, in Chi., Ill. (February 5, 2018).
[16] Interview with Mike Smith, Designer, Jump Assocs., in Redwood City, Cal. (Feb, 26, 2020).

> when you present design as saving the world, when that is patently untrue, you're actually destroying it in many cases.

When we asked George to describe work he thought was adhering to a more ethical design practice, or at least the kind of design work he preferred to pursue, he described his evolution from "form-giving" to service design in the following way:

> What I found in my experience was that it was like one in ten or one in twenty projects, and until that tenth or twentieth project would come by, I was mostly making plastic injection-molded objects. And when I was there, and while I was a participant of it, I loved it. I was so excited that I could make something that would then become real. I have, I think it's like five or six design patents, and I have probably about half a dozen products that are sold to market. And you know, I only say that as like one tiny piece in the machinery. Whole design teams, you know, were involved in making it from the client team to the manufacturing and engineering, but to see something on the shelf that you've contributed to is mind-blowing. There's such a satisfying feeling. And then I got over it, because I started realizing, 'I don't get the satisfaction I used to from that feeling,' and I realized … "I'm not sure if I can do this any longer." So those projects of one in ten that I felt ecstatic about, probably the most memorable one was working on a hospital complex, a patient experience for young people with chronic diseases … That project was so exciting. … it was really satisfying. … rather than being a regular healthcare experience, this was designed very much around a patient-centered, versus what is typical, which is designed around a doctor-centered [system]. So really rad.

Lee Moreau puts this critique of avoiding making "more stuff" and instead doing good in the world in terms of a pitch to clients. He says this is what he says to his clients:

> "This is what your consumer's doing now. We did this qualitative research. This is what they value, and what they aspire to, and this is a new behavior that we believe they will have in the future. Nobody else is giving them this behavior. Nobody else is forcing them to do this, but if they do it, they're gonna want it more and more." And so that's where the ethics come in, is, is this actually something that's good for the world?

The content of ethical design varied from avoiding waste, making sure real human needs are met, to ensuring everyone feels like they are loved and they belong. Here are partners in a landscape design firm describing their ethical goals for their design practice.

> Michelle Crowley : Our big thing, which has to do with love, is accessibility, and getting people in the front door equitably? Like forever it was, 'You can go around the back, and there's a ramp in the back to the loading dock, and you can take some freight elevator up,' right? I mean everything now is changing, which is great, … we want everybody

> going in the front door. So we integrate all of our accessibility as best as we can into the landscape so that anyone who is disabled feels like they belong in there. …
>
> Naomi Cottrell: I believe that designed landscapes, especially in the urban or suburban environment, where we've lost our connection to nature, is an essential part of humanity. And will save the world. Quote me on that."

CONCLUSION

We have only superficially mined the data. The coded data contains many more ways to isolate and compare other categories and variables. For example, our code book includes codes relating to the qualities of design work, such as "simple," "coherence" "beauty," "hierarchy" and "utility." Other codes relate to business strategy and client demands, including "growth," "feasibility," "sustainability," and "disruption." We coded for ways of working in or for companies, including "freelance," "collaboration," "team," "constraint-role," and "constraint-legal." Our data analysis includes codes relating to ethics, professional organizations, employment status, and broader social and legal issues, including wealth inequality, the climate crisis, and intellectual property law. We have only scratched the surface in our analysis of the data. But the above description and analysis of some of the data demonstrates the richness and textured nature of the empirical data, which we anticipate will be useful for others who seek to better understand the relationship between any one particular variable and other existing legal or institutional mechanisms.