# **Regenerative User Experience**

Towards a Heuristics of Post-Capitalist Digital Design Practice

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# Abstract

If, as some economists have argued, the world stands on the cusp of a new post-capitalist era-marked by a period of degrowth, a shift towards a knowledge- and service-based economy, and the decline of traditional corporate hierarchies in favor of smaller-scale, distributed networks—then what role might user experience (UX) practitioners working in industry play in fostering such a transition? This dissertation argues that UX practitioners are uniquely positioned to bring about transformative change in for-profit organizations; but that they face mounting obstacles to doing so in increasingly data-driven, mechanistic product development environments. Drawing on theoretical foundations from the realms of alternative economics, meaningful work, and futures studies, this dissertation explores the barriers that UX practitioners face in trying to incorporate long-term societal and ecological perspectives into their work. Through a combination of scholarly inquiry, reflexive autoethnography, practitioner interviews, and observations of professional development workshops, this research program explores the efficacy of a series of educational interventions intended to help UX practitioners redirect their work towards addressing societal wicked problems, while harmonizing their work with self-professed inner values. Ultimately, I theorize a new framework of "regenerative UX" to facilitate this transition, along with a professional development curriculum and set of associated heuristics to guide the design of digital products and services in an emerging post-capitalist era.

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### **1** Introduction

"Nothing is easier than to formulate high ideals, but few things are more difficult than to discover the means whereby those ideals can be implemented... This is the real problem, I mean, one has to dream, but one has to dream in a pragmatic way."

-Aldous Huxley (1962)

User experience (UX) practice stands at a crossroads. Forged in the crucible of late twentieth century post-industrial capitalism, the field has evolved with astonishing speed over the past three decades into a mainline business practice among commercial organizations that maintain a digital presence—which is to say, almost all of them. Reliable estimates of the number of working UX professionals in the world are difficult to come by, but as of this writing in March 2022, LinkedIn lists 1,660,000 members with the term "User Experience" in their professional profiles—up from an estimated one million in 2015. These practitioners describe themselves variously as UX designers, product designers, interaction designers, information architects, UX researchers, UX writers, content strategists, UX architects, UX managers, or any number of other bespoke job titles. One forecast predicts there may be as many as 100 million UX practitioners globally by the year 2050 (Nielsen, 2017). While the long-term future of UX practice may be difficult to foresee with precision given the rapid pace of technological change, there is little doubt that contemporary UX practitioners

play an outsized role in shaping the lives of billions of people around the globe.

UX practitioners work at the intersection of profound—perhaps even axial—transformations in the social, cultural, and political landscape of the twenty-first century. Yet for all this putative influence, many of them experience a widening gulf between the humanistic ideals that first attracted them to the field and the performative pressures of the increasingly data-driven business environments in which they work. At the precise moment when UX would seem poised to play a transformative role in reshaping the role of business in society, the horizons of UX practice seem instead to be shrinking. Many practitioners report working under intense organizational pressure to deliver short term-focused, incremental business results; working in modern software development regimes that celebrate so-called small wins at the expense of more holistic, systems-level considerations; and seeing their work subject to minutely focused evaluation frameworks that quantify the behavioral impact of the smallest design changes, often leaving little room for imaginative leaps or future-focused speculative exercises (see further discussion in section 3.2 and chapter 7).

Yet despite the rapid growth of the profession and the central place that UX practitioners occupy in delivering a vast swath of today's digital products and services, the lived experience of UX practitioners has received scant attention in academic studies of design practice. Most critical dialogue to date has taken place as an intra-disciplinary conversation among practitioners, with little crossover to scholarly discourse (see section 3.2). And while there is a robust research literature about design methods and practices within the human–computer interaction (HCI) field, academic

studies of UX practitioners working in industry remain few and far between. In the meantime, the field has continued to evolve, as practitioners engage directly with some of the most pressing societal concerns of our time: a climate crisis fueled by widespread over-consumption, economic inequalities that are inexorably bound up with the extractive practices of global capitalism, and disruptions in the global information ecosystem that tear at the fabric of civic life, to name but three.

If, as some economists have argued, the world is shifting away from a capitalist economy of goods and labor, toward a new economy predicated on the exchange of knowledge and services (a possibility explored in more depth in section 4.1), then UX would seem poised to play a pivotal role in this transition: facilitating the transformation of business through a practice concerned entirely with the creation of non-physical artifacts, driven by a set of methods focused on understanding and satisfying human needs, and working at the intersection of complex, interlocking systems at multiple levels of scale. Given their position of direct influence over the interfaces through which people interact with commercial enterprises, today's UX practitioners stand poised to emerge as the first generation of post-capitalist designers.

Yet UX work often feels constrained by market forces and mechanistic management processes that tend to work against the kind of holistic, humanistic considerations that initially drew so many of these practitioners to the profession. Navigating the transition from product- and service-focused design work towards more systemic, dematerialized ways of working poses a profound challenge for many practitioners—in part due to extrinsic business pressures, but also in part because UX practice generally lacks a theoretical basis that might foster such a transition. Given the growing prevalence of these practices in industry and elsewhere, attempts to begin establishing such a foundation seem long overdue.

This inquiry builds on one of the central premises of transition design, that designers have a role to play in addressing societal wicked problems: complex, interconnected, interdependent, problem spaces that lack a definitive formulation, have no "stopping rule," and typically defy singular solutions (Rittel and Webber, 1973). Examples of contemporary wicked problems include the climate crisis, the loss of biodiversity, food insecurity, and growing global income inequality. By nature, wicked problems tend to resist the kinds of discrete, measurable outcomes-oriented approaches that typically characterize the work of UX practitioners (and digital software development in general). As such, developing a vocabulary and methodological toolkit that might enable UX practitioners to effect such a transition will inevitably require finding ways for them to acquire new knowledge and skill-sets (Irwin, 2019).

The transition design framework proposes the possibility of shifting societal trajectories by reframing design problems through the lens of multi-stakeholder perspectives, envisioning desirable futures, and identifying points of intervention in complex systems to bring about long-term change (Tonkinwise et al., 2015). That is very much what this research attempts to do, by exploring the role that UX practitioners working in industry might play in catalyzing or accelerating such broad-based societal transitions. But the path to such a wide-ranging redirection of UX practice is by no means clear. There are formidable barriers at work, not least of which the inner

conflicts that many practitioners face in trying to locate a sense of meaning and purpose in their lives that would align with a more holistic systems orientation.

How might a stronger theoretical foundation rooted in alternative economics, meaningful work, and strategic foresight influence UX practitioners' ability to reframe their work in ways that lead towards more sustainable, long term social-ecological outcomes? That is the animating question behind this research. By taking a multi-modal, practice-led approach to these questions, I have aimed to deepen my perspective on the challenges that contemporary UX practitioners (myself included) face in trying to incorporate long-term perspectives into their work, and explore the efficacy of a number of design methods intended to enable them to redirect their professional practices. These are the main components of this inquiry:

1) **An analytic synthesis of theory and methods** drawn from the literature of alternative economics, strategic foresight, meaningful work, cybernetics, early hypertext, and the emerging field of transition design (see chapters 3 and 4).

2) **Autoethnographic reflections** on my own work as a UX practitioner and educator working in a range of organizational settings over the past 27 years (see chapter 6).

3) **Qualitative interviews with UX practitioners** working in industry, including one-on-one interviews, small group discussions, and workshop exercises, to

identify the barriers and inner tensions that they experience in their work (see chapter 7).

4) **Professional development workshops** conducted in both situated environments and educational and conference workshop settings, incorporating readings and lecture material, and a set of methods adapted from the realms of alternative economics and strategic foresight, as well as the emerging body of work surrounding transition design (see chapter 8).

**5) Analysis and framing** exercises to envision a range of possible futures for UX practice, leveraging tools drawn from strategic foresight and the emerging transition design framework: including a STEEP (Social, Technological, Economic, Environmental, and Political) analysis, scenario planning, and a multi-level perspective on UX practice, as well as a proposed pathway for further research and curriculum development (see chapter 9).

Taken together, these research activities constitute a form of action research: a method of inquiry focused on engaging participants' powers of reflection through situated learning and problem-solving, with the intention of improving their strategies and practices and enabling them to develop new courses of action (Lewin, 1946). This approach leans heavily on activating a process of inner work, to help participants identify a set of "private troubles" (Mills, 1959) that they have in common with each

other, as a basis for moving forward. Ultimately, the success of this research rests on its ability to cultivate a process of "knowing how" rather than "knowing that" (Candy, 2006). In other words, the outcome consists of a set of new or evolved practices, as a means of introducing and activating a set of theories into professional practice.

Ultimately, this dissertation seeks to substantiate the following three claims of original contribution to knowledge:

1) A contribution to theory in the form of a new framework of regenerative UX, a set of theories and methods intended to help UX practitioners working in industry redirect their practices towards more sustainable, long term-focused outcomes that strengthen the alignment between their personal values and their professional project work. This theory is rooted in the central insight that UX practitioners working in industry often experience inner conflicts that stem from a tension between their espoused values and the performative pressures of working in for-profit enterprises that prize incremental improvements and decision-making processes. The prevalence of Lean/Agile-style software development methodologies and A/B and multivariate testing methods embody a set of mechanistic management processes and a consumerist imperative of satisfying individual user need-states that makes it difficult for them to focus their work towards addressing societal wicked problems that might lead towards more just, sustainable, and equitable outcomes, and would align more closely

with their personal value systems. Drawing on theoretical frameworks from the realms of alternative economics, meaningful work, and strategic foresight studies—as well as a historically focused inquiry into the evolution of present-day UX practice—this framework is expressed as a set of principles and practices distilled from these precursor disciplines, and as a set of provisional heuristics (see chapter 10) to guide practitioners in reframing their professional practices. Ultimately, it endeavors to equip UX practitioners with the tools to develop and act on personal theories of change that might empower them to shift their work towards more personally meaningful and societally beneficial outcomes.

2) A contribution to practice in the form of a curriculum and set of design activities for professional development workshops geared towards UX practitioners working in industry. This material draws primarily on the literature and practices of strategic foresight and transition design, and also includes the creation and introduction of three new design methods: values mash-ups, alternative capital resource mapping, and personal theories of change (further described in chapter 8). Taken together, these methods are intended to provide a practical toolkit that will enable UX practitioners to activate the theory of regenerative UX at both the inner level of realizing a sense of meaning and purpose at work; and at the outer level of applying their craft towards effecting

more sustainable, long-term focused outcomes.

3) A set of proposed heuristics for post-capitalist digital design practice,

intended to help practitioners bridge theory with practice in applying this framework in their own professional work.

The proposed heuristics include:

- 1. De-center the user
- 2. Align inner and outer values
- 3. Calibrate feedback loops
- 4. Net-positive value creation
- 5. Simulation over specificity
- 6. Design for unintended outcomes
- 7. Draw out next-order consequences
- 8. Seek balance

Each of these heuristics is discussed in further depth in chapter 10.

The remainder of this dissertation will explore these dimensions of practice in further depth, through a multi-modal process of practice-led research, and assess the efficacy of a number of educational interventions intended to help practitioners effect change in their professional practices. But first, it seems necessary to set the boundaries of this inquiry by interrogating the nature of UX practice itself.

#### 1.1 Defining UX

What, exactly, is meant by the term UX? Although the words "user experience" first entered the professional lexicon in 1993 (see section 3.1), the term still lacks a precise, widely accepted definition. Broadly speaking, UX practitioners engage in a range of practices related to the design of digital products and services: websites, software programs, and other user interfaces across a growing range of surfaces like smart watches, AR/VR devices, AI-powered voice recognition platforms, and so on. The term typically encompasses several sub-families of professional job categories, commonly called UX designer, product designer, interaction designer (IxD), information architect (IA), user researcher (UXR), content strategist or UX writer, and -less frequently-motion designer, visual designer, and UX engineer. Some practitioners consider themselves disciplinary specialists, while others characterize themselves as so-called T-shaped practitioners with more than one skillset; still others (especially managers and so-called UX leads) function as disciplinary generalists, whose work typically involves coordinating the efforts between these disciplines, and often bleeds into product management and strategic planning work. See section 3.1 for further discussion of the evolution of UX practice and its precursor disciplines.

The Nielsen-Norman Group—one of the earliest high-profile consultancies to provide professional UX services—offers this definition: "'User experience' encompasses all aspects of the end-user's interaction with the company, its services, and its products" (Nielsen-Norman Group, 2021). That framing, far-reaching as it might seem, still lacks precision. But it does embed two foundational assumptions that have shaped the field from the outset, namely "the company," and "the end-user." This emphasis on shaping the experiences of an individual in interacting with a for-profit entity points to an essential framing—with its insistent focus on casting individuals as consumers—that continues to define the constraints within which UX practice currently operates.

As discussed in section 3.2, some prominent practitioners and design critics have challenged the term "user" as a fundamentally problematic framing that undergirds the entire field of practice. Some have called for either supplanting it with a less transactional term like "human" or "people," or shifting towards more intentionally broad, holistic framings of practice like "experience design," "ecosystem design," or, simply, "design." Given the centrality of the term "user experience" to this dissertation, one might reasonably ask why I have chosen to persist with this term. Indeed, the first heuristic proposed in this dissertation calls for de-centering the "user" (see chapter 10). Why then have I persisted in using this term throughout the dissertation? While this research seeks to explore the capitalist assumptions underlying contemporary digital design practice—and will also raise the question of whether the term "user" poses a fundamental conceptual obstacle to redirecting these practices—the practice-led nature of this research is squarely focused on understanding the work experiences of a group of more than one million professionals worldwide who self-identify under the term "User Experience" - a phrase that, while fuzzily defined, and ripe for interrogation—has nonetheless acquired a broad currency in the professional world. As

such, it seems incumbent on me to meet these practitioners where they are: namely, in the present-day field of UX practice. Insofar as my research seeks to explore how these practitioners might reorient their current practices within the context of their current roles, it feels more appropriate in the context of this research to explore how these practices might evolve—in the process theorizing a new form of regenerative UX—rather than calling for the wholesale rejection of such a well-established term of art.

While each of the many sub-specialties that fall under the broad rubric of UX might be considered a field of practice in its own right, most of these practitioners self-identify as UX professionals. Some of these specializations proceed from the traditional "craft" design fields like graphic design, architecture, and design research, while others incorporate theories and practices from other fields including HCI, cognitive psychology, library and information science, and market research. Nevertheless, proceeding from Herbert Simon's characterization of design as the transformation of existing conditions into preferred ones (Simon, 1988), it may be comfortably asserted that the extended community of UX practitioners all qualify as designers, regardless of whether they use the term "designer" on their business cards.

For the purposes of this dissertation, I use the term UX to include the entire range of practices that fall under this umbrella, though the bulk of this inquiry will focus on the two specialties that are most widely practiced in industry: UX designers (also known as product designers, interaction designers, or—increasingly less frequently—information architects) and UX researchers (including both qualitative and quantitative researchers). While these practitioners come from a range of backgrounds and leverage methods drawn from a disparate array of fields, they share a defining purpose: creating digital products and services centered on the all-important construct of the "user."

Working primarily in industry and non-profit settings, UX practitioners differ critically from past communities of design practice in two respects: 1) The vast majority now work in so-called in-house organizations, rather than at agencies or consultancies; and 2) Many of them collaborate closely with peers as part of cross-functional product teams (primarily product management, engineering, marketing, research, and data science or analytics). They inhabit a professional world in which, as Manzini puts it, everybody designs (Manzini, 2015).

Practitioners who assume management and leadership roles typically emerge from one of these craft specialties, but in order to work effectively in modern organizations they must also master what Forrester Research analyst Ted Schadler once called "the third skill" (Schadler, 1998): synthesizing input, forging consensus with stakeholders from a broad range of backgrounds, and charting a path forward that often has both tangible "designed" outputs (such as interfaces, illustrations, and written copy) and less tangible conceptual outputs (such as business processes, research findings, and ultimately business strategies).

As the field continues to evolve, many practitioners evince a growing interest in mastering more strategic design competencies: like service design, systems mapping, and bringing so-called design thinking strategies to bear in strategic planning efforts.

But the gulf between theory and practice remains wide; and many practitioners struggle to attain this level of strategic influence in real-world organizational settings. This gap between practitioners' self-professed values and the constraints of the work they do yields the second proposed heuristic: to align inner and outer values (see chapter 10). Instead, many present-day practitioners report feeling increasingly disillusioned with the seemingly narrowing horizons of their work (see chapter 7). As I argue throughout this dissertation, the key to redirecting UX practice hinges on practitioners' ability to shift their posture and mindset in ways that will allow them to find greater alignment between their personal values and professional lives.

### 1.2 Theorizing UX

As the UX field continues to grow, some design theorists, along with prominent voices in the practitioner community, have argued that the practice must change in fundamental ways: from incremental improvements to digital user interface designs, towards a more holistic approach that incorporates a broader set of societal concerns, considering the effects of a product or service on civic health, the natural environment, or the broader social, cultural, and political ecosystem (see section 3.2 for a further discussion of contemporary critiques of UX practice).

The past few years have seen a rhetorical bull market in the UX practitioner community for discussions of more ethical design practices: from industry-focused initiatives like the Sustainable UX movement, the Center for Humane Technology, and Ethical OS (a collaboration between the Institute for the Future, Digital Intelligence & the Omidyar Network) to sustainability-minded academic programs like the School of Visual Arts' Products of Design program and the PhD in Transition Design offered at Carnegie Mellon, there seems to be no shortage of well-intentioned exhortations for UX designers to think more deeply about the long-term and sometimes unintended consequences of their work. This outpouring of concerned rhetoric notwithstanding, many of these critiques suffer from a lack of informed perspective from practitioners working in industry—and, as a result, they often tend to fall flat with their intended audience (see section 3.2). Most of these "50,000 foot"-level critiques fail to provide usable prescriptions for effecting change; to the extent that they offer solutions at all, they are rarely accompanied by either robust theoretical inquiry or applied case studies demonstrating how new design frameworks and methods might produce desired outcomes. How do the performative financial pressures of industrial capitalism shape the cultural norms and organizational processes that circumscribe practitioners' work? What kinds of inner and outer conflict do practitioners experience between their personal values and project goals? And how might new practices rooted in theories of alternative economics and futures studies equip them to effect long-term organizational change aligned with the wider-angle concerns of transition design?

Effecting a transition towards more sustainable ways of engaging in the world will almost certainly demand that UX practitioners learn to incorporate new theories and methods drawn from outside of the traditional toolkits of human-centered design methods. However, the methods commonly in use today have remained remarkably stagnant for the past 10–15 years: e.g., qualitative user interviews, journey maps,

personas, prototypes, usability tests, diary studies, and so forth. While constantly evolving technologies, platforms, and software tools create a steady demand for new kinds of design artifacts, the underlying methods that UX practitioners employ have remained surprisingly static over the past decade or so.

If the premise is accepted that redirecting UX practice towards more sustainable long-term outcomes is a worthwhile goal, how then might one pursue this goal through the vehicle of doctoral research? In this dissertation, I argue that a program of practice-led research, coupled with a firm foundation in theoretical inquiry, might make it possible to envision and perhaps begin to effect such a transition. As Dick Buchanan (founder of the original Carnegie Mellon School of Design PhD program) puts it: "The central challenge is to understand how designers may move into other fields for productive work and then return with results that bear on the problems of design practice. Applied research is critical to this task, since it seeks to establish connections among many individual cases" (Buchanan, 2011, 18-19). My goal with this research is to do just this: to bridge theory and praxis through a program of applied research, engaging with industry practitioners, exploring their lived experiences, reflecting on my own experience as a practitioner, and then assessing the utility of a range of tools, methods, and theoretical frameworks that might help them redirect and transform their professional practices towards more sustainable outcomes that are focused on the long term.

Specifically, this research draws on three theoretical frameworks: alternative economics, meaningful work, and strategic foresight (see chapter 4)—along with a

consideration of the historical development of the UX field and its precursor disciplines such as Human-Computer Interaction (HCI), Library and Information Science (LIS), cybernetics, and early hypertext studies—in search of useful constructs that might help inform the design of a professional development curriculum to help UX practitioners bridge these theories to practice with a new methodological vocabulary.

Ultimately, this dissertation theorizes a new framework of regenerative UX. Rooted in the literature of alternative economics, meaningful work, and strategic foresight, regenerative UX posits a theory of change that is predicated on enabling practitioners to identify and bridge conflicts between their inner and outer lives, as a means towards effecting long-term systemic change in organizational settings. Specifically, I argue that regenerative UX rests on three modes of working, building from a process of so-called inner work to more outwardly focused interaction with the phenomenal world:

1) **Reflective engagement** with the literature of alternative economics, meaningful work, and strategic foresight.

2) **Inner-directed values inquiry**, coupled with design methods that allow for the incorporation of multi-stakeholder perspectives and long-term strategic foresight.

3) The adoption and socialization of new design methods and heuristics,

providing a conceptual scaffolding for future research and practice exploration.

When practitioners are able to put these three competencies into practice, I argue, they will acquire the ability to effect lasting shifts in their work at multiple levels of impact: at the inner level of personal fulfillment and meaning, and at outer levels of individual project outcomes, organizational processes, and broader shifts in focus across the larger community of UX practice.

In subsequent chapters I explore a range of experimental forays in trying to assess how these theoretical frameworks might be activated in practice. Chapter 6 mines my own professional life as a practitioner, recounting my experiences trying to effect paradigmatic transitions in a series of different organizational settings. Chapter 7 recounts a series of in-depth interviews with practitioners working in industry, to glean insight into the relationship between inner and outer obstacles to transformation of their work practices; and to explore how they might create better feedback loops (the third proposed heuristic) to orient their work towards more ecosystem-level outcomes. Chapter 8 describes a series of educational interventions, intended to introduce these theoretical frameworks via workshop exercises with more than 100 UX practitioners currently working in industry. Chapter 9 synthesizes the findings from these workstreams to identify a set of emergent themes, implications for UX practitioners, and consideration for further research. Chapter 10 then endeavors to distill these themes and findings into the aforementioned set of heuristics.

#### **1.3 Problematizing UX**

UX practice has, since its inception in the mid-1990s, challenged organizations to shift their management practices in fundamental ways, towards more human-centered ways of working – and in the process to re-evaluate many of their core processes and operating assumptions. Yet for all its humanistic rhetoric, the field nonetheless operates within a set of deeply capitalist assumptions. Over the past two decades, digital design practices have emerged primarily in the context of commercial enterprise-driven, as design educator Ralph Ammer puts it, "by consumption and the promise of comfort" (Ammer, 2018). Although many practitioners espouse humanistic values in their practice, their work typically happens within commercial enterprises that tend to focus designers' attention primarily on financial outcomes: revenue growth, cost savings, and so-called soft ROI (return on investment) considerations like brand awareness and likelihood to recommend a product or service. In professional settings, these pressures often manifest in the form of big data, A/B testing, and Lean or Agile software development methodologies. As discussed further in this dissertation (in section 3.2 and chapter 7), the net effect of these methodologies has been to reduce many UX practitioners to the role of production designers, limiting their spheres of impact and sense of agency at work. As a result, many practitioners experience a dispiriting gap between the field's loftier aspirations and the pragmatic short-termism that is already endemic in many for-profit organizations.

These tensions can beget profound inner conflicts, as practitioners reckon with a

cognitive gulf between the more humane, holistic worldview to which they aspire and the "internalized capitalism" that organizational priorities often demand. However, UX professionals, working as they do in a highly applied field of practice, often lack the theoretical foundations to interrogate these constraints in much depth. The strictures of capitalism typically seem like a non-negotiable constraint, and as a result, practitioners rarely feel equipped to redirect their practices in ways that might balance financial outcomes with other forms of value exchange. And while many practitioners in recent years seem drawn to engaging with questions of design ethics or so-called big D design, these forays by and large fail to engage with the central problem of capitalism (as we will see in section 3.2).

This, then, is the paradox of contemporary UX practice: Never before have so many designers occupied positions of such potential influence in business, yet many of them feel helpless to effect systemic long-term change, and they experience a widening gap between their internal values—which are often deeply intertwined with the human-centered, systems-oriented worldview that permeates their professional discourse—and the work they actually deliver, which feels increasingly incremental, reductionist, and driven by a mechanistic business practices that often seem redolent of neo-Taylorist scientific management theories. This tension between extrinsic organizational pressures and intrinsic values and motivations can at times lead to a sense of profound disillusionment, and a sense of powerlessness in the face of macro forces that seem beyond their control. And for all the hopeful rhetoric about the potential of UX practice to humanize business and create a better, more connected world, many practitioners seem less and less sanguine about the prospect of realizing those ideals in their professional lives. The aperture of available futures seems to be narrowing, not widening.

In considering a range of possible futures for UX practice, it may first be necessary to step back and interrogate some of the core assumptions that undergird these practices. By considering the context in which UX practice emerged-revisiting both the historical and epistemological dimensions of its evolution – this dissertation challenges the conventional view of UX as a primarily consumer-focused, business growth-oriented set of design activities. While many of the UX field's central practices remain deeply rooted in the culture and worldview of industrial capitalism-a system built around "instrumental, and predominantly economic, criteria such as efficiency, cost-effectiveness and utility" (Jones, 2008)—there is a deeper heritage of practice underlying these practices that may hold latent possibilities for redirecting them towards more sustainable – and ultimately regenerative – ends. The fourth proposed heuristic – net-positive value creation – challenges UX practitioners to consider how their work might create additive value in the world, rather than merely supporting the market logics of extraction that characterize so much industrial capitalist business practice. In search of ideological underpinnings that might guide such efforts, chapter 3 explores the lineage of lesser-understood precursor disciplines of cybernetics and early hypertext, and considers contemporary critiques of the field before identifying a

number of potential avenues for exploring the redirection of current practices; and introduces new theoretical perspectives that have not traditionally been associated with UX practice—including alternative economics, inner values exploration, futures studies and strategic foresight—in hopes of teasing out opportunities for recontextualizing the practice towards more sustainable, long term-focused ends.

While the rise of UX practice would appear closely aligned with the growth imperatives of global capitalism, the field has also historically carried within it a strong undercurrent of disruptive ideology, including a heritage of utopian thinking whose lineage dates back to the US counterculture of the 1960s, and even further back in a pre-history that incorporates aspects of cybernetics, early hypertext theory, and a number of utopian social movements in the late nineteenth century (as discussed in section 2.1). While this heritage remains opaque to many current practitioners – echoing the broader tendency of the technology industry to disregard its own history (Wright, 2007)-these historical antecedents nonetheless provide useful reference points for problematizing current UX practices, and considering how they might yet evolve in ways that build on historical critiques of industrial capitalism. An inquiry into the historical foundations of these practices also reveals a deeper, multidimensional legacy that supports a critical interrogation of some of the seemingly intractable assumptions about financial growth and the centrality of the "user" as an object of design practice that undergirds so much of contemporary UX practice.

At the precise moment when design is beginning to occupy a central role in the creation of the new networked economy, however, the scope of experiential possibilities also seems to be growing more limited, as mechanistic management methods and a growing business fixation on big data and measurable outcomes increasingly threaten to cast UX practitioners in a primarily production-oriented role. Many UX practitioners report feeling that the field may actually be regressing in the face of these pressures (see chapter 7). Amid a rising disillusionment in the field—especially among more experienced practitioners—it seems that humanist rhetoric and user-centered design methods are proving inadequate to the task at hand: namely, to facilitate a shift in business practices towards more integrative ways of thinking about value creation and exchange, and a whole-systems orientation that can enable UX practitioners to embed wider-angle societal concerns.

Given the central place that UX has come to occupy in the corporate landscape—and the widespread co-opting of its humanist values in the service of capitalist value creation—what implications might the emergence of a post-capitalist era hold for UX practice? This dissertation will argue that equipping UX practitioners with a broader critical vocabulary that leverages frameworks from alternative economics and strategic foresight—coupled with a deeper understanding of the drivers of personal meaning at work—will enable them to redirect their practices in ways that yield deeper personal fulfillment, challenge the incrementalism and short-term financial pressures that often circumscribe their practices, and ultimately improve their ability to influence organizational processes to focus on so-called wicked problems by incorporating long-term, multi-stakeholder perspectives into their project work. To effect such a change, they will need to embrace new ways of designing, to—as suggested in the fifth heuristic: to optimize for simulation over specificity. Or in other words, to envision whole systems outcomes rather than simply incremental project improvements.

UX practice, at present, has a predominantly degenerative or extractive character, exemplified by its use within commercial enterprises to generate profit through various means of extraction (e.g., raw materials, intellectual capital, social relationships, or other forms of stored value). This extractive or degenerative dynamic often leads to unfortunate unintended outcomes; and thus the sixth proposed heuristic calls for UX practitioners to set an explicit goal of designing for unintended outcomes. These extractive practices and the associated possibilities of adverse unintended outcomes, I argue, leads directly to a sense of loss of meaning for practitioners in their work lives. And it is precisely this threatened loss of meaning that may provide the fulcrum point that will enable practitioners to begin effecting change. This dissertation will hypothesize a new framework of regenerative UX practice that endeavors to transform these degenerative business practices across multiple time horizons and at multiple levels of impact, spanning practitioners' personal, organizational, and societal spheres of influence. To do so, they will need to master the tools of strategic foresight, especially the ability to draw out next-order consequences (the 7th proposed heuristic).

Ultimately, my goal with this research is to explore how UX practitioners can leverage new theoretical constructs and methodological toolkits to align their work towards addressing wicked problems. To effect such a change in practice for UX practitioners—typically accustomed to working on "tame" problems with solutions that result in more definitive, measurable outcomes—will require looking for frameworks and methods from outside the traditional domains of design practice. To do so, they must also—as I suggest in the eighth and final heuristic—seek balance, striving to reconcile the competing pressures of efficiency and resilience, collaboration and competition, divergence and coherence.

Before further exploring the evolution of the field, and considering how the proposed regenerative UX framework and associated heuristics might enable practitioners to navigate the shift towards a post-capitalist world with theories and methods drawn from outside their typical frames of reference, it seems critical to begin by reckoning with my own position in this work and its attendant subjectivities. Given the emphasis of this research on the possibilities of reflecting on inner values and lived professional experiences as a fulcrum for effecting systems-level change, it seems incumbent on me to ground this work in my own professional experiences, through a process of reflexive inquiry that I discuss in the next chapter.

## **2 Reflexive Practice**

"The first principle is that you must not fool yourself—and you are the easiest person to fool."

-Richard Feynman (1997, 343)

The credibility of professional practice as a form of scholarly research hinges on the question of whether a practitioner's own experience can constitute a meaningful contribution to a larger body of theoretical knowledge. This question grows even more acute when the researcher–practitioner in question (i.e., myself) is in the employ of for-profit corporations whose business goals may directly influence the research agenda or, at minimum, create structural biases in favor of one's employer. Beyond the policy and legal issues of protecting proprietary and confidential information about project goals and success metrics, the deeper questions comes down to reckoning with one's own positionality, power, and subjectivities.

While much of this research attempts to gather and synthesize learnings by engaging with practitioners working in industry through a series of interviews and workshop interventions, it would be disingenuous for me to deny my own professional self-interest in this work. As a practitioner conducting research with other practitioners in the same broader community of practice, I must therefore consider my own role in this work from the outset.
## 2.1 Power, Position, and Privilege

This research has taken place over the past six years in multiple organizational contexts—both professional and academic—during which time my perspective has shifted through several different roles. While my role as a PhD researcher at Carnegie Mellon School of Design has remained constant throughout, I have also worn a number of professional hats at various points along this journey: Senior Director of User Experience at Etsy; Advisor to the Good Work Institute; Research Director at Instagram; Adjunct Instructor at the School of Visual Arts; and most recently as Head of User Experience at Google News (see chapter 6 for a fuller description of these professional experiences). Given these shifting perspectives, it feels necessary for me to contend with the question of my own positionality as both a practitioner and a researcher—to acknowledge my own place and privilege in the social, cultural, and institutional contexts in which this work has taken place.

Making matters more complicated, my vantage as a practitioner has been primarily that of a UX manager embedded within organizational power structures, forcing me to contend with questions of my own power and agency in these situations. It would be disingenuous for me to attempt to position myself as a disinterested observer in this process. This work then is not only situated within a particular body of scholarship and the perspective of a working design practitioner but also within a set of overlapping institutional power structures—each with its own social constructs, subjectivities, and biases (Lave & Wenger, 1991). In attempting to introduce and evaluate changes to design processes within a set of for-profit organizational settings, my own agency in this process cannot easily be veiled behind a cool gauze of scholarly detachment. Rather than feign objectivity, it seems necessary for me to reflect on my own placement in this work and to acknowledge my biases as a basis for reflection and engagement (Throne, Bourke et al., 2018). Through a process of self-examination and critical inquiry, I seek to integrate my various identities in this work—including, at different times, practitioner, manager, analyst, investigator, instructor, and scholar—into a unified narrative.

For this kind of inquiry to work effectively, Schön argues that reflective practitioners must seek out the "high ground" where they can work towards manageable solutions built on theory and technique, lifting themselves out of the "swampy lowlands, [where] problems are messy and confusing and incapable of technical solution." Herein lies the central irony of reflective practice: the "high ground" problems typically seem less urgent and relevant for many organizations, whereas the "swampy lowlands" problems usually command the greatest attention. Thus, the practitioner–researcher always faces the dilemma of rigor versus relevance: Should such a figure choose to inhabit the high ground, "where he can solve relatively unimportant problems according to his standards of rigor," or to dwell in the swampy lowlands, full of "important problems where he cannot be rigorous in any way he knows how to describe" (Schön, 1983, 42)?

This central dilemma—how to navigate between the high and low grounds —motivates my entire research program. As a practitioner–researcher, I set out to investigate design practice from the vantage point of professional settings where my work must inevitably align with a set of organizational goals. As an employee and people manager with obligations to uphold my employers' interests, I have an inescapable structural bias in favor of my employer. In some cases, I have found myself in the position of having to advocate for work practices—for example, coaching designers to meet an aggressive deadline—that highlight exactly the tensions that my research explores. As a researcher, it is incumbent on me to recognize, name, and control for these biases. At the same time, it would be disingenuous and nigh-impossible for me to lay claim to the kind of critical distance needed to assess every ethical dimension of my employers' particular business strategies.

An honest accounting of my research must therefore avoid the temptations of *faux* objectivity, the temptation to position myself as a kind of disinterested observer in my own work. How then should I frame my own involvement in this research? Cunliffe and Karunanayake describe four "hyphen-spaces" in which this kind of research can take place: "insider-outsiderness," or the extent to which the research identifies with the community being studied; "sameness-difference," or the researcher's relative similarity to subjects in terms of demographics, language, cultural identity, etc.; "engagement-distance," or the level of interplay between researcher and participant in generating knowledge; and "political activism-active neutrality," or the orientation of the researcher and participants towards particular social/political/organizational agendas (Cunliffe & Karunanayake, 2013). These spaces frame the possible ways of engaging with my own work as a subject of study. For the purposes of this research, my

involvement with the subject seems to inhabit the intersection of insider-outsiderness and engagement-distance. Given my role as a UX practitioner studying other practitioners, I clearly qualify as an "insider" within this community, while my academic affiliation with a doctoral research program also creates a level of critical distance to the work; similarly, the co-creative nature of the workshop exercises (see chapter 8) presses me into a posture of engagement with participants in assessing the efficacy of these frameworks in applied UX work, while my role as instructor and facilitator of these exercises also puts me in a position of elevated power in relation to the participants. Finding the right balance between these poles has forced me to cultivate a kind of double awareness throughout the process, requiring ongoing shifts in posture towards not merely a reflective stance—but a reflexive one.

Whereas reflective practice demands that the practitioner step outside of the immediate problem space to claim Schön's "high ground," reflexive practice goes a step further, beyond the search for theory, to the more difficult task of engaging directly with one's own personal influence on the situation (echoing the concerns of second order cybernetics with the role that human actors play in exerting influence within a system, as discussed in section 3.1). "Reflexivity is potentially more complex than being reflective, in that the potential for understanding the myriad ways in which one's own presence and perspective influence the knowledge and actions which are created is potentially more problematic than the simple searching for implicit theory" (Fook<sub>1</sub> 2002, 43).

## 2.2 Practice-led Research

This research takes a practice-led—rather than practice-based—approach to addressing the question of how to help UX practitioners redirect their work towards more sustainable, long-term focused outcomes. While the terms "practice-led" and "practice-based" are frequently conflated, they have distinct meanings that deserve further elaboration. Whereas practice-based research depends on the creation of a new artifact that itself forms an original contribution to knowledge (with appropriate levels of analysis and elaboration), a practice-led research program investigates the nature of practice itself. Ultimately, this kind of program aims to generate new knowledge with operational significance for the larger field of practice (Candy, 2006). Given the situated nature of this research, and its focus on redirecting professional practices through a range of educational interventions—rather than producing a singular object of study—this research falls squarely into the category of a practice-led inquiry.

Design is and has always been an applied field, where it is often difficult to draw clean lines between theory and praxis. However, other applied fields like medicine, business management, and social work have long since embraced academic research conducted in work settings, as exemplars of the "sciences of the artificial" (Simon, 1988), or design research that is grounded in applied project work. Whereas design researchers continue to struggle with defining the proper role of practice in formulating design theory, Findeli suggests that "[w]e need a more sophisticated, complex model where practice and theory mutually nurture and validate themselves" (Findeli, 1999, 1-3). Whether this type of work is characterized as "practice-led" (Cross), "action-research" (Seago & Dunne), or "project-grounded" (Findeli), designers have always developed distinct forms of knowledge rooted in their professional activities—and they have done so in ways that do not map neatly to either humanistic of scientific modes of discourse. Cross calls these "designerly ways of knowing," characterized by a distinct set of values including practicality, ingenuity, and empathy—in contrast to the scientific values of empiricism or objective rationality, or the humanities' concern with subjectivity, imagination, and a concern for justice (Cross, 1982).

Redstrom (2017) proposes three distinct pathways towards bridging theory and praxis in academic research: 1) Parallels—taking an existing design approach and incorporating layers of reflection drawn from existing theories; 2) Sequencing—introducing shifts in design practice or new methodologies, typically by introducing theories drawn from other realms of scholarly inquiry; and 3) Intermediaries—creating entirely new forms of abstraction (such as pattern languages or other form languages) that create a new, intermediate level of knowledge between generalized theories and specific instances of practice. While any of these forms of inquiry might conceivably constitute an original contribution to scholarship, it is this last form—Intermediaries—that seems most likely to yield a meaningful contribution towards transforming a set of design practices. Only by engaging with the nature of practice itself can a researcher–practitioner begin to interrogate—and potentially reframe—its underlying assumptions. Only then is it possible to begin to envision meaningful long-term transitions in practice. How, then, does one actually embark on this process?

Frayling (1993) argues for the validity of practitioner-led research in the design field by identifying three distinct modes of design research: research into art and design, research through art and design, and research for art and design. Most design research falls squarely into the first category, consisting of conventional modes of scholarly inquiry that are well-established in other academic disciplines. Frayling further argues that the third category—where the primary output is likely to be the designed object itself—rarely constitutes an original contribution to knowledge that rises to the standard of PhD-level research. It is the middle category—research through art and design—that often seems the least straightforward and open to debate. This kind of work may include materials research, development work, or—as is the case with my research—practice-led research that consists of applied work in the field. Frayling argues that this kind of research can indeed rise to the level of a PhD-level contribution to knowledge, but only if the researcher can articulate clearly what is being achieved and communicated (Frayling, 1993).

While Frayling's framing of design research clearly argues for practice-led research projects as a valid form of inquiry that can help advance critical practice, practical questions abound. As Grocott (2010) points out, the role of practitioners in contributing to the academic discourse around design theory remains uncertain. Useful reference points in the realm of digital design practice are few and far between. As Queensland University of Technology drama professor Brad Haseman puts it, "many practice-led researchers do not commence a research project with a sense of 'a problem'. Indeed they may be led by what is best described as 'an enthusiasm of practice': something which is exciting, something which may be unruly, or indeed something which may be just becoming possible" (Haseman 2006).

Haseman proposes a notion of performative research, a new paradigm distinct from the traditional confines of qualitative and quantitative research, one that allows for the active participation and involvement of the practitioner by adopting a posture that is more firmly grounded in the practitioner's own professional experience. This view aligns closely with Findeli's notion of project-grounded research, "a kind of hybrid between action research and grounded theory research … that reaches beyond those methods, in the sense that our researchers in design are valued both for their academic and professional expertise" (Findeli, 1999, 1-3).

Practitioner-led research in any field often hinges on a process of reflective practice, an action-oriented model of professional engagement first articulated by Schön (1983 and 1987). Here, research centers on a practitioner's effort to conduct and reflect on a set of discrete actions, engaging in what Dorst and Cross (2001) characterize as a co-evolution of problem and solution. As part of this process, the practitioner also inevitably embarks on a journey of reflective self-discovery while attempting to solve the problem at hand.

By grounding this research in a reflexive, practice-led process that embraces my own subjectivity, while also trying to glean generalizable learnings from the interviews and workshops presented in later chapters, I have endeavored to explore the space between insider and outsider, engagement and distance, traversing both high ground and swamp in search of a theory of change that can be generalized to other organizational settings. I discuss my own professional history and reflections on practice in more depth in the Autoethnography (chapter 6). But before centering further on my own experiences, in the next chapter I aim to put the field of UX practice in context by considering its evolution, current critiques, and opportunities for practice redirection.

## **3 UX in Transition**

"In the field of design, the expression of ideas is not the central issue... These 'creative people', as the designers who serve capital's amorphous aims call themselves, are turned into mere shadows of creative people. What they make is always already reappropriated into the pointlessness of a mere façade, which is itself immediately replaced by the next. On the other hand, it is the very meaninglessness of capitalist design which gives it unlimited freedom and the greatest impact."

-Fritz Haug (1986, 92)

The modern design professions—graphic, industrial, fashion, interior, and so on—have emerged largely in concert with the rise of industrialization over the past two centuries: a period marked by rapid technological change, the rise of public markets, and the growth of the modern bureaucratic organization. In this swirling economic milieu, designers have played a central role in the creation of artifacts—signs and symbols, physical products, and digital interfaces—that have become the lifeblood of modern capitalism. As Pater and others argue, the practice of design is inexorably linked with the economic logics of the free market (2021)—so much so that it often seems as though capitalism itself is nothing less than the "ideological container" within which contemporary design operates (Wizinsky, 2022).

For UX practitioners, these pressures manifest most clearly in the consumerist

assumptions embedded in the foundational term "user," in the attendant focus on satisfying consumer needs, and in the delivery of incremental product improvements that lead to customer engagement and retention. But UX also occupies an unusual position among the design trades, insofar as it incorporates a broad swath of practices and perspectives from disciplines not typically construed as "design": social sciences, cognitive psychology, library and information science (LIS), and HCI, to name a few. While other design disciplines—notably architecture—certainly incorporate theories and practices from other fields, no other design profession has such loosely defined boundaries or such a polymorphous disciplinary pedigree as UX. To assess the field of UX purely through the lens of "design" is to overlook its heterodox foundations, some of which are less directly embedded in the market logics of capitalism—and may therefore hold useful reference points for considering what a post-capitalist set of UX practices might look like.

## 3.1 Historical Perspectives on UX Practice

In 1993, Don Norman coined the phrase "User Experience Architect" when he joined Apple as Vice President of the Advanced Technology Group. Norman had previously introduced the term "user-centered design" in 1986 (Norman, 1986), and had further popularized the term in his best-selling trade book *The Design of Everyday Things* (Norman, 1990). When he arrived at Apple and took on leadership responsibilities for a broad swath of corporate design initiatives, he felt the need to propose a more expansive term:

I invented the term because I thought human interface and usability were too narrow. I wanted to cover all aspects of the person's experience with the system including industrial design graphics, the interface, the physical interaction and the manual. Since then the term has spread widely, so much so that it is starting to lose its meaning. (Norman, quoted in Merholz 1998)

Over the ensuing 29 years, the expression has indeed evolved and broadened its reach, now serving as an umbrella descriptor for a wide range of digital design activities encompassing graphic design, HCI, information architecture, user research, content strategy and copywriting, and interface engineering. Designer Thomas Gläser's visualization (see figure 1 below) shows one view of the wide range of interrelated and partly overlapping fields of practice that typically fall under the broader rubric of User Experience, based on an earlier framework developed by interaction designer Dan Saffer (Saffer, 2008).



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Figure 1: The Disciplines of User Experience, from a model developed by Dan Saffer (Gläser, 2013)

As digital products and services have proliferated over the past quarter century, the term "user experience" has entered common parlance. Figure 2 below shows the growing prevalence of the term "user experience" in the Google Books English language corpus, pointing towards the term's broad adoption over the past quarter century. Yet for all its widening popularity, the gist of Norman's definition still holds: UX is a multi-disciplinary practice spanning the entirety of an individual human being's interaction with a system



Figure 2: Incidence of the term "user experience" in the Google Books English

Long before the term "user experience" entered the professional lexicon, the set of practices we now refer to as UX were evolving through a number of precursor disciplines. This evolution maps broadly to Buchanan's construct of the "four orders of design" (Buchanan, 1992), which posits an evolution of design practice from its earliest roots in the foundational practices of graphic design and industrial design, towards the progressively more complex, multi-layered concerns of interaction design and, eventually complex systems design that reaches into the core operating processes of enterprises of all stripes (see Figure 3).



Figure 3: Buchanan's four orders of design, illustration © 2022 Alex Wright

This design-centric view of the profession feels incomplete, however. While the

heritage of graphic and industrial design certainly figures prominently in the evolution of UX, the story does not run in a straight line back to graphic design. The field also carries imprints of other practices that fall well outside the traditional boundaries of professional design practice: cognitive psychology, anthropology, library and information science, and of course computer science, to name a few. These influences are broadly acknowledged and at least partially understood by many present-day practitioners. But two other precursor disciplines—cybernetics, and library and information science (especially early research into hypertext systems)—have largely faded from the professional dialogue. These two lineages not only fill in important gaps in understanding how UX practice came to be, but they also point the way towards a more regenerative, societally focused orientation towards practice. Probing the heritage of these lineages may point the way towards latent possibilities that could yet inform the shape of the practice in years to come.

Cybernetics serves as a particularly potent reference point for UX, predicated as it is on the problem of designing systems to support communications between people and systems. First coined by Norbert Wiener in 1948, who defined the term as "the science of control and communications in the animal and machine," (Wiener, 1948), the term has come to serve as a kind of grand unifying theory for explaining how complex systems operate in a wide range of domains: biological, mechanical, electrical, psychological, technological, social, economic, and so on. At its most basic level, cybernetics is predicated on the importance of circularity (or feedback loops) as a mechanism for enabling systems to maintain themselves and adapt to changing circumstances. Wiener believed that in order for systems to work effectively, they must include circular feedback loops—a framework that Wiener developed by drawing on his wartime work with Bigelow on charting missile trajectories (Bowker, 1993). "It is my thesis that the physical functioning of the living individual and the operation of some of the newer communication machines are precisely parallel in their analogous attempts to control entropy through feedback. Both of them have sensory receptors ... The information is then turned into a new form available for the further stages of performance." Wiener believed that by creating systems to make information processing more efficient, people would enjoy an enhanced ability to gather and act on the information they needed in an increasingly multi-layered world:

The needs and the complexity of modern life make greater demands on this process of information than ever before, and our press, our museums, our scientific laboratories, our universities, our libraries and textbooks, are obliged to meet the needs of this process or fail in their purpose. To live effectively is to live with adequate information. (Wiener, 1948, 18)

While many present-day UX practitioners find their work heavily constrained by the short-term feedback loops of A/B and multivariate testing, and other forms of big data analysis; they lack access to the kinds of ecosystem-level feedback (for example, monitoring environmental impact, or the effects of a product on indirect stakeholders) that would enable them to take a more truly cybernetic approach to their practices. Wiener goes on to paint an even more expansive picture of a technological future, in the form of an all-encompassing "theory of the message among men, machines, and in society as a sequence of events in time which ... strives to hold back nature's tendency toward disorder by adjusting its parts to various purposive ends" (Wiener, 1948, 27). Throughout the 1950s and 1960s, cybernetics commanded widespread popular interest, driven in no small part by Wiener's immensely popular general interest book The Human Use of Human Beings (Wiener, 1950) (emphasis Wiener's). Scholars across a number of disciplines embraced cybernetics as a new *lingua franca*—notably Margaret Mead and Gregory Bateson, both of whom explored its relevance to the social sciences especially anthropology and psychiatry. By the 1960s, cybernetics had started to influence the work of pioneering computer scientists like John von Neumann, Claude Shannon, and J.C.R. Licklider (whose work with the Defense Advanced Research Projects Agency laid the foundations for the modern Internet), as they started to wrestle with questions of neurobiology and its implications for computer science (Dubberly and Pangaro, 2015).

Although cybernetics started to fade from the popular consciousness starting in about the 1970s, Bateson's work provides a critical link to the subsequent evolution of personal computing and, eventually, UX practice. One of Bateson's acquaintances and early devotees was another non-"designer"—Stewart Brand—who first popularized the term "personal computer" (Markoff, 2006), after playing a seminal role in the early Bay Area hobby computing scene. Brand's views on the possibilities of personal computers stemmed in no small part from his interest in cybernetics. While studying a few years earlier at Stanford, Brand had immersed himself in the work of Norbert Wiener, Marshall McLuhan, and Buckminster Fuller, and "came to appreciate cybernetics as an intellectual framework and as a social practice; he associated both with alternative forms of communal organization" (Turner, 2008, 43). Brand's interest in cybernetics and its whole-systems orientation deeply imbued his subsequent work with creating the Whole Earth Catalog, the WeLL (a pioneering early online community), and the Long Now Foundation (full disclosure: I consulted for the Foundation from 2001 to 2003).

In his 1972 *Rolling Stone* article "Spacewar," Brand identifies and names the emerging hacker ethos that he had started to encounter amid the post-1960s Bay Area counterculture: "We are all Computer Bums, all more empowered as individuals and as co-operators. That might enhance things ... like the richness and rigor of spontaneous creation and of human interaction ... of sentient interaction" (Brand, 1972, 50-51). Here, Brand gives expression to the utopianism that also undergirds contemporary UX practice: a sense of kandy-kolored Silicon Valley optimism, a belief in individual liberation and in the possibilities of technology to effect that liberation. Indeed, Brand's spirit lives on with many UX practitioners, for whom his Pace Layering framework has long since entered into their professional lexicon (see further discussion of Brand and Pace Layering in Section 4.3).

Cybernetics also contains within itself a hint of nineteenth century logical positivism, a kind of universalist optimism that carries a subtle undercurrent of coercion, predicated as it is on required human participation. An early Soviet critique pointed towards problematic aspects of the practice that feel redolent of the ethical challenges many UX practitioners face today:

Cybernetics clearly reflects one of the basic features of the bourgeois worldview—its inhumanity, thriving to transform workers into an extension of the machine, into a tool of production, and an instrument of war. At the same time, for cybernetics an imperialistic utopia is characteristic—replacing living, thinking man, fighting for his interests, by a machine, both in industry and in war. The instigators of a new world war use cybernetics in their dirty, practical affairs. (quoted in Bowker, 1993, 80)

Substitute the term UX for "cybernetics," and one might well issue a similar critique today. But there is another strand of the cybernetic lineage—so-called second order cybernetics—that offers a useful remedy to the potentially dehumanizing effects of a systems-centric orientation. Beginning with Heinz von Foerster's work in the early 1950s, early cyberneticists began wrestling with the question of the human actor's role in these systems. Von Foerster began considering the central role that individuals play in complex systems, not as disinterested observers but as active participants with considerable agency to influence the trajectory of the system. If humans embrace their own agency in the system, writes the Chilean biologist Humberto Maturana, who was deeply influenced by von Foerster's ideas, "we shall be able to act according to our awareness of our liking or not liking the reality that we are bringing forth… That is, we shall become responsible for what we do" (Maturana, 1997, 87). Here, then,

cybernetics provides an important reference point for considering the role of designers—and the personal values they hold—in the design of complex systems.

In recent years, some UX practitioners have started to embrace a more cybernetics-aligned vision of service and systems design, while multi-stakeholder and transdisciplinary design processes have become more normalized. Indeed, one might argue that UX has been a form of cybernetic practice from the beginning. But the term "cybernetics" itself has never had much purchase in professional UX dialogue. Hugh Dubberly, an early influential design leader at Apple and Netscape, has written at length about the relationship between cybernetics and digital design (Dubberly and Pangaro, 2007 and 2015). And his sometime collaborator Paul Pangaro taught a course in cybernetics for several years at the School of VIsual Arts MFA Program in Interaction Design, whose graduates went on to work at a number of major tech companies including Google, Facebook, Apple and others (full disclosure: I also taught as an adjunct instructor in this program from 2009-2018). These efforts aside, however, the vast majority of today's UX practitioners have little to no familiarity with cybernetics.

Similarly, most UX practitioners also have at best a glancing familiarity with the pre-history of interactive hypertext systems that came before the web. But that lineage stretches much further back than the traditional reference points of the early personal computer revolution. Decades before the advent of personal networked devices, an earlier generation of information scientists influenced the trajectory of personal computers and software development in ways that have fundamentally shaped the practices of networked information storage and retrieval—yet their work scarcely ever

surfaces in conventional histories of design. Long before the first personal computers took shape, early information theorists like Paul Otlet and Vannevar Bush had envisioned computing devices with a more altruistic, societally focused purpose: machines geared not to satisfy the needs and whims of consumers but rather to serve a more expansive vision of making information freely available for the purpose of uplifting society. H.G. Wells captured the public imagination with his vision of a "World Brain" that would unify the world's information, part of his larger project of cultural and political transformation rooted in principles of socialism (see Section 4.3 for further discussion of Wells' work).

This networked ideal would shape the subsequent development of the early Internet under the direction of J.C.R. Licklider (previously mentioned in the discussion of cybernetics above), the maverick hypertext theorist Ted Nelson, and the seminal work of Douglas Engelbart, whose fabled "Mother of All Demos" presentation in San Francisco's Herbst Theater in 1968 showcased a fully functional networked multimedia authoring environment to a stunned audience that included a number of notable counterculture figures like Stewart Brand (another early devotee of cybernetics, also discussed above) and assorted members of the influential Homebrew Computer Club. Engelbart's work would also inspire a young Harvard graduate student named Ted Nelson, whose early experiments with hypertext systems would directly inform the subsequent development of the World Wide Web (Wright, 2007). Although the early hypertext pioneers posited a range of different solutions for creating worldwide electronic information networks, all these efforts stemmed primarily from a vision of societal transformation rooted in solving wide-angle social problems: the problem of scientific information overload, creating societal equity through universal access to information, or establishing a new, post-national world order. For the most part, these efforts were utopian schemes envisioned as collaborative efforts among world governments and institutions of higher learning; the possibility of conducting business on these networks was largely an afterthought. Additionally, although every one of these efforts was a carefully designed system, if one reads through the works of Otlet, Wells, Bush, Engelbart, Licklider, or Nelson, one encounters scarcely any reference to the figure of a "designer."

The early hypertext visionaries saw their work not through the lens of business, but rather as social idealists leveraging new technologies in opposition to the consumerism and capitalist value system of the establishment. This anti-authoritarian streak, rooted in the 1960s counterculture, lurks just beneath the surface of contemporary software design. As John Markoff puts it, "computing went from being dismissed as a tool of bureaucratic control to being embraced as a symbol of individual expression and liberation" (Markoff, 1999, xii). However, just as the counterculture movements of the 1960s also spawned the "Me Generation" and a generational trend towards personal indulgence and conspicuous consumption, so the rise of the networked personal computer has created the cultural and market conditions in which the individual—the "user"—has attained primacy.

While the imprint of these precursor disciplines has grown fainter over time, what both cybernetics and early hypertext theories had in common were unifying theories of change that strove towards wide-angle societal transformations. While contemporary UX practice undoubtedly owes much to the heritage of graphic and industrial design—practices firmly rooted in capitalist business practices—mining the heritage of these alternative pre-histories of UX offers useful glimpses into other possible pathways for change. By raising awareness of these largely forgotten ancestors of UX practice, there may be opportunities to reintroduce some of these frames and their attendant theories of change back into the mainstream of contemporary UX practice.

While more conventional histories of contemporary graphic and industrial design typically situate their rise to prominence in the 20th century as part and parcel of the rise of capitalism, a strong countercurrent of utopian idealism has also accompanied the rise of design almost from the outset. The influential nineteenth century British designer and social activist William Morris's Arts and Crafts movement arose as a direct response to the reductionist impetus of mass manufacturing processes, and it constituted a lasting archetype for designers successfully challenging the dominant economic paradigm. Subsequent 20<sup>th</sup>-century design movements—Art Nouveau, De Stijl, Art Deco, Bauhaus, Brutalism, Internationalism, and so on—all carried within them either implicit or directly stated theories of change: for De Stijl, the search for a universal visual language to unify human cultures with shared ways of understanding the world (Widewalls, 2016); for the Bauhaus, using design to foster a renewed sense of purpose in human work, as an antidote to the dehumanizing effects of mechanization (Saval, 2019); for the Brutalists, shunning architectural frivolity in favor of

a simplified style that celebrated the elemental virtues of raw materials and hoped to foster the advent of a new, equitable human society founded on socialist ideals (Banham, 1955).

To this day, echoes of these sentiments can be found in contemporary UX practice: in the widespread embrace of gridike design systems intended to create unified visual languages and user interface pattern libraries; in the frequent invocation of Louis Sullivan's famous axiom "form follows function" (Sullivan, 1896); and in Jakob Nielsen's widely used heuristic for user interface design: "aesthetic and minimalist design" (Nielsen, 1994). Yet for all these direct influences, most UX practitioners remain minimally aware of such historical antecedents. This ahistorical perspective is by no means unique to UX practice; indeed, the technology industry at large seems minimally invested in cultivating historical perspectives. As the philosopher-programmer Werner Künzel has it, "Computer theory is currently so successful that it has no use for its own history" (Künzel, 1992). Without a long-term historical perspective on the evolution of the field, it is scarcely surprising then that practitioners might struggle to cultivate long-term, forward looking perspectives as well. Today's technology professionals work under the "tyranny of the present," as Xerox PARC pioneer Alan Kay once put it (Kay, 2014). Engaging with historical perspectives can not only serve as an antidote to this tendency; it can also lay the foundation for forward-looking speculation as well. As UNESCO Futures Research Chair Epaminondas Christophilopoulos argues, the metaphorical futures cone can extend both forwards and backwards in time (see figure 4 below).



Figure 4 The Cones of Everything (Christophilopoulos, 2021)

By surveying the evolution of UX practice—including its historical antecedents stretching back to the second industrial evolution of the late nineteenth century—this section explores the ways in which so many contemporary design practices are at once deeply bound up with the evolution of modern corporate enterprises, yet also imbued with the seeds of other professional lineages that point towards more socially conscious, utopian, and systems-oriented ways of practicing that may point the way to a wider range of possible futures for UX practice.

As digital media historian Megan Sapnar Ankerson points out, contemporary web design is deeply rooted in a modernist worldview that rejects ornamentation in favor of simple sans-serif typefaces and grid design systems, evoking an "objective, clear, and impersonal" aesthetic that "upheld the progressive and socially improving values of modernity." These design practices have always been "enmeshed in systems of power that generated rules for regulating conduct and social practices." She further argues that the practice of UX design that has taken shape over the past quarter century stems from "specific industrial conditions that served a crucial role for commercial organizations and skilled laborers testing and navigating an ill-defined territory between innovation and the familiar social norms of mediated culture" (Ankerson, 2018, 13). But these aesthetic practices also have deeper roots in the evolution of corporate design programs over the course of the twentieth century.

As the design professions came into their own towards the middle of the century, the practices of both graphic and industrial design became closely associated with the growth of for-profit business. Former IBM Chairman Tom Watson, Jr. gave voice to this symbiotic relationship with his famous decree that "good design is good business." Under Watson's direction, IBM embraced design as a core corporate value, turning to Gropius protégé Eliot Noyes in 1956 to create the first large-scale corporate design program, one that in the subsequent decades would tap some of the leading lights of mid-20<sup>th</sup>-century design, including Paul Rand, Eero Saarinen, and Charles and Ray Eames. Noyes began a long campaign to transform the company's reach across broad swathes of the emerging American economy of the second half of the 20<sup>th</sup>

century. As Steenson writes, "Noyes understood the role of design as amassing and exacting power, 109" (Steenson, 2017). Noyes envisioned a new form of "organic" design, which he characterized as the "harmonious organization of the parts within the whole, according to structure, material, and purpose," and which would ultimately coalesce into "the rational elegance of things intended for use." This ideal of "rational elegance," as IBM design historian John Harwood puts it, "also carries within it an implied dynamic relationship between the industrially produced object and its subject (the user)" (Harwood, 2011, 23).

IBM's embrace of design as a driver of strategic value proved enormously influential in the rise of corporate design programs in the decades that followed. Indeed, my own experience working at IBM from 1995 to 1999 took place in close proximity to a Corporate Identity and Design team for whom Rand, Noyes, and the Eameses still loomed large within the organization's cultural memory, and whose dictums and advice would frequently crop up in meetings. As the archetypal successful large business of the 1950s and 1960s, IBM's decision to establish a proverbial seat at the table for design with C-suite executives carried—and carries—considerable weight and influence with a generation of North American and European business leaders.

During this same era, the booming post-war United States economy also saw the rise of industrial design as a profession, with the emergence of young designers like Raymond Loewy, Henry Deyfuss, and Norman Bel Geddes—the last of whom drew on the influence of the philosopher John Dewey to work out the contours of a new "machine aesthetic" that would transform the built environment in accordance with the modernist ideal of form following function without superfluous ornamentation. The mid-20<sup>th</sup>-century industrial design movement laid the foundation for the rise of user-centered software design in the 1980s, as designers like Henry Dreyfuss (author of *Designing for People*) began to articulate the value of utility and an understanding of ergonomics as core considerations for designers. This functional ideal found further echoes in the work of Dieter Rams at Braun starting in the 1960s, culminating in his articulation of his famous "Ten Principles for Good Design" that would directly influence decades of design work in the technology industry, notably at Apple (where head of design Jony Ive has frequently credited Rams as a foundational influence).

As the industrial design discipline gathered momentum amid the rapid growth of corporate enterprises in the mid-twentieth century, this emerging field of ostensibly human-centered design also attracted critics, notably Victor Papanek, whose book *Design for the Real World* (1971) offered a blistering criticism of the consumerist ideology underpinning so much of that era's product design work. "There are professions more harmful than industrial design," he famously wrote in the book's opening lines, "but only a very few of them." He goes on to argue for a more inter-disciplinary and socially engaged practice of design, conducted by "socially and morally involved" designers equipped to consider the long-term effects of their work (Papanek, 8). To that end, he proposes a framework of *integrated design* that considers the environmental, socio-economic, and political contexts in which the work happens—by taking a participatory, multi-stakeholder approach to design activity (see Figure 5 below) that presages the the participatory and cooperative approaches to

design that would later take shape in Scandinavia, which in turn would influence the evolution of co-design methods in the software and service design communities. At the time, however, Papanek's critique sparked considerable resistance in the industrial design community; the Industrial Designers Society of America even asked him to resign his membership (though three decades later they reversed their position and awarded him a posthumous Personal Recognition Award for his contributions to critical dialogues about design practice).



Figure 5: Papanek's conception of the minimal design team (Papanek, 1971)

For all the evident influence of industrial design and European modernism on contemporary UX practice, it would be folly to portray the development of UX practice as a linear progression from, as it were, Bauhaus to our house (with apologies to Tom Wolfe). For such an inherently cross-disciplinary field of practice, the possibility must be allowed of polymorphous lineages. Beyond the realm of corporate design or HCI, aspects of UX design can be seen as prefigured in the experimental art movements of the mid-20<sup>th</sup> century—for example, in Duchamp's assertion that the spectator plays a central role in the artistic process, in the Fluxus movement's early experiments with intermedia, or in Ascott's work with telematic art installations in the 1980s (Arns, 2004)—all of which laid the conceptual foundations for early experiments with interactive digital media starting in the 1980s. Such movements posited a renegotiation of the relationship between creator and consumer, and they thus prefigured the trend towards user-centered design in commercial settings.

The personal computer revolution, followed by the explosive growth of peer-to-peer networking that fueled the rise of the Internet, fused these heretofore disparate strains of cybernetics, hypertext, and industrial and graphic design into an emerging new field of practice that eventually came to be dubbed UX. In the early years of the web—following the National Science Foundation's decision to open the Internet to commercial development in 1993—the professions now bundled under the term UX began to coalesce from a messy tangle of largely disconnected disciplines into a recognizable community of practice. Early web developers (or "webmasters," as

many called themselves at the time) came from a wide range of backgrounds: copywriters, graphic designers, librarians, programmers, marketers, and any number of self-taught hackers and entrepreneurs.

Much of early web development was characterized by a period of exuberant experimentation, as enterprising amateurs began to explore the new medium. By the mid- to late- 1990s, the contours of an identifiable profession started to emerge. Whether they called themselves interaction designers, information architects, content strategists, user researchers, or any of a number of other titles, many of this emerging group of workers often ground their work in one or more of UX's main precursor disciplines: HCI, which had been steadily gathering steam since the 1980s thanks to the work of highly visible practitioners like Jakob Nielsen and Bruce Tognazzini (both of whom would go on to form a well-known consulting partnership with Don Norman known as the Nielsen/Norman Group), leading to the establishment of formal roles for interaction designers, eventually more commonly called UX or product designers; library and information science (LIS), which in part begat a practice of information architecture that focused on improving the user experience of interactive systems through the creation of ontologies, labeling systems, controlled vocabularies and faceted classifications that were deeply informed by library and information science principles (Steenson, 2017) (Rosenfeld and Morville, 2002); as well as the legacy of graphic design, which in the early days of the web led to a distinct specialization known as "visual design."

Another, somewhat parallel lineage of UX practice had been emerging in Europe

since about 1990, when Gillian Grampton Smith founded an early interactive design program at the Royal College of Art in London, with a focus that extended beyond the primarily screen-based efforts of early web designers. Focusing on three areas of study—interactive information worlds, tangible computing, and intelligent environments—the RCA program created the curricular template for many contemporary interaction design programs, including the Interaction Design Institute Ivrea in Ivrea, Italy (founded by Crampton after leaving RCA in 2000). This conception of interaction design was more firmly rooted in the European heritage of graphic design, industrial design, and architecture that stood somewhat in opposition to the more prevalent HCI and information science-driven approaches that initially emerged in the US (Steenson, 2017).

By the late 1990s, with the rapid proliferation of Internet connectivity and the growing influx of investment into web-based businesses, a cottage industry of UX consultants began to emerge. Design agencies like Studio Archetype (founded by Apple alum Clement Mok), R/GA (founded by Robert Greenburg), frog design, and newer "digital native" consultancies like Organic, Agency.com, Razorfish, Scient, and Viant discovered a lucrative market for digital product and service design work, and began codifying a set of practices, service offerings, and role definitions that would enable them to scale these offerings. By the early 2000s, new agencies emerged that specialized exclusively in User Experience consulting—like Creative Good, CarbonIQ, and Adaptive Path, a San Francisco-based consultancy that would play an influential role in defining and socializing UX practices in the business community throughout the

2000s. Over the next decade, however, many of these organizaton's clients began to establish in-house UX teams, gradually displacing the market for consulting services. In 2013, Facebook acquired Hot Studio, a large design agency founded by Maria Giudice; a year later, in 2014, Adaptive Path sold itself to Capital One. That same year, IBM announced that it had expanded its in-house design team to 1000 people. While UX-focused consultancies continued to operate (and still do), this rapid succession of events seemed to signal a sea change in the industry, as former frog design creative director Robert Fabricant lamented in a 2014 Wired article entitled "The Rapidly Disappearing Business of Design" (Fabricant, 2014).

During this period starting in the early 2000s, many organizations building digital products began to embrace new forms of fast-paced software development methodologies. The terms "Lean" and "Agile" appear throughout this dissertation, and so it seems worthwhile to spend a moment defining them here. The Agile software development movement dates to 2001, when a group of seventeen software development movement dates to 2001, when a group of seventeen software development movement dates to 2001, when a group of seventeen software development movement dates to 2001, when a group of seventeen software development—as opposed to the more traditional, heavyweight, requirements-driven approaches that are sometimes called "waterfall" development. Together they developed *The Agile Manifesto* (Beck et al., 2001), a document that has since become enormously influential in the broader technology industry. The manifesto lays out twelve foundational principles for development, including: "Customer satisfaction by early and continuous delivery of valuable software"; "Deliver working software frequently (weeks rather than months)"; "Welcome changing requirements,

even in late development"; and "Simplicity—the art of maximizing the amount of work not done—is essential" (Beck et al., 2001). These principles point towards the animating spirit behind Agile: move quickly, in incremental steps, and continually measure progress at every step of the way. The manifesto perfectly captures the rapid, reductionist, results-focused work ethic in which many UX practitioners now operate. The creators of the Agile framework explicitly intended it to enable software organizations to move quickly, and build confidence in the efficacy of incremental improvements to a particular product or service. With its focus on self-organizing teams, continual improvement, and flexibility in deployment, Agile approaches enable product teams to test, learn, and iterate on projects as they go—and to avoid getting bogged down by wider-angle concerns beyond the immediate goals of the product team.

Lean software development aspires towards similar goals, and indeed its founders Mary and Tom Poppendieck have been active participants in the Agile software development community over the years. First described in an eponymous 2003 book, Lean software development also rests on a set of foundational principles that emphasize speed and efficiency, with slogans like: "Eliminate waste"; "Decide as late as possible"; and "Deliver as fast as possible." However, Lean includes one additional principle that might hold the promise for a more systems-oriented outlook: "Optimize the whole" (Poppendieck & Poppendieck, 2003).

Taken together, these approaches have gained enormous traction in professional product development environments, equipping teams with a set of

frameworks and tools intended to speed development, eliminate unnecessary process overhead, and ensure a tight feedback loop in which solutions are developed quickly based on an understanding of customer needs (or "user stories"), and then quickly iterated and refined. In principle, these efforts are meant to reduce the cycle time to evaluate new products, and should ostensibly align well with the user focus of UX practice. In reality, however, UX practitioners—especially those working as part of in-house teams—started to find their work increasingly constrained by working in Lean-Agile environments.

Amid this shift to faster-paced ways of working and the broader transition towards in-house UX teams, UX roles and methodologies continued to evolve into a more stable set of practices— rooted in the immediate precursor fields of HCI, LIS, interaction design, and graphic design—but also increasingly focused on optimzizing design outcomes towards short-term, measurable results. As this section has tried to convey, however, there is a deeper and more complex history of design practices and frameworks that directly informed the work UX practitioners do today—a heritage that is rapidly receding from view for many working practitioners working in increasingly performance-driven work cultures. Expanding the conception of UX practice to include these less visible antecedents—such as industrial design, cybernetics, and the early history of hypertext—enables us to locate a richer legacy of design practitioners engaging with complex social and political problems, universalist ideals, systems theory, and to consider the central role that UX practitioners might yet play in shaping the contours of complex social, political, and ecological systems.
## 3.2 Contemporary Critiques of UX Practice

As the UX field has grown and evolved over the past quarter century, a global community of practitioners has emerged-now numbering more than a million (LinkedIn, 2022). Although the boundaries of the field remain loosely defined, a sprawling professional discourse has taken shape among these practitioners, spanning a wide range of forums-from traditional vehicles like published books, articles, and conference talks to online discussions via mailing lists, threaded discussions, online interest groups, and uncountable "walled garden" conversations happening within organizations outside of public view. Despite today's fragmented media landscape and the inherently transitive nature of online discussions, a robust dialogue has nonetheless taken shape among industry practitioners, focused largely on practice-oriented questions of methods, processes, and organizational structures-but also, increasingly, grappling with the broader societal impact of UX work, and the assumptions embedded therein. As the social, political, and economic impact of the Internet's rapid growth come into view, a few UX practitioners have struggled to situate their work within these wider-angle concerns.

Meanwhile, rising public and policymaker attention to the increasing influence of the global technology industry has spurred a growing discussion about design ethics and the role of UX practitioners in addressing wider-angle societal concerns. Between the maturing of the profession and the increasing public scrutiny under which many practitioners now operate, the last few years have seen an outpouring of dialogue within professional UX circles about the ethical obligations of UX practitioners. In this section. I survey some of the current debates taking place within the practitioner community.

As more and more UX practitioners have moved into in-house roles – displacing the traditional role of designers as consultants working in studio and agency environments-they find themselves increasingly enmeshed in business strategy work that inevitably forces a reckoning with the systems-level effects of their work, in ways that might have seemed less pressing in an era of work-for-hire projects. Industrial designer and IDEO chair Tim Brown argues that this transition has enabled practitioners to accrue considerable power in many organizations: "Designers are now the drivers of strategy and innovation for business and are contributing within the social sectors of governance and policy sectors" (Brown, 2009). For many UX practitioners, however, this assertion feels more like aspiration than reality. And whereas Brown wrote from the vantage point of 2009 when Internet consultancies still held considerable sway with large clients; many UX-focused design firms have given way to large in-house UX organizations, especially in big tech organizations. While consultancies like Brown's IDEO increasingly offer services more akin to management consulting than for-hire UX design work.

Most contemporary UX designers find themselves in a paradoxical state of enjoying more access and power—the proverbial "seat at the table"—while simultaneously finding their work constrained by short-term pressures and <u>by</u> management and measurement techniques that tend to circumscribe their reach and influence. The overarching focus on "users" and "needs" that guides so much experience design work carries with it a consumer-oriented set of assumptions that are deeply intertwined with a capitalist worldview of economic growth. Contemporary UX practice is, as Ammer writes, "based on the problematic idea of infinite growth." UX practitioners working in industry must ultimately justify the value of their work in terms of positive "user" outcomes: making quantifiable improvements in ease of use, customer engagement, cost savings, sales and conversion rates, or so-called soft ROI goals like customer sentiment. As a result, too many digital products and services "ruin our living environment, damage our social cohesion ... dumb us down and confuse us while things around us get 'smarter'" (Ammer, 2018). Whatever the particular formulation of goals that guide practitioners' work, inevitably these goals tend to ladder up to financial outcomes as the ultimate bellwether of success. Figure 6 below depicts one metaphor for the current state of UX practice, as envisioned by longtime UX design practitioner Erika Hall, with a caption reading: "This is all too often how UX design is considered and practiced." (Hall, 2020)



Figure 6: Illustration by Erika Hall (2020)

Human-centered design approaches, tailored as they are towards satisfying the wants and needs of individual human beings, typically lack well-established frameworks for incorporating stakeholder perspectives beyond the perspectives of those who are directly engaged with either the creation or use of the product. As Terry Irwin notes, "Although traditional design-led approaches consider user preferences and motivations, they seldom examine the individual and collective stakeholder beliefs, assumptions and cultural norms that have contributed to the problem" (Irwin, 2018, 2).

In a similar vein, Jones argues that "instrumental, and predominantly economic, criteria such as efficiency, cost-effectiveness and utility become virtually redefined as ends whilst the actual goals being pursued remain predetermined, and very largely unevaluated insofar as they are assumed to be furthering industrial growth and expansion" (Jones, 2008). Jones' argument points towards the central, intractable problem of contemporary UX design: the underlying and enabling system that fundamentally privileges economic outcomes over other potential goals.

The capitalist imperatives underlying so much of contemporary experience design-like the focus on consumption, the construct of "the user," and the centrality of "user needs" to so many design processes - may have created a kind of path dependency (to borrow Trevor Pinch's term) whereby, as Scott et al. put it, "a technology exercises a form of power to maintain patterns of behavior in society." Scott et al. also criticize the use of human-centered approaches that "generally lack a critical basis." Instead, they argue, these practices are characterized by a "focus on 'user needs' to legitimize the conventional motive of design, which is, of course, to make and sell presumably better, but most definitely more stuff." They go on to argue that designers must overcome their learned instinct to take user needs as a given, embracing more practice-oriented approaches to design "as a framework for analyzing the social nature of consumption," and integrating a range of other considerations into the design process, such as social norms, practical and cognitive routines, physical and cognitive habits, and inter-related artifacts and technologies (Scott et al., 2012, 280-282).

Yet the standard UX practitioner toolkit focuses almost exclusively on the needs of individuals, consisting of exercises like qualitative interviews, needs assessment and task analysis, journey mapping, interactive prototyping, and iterative testing—all activities centered primarily on the relationship between the "user" and an organization, or in some cases between users and other users, or between the members of larger groups. They typically fail to account for the perspectives of indirect stakeholders—people who do not directly interact with a product or service, but are nonetheless affected by it—and other wider-angle ecosystem considerations, let alone furnishing practitioners with the kind of theoretical foundation required to engage in deeper systems-level analysis, or the consideration of alternative economic frameworks as part of their goal-setting exercises.

UX designer-turned-futurist and author Cenydd Bowles argues that despite the humanist rhetoric that envelops the field, in practice "digital technology often … constrains user choice. We often hear that design is a conversation with the user; in tech, the conversation is woefully one-sided. … Short of learning a programming language or building a device from scratch, you can't make a computer do anything its interface doesn't allow. Design decisions, therefore, give technologies the power to enforce behaviour—and hence moral conduct—in the designer's absence" (Bowles, 2018). The ethical dimensions of design practice have attracted growing scrutiny in recent years, as evidenced by the formation of Tristan Harris's (former Google design ethicist) Humane Technology Project, and a wide range of journalistic critiques of contemporary design practice.

For practitioners, this state of affairs often manifests as an inner conflict between their personal values—commonly imbued with the humanist ideals that are inherent in the UX mindset—and organizational goals that tend to create ethical conundrums, while reducing "users" to so many calculable data points. In 2009, designer Doug Bowman summed up his frustrations in working in such a data-driven design environment at Google:

When I joined Google as its first visual designer, the company was already seven years old. Seven years is a long time to run a company without a classically trained designer. Google had plenty of designers on staff then, but most of them had backgrounds in computer science (CS) or HCI. And none of them were in high-up, respected leadership positions. Without a person at (or near) the helm who thoroughly understands the principles and elements of Design, a company eventually runs out of reasons for design decisions. With every new design decision, critics cry foul. Without conviction, doubt creeps in. Instincts fail. "Is this the right move?"

When a company is filled with engineers, it turns to engineering to solve problems. Reduce each decision to a simple logic problem. Remove all subjectivity and just look at the data. Data in your favor? Ok, launch it. Data shows negative effects? Back to the drawing board. And that data eventually becomes a crutch for every decision, paralyzing the company and preventing it from making any daring design decisions. (Bowman, 2008)

Bowman ultimately resigned from Google, but on reflection, he grappled with the decision: "I can't fault Google for this reliance on data. And I can't exactly point to financial failure or a shrinking number of users to prove it has done anything wrong," he wrote. "Google has momentum, and its leadership found a path that works very well." While Google has evolved its practices considerably since this era—expanding its visual design capabilities, and no longer relying so heavily on A/B testing, for example—Bowman's critique nonetheless points towards a fundamental tension that still operates within many in-house design organizations, between the holistic, imaginative aims of design practice and the reductionist, closely instrumented measurement frameworks that drive decision-making in most for-profit organizations.

The inner conflict that designers experience—in reconciling the tension between the humanistic ideals espoused in the UX community and the mechanistic, reductionist, and dehumanizing tendencies of many large organizations—is something that some industry practitioners have pointed to. Jesse James Garrett gave voice to this strand of well-meaning humanism in a talk at the 2016 Information Architecture Summit:

Organizations are made of people. Because they're made of people, we expect organizations to act like people. But they're not people. They're monsters. Monsters made of people. As experience designers, we are creating the tools by which we can teach the monsters to care. We are creating systematic ways by which human experience can be understood and therefore acted upon. We are changing the way organizations set priorities and allocate resources.

Garrett goes on to say:

Our aim must ultimately be to dismantle the dehumanizing machinery of the 20th Century, and forge from it something altogether new: a kind of organization built on compassion and respect, where there is a place for humanity and human experience in the decision-making calculus. I believe this is not simply our mandate, but our manifest destiny. (Garrett, 2016)

In a similar vein, Adam Greenfield writes, "How I, at least, ensure that my work meets my criteria for right livelihood is by practicing it with compassion ... to my mind, this is the crucial insight at the heart of the discipline: a good user-experience practitioner has to be able to imagine, and share the frustrations of, the human users of the artifact in question, in the hope that these frustrations can be reduced or eliminated" (Greenfield, 2006).

Such lofty rhetoric echoes the idealism of 19<sup>th</sup>-century socialists and their spiritual heirs in the 1960s counterculture; but these exhortations towards even more compassionate, human-centered forms of practice also belie a critical blind spot that continues to afflict many UX practitioners: a belief in human-centered design

methodologies as the solution, rather than another layer of problem to be interrogated—coupled with a persistent unwillingness to examine the assumptions embedded in the foundational construct of the "user." While more than a few critics have pointed to the problematic framing of "the user" as an object rather than agent in the creation of new experiences, these critiques also fail to take into account the wider-angle, ecosystem-level concerns of transition design.

Mule Design founder and industry provocateur Mike Monteiro writes: "The current generation of designers have spent their careers learning how to work faster and faster and faster. And while there's certainly something to be said for speed, excessive speed tends to blur one's purpose" (Monteiro, 2018). Monteiro proceeds to argue that the problem stems from a lack of agency among design practitioners: "Our field was defined first by engineers because, let's be fair, they're the ones who invented the internet. And their definition of design—the people in the bunny hats who make the colors—is still widely accepted by a large majority of designers working in the field today." He goes on to write that designers themselves have failed to seize the opportunity ahead of them: "We've spent the last twenty years proving our legitimacy to engineers who thought we were a waste of time. Until they realized we could magnify their power exponentially ... We fought for a seat at the table, and once we started getting that seat, we found out a lot of designers didn't want it" (Monteiro, 2018). While this assertion feels overly broad-there are surely UX practitioners working in industry doing more than painting buttons on screens—it nonetheless points to a frustration commonly felt among UX practitioners working in industry: the

perceived devaluation of professional expertise and the pressure to deliver short-term business results in response to extrinsic pressures from partners and customers.

Mark Hurst, another early and influential UX practitioner who started the consulting firm Creative Good in 1997, describes how he has grown increasingly disillusioned with the field in recent years. He laments the passing of what he calls "golden era of online UX," which he dates to about 1997-2007, a time "when companies were willing to invest in listening to customers in order to serve them better." Starting in the aftermath of the 2008 financial crisis, he describes a period of diminishing organizational influence for UX practitioners as increasingly sophisticated data science began to take root in many large organizations. "Now it was data and algorithms, not UX, that mattered most. UX was, at best, a superficial sop for users." Today, he sees a further deterioration as he sees UX practice increasingly coopted towards unsavory business purposes, even going so far as to aver that "UX is now 'user exploitation" (Hurst, 2021). Of course, it bears noting that this perceived diminution of UX practice also correlates roughly with the transition from a primarily consultancy-driven model of UX (from which Hurst benefited, as the proprietary of one of the first major UX consultancies) to a period where UX is increasingly practiced in-house. As such, this critique—like Monteiro's and Garrett's—shares a structural bias against in-house work, and one cannot discount the possibility that such critiques are at least in part informed by a presumably diminished market for UX consulting services among major corporate clients. Designer and author Scott Berkun wrote a rebuttal of Hurst's argument, suggesting that the fault here lies not with UX practice per se, but

with the underlying strictures of capitalism itself:

Somewhere in Hurst's story, and in the design community, was the latent hope that UX was going to reform capitalism. Or be immune from it. That sounds ridiculous, but there is no other explanation for our surprised outrage that these businesses do what they have always done, but now use UX as part of their tactics. As if we are so special and our knowledge beyond appropriation.

I don't think Hurst's lost faith is actually in UX. User Experience design is primarily a set of skills. You can't lose faith in UX design any more than you can lose faith in carpentry [*emphasis Berkun's*]. Instead he has lost his faith in the willingness of predatory (big tech) corporations to do the right thing. Placing faith there was the mistake, given what we know of the species. (Berkun, 2021)

These designerly exhortations seem laudable insofar as they go; but they all ultimately seem to position the UX practitioner as a victim of circumstances, rather than an agent fully capable of intervening in and shaping the surrounding system (as Wiener and the cyberneticists argued). However, absent a more cogent critique of the larger economic system and the imperatives of consumption that underlie the pervasive construct of the "user," these appeals to humanism as the ultimate answer seem unlikely to achieve the kinds of systems-level change in the nature of practice that would facilitate larger societal transformations.

More recently, a growing movement in the design studies community towards decolonizing design has started to penetrate the professional dialogue around UX practice. The movement stemmed in part from a meeting of the Design Research Society in 2014 involving Pedro Oliviera, Ahmed Ansari, Mathew Kiem, and Luiza Prado, which led eventually to the Decolonizing Design initiative, a collective effort that has spawned a number of articles and symposia, some of which was captured in a special issue of *Design and Culture* (2018). While much of this dialogue seemed highly theoretical at first-offering a broad-based critique of the tendency of designers to, as Oliviera puts it, "think in one-off and palliative solutions to complex problems, normalizing or ignoring the systemic problems created by their own designs." (Oliveria, quoted in Sbravate, 2020) – a growing societal awareness of racial inequity and social justice issues (at least in the US) has fueled growing interest in the possibilities of UX practice as a vehicle for social activism. In a similar vein, Arturo Escobar's Designs for the Pluriverse (2018) makes a compelling argument for contemporary design practice as "patriarchal capitalist modernity," a critical enabler of West culture's tendency towards universalization—as seen most clearly in the heritage of European modernism and its impact on the aesthetics of contemporary UX design (see section 3.1), which can be seen as part of a larger project of Western cultural imperialism. Ultimately, Escobar calls for nothing less than "the end of modernity," and a pivot towards fundamentally new conceptions of human experience.

In order to disrupt this entrenched heritage of design practice, Escobar calls for new forms of what he calls ontological design "as a means to think about, and contribute to, the transition from the hegemony of modernity's one-world ontology to a pluriverse of sociocultural configurations." He contrasts this view with the predominance in Western design practice of what he calls functionalism, which seeks "to improve mass-produced goods and people's quality of life through the use of new materials and techniques." How instead might designers cultivate a more pluriversal world, in which many different worlds can coexist? Escobar advocates for a broad-based reorientation of design practice that synthesizes emergent focus areas such as degrowth, commoning, conviviality, wellbeing, rights of nature, communal logics, and civilizational transitions. Ultimately, he proposes a new form of "autonomous design" that is "user centered, situated, interactive, collaborative, and participatory, focused significantly on the production of human experience and life itself" - and characterized by a concern with sustaining communality and the relocalization of economic activity (Escobar, 2018)-not far removed in spirit from Papenek's critique of mid-century industrial design (see further discussion in section 2.1).

Growing interest in decolonizing design and pluriversal frameworks has started to enter the conversation both in industry circles, as well as within large in-house UX organizations in major tech companies (as I have seen first-hand in my own professional experience). While this emerging dialogue has yet to coalesce into a set of well-established methodological playbooks, it is starting to manifest in growing investments in strengthening product inclusion frameworks, funding participatory co-design efforts with members of underrepresented or indigenous communities, and fostering intra- and inter-company dialogues among UX practitioners. The recently launched CriticalUX conference points to growing interest among the broader practitioner community about how their work might begin to challenge dominant cultural paradigms, exploring issues of representation and identity, and the intrinsic power dynamics of UX practice.

Meanwhile, however, the reality of day-to-day product work for many UX practitioners continues to consist largely of incremental product enhancement work. For all this promising rhetorical engagement, the continued rise of A/B testing and Lean-Agile software development methodologies is severely constraining the ability of many UX practitioners to introduce more holistic, systems-level approaches into their work. Garrett describes Agile methods as "a win for businesses trying to wring maximum productivity out of their growing armies of engineers" but one that works at cross purposes to the more holistic concerns of UX practice (Garrett, 2021). "The same things that make Agile a great fit for scaling engineering work—regular sprint tempos; clearly articulated outcomes to be produced; breaking down the complex, unfolding experience of users into concrete elements that can be tied to code—are the very things that make it a terrible fit for foundational UX work," he writes, arguing that the reductionist demands of these software development frameworks are fundamentally "antithetical to the assembly-line chunks of user behavior Agile requires." Looking back on his experience as a practitioner over the past two decades, Garrett laments that the early, idealistic promise of UX practice has largely failed to materialize. "We thought we were winning hearts and minds," he reflects, "but we were really setting ourselves up

for exploitation, as businesses cherry-picked the bits of UX most compatible with their existing agendas and eschewed the parts that might lead to uncomfortable questions that could influence more than the color of a button on a screen" (Garrett, 2021).

Garrett pins much of the blame on the growing influence of "outsiders who never knew or cared about the principles underlying the practices." This characterization lacks precision, however. Who are these "outsiders," exactly? Clients, cross-functional partners, or the dreaded bogeymen, "businesspeople"? This rhetorical posture leaves little room for critical self-reflection, and it may suggest (unintentionally) that the problem lies within, insofar as UX practitioners see themselves as operating from an "inside" position, assuming a special status or authority in relation to other disciplines while simultaneously claiming professional victimhood. The reality of digital product design—especially in in-house team structures—is that it inevitably involves cross-disciplinary collaboration among a range of stakeholders. Design decisions are routinely made by "non-designers" like product managers, engineers, and product marketers. In many cases, a designer's effectiveness lies as much in having the ability to manage consensus as in being able to create skillfully made artifacts. As Manzini puts it, "Design has changed from an activity often undertaken by an individual professional designer to a highly collaborative, co-design activity that involves a variety of actors, including professional designers, experts from other fields and disciplines and users/co-creators" (Manzini, 2015). As such, proceeding from a posture of antipathy towards "outsiders" in a design process seems like an unworkable proposition.

Some UX practitioners have proposed new approaches to engaging directly with Lean-Agile practices, notably designers Jeff Gothelf and Josh Seiden (also interviewed in chapter 7), whose book *Lean UX* (Gothelf and Seiden, 2013) proposes a series of steps UX practitioners can take to align their work more closely with Lean-Agile methodologies. Notably, they call for applying Lean methods to the formulation of product hypotheses by engaging cross-functional teams in rapid ideation and prototyping exercises intended to yield Minimum Viable Products (MVPs), functional prototypes that are sufficiently usable to use for gathering customer feedback. While Lean UX endeavors to give UX practitioners greater agency and improved product outcomes within the context of existing Lean-Agile software development regimes—perhaps thereby improving their sense of meaning and fulfillment in their work—it still proceeds from the central premise of satisfying the needs of individual users; and does little to equip practitioners to address wider-angle societal concerns.

Some UX practitioners have started to explore the possibilities of wider-angle systems design frameworks as a path towards reframing their practices, by means of tools like ecosystem mapping, designing for indirect stakeholders, or engaging in planning exercises intended to help identify a range of potential unintended consequences for a given product or service. Veteran UX practitioner Cornelius Rachieru advocates for UX practitioners to embrace systems design practices, while also discouraging the adoption of "system designer" as a job title. Noting the growing awareness of systems theorists in UX circles—where works by writers like Donella Meadows and Peter Senge are starting to gain more visibility—he also argues that

practitioners have yet to crack the code when it comes to applying these frameworks in their day-to-day practices. "While these books portray the academic aspect of systems thinking as seen from the perspective of business and economics, they also have major blind spots when it comes to drawing any parallels directly relevant to the practice of experience design. Familiarity with these concepts, while foundational, barely scratches the surface." Rachieru argues that practitioners would benefit from deepening their engagement with these frameworks—for example, by exploring the utility of feedback loops, ecosystem maps, stock and flow diagrams, and gigamaps-but he also cautions against potential inclinations to establish new professional sub-specialties focused on systems design. Rather, he suggests that these approaches will have more impact if UX practitioners can embed them within their current practices, rather than establishing new sub-specialist roles like "system designer"-a development that, he argues, "will only weaken our ongoing argument." Echoing Meadows's work on identifying leverage points within a system (Meadows, 1999), he writes that "I firmly believe systems cannot be designed. At least not in the classic sense of the word we use at every other level below it. You can intervene in, influence, analyze, visualize or map systems, but generally they are too big to be 'designed' by a single entity, let alone a single individual. How do you 'design' societal systems like poverty? Or justice? Or finance? Or ecology?" (Rachieru, 2021). Rather, these viewpoints should provide points of reference for defining project goals, allowing designers to act more like acupuncturists—to borrow Irwin's metaphor (Irwin, 2019) executing highly targeted interventions intended to redirect the flow of energy within a

system. This question—how to embed these frameworks into the existing practices of UX design and research—goes to the heart of this dissertation's inquiry.

Systems thinking alone, however, may not prove sufficient as a theoretical basis for redirecting practice, without directly interrogating the extractive dynamics of the overarching capitalist financial system. Laurel (2011) examines this possibility through the lens of what she calls Gaian IxD, a more integrative, systems-oriented approach to design informed by an interconnected, explicitly environmental consciousness. Building on James Lovelock's Gaia theory—which holds that the earth is a complex entity comprising the biosphere, atmosphere, oceans, and society—Laurel evokes Wiener et al. in arguing that this entire interlocking web of complex ecosystems constitutes a "cybernetic system which seeks an optimal physical and chemical environment for life on this planet" (Laurel, 2014, 2016). She goes on to argue that "[a] Gaian perspective cultivates a deep understanding of nested entities and the complex relations among them" (Laurel, 2011) she writes, echoing E.F. Schumacher's call for a shift in humanity's ethical horizons "from the immediacy of our surrounds to embrace a planetary, even cosmic, consciousness" (Schumacher, 2010).

By embracing the Gaian perspective, Laurel argues that designers can attain an elevated awareness of the relationships between nested entities, characterized by the presence of what Rob Tow calls a "perception-representation-action (PRA) loop" capable of sensing its surroundings and rendering a reconstruction of its perceptions that enables it to take actions in response to its environment. With this framing, designers can transcend the duality of seeing Nature and Technology as oppositional

forces. "Technology is not the other," Laurel writes; "Nature is not the other." She further argues that the "othering" of nature leads to seemingly innocuous but highly problematic notions like husbandry, stewardship, and conservation—all of which are predicated on this kind of dualistic self–other relationship, and each of which can "give rise to its own flavor of hell" (Laurel, 2011). Laurel's work echoes the concerns of an emerging community of practitioners focusing on so-called Sustainable UX. Kramer (2012) explores this topic in some depth, primarily through an environmentalist lens. Shedroff (2009) also circles this terrain, making the case for sustainable design practices but stopping short of interrogating the deeper economic assumptions underlying contemporary UX design practice.

To help designers reframe their practices, Laurel proposes four heuristics for the practice of Gaian IxD: 1) Consider Gaian scale, to evaluate the impact on the largest-order entity even when engaging with the smallest; 2) Engage senses and emotions, to create the space for inner reflection and alignment as part of the design process; 3) Make the invisible visible, by using the tools of design to visualize complex, hard-to-see systems-level phenomena like climate change, or wide-scale group dynamics; 4) Take action, to ensure that design work exerts a tangible influence in the world (Laurel, 2011).

While Laurel's analysis resonates with the concerns of transition design, her prescription falls somewhat short of offering an implementable toolkit for UX practitioners. Nonetheless, this framing serves as a useful starting point for considering what a new heuristics of post-capitalist design might entail (see chapter 10). The core

practices of UX, ostensibly rooted in human empathy and understanding, could easily lend themselves towards a more expansive set of goals, rooted in humanism but extending outwards towards a more holistic, integrative view of possible outcomes. This new approach, however, will demand that practitioners engage directly with the problem of capitalism as the overarching system that informs and constrains much of their current work and that they begin to engage actively with alternative economic frameworks that would enable them to reframe their day-to-day work.

### 3.3 Redirecting UX Practice

As the preceding sections have demonstrated, UX practice sits in a paradoxical position in many organizations: poised to effect organizational change, but severely constrained by a set of operating assumptions and management practices that are firmly rooted in capitalism, it is also deeply informed by humanistic ideals and an idealistic zeal that stretch back into the pre-history of the profession. These tensions and contradictions often manifest in the form of inner conflicts that many practitioners struggle to resolve; yet these perceived conflicts also point towards an opportunity for interventions geared towards helping practitioners shift their posture and mindset in concert with exploring new design methods and frameworks. The core practices of UX design, rooted in an interest in translating human empathy and connection to the digital systems with which we interact, hold the possibility to effect a transition to a more sustainable world. However, today's UX practitioners, by and large, lack the tools, methods, and theoretical foundations to undertake such an effort.

While many UX practitioners take pride in the act of building well-crafted products capable of surprising and delighting their users, or reducing points of friction in their interactions with organizations of all stripes, there is also a growing awareness in the industry of some of the less salutary outcomes with which UX practice is becoming associated. Many practitioners see their work being used to manipulate users' behaviors in service of business growth: driving people along a marketing funnel towards a point of sale or "conversion," helping foster a culture of instant gratification and over-consumption that is inextricably bound up with the climate crisis; creating "sticky" experiences that command users' attention, with deleterious effects on civic life and emotional well-being; or papering over unsavory business practices-like predatory lending, or collecting and mining personal data—with elegant, well-crafted user interfaces that mask the dark underbelly of the underlying business models (Zuboff, 2019). But, as I argue in chapter 3, business is inherently neither good nor bad; it is a fundamental human activity that, when channeled towards a greater public good, can be a powerful force for transformative social change.

In the face of such a paradigmatic challenge, it is tempting to invoke the kind of lofty rhetoric and revolutionary calls to action that inspired the transformative design and political movements of past eras. For all their collective good intentions, UX practitioners largely lack a unifying theory of change or set of heuristics that might help facilitate this kind of ambitious transition. In the meantime, working practitioners continue to fight what they perceive as the good fight: advocating for "users," trying to bring divergent thinking and longer-term time horizons to their work, and building trust with stakeholders so that they can exert more influence over business strategies over the long term (see chapter 7). Given the inherently incremental nature of contemporary UX practice, however, the path towards redirecting UX practice will likely not come in the form of a singular radical new design movement—it is hard to imagine the emergence of a new Bauhaus at this point—but rather through a process of steady inquiry and incremental improvement, which has become UX practitioners' stock in trade. Given the current operating environment, an evolutionary path looks far more likely than a revolutionary one, but without a stronger theoretical foundation and pressure-tested set of process interventions, the prospects for deeper practice transformation seem remote.

Some practitioners see promise in the "design thinking" movement that has emerged over the past decade, spurred by the Stanford d.School as a means to help non-"designers" in management positions deepen their understanding of design methodologies in order to effect organizational change (Brown, 2019). An avalanche of criticism from design theorists and industry pundits notwithstanding, design thinking has helped strengthen the business case for many organizations to invest in design and to socialize the function of designers, not just as creators of artifacts but as facilitators of dialogue between stakeholders. Here too, however, these methods fall short of enabling deeper engagement with more complex, interlocking systems dynamics of public markets, the government regulatory environment, and the natural environment. While design thinking holds out the promise of helping companies make "better" (i.e., more profitable) products and services, its overarching goals remain squarely focused on the capitalist imperative of keeping customers happy.

To realize more positive systems-level outcomes that benefit society as a whole — and begin lifting the world's consumers from their state of learned dependency — there is a need to begin envisioning a new kind of design practice that does several things:

- Interrogates the primacy of the "user" as the primary focus of understanding
- Situates products and services within the broader systems in which they operate (environmental, political, societal, financial, and so forth)
- Considers the needs of indirect stakeholders (both present and future)
- Weighs short- and long-term financial value against other forms of capital
- Strives to harmonize designers' inner lives with the work that they do.

None of this is to say that designing products that generate financial revenue is intrinsically bad or necessarily incompatible with these goals. Business is a basic human activity, and one that has yielded enormous gains in people's material quality of life over millennia. Rather, there is a need to find design methods and frameworks that allow practitioners to consider and address a greater constellation of considerations to combat the "rampant economism" that has characterized the age of late-stage industrial capitalism and created such economic, environmental, and social imbalance in the world. Bridging the gap from theory to praxis will almost certainly require looking further afield than the usual toolkit of human-centered design methods. As I have shown, contemporary critiques of UX practice often center on questions of ethics: reducing harms, anticipating unintended consequences, or, more tactically, wrestling with constraints imposed by data-driven software development methodologies. Yet these critiques, by and large, do not directly challenge the narrow time horizons within which digital product development happens; nor do they interrogate the fundamentally capitalist, consumer-focused assumptions baked into the premise of designing for "the user."

Even the most intentionally systems-focused UX design approaches—like service design, ecosystem mapping, and various flavors of participatory design—fall short of equipping design practitioners with a vocabulary to interrogate deeply embedded capitalist assumptions about business growth and consumer demand. Despite a recent outpouring of impassioned pleas for UX practitioners to mitigate societal harms—by putting users first, anticipating unintended consequences, or, in more extreme cases, quitting their day jobs—most critiques of contemporary UX practice fall well short of providing a workable basis for interrogating the constraints of capitalism itself. To effect the kinds of long-term societal transitions that are the focus of this research, UX practitioners will likely need to engage with perspectives well beyond their traditional comfort zones of HCI, cognitive psychology, marketing, or communications design. While UX may lack a consensus definition or a robust theoretical basis, it nonetheless bears the traces of historical theories and methods that may point the way towards more regenerative futures. Chief among these are: cybernetics, with its emphasis on the agency of human actors to effect change within complex systems; the pre-history of hypertext, which points towards a strain of utopian social idealism that undergirded a great deal of early digital development work that has now been overshadowed by the capitalist imperatives that drive so much contemporary UX practice; and the legacy of industrial design and European modernism, which—though subject to well-deserved decolonialist critiques—nonetheless also points to the transformative power of broader societal theories of change as expressed through design.

The present-day UX profession seems poised at a paradoxical moment of triumph and crisis: widely embraced in corporate circles and seen as an enormous driver of business value; but at the same time highly constrained by business pressures to the point where many influential practitioners in recent years are experience a kind of collective professional identity crisis. Effecting a fundamental redirection of UX practice on a wide scale will require interrogating some of the field's most sacred constructs, starting with the foundational premise of the "user" as the focus of understanding. Practitioners must begin to situate the products and services they develop within broader systems, considering the needs of indirect stakeholders, and finding ways to harmonize their inner values with the work they are asked to do.

Such a process of paradigmatic change—towards more regenerative ways of

working—will almost certainly require UX practitioners to engage with bodies of work outside of their typical professional spheres. The next chapter (4) engages with three foundational bodies of literature—alternative economics, meaningful work, and futures studies—that may prove useful in helping theorize a new form of regenerative UX practice.

# **4 Theoretical Foundations**

"It is not enough for theory to describe and analyze, it must itself be an event in the universe it describes. In order to do this theory must partake of and become the acceleration of this logic. It must tear itself from all referents and take pride only in the future."

– Jean Baudrillard (2012, 80)

This chapter explores three interrelated bodies of theory that form the conceptual underpinnings for this multi-modal research program: alternative economics, meaningful work, and futures studies. In each case, I engage with relevant literature in the field, in search of paradigmatic insights that could point the way towards new frameworks for UX practice. Each of these discourses yields a set of operative principles that inform the primary research program that follows, as I explore the relevance of these theories to present-day UX practitioners (myself included), and attempt to activate this theoretical material in the design of a series of research activities, including a personal autoethnography (chapter 6), practitioner interviews (chapter 7), and professional development workshops (chapter 8), as well as in the development of a set of provisional heuristics (chapter 10). I then further consider the usefulness and validity of these principles in the discussion of research findings to follow (chapter 9).

# 4.1 Alternative Economics

Given that so many of the core assumptions underlying UX practice have taken shape in the organizational milieu of late twentieth-century capitalism, any effort at interrogating these assumptions must necessarily engage directly with the problem of capitalism itself. As I have outlined in the previous chapter, the mechanistic and performative aspects of UX practice are deeply rooted in the emergence of modern bureaucratic organizations during the so-called second industrial evolution of the late nineteenth century, when the Taylorist "scientific management" philosophy first took hold (Taylor, 1909). These pressures and management practices long preceded the advent of UX practice, and are now thoroughly woven into the fabric of commercial design practice.

As the costs of networked global capitalism have come into focus, however—yawning gaps in income equality, mounting environmental costs, and a growing spiritual anomie—designers now face what Capra famously called a "crisis in perception." He argues that the prevalent mechanistic-reductionist worldview is fundamentally inadequate for understanding the nature of complex systems and the myriad interconnected problems confronting society in the 21<sup>st</sup> century. He argues for a broad-based societal shift towards a more holistic, ecological worldview as a way to foster a transition towards more sustainable futures (Capra 1983).

While a range of design movements have emerged in recent years that focus explicitly on designing with "whole systems" in mind—sustainable design, ethical

design, and social design movements, for example—by and large these efforts still tend to take the constraints of capitalism as a given, a force to be ameliorated or resisted rather than directly questioned. But in order to effect a more far-reaching reimagining of UX practice, it seems necessary to interrogate some of these assumptions, in order to assess whether an evolved version of UX practice might even be possible without the fundamental constraints of capitalism.

#### 4.1.1 Defining Post-capitalism

Over the past half century, several strains of alternative economic theory have emerged that challenge the prevailing orthodoxies of capitalism. Chief among these are anti-capitalist and, more recently, post-capitalist theories.

Anti-capitalism espouses a fundamentally Marxist critique of capitalism as an extractive, exploitative system that contains within it the seeds of its own demise. The anti-capitalist stance has attracted popular interest in recent years, as evidenced in worldwide global protest movements like Occupy Wall Street and the global Climate Strike. In this worldview, adherents advocate a range of possible responses to the capitalist system, including four moves postulated by sociologist and utopian studies scholar Erik Olin Wright: smashing capitalism, taming capitalism, escaping capitalism, and resisting capitalism. "These logics often coexist and intermingle," he writes, "but they each constitute a distinct way of responding to the harms of capitalism" (Wright, 2015). Figure 7 below shows a 2x2 grid depicting Wright's postulated range of possible future scenarios for capitalism.



Figure 7: Four Strategic Logics of Anti-Capitalism (Wright, 2015)

Wright views "smashing" capitalism as an unrealistic alternative, one that may ultimately cause more harm than good. But the other three logics of taming, escaping, and resisting capitalism constitute a broader strategy of "erosion"—to mitigate the worst impacts of capitalism and help people chart a course towards new ways of living that are less bound up with capitalist economies of scale and mass production. As an alternative to the traditional socialist prescription of state-owned enterprise, Wright proposes instead a model of so-called real utopias, which he characterizes as "visions of alternatives to dominant institutions that embody our deepest aspirations for a world in which all people have access to the conditions to live flourishing lives," as well as alternatives to contend with "problems of unintended consequences, self-destructive dynamics, and difficult dilemmas of normative trade-offs." By way of example, he includes worker-owned cooperatives, participatory budgeting, public libraries, and — in the digital sphere — Wikipedia, which he characterizes as "the best known example of a more general model of nonhierarchical cooperative economic activity: peer-to-peer distributed production with open source property rights" (Wright, 2013, 10).

Post-capitalism, by contrast, posits a new system that will emerge not in opposition to capitalism, but rather as an outgrowth of existing trends towards a more open, distributed, networked society where the traditional capitalist model of private property rights holds less sway. Peter Drucker coined the term "post-capitalism" in 1993, to describe a coming era when knowledge—rather than goods and labor—would become the primary engine of wealth creation. The French sociologist Alain Touraine coined the term "post-industrialism" in 1969 to mean much the same thing (Touraine, 1969); and the two terms are often used interchangeably. Whereas industrial societies of the 19<sup>th</sup> century saw the population divided into two broad classes of capitalists and laborers, the transition to an information economy, he argued, will divide the populace into two new classes: knowledge workers and service workers. Drucker predicted that this transition would take place between 2010 and 2020, as the boundaries between commercial value creation and social networks blurred into what he called a "society of

organizations" (Drucker, 1993). The term "post-capitalism," as now commonly used, extends to a broader range of associated economic theories known variously as sustainable development, degrowth, and the green economy, among others (Schmid, 2019).

In 1972, pioneering alternative economist E.F. Schumacher anticipated just such a shift long before most of his peers (although the term "post-capitalism" had not yet been coined), predicting the transition from an economy built on hierarchical organizations to one defined by networks of peer-to-peer production. In his landmark business manifesto Small Is Beautiful, he outlines a vision of a more sustainable economic model that could supplant the "ruthless simplification" of capitalist enterprise. Schumacher proposes a "new style" capitalism, as a successor to the "old style" capitalism. Whereas the old style focuses exclusively on profits through operating processes that tend towards "total quantification at the expense of the appreciation of qualitative differences," new style capitalism "pursues a great variety of objectives; it tries to consider the whole fulness of life and not merely the money-making aspect." Ultimately, Schumacher prescribes nothing less than a fundamental reassessment of human values as the foundation of business activity: "What is most needed today is a revision of the ends which these means are meant to serve. And this implies, above all else, the development of a life-style which accords to material things their proper, legitimate place, which is secondary and not primary." No transformation is possible, he argues, "unless the 'logic of production' itself is brought under control" (Schumacher, 1973, 215).

Writers like Jeremy Rifkin 2015 and Paul Mason (2015) have elaborated further on this theoretical framework in recent years, arguing that this process of de-industrialization will pave the way for a broad-based transition to new economic models. As information products and services proliferate-aided and abetted by the rapidly expanding ranks of UX practitioners—and the costs of production plummet towards zero, a lack of scarcity will corrode the ability of the market to assess value and set prices effectively. It may also, in the short term, create the conditions for monopolistic businesses to use their market power to create artificial scarcity. But this state of affairs will prove transitional. Emerging development like parallel currencies, cooperative working arrangements, and small-scale production networks will fundamentally upend the prevailing economic order. In this view, we may have already reached "peak capitalism": a state in which the efficiencies to be gained from the global marketplace are reaching their limits—and that we are now heading towards a new economic environment marked by the decline of corporations and the rise of small-scale, self-organizing production networks. "Almost unnoticed," writes Mason, "whole swathes of economic life are beginning to move to a different rhythm." As the global network continues to shrink the distance between producers and consumers, the larger economy is meanwhile responding to a set of systemic shocks, including climate change, growing income inequality, mass migration, and the rise of populist right-wing nationalism (Mason, 2015). Mason sees three central drivers underlying these shifts:

- Information technology, which is now nearly ubiquitous in most of our daily lives and has "blurred the edges between work and free time and loosened the relationship between work and wages."
- Information products, which flow freely across the global network, disrupting legacy business models and "corroding the market's ability to form prices correctly."
- Collaborative production, in which the creation of value happens between peer actors on a network, acting outside traditional corporate and managerial hierarchies (Mason, 2015).

Post-capitalism, then, rejects the Marxist characterization of capitalism as an all-or-nothing proposition—the world-devouring Moloch of Blake and Ginsberg's apocalyptic visions. Instead, this view posits a more multi-dimensional vision of human activity, built around a pluriversality of identities, discourses, and practices—conditions that create the space where ethical decision-making can still take place (Schmid, 2019). The economic balance of power is shifting rapidly in major sectors of the economy like travel, transportation, and consumer retail. Entrepreneurs who once relied solely on institutional funding sources like banks and venture capitalists can now also raise capital through crowdfunding or peer-to-peer lending services. At a less visible level, supply chains and distribution networks are undergoing radical reconfigurations as collaborative production mechanisms take shape across the global network. Mason argues that these transformations demand "a change in our thinking about technology,

ownership and work itself" (Mason, 2015).

Author and entrepreneur John Elkington (2004) identities points towards a fundamental shift in consumer attitudes that will necessitate a new way of doing business that he has famously categorized as the "triple bottom line," an accounting framework that balances financial outcomes alongside social and environmental concerns. He sees this transition taking shape through three successive waves of change:

- **Wave 1:** Environmental impacts and natural resource demands have to be limited, resulting in an initial outpouring of environmental legislation.
- Wave 2: A widespread realization that new kinds of production technologies and new kinds of products are needed – and a sense that business would often have to take the lead.
- Wave 3: Growing recognition that sustainable development will require profound changes in the governance of corporations and in the whole process of globalization. (Elkington, 2004)

How might these shifts play out in UX practice? We can map each of these phases to a progression of so-called ethical design practices: In the first wave, practitioners focused on harm reduction by trying to mitigate unintended
consequences, work towards environmental impact, and inclusive product development practices. In the second wave, technologists shift towards the creation of new products ostensibly aligned more closely with planetary-level concerns: so-called green tech. In the third wave—mapping roughly to Buchanan's fourth order of design (see section 3.1)—practitioners must turn towards more systems-level concerns and practices that enable them to shape long-term business strategies.

These visions of an evolving post-capitalist society echo some of the optimistic rhetoric that surrounded the early days of the commercial Internet. In the pages of late-1990s Internet magazines like *Wired* and the influential early online discussion forum the WELL (Whole Earth 'Lectronic Link, co-founded by Stewart Brand in 1985), so-called "digerati" wrote hopefully about an emerging era where new digital marketplaces would usher in a new economy, built on collaborative networks of production, gift economies, and the exchange of social rather than financial capital, like the much-hyped "attention economy" (Turner, 2008). While that idealized vision of a networked economy may seem today like a distant dream amid the ongoing growth and consolidating market power of major tech companies, Wizinsky argues that such a long-term shift nonetheless seems all but inevitable in a market for dematerialized experiences, in which "digital goods and services and the rapid automation of production, distribution, and the design of all kinds of material 'things' may simply be incompatible with market mechanisms alone" (Wizinsky, 2022).

Marx himself anticipated such an eventuality, envisioning what he called a "general intellect" consisting of the collective knowledge capital of all humanity, a development that constitutes a direct force of production in its own right that, when coupled with a flowering of human social relationships would, he predicted, "blow this foundation [of capitalism] sky high" (Marx, 1861). Marx's notion of a general intellect also presages the work of early hypertext visionaries like Paul Otlet, H.G. Wells, and Wilhelm Ostwald (Wright, 2014), all of whom similarly imagined systems for gathering humanity's collective knowledge stores as part of larger utopian projects that envisioned a post-national global world order predicated on the collection and free dissemination of recorded knowledge for the purpose of uplifting the human condition.

The transition that Marx envisioned towards a new information-driven economic order seems readily apparent across the modern Internet. In the emerging digital post-capitalist economy, individuals—rather than corporations—create non-monetary forms of wealth (like photographs, blog posts, and videos) and engage in value exchanges involving markers of social—rather than financial—capital. Meanwhile, goods and services increasingly flow through networked marketplaces (like eBay, AirBnB, or indeed Etsy) where the principal value creators are individual actors rather than hierarchical corporate entities.

In the marketplace model, the means of production have shifted away from the corporation and towards the producer of the product or service in question, yet the marketplace operator itself still retains enormous economic power: setting the terms, policies, and fiscal boundaries within which these interactions happen. The buyers and sellers on these networks have little meaningful control over the business decision-making processes of the marketplace operators; they work to some extent

like digital sharecroppers. While the dream of self-organizing networks of small producers that pioneering alternative economist E.F. Schumacher envisioned (Schumacher, 1973) has yet to come fully to fruition, glimpses of this kind of activity are nonetheless percolating in many corners of the Internet: in the rise of open source software, the collaborative information production model of Wikipedia, or the rapid expansion of so-called influencers generating economic gains that are increasingly untethered from particular platform providers.

Yet while many of these possibilities have taken shape in various incarnations on today's Internet, it is an inescapable fact that the majority of user activity on the Internet still takes place under the aegis of publicly traded corporations that are explicitly chartered to pursue financial growth. At the root of these companies there lies the baseline capitalist imperative to return year-over-year financial growth. And as production costs plummet, so-called big tech companies are leveraging their market-making power to reap enormous profits. Post-industrial capitalism hinges less on ownership of the means of production, and more on the ability to create markets and exert control of global supply chains. What if the net effect of de-industrialization is not the enlightened, emancipatory economic order that Schumacher, Rivkin, and Mason envision—but rather a spiraling "race to the bottom" in which a handful of monopolistic organizations continue to extract value from a booming attention economy of information products? What criteria, then, might we need to assess whether a post-capitalist future has indeed arrived?

De-industrialization and the subsequent dematerialization of products may be

the necessary precursors for the transition to a post-capitalist economic order; but a truly post-capitalist economy will necessitate deeper shifts in the distribution of power and decision-making, and a fundamental reconception of the ways in which value is created, stored, and exchanged. What criteria, then, might we use to assess whether we have actually achieved a state of post-capitalism? I argue that there are several criteria that must be met:

- The transition to a primarily knowledge- and services- based economy (cf. Drucker, 1973)
- Continuous reduction in the marginal costs of production, disrupting conventional free market economics and resulting in new cooperative, loosely affiliated networks of production that are inherently resistant to traditional management hierarchies (cf. Mason, 2015)
- A wide-scale shift in consumer attitudes and business planning frameworks that incorporate multidimensional forms of value creation and exchange, including financial, social, and ecological concerns (cf. Elkington, 2004)

This transition, if indeed it comes to pass, will not happen in a singular moment; rather we will likely experience a period of continual transition for an extended period, possibly stretching into decades. Or it may not come at all; perhaps we are indeed headed into a dystopian era of all-powerful corporations consolidating their grip on the global attention economy. But if a few glimmers of a possible post-capitalist future may seem apparent in some quarters today, it might also suggest that the future—to borrow William Gibson's famous formulation—is not yet evenly distributed. It would be the height of arrogance for me to assert a certain knowledge of how the future of global capitalism may play out. Better to adopt the stance of a futurist and try to anticipate a range of possible futures in which UX practice might evolve (see chapter 9 for a scenario planning exercise along these lines).

## 4.1.2 Regenerative Design

If for-profit organizations can indeed make the transition towards embracing alternative forms of capital, then a future post-capitalist world may be characterized by what Carol Sanford calls "regenerative business," an antidote to the mechanistic worldview that for decades has "generated dehumanized workplaces, damaged ecosystems, and loss of local cultures around the world" (Sanford, 2017). Similarly, Ethan Roland and Gregory Landua call for a new model of "regenerative enterprise," which they contrast with so-called degenerative systems that "optimize the increase of financial and material capital by depleting the fundamental generative basis of living, cultural, and spiritual capital." These degenerative systems are fundamentally extractive, insofar as they also "apply intellectual, experiential, and social capital to achieve the increase of financial and material capital" (Roland & Landua, 2015).

Regenerative systems, by contrast, aim to foster mechanisms for renewal and revitalization, creating resilient systems that align societal needs with the dynamics of

the natural world. Sanford takes the concept of regeneration a step further, arguing that truly regenerative systems must also replenish the people who engage with them, through a process of inner transformation that catalyzes their own "beliefs, perspectives, aspirations, and thought patterns ... [R]egenerative change is built on the power of taking conscious charge of our thinking processes and helping others do the same" (Sanford, 2020). She also sees a potential consilience between the opportunities offered by regenerative design and the increasing popularity of design thinking strategies in many corporations: "Whereas regenerative design begins from the unique and specific potential of a situation and works to develop the capacity to bring this potential forward, design thinking emphasizes problem solving as a way of arresting disorder. In other words, the two operate at different levels of paradigm" (Sanford, 2021).

Why "regenerative" rather than "sustainable" or "ethical" UX? The emerging sustainable UX movement focuses primarily on the role UX might play in addressing the climate crisis, while the fast-growing body of work on design ethics (mainly targeted at the same audience of technology workers that is the focus of this research) aims primarily at the reduction of societal harms by equipping practitioners with design tools that allow for adapting to the possibilities of unintended consequences (echoing Elkington's proposed first wave of harm reduction, as discussed in section 3.1.1). It remains an open questions whether the majority UX practitioners fully comprehend the impact of their work in terms of environmental impact. Microsoft researcher Kate Crawford and Professor Vladan Joer have explored the environmental impact of global

supply chains on technology products in "Anatomy of an AI system," mapping out the extractive effects of digital product development in terms of fossil fuels, minerals, human labor, and physical waste. They argue that understanding the "full stack supply chain" is critical for technology workers to develop a holistic view of their ecological impact (Crawford and Joler, 2018). Crawford's recent book Atlas of AI (2021) further explores the extractive nature of AI-driven systems, both in terms of physical resource depletion (e.g., Lithium crystals for phone and electric car batteries, and the energy consumption required to power the vast server farms around the globe), as well as the extractive nature of AI systems in terms of mining personal data and social graphs for the purpose of fueling the financial growth of tech companies (Crawford, 2021). But again, harm reduction alone is not enough. While concerns of sustainability and ethics bear closely on this work, ultimately regenerative UX extends beyond the problem of controlling for negative societal or environmental consequences. The term "regenerative" promises renewal and rebirth, not merely the mitigation of harms.

Regenerative systems focus instead on restoration and growth through the cultivation of complex, diverse, life-giving systems. Furthermore, while degenerative systems also often involve the extraction of incremental value from labor in the capitalist mode, regenerative systems strive instead to develop healthy, resilient systems of work and civic engagement. Roland and Landua define regenerative enterprise as "a venture that pro-actively grows and cultivates the foundational pools of social, cultural, spiritual, and living capital by providing goods and services in a way that creates net positive gains for the system as a whole" (Roland and Landua, 2015).

"Regenerative" contains multiple potential meanings, each of which bears on the work at hand (see table 1 below).

Туре	Definition	Examples
Biological	Physical healing and	Tissue growth; cellular
	tissue creation that make	proliferation;
	organisms resilient to	morphogenesis
	damage or decay	
Material	Designs that recapture	Living buildings;
	and replenish resources to	permaculture farms
	produce net positive	
	energy	
Electrical	Dynamic feedback to	Regenerative circuits;
	recapture energy and	kinetic energy recovery
	signals produced within a	systems
	system	
Spiritual	An inner process of rebirth	Baptism; epiphany;
	or revival that leads to	reincarnation traditions
	awakening, insight, and	
	active contemplation	

Table 1: Meanings of "regeneration"

Taken together, these dimensions of meaning offer useful metaphoric reference points for considering what a multi-layered approach to regenerative design might look like. The biological sense of regeneration suggests the possibility of systems capable of healing themselves from within. In such an environment, we might consider the design practitioner as a kind of free radical, identifying points of friction or damage to the system and intervening to redirect the flow of energy towards healing ends. In the material sense of regeneration, we might envision the practitioner as an architect or engineer, designing systems that conserve, recover, and recreate new forms of energy to sustain themselves. The electrical sense of regeneration evokes the even more transformative possibilities of transmuting one form of energy into another. Finally, spiritual regeneration is scarcely a metaphor at all; rather, it suggests the possibility of a deeply personal process of change in which the practitioner discovers a source of inner renewal in the practice of work itself. While such a process might not rise to the level of religious awakening or reincarnation – and thus there is some level of metaphorical meaning at work—nonetheless the discovery of a sense of purpose and vocation in one's life may lead to deep and lasting changes in practitioners' inner lives that leads to more engaged and committed ways of working that may drive broader and lasting societal impact.

In contrast to degenerative UX practices that focus narrowly on the satisfaction

of individual "user" needs in the service of an organizational drive towards financial gain, regenerative UX practice takes a "whole systems" view. It attempts to replenish and heal the larger system, by fostering design outcomes that create net positive energy in multiple forms of capital, capture and recycle excess energy, and ultimately lead to a process of inner awakening both for practitioners and the wider community of stakeholders they serve. As Sanford puts it,

Regeneration is a process by which people, institutions, and materials evolve the capacity to fulfill their inherent potential in a world that is constantly changing around them. This can only be accomplished by going back to their roots, their origins, or their founding to discover what is truly singular or essential about them. Bringing this essential core forward in order to express it as new capacity and relevance is another way to describe the activity of regeneration. In other words, regeneration is the means by which enlightened, disruptive innovation happens. (Sanford, 2017)

This tiered approach to regeneration—engaging with the interplay between individuals, organizations, and the wider environment—also lends itself to a range of systemic and co-creative design processes that constitute some of the essential methods outlined in this research. Sanford sees this process as a balance of three complementary inner forces: manifesting new capacity (for example, adopting new practices and creating project outcomes), magnetizing potentiality (overcoming inner obstacles to growth and fulfillment), and reconciling towards elegance (finding opportunities for intervening in a system to create positive value for users), as shown in figure 8 below. Sanford also points to the importance of building comfort with "cognitive tension" and "a willingness to enter the unattached states that allow insight and patience" (Sanford, 2020)—echoing the Greek ideal of *metis*, or negative capability (see further discussion in section 4.2).



The Essence of the Regenerative Designer

Figure 8: The Essence of the Regenerative Designer (Sanford, 2020)

What might a broader-based shift towards a regenerative business ecosystem imply for UX practitioners, or designers more generally? Gideon Kossoff envisions a

more systems-oriented, holistic approach to design, rooted in the primacy of everyday life, which he sees as the necessary counterweight to the totalizing influence of corporations. He characterizes the latter as "counterfeit wholes" that rely on top-down management authority rather than the small-scale, interpersonal networks of value exchange that create "ecosystems of interdependence and mutual benefit, parts and wholes of everyday life at all levels of scale enfolding and reciprocating one another." In such an interdependent—or as Ted Nelson might say, "intertwingled"—world, Kossoff asserts that "we might proceed not from a single-minded fixation on maximizing economic outcomes, but rather from a 'whole systems' understanding that balances a wider range of considerations" (Kossoff, 2011).

The Natural Capitalism framework (Hawkens, Lovins et al., 1999) also posits a redefinition of the term "capital" to embrace a greater range of meanings, including natural resources and other elements of a wider ecosystem, as a framework for spurring the "Next Industrial Revolution." Roland and Landua posit a more expansive framework for value exchange, predicated on eight forms of capital: financial, material, intellectual, spiritual, social, living, cultural, and experiential. While the term "capital" is used metaphorically in this case, they claim that this framing provides an effective way of helping consumers assess the non-monetary impact of their consumption habits. If successful, this shift in consumer mindset could lead towards a decrease in the consumption of non-essential goods and services that undergirds the capitalist financial system's reliance on the presumption of infinite growth (Roland & Landua, 2015).

Given the highly performative, metrics-oriented environment within which UX practitioners currently operate in most commercial organizations, any effort to reframe their practices must also inevitably contend with the problem of measurement. This is no small task. As Ivan Illich points out, "economists have no effective means of including in their calculations the society-wide loss of a kind of satisfaction that has no market equivalent" (Ilich, 1978). Schumacher also acknowledges that in embracing a more multi-dimensional conception of value, new style capitalism "achieves a simplification of objectives and possesses no reliable measuring rod of success and failure" (Schumacher, 1973).

How, then, might UX practitioners begin to shift their practices in ways that satisfy a managerial demand for measurable outcomes, while reframing the goals they pursue in their work towards more systems-oriented, multi-dimensional objectives—which are inherently difficult, if not impossible, to measure? This kind of strategic reframing simply cannot happen in the disciplinary vacuum of a design practice; inevitably, enabling such a shift demands organizational commitment at the highest levels, as well as cross-disciplinary alignment around goals and measurement frameworks: to de-center financial outcomes as the primary driver of product goals, and to embrace a more multi-dimensional model of value creation and exchange. One promising step in this direction is the growing adoption in business circles of integrated reporting frameworks and integrative thinking, which attempt to create management frameworks for a more holistic approach to corporate management that factors in a broader range of capitals: financial, manufactured, intellectual, human, social and relationship, and natural (Value Reporting Foundation, 2021). Major corporations, including Unilever, Microsoft, Coca-Cola, Hyundai, and HSBC, have all piloted these frameworks for their public reporting. Some businesses have also started to explore the possibilities of aligning their strategic planning cycles with the UN Sustainable Development Goals (Enright et al., 2018). These methods are starting to gain traction at the level of corporate strategic planning and board-level discussions; but, as far as I know, UX practitioners have little to no awareness of these frameworks for UX practice has not been explored in any depth.

Incorporating alternative forms of capital into corporate goal-setting exercises seems like a potentially useful pathway for leveraging and redirecting the measurement mindset that prevails in most corporate environments. The literature of alternative economics also points towards several other hypothetical frameworks for shifting design practice to embrace more systems-oriented perspectives. In 2013, the Winterhouse Symposium for Education and Social Change developed a model for enabling design practitioners to link projects operating at different scales and levels of impact, by mapping skills and resources across projects and by developing shared frameworks for assessing project outcomes and impact (Drenttel, 2013). This model has since played an important role in informing the subsequent development of the Transition Design curriculum at Carnegie Mellon School of Design (Irwin et al., 2022), with its focus on catalyzing multi-stakeholder strategies for addressing societal wicked problems. But in order to effect such a change, it may also be necessary to consider

the inner dimensions of this transition as well, and the steps that will be required to enable UX practitioners to realize inner states of regeneration.

In summary, the emerging field of alternative economics offers a number of useful framing tools that point the way towards more regenerative futures for UX practice. In order to effect a transition to a more sustainable, post-capitalist era—characterized by degrowth and a more participatory economy that revolves around a multi-dimensional conception of value—UX practitioners could, if they so choose, play a central role in this transition.

Alternative economic frameworks, especially triple-bottom line economics (Elkington, 2004) and alternative forms of capital (Roland, 2011), may serve as useful framing tools for enabling UX practitioners to reframe project goals in more multidimensional terms that balance financial with non-financial outcomes (like integrated reporting, discussed above), while continuing to operate within the highly measurement-oriented, technocratic managerial systems that tend to predominate in digital product development environments.

An understanding of post-capitalist theories may also offer UX practitioners a conceptual framework for interrogating the strictures of capitalist economic structures that otherwise often feel like immovable boundaries. As the marginal costs of goods and services continues to plummet, they may begin to consider whether the largely dematerialized work of UX practice is contributing to corporate consolidation of power and rising global economic inequities, or whether it might instead be directed towards the formation of a more just, networked, distributed economy more in line with the

earlier utopian visions that undergirded the rise of digital design practice in the late twentieth century,

By engaging more deeply with whole systems-oriented perspectives, they may begin to envision their ability to influence outcomes at a societal scale rather than focusing exclusively on satisfying the needs of a "user." A turn towards more systems-oriented perspectives may also, over time, enable practitioners to shift focus beyond concerns of ethical conduct or harm reduction, to begin to consider a more expansive vision of what truly regenerative forms of UX practice might look like.

## 4.2 Meaningful Work

If the performative financial pressures of industrial capitalism shape the macro goal-setting and operational processes of commercial organizations, they also inevitably exert a micro influence on the lived experiences of people working within these organizations. Organizations are ultimately made of people, after all. And given the central role that work plays in so many of their lives, the core human need for meaning and purpose often plays out within the confines of organizational settings. But what does it mean, exactly, to do "meaningful" work? And to what extent does an individual's sense of professional meaning hinge on their perceived ability to effect positive change at the level of broader societal and ecological systems?

According to a recent MIT study, most people find a sense of purpose and satisfaction in their professional lives in highly individual and idiosyncratic ways: One

person's tedium is another's labor of love. Yet those who report finding meaning in their work seem to share a common trait: They perceive their work as "self-transcendent," contributing to society in a way that matters to others more than it does to themselves. Conversely, one of the most commonly cited barriers to meaningful work arises when job duties come into conflict with one's personal values, especially when short-term business goals exert pressures that tend to devalue the practice of a professional craft by undermining the practitioner's agency and authority to exert his or her expertise. For example, lawyers report feeling pressured to focus on billable hours over serving client needs; nurses bristle at management imperatives to manage bed utilization at the expense of patient care; and academics often feel the strain of bureaucratic chores that prevent them from devoting time to research or working with students (Madden et al., 2016). For UX practitioners, this tension might manifest in time pressures that prevent them from investing time in thinking deeply through a design problem, or considering the next-order effects of their work at the level of societal or ecological impact.

Nettle suggests that there are three distinct forms of human happiness: 1) momentary feelings of pleasure; 2) "life satisfaction," or overall contentment; and 3) eudaimonia, or feelings of self-realization (Nettle, 2006). The science of human happiness has emerged as a field of study unto itself in recent decades, perhaps nowhere more wholeheartedly embraced than the Buddhist kingdom of Bhutan, where the nation has for decades refined its Gross National Happiness framework (which has influenced a number of corporate employee engagement survey methodologies) draws a distinction between "affective happiness"—relating primarily to momentary feelings of pleasure—and "evaluative happiness," which points towards more reflective, self-reported states of satisfaction that are more closely related with the individual's perceived relationship to society at large (e.g., health, trust in institutions, and a sense of community). While this construct is targeted primarily at national governments—and is designed to serve as a counterweight to the traditional fixation on GDP—the underlying data model (based on 33 cluster indicators with 124 variables) seems quite robust and adaptable in other economic contexts (Ura et al., 2012).

Schumacher argues that the transition towards a more just, human-centered economy cannot happen through organizational planning and process improvements alone; rather, this transition can only take place when it passes through the transformative filter of individual human experience: through a process of inner reflection and transformation whose effects will ultimately reverberate across the wider, interdependent systems that connect us all. "We shrink back from the truth if we believe that the destructive forces of the modern world can be 'brought under control' simply by mobilizing more resources," he writes. "[W]hat is most needed today is a revision of the ends which these means are meant to serve. And this implies, above all else, the development of a life-style which accords to material things their proper, legitimate place, which is secondary and not primary." Transitioning towards a more humane economy inevitably involves centering our efforts on the lived experiences of individuals: "What can I actually do?" he asks. "The answer is as simple as it is disconcerting: we can, each of us, work to put our own inner house in order" (Schumacher, 1979, 249-50).

UX practitioners, like a great many people toiling in contemporary corporate environments, also have to contend with a subtler problem of mindset: the phenomenon of "internalized capitalism." Meadows ranks mindset or paradigm as the single most powerful leverage point for change in a system, because all the goals, structure, rules, and parameters of any given system arise directly out of the minds of individual human beings. Although mindsets can be slow to change, this is by no means always the case: "You could say paradigms are harder to change than anything else about a system ... but there's nothing physical or expensive or even slow in the process of paradigm change. In a single individual it can happen in a millisecond" (Meadows, 2008, 163). The performative pressures of capitalism inevitably create pressures towards linking employee productivity and output with measures of self-worth. If practitioners can shift their perceptions of self-worth towards assessment of well-being alongside traditional measures of productivity, they may be able to help influence wider organizational measurement frameworks around employee engagement, retention, and impact.

As discussed in chapters 2, 6, and 7, UX practitioners experience high degrees of both dissatisfaction and disillusionment in their work—largely as a result of a cognitive disconnect between the humanist ideals to which they aspire and the dehumanizing, reductionist impulses of the business environments in which many of them operate. The appetite for a broad shift in mindset and paradigm among UX practitioners would seem self-evident. And while theories of alternative economics and new forms of sustainable business practice may hold out promise as useful reference points for effecting organizational change, no such change can happen without the agency and sustained efforts of individuals willing to invest their energy in effecting it. Therefore, it seems useful to inquire into the role that practitioners' lived experiences might play in fostering a process of both inner and outer change.

As proponents of human-centered design processes, UX practitioners would seem uniquely suited to apply such a lens to their own work: to identify the strictures and mitigating forces that prevent them from finding meaning in their own work, and to consider how to design organizational systems and processes that yield improvements in their perceptions of professional satisfaction and lead to a closer alignment of their work with their professed values. Moreover, the potential influence of UX practitioners in a post-capitalist society should make them uniquely well-suited to take on a role as agents of change within commercial enterprises. But the nature of UX practice itself-taking place as it does in a highly privileged professional setting-may also militate directly against this transformation. Illich (1987) locates the challenge of finding meaning in contemporary work as closely tied to "the rapid growth of a technocratic elite, equipped with professional and technological expertise from which the lay-person is excluded." He goes on to argue that institutions have increasingly become controlled by professionals who have been able to achieve a "monopoly over the social imagination" (Illich, 1987). In other words, and as this research seeks to point out, the nature of UX practice itself may be the problem it seeks to solve.

In his 1905 novel A Modern Utopia, H.G. Wells imagined a future world in which a small group of highly skilled creative workers wield enormous power over the rest of society. He dubbed this new breed of elite professionals the "Samurai" (anticipating the popularization of the term "ninja" as a sobriquet for modern-day technology workers). Wells' notion of a Samurai class seems eerily prescient, describing a group of workers bearing a notable similarity to today's digital professionals: highly skilled, accomplished people who display a mastery of particular techniques that enable them to wield an outsized influence over the lives of others. More than a century later, the world may be witnessing the emergence of just such a class of worker in the form of modern-day technology professionals, who collectively exert vast influence over our lives by shaping the channels through which culture, commerce, and political power increasingly flow.

"The social theorists of Utopia," Wells writes, "did not base their schemes upon the classification of men into labour and capital. They esteemed these as accidental categories, indefinitely amenable to statesmanship, and they looked for some practical and real classification upon which to base organisation." The Samurai were also, Wells writes, the custodians of the future: "Except for processes of decay, the forms of the human future must come also through men of this same type, and it is a primary essential to our modern idea of an abundant secular progress that these activities should be unhampered and stimulated." In place of the traditional Marxist definitions of labor and capital, Wells divided the citizenry into four classes of minds: the Kinetic, the Dull, the Base, and the Poietic. Kinetic minds, he wrote, are "able but not particularly inventive"—they might be middle managers and bureaucrats, performing administrative roles with competence but little meaningful influence on the larger systems around them. The Dull—encompassing a broad swath of other functional capabilities (perhaps clerical workers, shop foremen, or other skilled laborers performing tasks requiring specialized training) have "inadequate imagination." The Base—roughly equating to the lumpenproletariat of low-skilled, unemployed or under-employed workers—"are mired in egotism and lack 'moral sense.'" Of the four classes, only the Poietic rank as Samurai. *Poiesis*, from the ancient Greek  $\pi$ oić $\omega$ , means literally "to make" (the word "poetry" shares the same root). In order to qualify as a Samurai, a candidate had to display poietic mastery of a "productive technique" like medicine, law, engineering, teaching, painting, writing, and so forth: "He had, in fact, as people say, to 'be something,' or to have 'done something.'" The Samurai effected change in the world by dint of their poietic mastery, transforming the world around them through the applied power of their imaginations (Wells, 1905).

Wells' Samurai bears more than a passing resemblance to Buckminster Fuller's ideal of the "comprehensive designer," which he characterized as "an emerging synthesis of artist, inventor, mechanic, objective economist and evolutionary strategist" (Turner, 2008). Stewart Brand took direct inspiration from Fuller's notion of the comprehensive designer, using it as a guiding avatar for his own multi-disciplinary professional life—which, as I noted in Section 2.1, played a direct role in influencing the subsequent trajectory of networked computing and UX practice.

The parallels between Wells' Samurai and contemporary knowledge workers seem clear enough. In principle, like other classes of knowledge workers, experience designers wield enormous potential influence over the lives of others: they frame the choices that consumers make through the creation of user interfaces, category schemes, and taxonomies on online shopping services; they apply the principles of neuropsychology to create experiences that stimulate the reward centers of the brain, ensuring the "stickiness" of social media service; or they "gamify" the distribution and consumption of editorial content, video, and other forms of intellectual capital to maximize publishers' advertising revenue (Zuboff, 2019). All of this cultural influence has accrued to designers against a backdrop of an emerging gulf between the increasingly wealthy professional classes and just about everyone else. The Poietics are indeed winning the day. They might aspire, as Wells envisioned, towards "imaginations that range beyond the known and accepted," enabling them to work towards "the invention of something new or the discovery of something hitherto unperceived" (Wells, 1905).

In other words: They design. Wells might have found it amusing that at least some of these workers now choose to identify themselves as "ninjas." Wells' notion of the Samurai finds echoes in the later work of the cultural critic Ivan Illich, who coined the term "disabling professions" to describe the privileged place of contemporary knowledge workers like lawyers, doctors, and social workers — all of whom have accrued enormous power and authority through the exertion of a kind of asymmetrical information advantage that, coupled with state sponsorship, gives them broad powers to influence the life, death, and general well-being of the population at large.

Today, however, these advantages are giving way to the disruptive and

seemingly democratizing effects of a global information network. Yet whereas information that was once tightly controlled by these gatekeepers now seems — on the surface — to have become open and available, in reality that information flows through channels that are shaped and curated by a new breed of "disabling" professional: technology workers — and more specifically, UX practitioners.

Nonetheless, modern UX practitioners seem to lack the kind of power and agency in world affairs that Wells envisioned. Instead—as this dissertation will discuss in the interview findings and analysis in chapters 6 and 8—many practitioners feel shackled to a performative culture that they perceive as deeply misaligned with their own values and aspirations. While the Samurai might serve as a useful platonic (or poietic) ideal, the realization of that kind of power also has its own troubling implications.

How might the culture of measurement be employed to good effect here, to explore how shifts in UX practitioner mindset might foster meaningful engagement and a longer-term impact on the shifting of corporate goal-setting processes? Most major corporations now run regular employee engagement programs, to assess employees' self-reported quality of life, confidence in management, and likelihood to stay at the company. These metrics provide important tools for employers to assess the collective health of their organizations and identify focus areas to help improve employee engagement and retention. Forrester has advocated for UX organizations to make employee engagement an explicit focus, identifying a correlation between employee engagement and good customer experience outcomes (Hewitt and Johnson, 2019). It is logical to suppose that companies that apply human-centered design principles to creating positive employee experiences appear more likely to produce good design outcomes for customers as well. Popular business writer Daniel Pink has identified three core aspects of cultivating intrinsic motivation at work: purpose, mastery, and autonomy (Pink, 2009) — in other words, eudaimonia. What exactly, though, might be measured? Is employee satisfaction the be-all and end-all? Kossoff points to Max-Neef's matrix of needs and satisfiers (see table 2 below), a model of human motivations and desires that bears some resemblance to the better-known Masloff hierarchy but features a level of nuance that seems far more actionable for working designers.

	<b>Being</b> (qualities)	<b>Having</b> (things)	<b>Doing</b> (actions)	Interacting (settings)
Subsistence	Physical health, mental health, sense of humor, adaptability	Food, shelter, work	Feed, procreate, rest, work	Living, environment, social setting
Protection	Care, adaptability, autonomy, equilibrium, solidarity	Insurance systems, savings, social security, health systems, family work	Cooperate, prevent, plan, take care of, cure, sleep	Living space, social environment, dwelling
Affection	Self-esteem, respect, tolerance, generosity, receptiveness, passion	Friendships, family, partnerships, relationships with nature	Make love, express emotions, share, take care of, cultivate,	Privacy, intimacy, home, space of togetherness

Table 2: Matrix of needs and satisfiers (Max-Neef, 1991)

			appreciate	
Understanding	Receptiveness, curiosity, astonishment, discipline, intuition, rationality	Literature, teachers, method, educational policies, communication	Investigate, study, analyze, experiment, educate, meditate	Settings of formative interaction, schools, universities, academies, groups, communities, family
Participation	Adaptability, receptiveness, solidarity, willingness, determination, dedication, respect, passion	Rights, responsibilities, duties, privileges, work	Become affiliated, share, cooperate, propose, interact, obey, agree on, express opinion	Settings of participative interaction, parties, associations, churches, communities, family
Idleness	Curiosity, receptiveness, imagination, recklessness, sense of humor, tranquility, sensuality	Games, parties, clubs, spectacles, peace of mind	Daydream, brood, dream, recall old times, remember, relax, have fun, play	Privacy, intimacy, spaces of closeness, free time, surroundings, landscapes
Creation	Passion, curiosity, determination, intuition, imagination, boldness, rationality, inventiveness	Abilities, skills, method, work	Work, invest, build, design, compose, interpret	Productive and feedback settings, workshops, cultural groups, audiences, spaces for expression, temporal freedom
Identity	Sense of belonging, consistency, differentiation,	Symbols, habits, customs, values,	Commit oneself, integrate, comfort,	Social rhythms, everyday settings, setting switch

	self-esteem, assertiveness	language, work, reference groups, sexuality, norms, historical memory	decide on, get to know oneself, recognize oneself, actualize oneself	one belongs to, maturation stages
Freedom	Autonomy, self-esteem, determination, passion, assertiveness, openmindednes s.	Equal rights	Dissent, choose, be different from, run risks, develop awareness, commit oneself, disobey	Temporal / spatial plasticity

Max-Neef's model proposes a classification of satisfiers that all human societies rely on for addressing these fundamental needs. Applying this lens, it is clear how much of contemporary interaction design work takes place at the base levels of subsistence (buying and selling), participation (exchanging social signals), and protection (ensuring security and privacy), while higher-level needs such as understanding, identity, freedom, and leisure—let alone transcendence—go largely unaddressed. How might UX practitioners start to address these higher-order needs? Just as transitions in design practice may necessitate decentering the satisfaction of individual user needs in product planning processes, so too it may be necessary to consider decentering the designer as well—to create more fluid, less deterministic pathways within a given system. Illich argues that "the waning of the current

professional ethos is a necessary condition for the emergence of a new relationship between needs, contemporary tools, and personal satisfaction." Envisioning a more balanced world with fewer disabling information asymmetries necessitates developing what Illich calls a "non-deferential posture" towards professional expertise across a wide range of fields. "Social reconstruction," he writes, "begins with a doubt raised among citizens" (Illich, 1978. 40).

What might such a transition look like in practice? John Keats famously celebrated the virtues of "negative capability," that elusive state of being "when man is capable of being in uncertainties. Mysteries, doubts, without any irritable reaching after fact and reason." An irritable reaching after fact and reason seems to have become a chief preoccupation of UX practice in recent years: the urge to produce results, demonstrate ROI, and ultimately justify the designer's existence (and paycheck). This orientation towards measurable outcomes tends to beget a lot of short-term thinking, limiting the capacity of designers to factor in the social, cultural, and environmental considerations that could broaden and deepen the impact of their work. How might UX practitioners combat this tendency? Anne-Laure le Cunff offers a useful prescription for incorporating negative capability into one's work-and battling the fundamental arrogance that can come from an overly deterministic approach – by embracing a set of inner practices including: embracing ignorance, suspending judgment, sitting with doubts, questioning assumptions, and revisiting ideas. "Through this process," she argues, "we can connect deeper with ourselves, with each other, and with the world. (Le Cunff, 2022).

How then might a more open, reflective orientation—a shift in posture, so to speak—change the way practitioners approach design practice? One useful reference point comes from Chia and Holt, whose *Strategy Without Design* (2009) makes a provocative argument for a new approach to strategic planning: one not driven by a desire for "spectacular strategic interventions," as the authors put it, but rather evolving through a nuanced process of inner reflection. Grounding their argument in the Greek notion of *metis*, a state of mind that demands "alertness, sensitivity and a peculiar disposition," they advocate for a disciplined, spacious practice of observing, staying open, and seeking understanding rather than charging headlong into action.

This notion feels deeply relevant to the practice of UX research, relying as it does on direct observation as the basis of insight. That practice invariably takes place in the context of a specific business strategy that demands tangible results, however—and tends to create an impetus against deeper levels of inner reflection. In Chia and Holt's model, there is a clear distinction between the activity of producing near-term outcomes and the more demanding challenge of effecting meaningful, long-term transformation. Transformation, they argue, happens only through a process of "tireless continuity and pervasiveness, and that is what makes it eventually effective. Transformation, because it is continuous and operates at a mundane everyday level, normally passes unnoticed. The skills and knowledge are absorbed unconsciously" (Chi and Holt, 1992).

In a similar vein, Kees Dorst's landmark book *Frame Innovation* (2015) posits an approach to problem-solving rooted in what he calls "design abduction"—or

approaching a problem without a particular process or method in mind. Dorst cautions against the fetishization of process, or a reliance on "fossilized frames" that tend to beget bureaucratic, institutionalized approaches to problem-solving. For Dorst, reframing is the key to design thinking. Quoting Einstein, he writes, "A problem can never be solved from the context in which it arose." Instead, "this means moving away from problems and solutions. As long as we continue to speak in terms of problems and solutions, we remain in the rationalist culture of idealised linear engineering design, and afford it 'remarkable power,' as we cover our creative skins with managerial masks." (Dorst, 2015, 19). It is therefore the job of the designer (or design researcher) to question assumptions and to explore new discourses and themes as a means to reframe problem spaces. He lays out a nine-step process for doing so, deeply rooted in gualitative research methods—including ethnographic fieldwork, secondary research, and trend analysis—to help designers shift their perspectives on a particular problem space to open up new lines of inquiry. The practice of direct observation and a posture of openness (or negative capability) form the backbone of this approach.

This notion of deep listening and reflection sounds intrinsically appealing, but the reality of UX practice inevitably involves working within time-bound constraints and expectations of useful outcomes. How, then, might designers usefully embrace a posture of negative capability without, frankly, putting themselves out of work? Here the onus may fall to organizational leaders rather than individual practitioners. Business theorists Peter Simpson and Robert French have explored the application of Keats' notion of negative capability to the practice of business management, formulating a powerful critique of business leaders' well-known tendency to charge into action. "Negative Capability is the ability to resist dispersing into inappropriate knowing and action," they write. Instead, they argue that business leaders should strive to cultivate a capacity for operating at the "edge between knowing and not knowing...

Organizational leaders must be oriented towards the unknown creative insight of the moment and hence towards 'the edges' of their ignorance" (Simpson and French, 2006). This, of course, is much easier said than done, given the inexorable pressures on corporations to do things faster, better, and cheaper. French and Simpson characterize this collective tendency as the "principle of performativity" — an orientation towards doing that "dominates our culture at all levels and 'serves to subordinate knowledge and truth to the production of efficiency" (Fournier and Grey, 2000).

In an increasingly mechanized world, "the active and the technical dominate over the passive and the humane." The pressures of "performativity" are wreaking widespread havoc on families, institutions, the environment, and other complex systems that humans are barely beginning to understand. Furthermore, the values of speed, efficiency, and profit-making are no longer as self-evident as they might once have seemed. "In such an environment," Simpson and French wonder, "how is one to attribute value to low status aspects of behaviours such as waiting, patience, passivity, observing, illusion, imagination, detachment, disinterest, desire, trust, withdrawing, tempering, adapting, indifference, humility...?" (Simpson and French, 2006).

The opportunity to redirect UX practices towards more regenerative ways of working seems to sit at the intersection of several overlapping problem spaces: the identification and alignment of internal values with outer work goals; the reorientation of design practice away from "heroic" and productive modes of working and towards more co-creative, facilitative modes of engagement; and finally, in reckoning with the European heritage of universalism and cultural imperialism that is inherent in the heritage of contemporary UX design practices.

The literature of meaningful work points the way towards opportunities for UX practitioners to engage more deeply in a process of inner-directed inquiry into their own values, posture and mindset. By interrogating their own values, identifying obstacles to realizing those values at work, and considering how shifts in posture and mindset might enable them to reorient their work practices, UX practitioners may discover a heretofore unrecognized level of agency in their work. Engaging with these inner dimension of work may provide a powerful fulcrum for enabling practitioners to effect change in their work lives—by recognizing their agency as actors in complex systems. Such a process may also enable them to recognize the ways in which they may have internalized capitalist values, and begin to interrogate and activate their values at work in ways that lead to more fundamentally regenerative ways of working.

## 4.3 Futures Studies

If alternative economics and meaningful work hold promise as theoretical frameworks for redirecting UX work towards more sustainable, long term-focused outcomes, then how might one bridge these theories with practice? What kinds of specific skills and methods might prove useful? And what barriers might practitioners encounter in trying to put such techniques into practice in professional settings? Here futures studies—or strategic foresight, as it's typically referred to in business circles—offers a potentially promising path forward.

If the aim of design is, as Herbert Simon argues, "to devise courses of action aimed at changing existing situations into preferred ones" (Simon, 1969, 111), then one might well argue that all design activity is, in effect, a form of futuring (Hill & Candy, 2019). But in UX circles, the field of futures studies remains little understood. To the extent that UX practitioners engage in future-focused work, it typically takes the form of singular, normative "north star" vision projects or storyboard-style narratives that attempt to depict a particular, usually highly specific version of the future that aligns with and supports the organization's strategic business interests. Long term-focused UX projects that attempt to explore a range of possible divergent futures—or directly address societal wicked problems—remain few and far between.

Futures studies could, in principle, offer the promise of a theoretical framework that would enable designers to, as Candy puts it, "interrogate higher-level consequences." For futurists, in turn, design practice offers a path towards materializing their work in more impactful, visually engaging ways than the largely text-based narratives that have traditionally characterized futures work (Candy, 2019). But as a practical matter, the professions of design and strategic foresight have traditionally operated in separate professional orbits.

Their disparate histories notwithstanding, the two fields have much more in common than might at first appear, including a few points of direct intersection between the evolution of futures studies and the pre-history of UX practice, and in recent years a few concerted efforts to bridge the realms of strategic foresight and design practice. A brief survey of the history of futures studies therefore seems in order.

## 4.3.1 A Brief History of Futures Studies

Historian and futurist Jennifer Gidley traces the arc of futures studies as an identifiable field of practice back to the late nineteenth century—a period of rapid societal change, driven by industrialization and the proliferation of new technologies—when science fiction and other forms of popular speculation about the future emerged. While literary and artistic utopias have a rich history dating back to Plato's *Republic* and Thomas More's seminal *Utopia* (1516), these narratives typically posited the possibilities of better worlds in other places: terrestrial realms of the imagination. Only in the nineteenth century did imaginary utopias start to take on a temporal dimension, a transition that sociologist and futurist Wendell Bell characterizes as a radical shift from "a different place at the same time to the same place at a different time" (Bell, 2003). This transition towards situating time rather than place as

the defining characteristic of speculative realities marks the defining characteristic of futures studies.



Figure 9: A vespertine trip high above the rooftops of Paris, from Albert Robida's La Vie Électrique: Le Vingtième Siècle (1892)

Scholars of futures studies typically fix the origins of the field to H.G. Wells's 1902 book *Anticipations*, a series of essays in which he speculated about what the world might look like in the year 2000 (Wells, 1902). The book probes a wide range of potential futures covering topics as diverse as locomotion, cities, social relationships,

democracy, war, languages, faith, and public policy. Wells's work—wildly popular in its day—also provides the earliest examples of what might now be termed "images of the future": a term first proposed by sociologist Fred Polak (Polak, 1955) to provoke public discussion about possible pathways towards long-term societal change. Whitmarsh characterizes Wells's work as "science-fictional modernism" (along with writers like Philip K. Dick, Ursula K. Le Guin, and William S. Burroughs), insofar as it fuses speculative fiction with broader societal, cultural, and political critique: a style of socially engaged science fiction that also paved the way for the emerging field of cybernetics (see Section 3.1), offering writers "a new conceptual vocabulary for addressing modernist concerns over selfhood, personality, embodiment, and narrative style and technique" (Whitmarsh, 2019). In other words, the proto-literature of futures studies that emerged in late nineteenth- and early twentieth- century science fiction hinges on the lived experiences of individuals, and the role they might play in fostering the transition towards new, more desirable futures.

Years later, Wells would also argue for the need to establish a profession of foresight studies. In a 1932 BBC broadcast, he argued for the creation of university departments dedicated to the practice of foresight:

It seems an odd thing to me that though we have thousands and thousands of professors and hundreds of thousands of students of history working upon the records of the past, there is not a single person anywhere who makes a whole-time job of estimating the future consequences of new inventions and
new devices. There is not a single Professor of Foresight in the world. But why shouldn't there be? (Wells, 1932)

In the decades following Wells's call for a dedicated field of foresight studies, a professional field of study and practice has indeed emerged. Bell (2003) argues that while the profession owes a debt to forerunners like Wells, it was not until the middle of the 20th century that a recognizable profession of futures studies became visible. Hines (2019) suggests that contemporary futures studies hinges on the establishment of the RAND corporation, which originated in 1946 with a United States Air Force-funded effort to forecast the future of weaponry. An early influential RAND staffer named Herman Kahn, a mathematician by training, argued that analysts would need new tools and methods-"strange aids to thought" (Kahn, 1962) that would enable them to model multiple potential scenarios. Ultimately, Kahn and his colleagues developed tools like an early version of scenario planning, which would become foundational to contemporary strategic foresight practice. The RAND project also led to the creation of the Institute for the Future (IFTF) in Palo Alto, California: a non-profit foundation dedicated to promoting foresight practices, whose work has been deeply felt across the governmental, educational, and for-profit landscape of foresight professionals (Campbell, 2004).

By the 1950s, the field of foresight analysis had started to find purchase in a range of institutional efforts in both business and governmental organizations: including strategy development, economic forecasting, and policy planning (Bell, 2003). By this

time, a wave of pop literature about the future had started to re-capture the public imagination, thanks to writers like Marshall McLuhan, Rachel Carson, and later Alvin Toffler, whose 1970 book *Future Shock* first introduced the term "information overload." These writers all worked well outside the emerging scholarly world of futures studies. But at around the same time, a more formal academic movement was gathering steam to create a more rigorous metatheoretical stance towards the study of the future, thanks to the pioneering work of early advocates like Jim Dator at Virginia Tech (and later the University of Hawaii at Manoa) and Wendell Bell at Yale, both of whom began teaching a version of futures studies in their respective institutions in1967 (Bell, 2002).

Dator's seminal work draws on multi-disciplinary perspectives spanning cultural studies, anthropology, and evolutionary systems theories, as foundational inputs (Dator, 1988). Most importantly, he argues against the once-prevailing view of strategic foresight as an exercise in predicting the future. Rather, the future is inherently unknowable, and the value of futures studies should rest not on its predictive accuracy but rather on its ability to create a future-focused dialogue through which people interrogate their own beliefs and assumptions (Dator, 2009). This emphasis on divergent thinking moved beyond the polemical utopianism of the Wellsian approach to allow for considering a wider spectrum of possible futures that may be "optimistic or pessimistic, frightening or ennobling, paralyzing or motivating, weak or robust, unexamined and naive, or fully researched, articulated, tested, and developed" (Dator, 1998)—also echoing's Dorst's approach to frame innovation discussed above (Dorst, 2015). Ultimately, Dator argues that all such images of the future fall into one of four

broad scenarios (see table 3 below).

Table 3: Four Futures, Jim Dator (2009)

SCENARIO	DESCRIPTION
Continuation	Scenarios that typically involve "forward"
	progress, particularly in terms of
	economic and political indicators of
	societal well-being
Collapse	Dystopian images demonstrating the
	impact of any number of catastrophic
	scenarios including environmental
	overload, economic instability, warfare,
	or other planetary cataclysms
Disciplined Society	Images that evoke a values-driven social
	organization that often involves a return
	to an earlier set of imagined ideals
	stemming from the natural world, ancient
	wisdom, a particular set of ideologies, or
	divine inspiration

Transformational Society	Utopian worlds that typically mark a
	dramatic step forward based on the
	emergence of new beliefs or ways of
	knowing

Whatever their particulars, these images are neither "right" nor "wrong." Rather, these are the raw materials that enable participants in a futures-oriented planning process to envision a preferred future among many possible ones—and coalesce around a plan of action towards a desired set of outcomes (Dator, 2009). Dator also emphasizes the importance of a "broadly participative inquiry," including a range of stakeholders in futuring activities—evoking the ethos of co-creation and socially constructed meaning that informs so much of contemporary UX practice (Dator, 2002). However, the emphasis in Dator's work tends towards administrative planning processes rather than product development, and the recommended activities and outputs tend to look more like design for social innovation and policy—the kinds of higher-order service design work that can often seem far out of reach for UX practitioners.

By the time the Internet emerged into the public consciousness in the mid- to late-1990s, images of the future again began to gain new purchase on the popular mind, thanks in no small part to the relentless marketing of the fast-growing technology industry and rhetorical flights of imagination found in the pages of *Wired* and other New Economy publications. Suddenly, writing about the future seemed fashionable again, as the utopian zeal of the early "digerati" began once again to evoke Wellsian positivism as well as growing social critiques. One of this period's seminal literary voices came from Stewart Brand (see further discussion of Brand and his involvement with cybernetics in section 2.1), a prime mover in the environmental movement and the founder and publisher of both the Whole Earth Catalog and the early online community The WELL, where many of the first-generation online influencers first convened to discuss the possibilities of the Internet (Turner, 2008).

In his landmark book *The Clock of the Long Now*, Brand makes an impassioned argument for the importance of long-term planning frameworks at this particular historical moment. "Civilization is revving itself into a pathologically short attention span. The trend might be coming from the acceleration of technology, the short-horizon perspective of market-driven economics, the next-election perspective of democracies, or the distractions of personal multi-tasking" (Brand, 1999). Brand proposes six levels of "pace" as a structural model for any healthy civilization: Fashion/art, Commerce, Infrastructure, Governance, Culture, and Nature (see figure 10). "In a durable society," he writes, "each level is allowed to operate at its own pace, safely sustained by the slower levels below and kept invigorated by the livelier levels above" (Brand, 1999, 36).



Figure 10: Pace layering (Brand, 1999)

Brand's work not only captured the popular imagination but also garnered the attention of many first-generation web designers and developers. For them, Brand represented a living link to the counterculture of the 1960s from which the early Internet had sprung (Markoff, 2006). His pace layering concept quickly gained traction among designers, developers, and product managers looking for an organizing principle to help plan their work. Brand presented this framework at an influential keynote speech at the Information Architecture Summit (2001), and it subsequently became the focus

of much discussion among influential early UX practitioners like Peter Morville (Morville, 2001) and Jeffrey Veen (Treseler, 2014). But this initial burst of enthusiasm for pace layering and systems thinking in the early 2000s proved short-lived.

In the meantime, strategic foresight practitioners continued to develop and refine methods for influencing organizational strategies. In 2002 Jay Ogilvy—who co-founded the highly influential Global Business Network with Brand—proposed a new approach to scenario planning. It lays out a series of steps for guiding multiple stakeholders to work through a futures problem in a way closely reminiscent of contemporary participatory design activities, beginning with an effort to invite a diverse group of participants to create a narrative by inventorying key factors that could conceivably influence the future trajectory of an organization, a product, or any form of endeavor. In Ogilvy's model, the scenario team then settles on 2–5 basic storylines or "plots" and creates a series of long, written narratives for each (with a beginning, middle, and end), then shares them back with the stakeholder team for further refinement (Ogilvy, 2002)

While both Dator and Ogilvy argue for an approach that strives not for prediction but divergent scenarios, that approach seems far removed from the "north star" visioning exercises that often take place in corporate planning exercises involving UX practitioners—but these unidirectional design projects do nonetheless constitute a form of futuring. Gidley argues that contemporary futures studies falls roughly into five distinct philosophical approaches. The first of these, which she characterizes as the predictive/empirical approach, stems from the positivist, "hard sciences" approach to predicting a unilinear future—very much in the mode of Donald Schön's conception of technical rationality (Schön, 2005). It is this form of predictive futuring—the "north star" style of design—that predominates in many UX organizations. She contrasts this deterministic approach to more pluralistic approaches that arise from a more social sciences-driven approach to understanding a plurality of possible futures: critical/postmodern; cultural/interpretive; participatory/prospective; and integral/holistic. (Gldley, 2017).

In a similar vein, Ramos (2017) traces the evolution of futures studies in terms of a progression from narrowly targeted forecasting that predominated in the 1950s and 1960s, towards more systemic perspectives in the 1970s and 1980s, critical inquiry in the 1980s and 1990s, more participatory approaches in the 1990s, finally culminating in an approach that he advocates for fusing action research—a term coined by the social psychologist Kurt Lewin to denote the active participation of practitioners in a research practice (Lewin, 1946)—with strategic foresight. Figure 11 below depicts Ramos's view of the evolution of the field.



*Figure 11: Evolution of futures studies from an action research perspective (Ramos, 2017)* 

Ramos advocates for an action research (AR)-oriented approach to futures studies that centers practitioners' own experiences in interrogating assumptions about the future, to help them engage with their own values and psychological development as critical inputs to the process. He then proposes moving towards second order forms of AR that widen the circle of input to a group of practitioners working together to forge consensus on a path forward; and finally to third-order AR that further extends the process to reflect "the dynamics of a larger community of co-inquiry." (Ramos, 2017). This centering of the observer/practitioner's own perspective as a critical instrument for shaping the trajectory of projects hews closely to von Foerster's model of second order cybernetics (see section 3.1). Futures studies scholar Richard Slaughter (2002) proposes an even simpler model encompassing three broad styles of futures studies: pop futurism, which consists largely of packaging up trends and insights about emerging technologies and other sociotechnical developments for a mass audience, often in the form of easily understood predictions and prognostications; these fall largely into Gidley's conception of predictive/empirical futuring. Slaughter then divides more pluriversal approaches to futures work into two broad categories; problem-oriented futures work, which explores the ways in which societies and organizations might respond to emerging challenges like environmental changes, or shifts in the regulatory environment; and critical and epistemological futures studies, which "probe beneath the surface" of observable phenomena to tease out the deeper, formative processes that allow people to interrogate the assumptions undergirding current lifestyles (Slaughter, 2002).

As this highly condensed history of futures studies has shown, the field has evolved over the course of the twentieth century in a range of both academic and professional settings—yielding a wide range of frameworks and methods in use across an expanding organizational landscape. Today, we may be living in a period of peak futuring. "As the pace of change accelerates, the word 'future' is becoming ever more ubiquitous," writes Gidley. "Since the turn of the 21st century, with the exponential rate of technological change, time itself seems to be speeding up, bringing 'the future' ever closer" (Gidley, 2017, 3). Paradoxically, however, the recent boom in futures studies also seems to coincide with an epidemic of institutional short-termism. Indeed one cannot help but wonder whether the very notion of a "user" exerts a certain temporal pull, forcing an organizational focus on moments of interaction between people and organizations which, in a pre-digital era, simply required more time to complete. These issues may be intertwined, insofar as widespread concern about narrowing time horizons—spurred in part by the ubiquity and efficiency of self-service digital touchpoints—may have, paradoxically, spurred a growing popular interest in longer-term perspectives. As such, the field of UX practice would seem ripe for a deeper engagement with the theories and methods of strategic foresight.

#### 4.3.2 UX Futures

As I have discussed above, the practices of design and foresight evolved largely independently, albeit with a few tantalizing points of intersection (as in the work of Stewart Brand and the early cyberneticists). In recent years, however, a new generation of futurists like Stuart Candy, Jake Dunagan, Anab Jain, Elliott Montgomery, Leah Zaidi, and Kelly Kornet have explored new ways of bridging futures studies and strategic foresight practices with design work, in an effort to effect what Candy and Dunagan term an "experiential turn" in design practice (Candy & Dunagan, 2016). Arguing that futures studies as a discipline has not yet realized its potential to exert widespread influence on mainstream culture, they advocate for practitioners to create more persuasive artifacts.

While the dialogue between professional designers and foresight practitioners is a relatively recent phenomenon, there is nonetheless a rich legacy of designed artifacts playing a pivotal role in influencing the public imagination over the course of the twentieth century. In some cases, these "images of the future" have exerted a profound influence on the subsequent development of technology and society. Especially in the wake of the Bauhaus and during the mid-twentieth century heyday of industrial design, far-reaching visions of future worlds both galvanized the popular imagination and directly shaped the subsequent trajectory of innovation. I argue that these expansive projects may serve as an important reference point for considering what a practice of UX futures might look like.

Some early examples of proto-UX projects that might also qualify as futures projects include Vannevar Bush's Memex (see figure 12 below), a speculative imagining of an information storage and retrieval system that inspired subsequent generations of network pioneers like Doug Engelbart, Ted Nelson, and ultimately Tim Berners-Lee—who might never have conceived of the World Wide Web had it not been for Bush's futuristic vision (Bush, 1945).



Memex in the form of a desk would instantly bring files and material on any subject to the operator's fingertips. Slanting translucent viewing screens magnify supermicrofilm filed by code numbers. At left is a mechanism which automatically photographs longhand notes, pictures and letters, then files them in the desk for future reference (LIFE 19(11), p. 123).

Figure 12: Vannevar Bush's Memex, as visualized by Alfred D. Cimi (1945)

In a similar vein, Norman Bel Geddes's Futurama Pavilion at the 1939 World's Fair (see figure 13 below) — sponsored by General Motors — depicted a vision of an automobile-centric America connected by highways, cloverleaf intersections, and modernist Corbusier-esque cityscapes, implanting an image of a future world dominated by mobility and urban renewal that would directly shape the subsequent half century of transportation networks and urban planning.



Figure 13: Norman Bel Geddes's Futurama pavilion at the 1939 World's Fair

Twenty five years later, IBM's Pavilion at the 1964 World's Fair (see figure 14 below) posited a vision of a future world of networked computers. With a striking pavilion designed by Eero Saarinen and a range of exhibits, graphics, and multimedia presentations created by Charles and Ray Eames, the pavilion presented visitors with an introduction to how computers worked and painted a picture of a world in which computing would become deeply embedded in the fabric of human society.



Figure 14: IBM Mathematica pavilion at the 1964 world's fair

More recently, Apple's 1987 Knowledge Navigator video, produced by Hugh Dubberly (whose interest in cybernetics is discussed in section 3.1) and Xerox PARC pioneer Alan Kay, portrayed a future networked world where people would have access to the world's information via a wireless tablet that could access a powerful hypertext network, including voice recognition and an automated AI agent. The concept built in part on Kay's earlier work on a proto-tablet concept called the Dynabook, which has served as a kind of Platonic object for early personal computer design efforts at Xerox PARC, Apple, and elsewhere (Kay, 2014). The Knowledge Navigator (see figure 15 below) evoked a world of networked multimedia that—while never intended to be built as a product per se—nonetheless served as a unifying vision and rallying cry that helped spur the development of the rich media landscape that we all now inhabit.



Figure 15: Apple's Knowledge Navigator (1987)

Although none of these projects involved a professional futurist per se,

nonetheless they all demonstrate the potential of designed artifacts to influence wider societal dialogue about the future—and in some cases to shape that future directly. Yet today—in an era when many companies are starting to invest in both UX and strategic foresight capabilities—these kinds of ambitious, public-facing design visions seem to be in short supply in the corporate sector (although to be sure there are companies investing in similar kinds of exploratory design work for the purposes of internal strategic development). There does, however, seem to be a growing interest in such futures-led design initiatives among governments, non-profits, and media organizations.

To be sure, UX practitioners today do at times engage in so-called concept car projects and R&D initiatives. There is no shortage of product demos, "north star" visions, and highly produced videos and presentation decks depicting alluring future products; but the craft and polish of these artifacts is somehow inversely proportional to their cultural ambition. Too often, they seem like little more than sales pitches, centering narrowly on exploring how new technologies might create and satisfy user needs, holding out the promise of individual comfort through new means of consumption. Rarely do these projects attempt to penetrate the deeper pace layers that Brand hypothesized, or to address broad-based societal wicked problems (the occasional "greenwashing" effort at corporate sustainability notwithstanding). What they lack is an overriding theory of change: a point of purchase in the larger social, cultural, and political firmament. As digital design teams have increasingly moved in-house and gained putative influence in corporate decision-making processes, the practice of forward-looking design efforts also seems, paradoxically, to have ceded its ability to inspire.

Conversely, the field of futures studies has suffered from what Candy and Dunagan have deemed "an experiential gulf," which they characterize as "one of the main reasons for what we would say has been the field's insufficient impact on mainstream thinking about the future over the past half century" (Candy and Dunagan, 2016, 61ff). In a world of increasingly mixed media and interactive modalities, they argue, futurists must move beyond the linear forms of text-based documents and embrace a wider range of media to bring their work to life—an effort that will inevitably involve more cross-disciplinary collaborations with designers, engineers, data scientists, and other professions adept in the creation of designed artifacts.

Candy proposes a model he dubs the Experiential Futures Ladder" (see figure 16 below), a conceptual scaffolding to support design futures work.



Figure 16: The experiential futures ladder (Candy, 2016)

Echoing Eero Saarinen's dictum to always design things by considering them in their next larger context (Saarinen, quoted in Time, 1956), he proposes a model in which futurists work towards generating tangible artifacts—"Stuff"—consisting of artifacts (typically visual) that evoke a particular situation—a time, a place—in a specific scenario, within the broad context of a specific possible future. In order to bring this kind of work to fruition, he argues, futurists must embrace a range of skills and mindsets, including the study of history and culture, mental modeling, "long-zooming and scale-toggling," group co-creation, and a willingness to forge partnerships with collaborators drawn from highly variegated professional backgrounds and skillsets (Candy and Dunagan, 2017). More importantly, they must show a willingness to create the conditions for "scalable structures of participation," in which a truly collaborative inquiry can take place.

What might this look like in practice? Candy proposes two high-level approaches for experiential futures: "future shock therapy"—the creation of provocative artifacts to function as evidence of the future and, ideally, a spur to action—and "ambient foresight"—a more nuanced model of embedding subtle cues to the future in everyday experiences (Candy, 2010). Candy and Dunagan highlight a series of non-profit, governmental, and academic projects, some with limited private sector involvement—many yielding fascinating and provocative results. However, successful collaborations with for-profit corporations remain noticeably absent from this field of inquiry.

In a related vein, Dunne and Raby have proposed an approach dubbed

"speculative design," which offers a framework for using design interventions to address wicked problems, "to create spaces for discussion and debate about alternative ways of being, and to inspire and encourage people's imaginations to flow freely. Design speculations can act as a catalyst for collectively redefining our relationship to reality" (Dunne & Raby, 2013, 2). They developed this framework while teaching at the Royal College of Art, where they invited Stuart Candy to introduce students to foresight concepts and methods—and, according to Candy, in turn inspired his interest in exploring ways to engage designers in futures studies endeavors (Candy, 2018). Envisioned explicitly as a means to enable designers to step outside the performative pressures of market demands, Dunne and Raby intended for this framework to help channel designers' "growing desire for other ways of managing our economic lives and the relationship among state, market, citizen, and consumer" (Dunne and Baby, 2013, 9). Dunne and Raby acknowledge the difficulty this kind of work faces in gaining traction in organizational settings, pointing towards three major forces that seem to militate against this:

- Market forces. To the extent that organizations see design primarily as a tool in service of creating positive financial outcomes, speculative design practices are often "seen as out of sync with design's potential to generate wealth."
- Atomization. A design culture that focuses primarily on creating outcomes

for individuals has tended to work against the need to solve wider-angle societal problems.

• **Pessimism**. Looming societal threats, like climate change and global income inequality, feed a sense of hopelessness and lack of faith in the future, making it more difficult for designers to pitch more future-focused solutions. (Dunne & Raby, 2013)

Dunne and Raby's work popularized the practice of speculative design, especially in academia (especially at the Royal College of Art, where they guided numerous student projects). While clearly intended as a vehicle for systemic change, in practice speculative design has been co-opted by some companies in service of clearly capitalist aims to promote visions of expanded growth and consumption driven by new products and services. As Dutch designer and researcher Ruben Pater argues, "Speculative design should stop imagining luxury fantasies for the one percent ... The only ethical future imagines a world that protects and respects the life of all living beings" (Pater, 2021).

As already discussed, futures studies has taken shape largely independently of professional design practice. Yet the two fields share a few common strands of lineage: born of the second industrial revolution, inspired by the logical positivism of early modernism, and in more recent decades engaged with increasingly divergent and participatory ways of creating meaning—and engaging with questions of ethics.

However, while the benefits of design to futures studies seem clear enough—namely, the ability to create more compelling narrative artifacts, as a means towards bridging the "experiential gulf" —the potential utility of futures studies to UX practice remains more of an open question. Moreover, given that many strategic foresight efforts take place in the realm of C-suite or strategic planning groups that tend to operate at a more senior level in the organization than most in-house design teams—with a few notable exceptions like Apple, IBM, or AirBnB, where design leaders have successfully penetrated the C-suite—some strategic foresight methods do not mesh easily with design processes that revolve primarily around the crafting of experiential artifacts and narratives.

While I am aware of efforts to apply strategic foresight methods by UX practitioners in a handful of major technology companies (with some of which I have been directly involved), the literature on these efforts remains sparse due to the proprietary nature of this work. While extrinsic constraints will almost inevitably limit the ability of many UX practitioners to fully embrace these forecasting methods—we may not see professional UX futurists materialize anytime soon—nonetheless the theory and practices of futures studies can provide a useful spur towards helping them start to instill a culture of foresight in their organizations, create openings for experiential futures explorations within existing design processes, and begin to explore how to exert a more direct and meaningful influence on the "upstream" organizational planning and strategy decisions where this kind of work is likely to have the most impact.

Whereas futurists typically disavow any intention to predict the future, most UX

practitioners—working towards incentives that guide them to strive for "positive" impact, as measured by some combination of business performance outcomes and user satisfaction metrics—tend to see their ability to predict the success of a product in the marketplace as an essential indicator of their professional self-worth. Thus they tend to default to the predictive/empirical mode of futuring that Gidley (2017) describes. How might they redirect their practices to engage with more pluriversal, post-positivist approaches to considering a wider range of possible futures? The tools of futures studies, appropriately applied, offer what may be the essential bridge between theory and practice, creating a point of entry for working designers to employ their craft skills to engage with a range of possible futures—and in the process, to develop a set of tools and (more importantly) a world view more oriented towards longer-term thinking and the wider-angle concerns of transition design.

The theory and methods of futures studies (or strategic foresight, its more applied manifestation in business circles), offers a powerful set of frameworks and toolkits for envisioning possible and preferable futures. In particular, pace layering (Brand, 2000), scenario planning (Ogilvy, 2002), and experiential futures (Candy and Dunagan, 2016) hold enormous promise as vehicles for redirecting UX practice towards more sustainable long-term outcomes. While these practices enjoy limited awareness among present-day UX practitioners, a deeper understanding of these frameworks could enable them to shift focus towards considering more divergent possible futures, embracing "whole systems" ways of working, and designing effective images of the future that could serve as powerful interventions for effecting long-term change.

## 4.4 Summary reflections

These three bodies of theory—alternative economics, meaningful work, and futures studies—form the intellectual scaffolding on which the remainder of this research program hinges. The insights gleaned from each of these discourses have directly shaped the instructional material and methods used in the professional development workshops (chapter 8), informed the discussion guides for the practitioner interviews (chapter 7), and directly influences the provisional heuristics introduced in chapter 10. To summarize, these are the key operative themes to emerge from this review of the literature:

 The emerging field of alternative economics offers a set of theoretical underpinnings that may enable UX practitioners to reframe their work using multidimensional conceptions of value. In particular, an understanding of alternative forms of capital (Roland, 2011) and triple-bottom line economics (Elkington, 2015) may enable them to develop new goal-setting and measurement frameworks to balance systems-level outcomes (often in the form of non-financial forms of value exchange) with the tactical, business-oriented goals of satisfying user needs.

Additionally, an understanding of post-capitalist theory may equip UX

practitioners with a much-needed critical vocabulary to interrogate and challenge the performative pressures of capitalism in their day-to-day work. By deepening their understanding of the extractive pressures of capitalist systems, they can begin to envision the possibility of economic systems centered on degrowth, social justice, and ecological restoration: regenerative systems that promise societal renewal, rather than merely ethical business conduct and societal harm reduction. In this way these frameworks may enable practitioners to begin to shift their orientation towards design work that incorporates more direct consideration of societal outcomes within the context of for-profit business enterprises.

2) A process of inner-directed values inquiry may enable UX practitioners to engage in a reflective process that equips them to claim more agency over their role in influencing complex systems. By engaging more directly with their inner values, they may begin to identify obstacles to realizing those values in their professional practices. In particular, recognizing the pressures of internalized capitalism, and the ways in which a technocratic management regimes tend to mitigate against finding a sense of personal meaning and fulfillment at work (Illich, 1978 and 1987) may enable practitioners to recognize the direct interaction of capitalism with feelings of alienation and disempowerment at work. This may then lay the foundation for a consideration of what more regenerative ways of working might look like (Sanford, 2017 and 2020); and pave the way for them to claim more agency in influencing societal, systems-level outcomes.

3) The theories and methods of futures studies (or strategic foresight) provide a methodological toolkit for enabling practitioners to consider divergent futures, and reorient their work away from exclusively "user" focused outcomes and towards more holistic systems-level concerns that are rooted in pluriversal, post-positivist approaches to design. The emphasis of futures studies on anticipating a range of divergent futures may also provide encouragement to UX practitioners to move beyond the normative "north star" modes of designerly visioning that tend to predominate in many for-profit enterprises. And Ramos's framing of strategic foresight as a form of action research invites the activation of inner values as part of a process of applied forecasting. Specifically, frameworks for scenario planning, pace layering, and experiential futures provide both a transformative world view and a set of applied tools that may enable UX practitioners to effect meaningful, long term-focused change in organizational settings.

The next chapter (5) discusses the structure and development of the primary research tracks to follow, describing how the design of this multi-modal research inquiry leverages and applies these theoretical underpinnings.

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# 5. Research Design

Building on the theoretical foundations outlined in chapter 4, this research strives to find explore a range of education interventions intended to help UX practitioners working in industry reorient their work towards more sustainable, long-term focused outcomes. This practice-led inquiry has taken shape largely within the context of my professional work as a UX design and research manager at two different technology companies, Etsy and Instagram, as well as through bespoke workshops offered in educational and conference settings. I have also conducted a series of expert interviews with practitioners currently working in industry. Taken together, this research program aims to explore the following core questions:

- What barriers do UX practitioners working in industry encounter in trying to incorporate longer-term, systemic perspectives into their work?
- 2. How might an understanding of alternative economics, meaningful work, and strategic foresight enhance their ability to reframe project goals and influence organizational strategies?
- 3. Does an enhanced ability to focus on longer-term outcomes correlate with an improved sense of meaning and purpose in their professional lives?
- 4. What kinds of educational interventions might enable them to incorporate these frameworks into their professional practices?

This research proceeds from three core assumptions:

1) That exposure to the theoretical and methodological frameworks outlined in chapter 4 will support practitioners' ability to reframe professional project goals towards more sustainable, long-term outcomes.

2) That professional development in a situated learning environment can offer sufficient depth and support for practitioners to meaningfully redirect their practices over the long term.

3) That strategic foresight and experiential futures methods can offer a viable set of practices for UX practitioners, and can be applied in the context of for-profit, in-house product development teams towards meaningful project outcomes.

Each of these propositions represents a potential point of failure for this research. To assess the effectiveness of the interventions outlined below demands a clear-eyed assessment of whether these approaches really enable firm conclusions to be drawn about the efficacy of these efforts—admittedly a challenging proposition given the long-term time horizons at play. Doing so also requires assessing the self-reported effects on participants in both short- and long-term timeframes, to assess whether any of the new practices introduced through this process yields desirable outcomes.

I would be remiss in not identifying two fundamental limitations of this research. First, since I drew heavily on my own professional and social networks in recruiting participants for these studies, I cannot claim that this constitutes a representative random sample of practitioners. Any study of contemporary technology workers in the United States in the early 21<sup>st</sup> century—one of the most powerful and prosperous classes of workers in history—also demands an interrogation of one's own power and privilege (see Section 2.1). This cohort consists of a prosperous group of technically skilled workers, working in influential publicly traded organizations, whose experiences and perspectives may differ widely from design practitioners in other fields. Caution is therefore urged around the question of transferability of the findings from this research to other communities of practice. I have tried to address these concerns head-on wherever appropriate.

Second, my experience to date of designing and delivering workshops in a situated learning environment within commercial organizations has revealed the practical limitations of the "one-off" workshop format. While the opportunity to work with practitioners in situ offers the promise of insight into contemporary practices and the opportunity to pressure-test sets of methods under "real-world" conditions, the inevitable limitations on time and attention spans have proved a severely constraining factor in fostering the kind of deep, systematic mode of inquiry that transition design demands. Past research on professional development suggests that the most effective training programs typically rely on more longitudinal strategies: ongoing engagement, reinforcement, and regular touchpoints over extended periods of time—rather than

singular, episodic workshops. Achieving that level of integration would require a more significant engagement with an organization's human resources teams than I have thus far been able to orchestrate.

Given these limitations, how might the significance of the outcomes of this research be assessed, to determine whether it has indeed generated meaningful, new knowledge? Rather than try to formulate an arbitrary set of acceptance criteria, I will instead here invoke Karl Popper's conception of a "right to be sure" (Popper, 1959), by which he meant acknowledging the epistemic risk inherent in laying claim to generalized truths about the world, and instead committing to a continual process of attempting to falsify core hypotheses. To that end, I have tried to maintain a critical stance at each stage of this research, and to use each successive intervention as a renewed opportunity to disprove the theoretical underpinnings of this research. My aim has been, by making a sustained attempt at disproving these hypotheses, to ultimately build confidence in the claims of new knowledge that emerge at the conclusion of this program.

## 5.2 Methodology

When a program of study aims to explore a set of phenomena by way of people's direct experiences, qualitative research is the most appropriate method (Stake, 2010). Because this study aimed to formulate a theory of change based on observations of UX practitioners working in industry, a qualitative approach seemed the most appropriate path to pursue. To that end, I have designed three primary components to this inquiry:

#### 1. Authoethnography

As discussed further in chapter 6, this research is grounded squarely in my own professional work over the past 27 years. As such, I have attempted to recapitulate some of my own experiences and put them in the context of larger shifts in the sociotechnical landscape, as a means to formulate a set of initial hypotheses for exploration through the workshops and interviews.

#### 2. Practitioner Interviews

Beginning in September 2019, I conducted a series of in-depth practitioner interviews with 10 UX designers and researchers, consisting mostly of senior leaders working in industry, as well as a smaller number of experienced consultants who have engaged in strategic UX initiatives in a broad range of client organizations. These interviews set out to explore the experiences of working design practitioners in for-profit environments, to probe their experiences and attitudes in hopes of refining my emerging hypotheses about the intrinsic and extrinsic obstacles that UX practitioners face in trying to redirect their practices towards more sustainable societal outcomes. The interviews used a semi-structured discussion guide (see Appendix). This approach enabled me to capture a consistent set of baseline data across each session, while allowing flexibility to adapt parts of the interview depending on the specific work experiences of individual participants.

#### 3. Professional workshops

From 2017 to 2019, I conducted a series of stand-alone workshops around values assessment and strategic foresight methods at Carnegie Mellon School of Design, the IxDA Education Summit, and Latham St. Commons, as well as creating a five-week course at the School of Visual Arts Summer Intensive in Interaction Design. These workshops drew on theoretical frameworks from the realm of alternative economics and incorporated a set of educational tools adapted from the realms of futures studies and transition design. My goal for this phase of research was to assess the suitability of these tools for UX practitioners, identify perceived shortcomings in the tools, and ultimately develop a new set of tools purpose-built for UX practitioners working in commercial enterprises.

#### 5.2.1 Autoethnography

To establish my own positionally in this work, it is necessary to interrogate not only my current professional perspective but also the journey that led me to this moment, since my perspective has inevitably been shaped by the experience of working in a number of different organizational contexts—including, at various times, professional guises as writer, editor, designer, researcher, manager, and executive; and academic personas including adjunct instructor, workshop facilitator, and (of course) PhD researcher. In order to establish my perspective as a researcher–practitioner, it seems appropriate then to ground the inquiry that follows in a process of autoethnography.

Hayano coined the term autoethnography in 1979, to describe a process by which anthropologists might frame the study of their "own people" (Hayano, 1979). The term has since broadened in use to encompass a range of literary forms — including personal narratives (Denzin, 1989), critical autobiography (Church, 1995), personal ethnography (Crawford, 1996), and auto-observation (Adler & Adler, 1994) — that now make it difficult to ascribe a precise meaning to the original term. Adler and Adler advocate for a model of "complete-member researchers" to describe anthropologists who are fully engaged with and immersed in the groups they study, to the extent that the researcher in question "becomes the phenomenon" (Mehan & Wood). This mode of reflexive inquiry allows the researcher to shift focus, from the observation of participants under a rhetorical looking glass to an observation of participation itself as filtered through the researcher's own experience. Autoethnography is, as Ellis writes, part "auto"-or self-focused-and part "ethno"-or culture-focused. By taking a reflexive stance regarding my own work, I aim to leverage my own experience as a basis for critiquing the practices with which I have engaged over the past 27 years, foregrounding my own subjectivities (Adams and Manning, 2015) rather than feigning empiricism.

Autoethnographic research is not, however, without its critics. Denzin and Lincoln (1994) and Sparkes (2000) have cautioned against over-reliance on a researcher's own experiences, given the essential impossibility of making verifiable, falsifiable claims out of individual experience (Marcus & Fisher, 1986). Chang (2008) also warns against a slew of temptations that can befall the would-be autoethnographer: privileging one's own experience over others; over-emphasizing narration over analysis and interpretation; and an over-reliance on personal memory, with all its attendant subjectivities and distortions. Ultimately, after all, any one life is highly particular. Yet all lives are also generalizable, insofar as we all engage and interact with larger cultural and institutional systems (Ellis, 1995) that shape and inform our experiences.

My goal in using an autoethnographic approach, then, is to generalize from personal experience to tease out a set of hypotheses that could plausibly apply to the lives of others, and which thus serve as a basis for critical inquiry. With these caveats in mind, my goal is not to rely exclusively on autoethnography, but rather to incorporate my experience as one of several data points (balanced with direct observation and engagement with more than 100 other participants). By foregrounding and engaging with my own experiences and subjectivities here, however, I have aimed to bring a deeper perspective to the work, informed by the experience of working as a practitioner, not just an outside observer looking in. In this way, I intend to look into the nature of UX practice as it manifests in the inner lives of practitioners, grounding my work in a sense, informed by firsthand experience, of the obstacles that other practitioners might encounter in trying to find meaning in their work.

Chapter 5 includes further consideration of the opportunities inherent in reflexive

practices, and an autoethnographic sketch of my own path as a practitioner to date as of this writing in November 2021.

## **5.2.2 Practitioner Interviews**

To deepen my perspective on emerging hypotheses around the obstacles that UX practitioners face in trying to incorporate longer-term, systemic perspectives into their work, I conducted a series of in-depth one-on-one interviews in 2019 and 2020 with UX design and research practitioners working in the United States. All participants were currently either working full-time in professional practice for commercial enterprises; or worked in consulting roles where they engaged primarily with commercial clients and in-house UX teams.

The primary research goals for these interviews were as follows:

- Deepening my understanding of the lived experience of UX practitioners working in industry.
- Collecting examples of the design and research strategies these practitioners use in approaching projects with longer-term time horizons
- Exploring the relationship between self-reported measures of meaningfulness at work and the ability to carry out long-term focused projects.

All participants recruited for these interviews had to meet the following criteria:
- Currently employed as a UX designer, researcher, or manager in the United States
- At least five years of professional work experience in a for-profit environment
- At least two stints of professional employment lasting more than two years.

Each interview session consisted of a one-on-one interview lasting approximately 45 minutes, which was recorded and transcribed (see Appendix I). I then analyzed and coded the transcripts using a two-step process: 1) An initial round of In Vivo coding with pen and paper to identify verbatim quotes and clusters of related themes; 2) A more rigorous process of Hypothesis Coding to distill key themes and findings from the transcripts, using MaxQDA (qualitative data analysis software). While there is a range of coding methods from which I might have chosen—including, for example, Descriptive or Process coding-I chose to employ this combination of methods because In Vivo coding preserves the actual language of the participants (Saldaña, 105) and therefore seems most appropriate to working with interview transcripts. However, Saldaña cautions against an over-reliance on In Vivo coding, since "it can limit your ability to transcend to more conceptual and theoretical levels of analysis and insight." Therefore, I used the second round (Hypothesis Coding) for identifying higher-level themes, since this method lends itself to validating or invalidating working assumptions or theories already in development (Saldaña, 171).

Interview participants were the following:

- Alexis Lloyd, VP of Design, Medium
- Lauren Sherman, UX Researcher, Facebook
- Jennifer Brook, Staff UX Researcher, Dropbox
- Josh Seiden, Lean UX Consultant
- Alan Cooper, Founder of Cooper Interaction Design
- Andi Plantenberg, Principal, FutureTight
- Michael Kopcsak, Senior Director of UX, Cisco
- Gregg Bernstein, Head of UX Research, Vox Media
- Gülay Birand, Design Manager, Facebook News Feed
- Michael Yap, Product Design Director, Etsy

On balance, most of these participants tended to be senior leaders in their organizations, or consultants with long track records working with a wide range of clients. As such, they were able to offer perspectives drawn from their own professional experiences and engagement at the intersection of UX and business strategy. It should be noted, however, that these practitioners skew quite senior in comparison to the broader population of UX researchers; as such, they may not be fully representative of practitioners who have entered the field in recent years (unlike the participants in the professional development workshops discussed in chapter 8, who were by and large more representative of the industry in general. Detailed findings from the interviews are presented in Chapter 6.

## 5.2.3 Professional Development Workshops

From 2016 to 2021, I conducted a series of in-person workshops in situated professional settings including Etsy and Instagram/Facebook. I also presented versions of this workshop at non-profit and conference settings including Latham St. Commons and the IxDA Education Summit; and two sessions with future design practitioners in educational settings at CMU Design, and a summer course taught at the School of Visual Arts summer intensive program in interaction design.

Presenting these workshops in a range of settings—including non-profits, design school programs, industry conferences, and via in-house learning programs at publicly traded technology companies—gave me the opportunity to pressure-test the curriculum with UX practitioners working in a range of professional settings. Over the course of five years, I engaged with more than 175 participants, primarily from the US, but with approximately 20% representation of international participants from Europe (primarily the UK, France, and Germany), and Asia (primarily China).

While most participants came from one of the UX-affiliated professional fields, I also had the opportunity to engage with c.30 non-practitioners—at the Good Work Institute and Latham St Commons— involving a markedly polymorphous sample of participants including clergy, tattoo artists, hairdressers, furniture upholsterers, government workers, and micro-entrepreneurs working on creating regenerative business models in their communities.

Over the course of five years, the curriculum evolved—from early, open-ended co-design workshops with the nascent Good Work Institute, to the more fully developed, structured curriculum that I eventually introduced at the School of Visual Arts (and later adopted in condensed form at Instagram/Facebook and Google). Chapter 8 describes the process design and outcomes of each session, along with reflective feedback from the participants and consideration of lessons learned with each successive iteration of the curriculum.

## 6 Autoethnography

My professional journey as a UX practitioner began in 1995, when I accepted a position at IBM as a temporary contractor, hired to act as managing editor of the recently launched IBM.com website; later that year IBM hired me as a full-time employee tasked with building a small team to build and maintain the "front end" of the website. While this marked my first foray into professional web development, it was not my first exposure to the Internet or hypertext. As an undergraduate at Brown University from 1984 to 1988, I had studied with hypertext theorist George Landow and had the opportunity to contribute to Intermedia, a pre-web networked hypertext learning environment developed by Landow and Paul Kahn, with whom I would later collaborate at IBM (Kahn, 1995). After college, I worked as a library assistant at Harvard University from 1989 to 1994, where I worked at first on projects involving the digitization of the Harvard Library card catalog, and later as an electronic resources librarian at the Cabot Science Library. It was in this role that I first encountered the Internet, and I began to experiment with early client software like Gopher and WAIS. During this time, I also worked as a freelance magazine writer, contributing articles to publications like Boston Business, The Utne Reader, Library Journal, Yankee, Design Times, and Harvard Magazine. Together, these experiences gave me an interest in both the publishing industry and public information retrieval systems.

Like most Internet workers in the early- to mid-1990s, I taught myself how to create interactive products largely through experimenting with markup languages:

toying with HTML, viewing source code, tinkering with whatever seemed to be working elsewhere, and getting to know fellow travelers in the tiny community of early web developers – mostly liberal arts types manqués like myself – who were stumbling into the emerging world of web page-building. There was little to no formal training available in the field (it would be a decade or more before master's programs in interaction design or UX practice began to appear), so I taught myself primarily through trial and error. Eventually I created the first website for the Harvard Library system in early 1994 (so early, in fact, that it would be another six months before the university administration expressed any interest in the existence of the site). At no point in this formative period of my career would I have described myself as a "designer." In its early incarnation, the web was primarily a publishing tool, developed to support the research and information-sharing needs of scholarly researchers. It would be several years before this nascent medium became commercialized and, soon thereafter, colonized as a realm for professional design practice. By 1995, an early wave of interest in web development was starting to take shape in the private sector, in the wake of the National Science Foundation's 1993 decision to open up the Internet to commercial activity. This policy decision proved a signal event, unleashing the rapid commercialization of the Internet that would soon fuel the rapid emergence of a new global information economy.

Although the term "user experience" would not come into common parlance for another few years, the National Science Foundation's decision paved the way for the rise of commercial imperatives that would soon create a market demand for professionals with backgrounds in graphic design and HCI. By the mid-1990s, a handful of technology companies were starting to recognize the need for websites, but in those early days there was scarcely such a thing as a professional web designer or developer. Most early web creators thought of themselves primarily as "authors." With a rudimentary knowledge of HTML and a portfolio consisting of a couple of basic, HTML 1.0 websites, I had amassed enough of a portfolio to secure my first full-time web-based job at IBM. Originally hired with the title Managing Editor, IBM.com, I proceeded to work alongside a small team of collaborators, all housed in the Corporate Communications Department. Over the five years that followed, the company expanded its investment in its web presence, and my role soon morphed into a design management role in which I was responsible for the so-called "look and feel" of the company's global web presence, working closely with design agencies like Studio Archetype (founded by former Apple Creative Director Clement Mok) and R/GA (founded by special effects wizard Robert Greenberg). In this capacity I directly managed a 20-person team of designers, writers, and front-end developers tasked with the ongoing design and development of the IBM corporate web presence. Over the next several years, I proceeded to work on developing websites for IBM to support its corporate marketing and sales efforts, as well as sponsorship-driven web projects like the 1996 Olympic games and 1997 Kasparov versus Deep Blue websites. In this capacity, I began working increasingly closely with colleagues from other fields – software developers, corporate design managers, marketing and PR staff, human factors engineers, and assorted managerial types—absorbing whatever I could

from these largely orthogonal perspectives as we embarked on a journey to determine how best to design and operationalize a global corporate website.

By 1997, the team had grown to a modest sized group of about 10 graphic designers, writers, researchers, and front-end engineers. When my manager asked me to take on management responsibility for this team, it fell upon me to determine what to call it. Borrowing a phrase from Don Norman, I proposed that we call it the "User Experience" team. As far as I am aware, this was the first instance of a web-focused design team choosing to identify itself using that term.

My experience at IBM equipped me with a particular organizational perspective on the emerging field of UX practice: an understanding of the inherently interdisciplinary nature of web design and of the limitations of what designers can accomplish in a disciplinary vacuum; an appreciation for design as a strategic function, capable of influencing long-term business strategy (as evidenced in former IBM chairman Thomas Watson, Jr.'s oft-repeated dictum that "good design is good business"); and a conviction that UX practice can be at once a force for disruption in long-held business processes and organizational models, as well as a long-term driver of business value.

At this point in my career, I harbored a conviction that UX practice was an inherently ethical undertaking, a method for transforming old ways of working and doing business that would ultimately lead to a more humane, people-centered world. During this time, I also encountered some of the many obstacles that can constrain one's ability to effect long-term change in a large organization: the challenge of sustaining consensus around a design vision with a diverse group of stakeholders, the constant pressure of aligning one's work in support of quarterly profit targets, and ambient cultural pressures towards performative and mechanistic ways of working that lead one to internalize a set of capitalist values in one's own life. By the time I left IBM five years later, I had lived at the crux of these pressures, feeling constrained and burned out by the labor of constantly shipping product in a high-pressure corporate environment, while at the same time possessing a deeper belief in the righteousness of the work itself. I had drunk deeply from the Kool-Aid of utopian idealism surrounding the early Internet and believed that my work as a UX practitioner supported a larger process of revolutionary and transformative societal change. So, like many starry-eyed Internet idealists of this era, I made my way to San Francisco.

In 1999, I moved to San Francisco as part of the first dotcom gold rush. By this time, it had become abundantly clear that there was money to be made on the Internet, and venture capitalists and Wall Street funds were flooding into the Bay Area, fueling a fast-growing cottage industry of designers and developers working in the lofts and warehouses South of Market in San Francisco. I went to work at a small professional services firm called Phoenix Pop, a 100-person consultancy that offered design, engineering, and strategic planning support for its clients. The company had chosen to work exclusively with startups to incubate, design, and build their Internet-based applications. Early clients included <u>Wine.com</u>, PlanetRX, Epylon, Dialpad, and a raft of long-forgotten startups.

At Phoenix Pop, I first encountered the interdisciplinary team model that had

been perfected in the 1990s by consultancies like Cambridge Technology Partners (CTP); indeed, the company's president, Jerry Young, had previously worked as a senior consultant at CTP and brought much of their methodology and "flat" team-based approach to bear. My supervisor Kristee Rosendahl—formerly a co-founder of Purple Moon and a principal designer at the Apple Multimedia Lab—had also worked briefly at Scient, another consulting firm with a lineage of ex-CTP staff. Whereas, at IBM, projects took shape in a highly departmentalized model, where the design team, engineering team, research team, and other functions all worked in their own disciplinary silos, here I encountered a far more interdisciplinary, self-directed team model, with a "UX lead" coordinating the work of interaction designers, visual designers, content strategists, and UX engineers. This model has since evolved into a best practice at most organizations engaged in digital product development.

Along the way, I also had the good fortune to study Usability Engineering with Richard Anderson at UC Berkeley, taking an evening course through the Berkeley Extension School that by then had become a rite of passage for many members of the ACM SIG-CHI (Association for Computing Machinery, Special Interest Group on Computer-Human Interaction) community in Silicon Valley. Here, I first encountered the academic literature of early human factors working, reading white papers by Jakob Nielsen and Don Norman, and studying the foundational work of proto-UX designers like Bruce Tognazzini and Brenda Laurel. Although I had by this time been working in the field for more than five years, this was my first meaningful encounter with theory.

My experience working in the fledgling dotcom economy exposed me to both

the possibilities and the limitations of working in an agency environment: The performative pressure and project management rigor of agency work, coupled with the relative insulation of design teams from clients, creates an environment in which high-caliber design work can happen, without the constant second-guessing of colleagues from other disciplines or parts of the organization that can lead projects to fall apart in a miasma of competing requirements. However, it also became increasingly clear that the transitive nature of interactive design work made it difficult to create the kinds of feedback loops and ongoing iteration that are the hallmark of successful digital products. Unlike traditional design agency work, which typically results in fixed artifacts-physical products, printed material, or identity systems and guidelines – digital products are ephemeral and constantly evolving. Most of the work we delivered was handed off to clients who promptly began to change it in response to evolving business requirements and changing market conditions. The designers who created the first versions of these products typically had little influence on their subsequent evolution, and ultimately designers had little to no influence over strategic decision-making in these organizations; they were seen primarily as service providers. Despite a high demand for design services—in those early days, trained graphic designers could command a high premium for their work—early UX designers working on the agency side seemed far removed from having a seat at the proverbial table.

After I had been at Phoenix Pop for two years, the company fell victim to the economic pressures surrounding the early dotcom economy in the wake of the stock market crash of 2000. After an ill-fated acquisition by another company in the rapidly imploding market for professional web services, the company shut its doors (full disclosure: my committee member Molly Wright Steenson and I overlapped briefly at the company during its final few months, when she worked there as a user experience lead—although we never worked together on the same project). I spent the next five years working as an itinerant UX consultant, taking on a series of contract and consulting projects that involved various combinations of information architecture, interaction design, copywriting, and user research. My clients during this period included Sun Microsystems, Yahoo!, Adobe, the Long Now Foundation, the Internet Archive, and the California Digital Library, among others.

I was fortunate to find work, as the diaspora of engineers, designers, and project managers from Phoenix Pop ultimately proved an effective referral network for finding project opportunities in the years that followed. Working as a consultant also brought me into contact with a wide range of fellow travelers in the rapidly evolving UX industry of the early 2000s. A loose-knit group of self-identified UX practitioners had started to take shape in San Francisco, chatting on listservs, meeting informally for happy hours, self-organizing networking events, and gradually coalescing into professional organizations (like the Institute for Information Architecture, and later the Interaction Design Association). This community emerged in no small part due to the fluidity of contractors and consultants moving between companies—creating a kind of ecosystem of knowledge.

Despite the economic downturn, this community continued to coalesce through the early and mid-2000s, and, as the technology industry recovered, the UX field steadily grew in demand. It was during this period that I first began to identify with a larger community of practice, engaging in a wider dialogue with other practitioners, and beginning to understand the process of collective meaning-making that takes shape as loose-knit communities begin to coalesce into formal membership associations and begin to congregate at conferences and other professional networking venues. While the first part of my career had taken place largely within the confines of particular institutional cultures and value systems at Harvard and IBM, I now began to identify and affiliate myself with an emerging culture of UX practice that was now\_beginning to take shape that spanned organizations—one in which I could see myself as belonging to a broader professional tribe.

By the mid-2000s, companies were increasingly starting to invest in building in-house UX teams. In the early days of corporate website development, most companies tended to conceive of a website as a singular artifact, to be delivered as a whole by an agency. But as business increasingly moved online it became apparent that interactive web projects needed continual care and feeding, in response to evolving business requirements and a shifting landscape of new devices, platforms, web browsers, and so forth that demanded ongoing design and redesign. It was during this time that I transitioned again, moving away from working primarily in agency and consulting relationships and returning to working primarily as a member of in-house UX teams. After spending my first 12 years in the industry working as either a consultant or—at IBM—a client of design firms, I have spent the 15 years since working exclusively in in-house UX teams, with only sporadic interaction with digital agencies.

In 2007, I moved back to New York to accept a position with *The New York Times* as an information architect, where I worked on a series of interactive design projects including the launch of the company's first iPhone and iPad apps, as well as ongoing redesigns of various sections of the news report online. In 2009, I moved into a new role leading a small research team, and I once again assumed the job title "Director, User Experience." In this capacity, I worked on the launch of the *Times*' digital subscription offerings, as well as a series of new product initiatives.

During this time, I began to explore the possibilities of UX research more deeply and to develop a point of view on the relationship between "research" and "design." At the *Times*, these functions operated guite distinctly-with the digital design team reporting into the newsroom's art department, and the research team reporting into a centralized Customer Insights Group that laddered up into the marketing and subscriptions part of the organization (typically referred to as "the business side" in most newsrooms). In this role, my charter was to straddle these two sides of the organization: To conduct customer research and deliver insights to influence the design and development of digital products—like the Times website and its mobile and tablet apps—that were largely driven by the newsroom. This structural organizational divide posed several challenges, not least of which was bridging the cultural gulf between the editorial and business sides that for many years had been a sacrosanct barrier. Determining who "owned" the UX-the newsroom or the business-proved an existential challenge for the organization, one that came to a head with the design of the Times' new digital subscriptions initiative, which constituted the major undertaking

of my last few years at the organization.

My experience at the *Times* further highlighted the disruptive potential of UX practice and its ability to effect transformative change in a legacy organization, for example by highlighting the tensions between typical subscription marketing strategies and the transparency and agency required in following UX principles; by striking a balance between user access to the news and the business demands of driving subscription revenue; and by balancing advertiser pressures to generate revenue with the newsroom's desire to limit the intrusiveness of advertising experiences in the editorial product. The overarching challenge, though, was this: UX practice posed a profound conceptual challenge to both sides of the organization. The newsroom was more invested in story-telling than in supporting the kinds of behavioral interactions that UX practice promised, and the business side was more invested in generating revenue than in creating optimal UX outcomes. More importantly, although the entire organization existed in the service of creating a singular product—the printed newspaper, and later an online version thereof-that militated against exploring the creation of new products that might be more attuned to emerging user needs and behaviors.

During my tenure at the Times, the organization engaged in several efforts to drive innovation in its product offerings—with varying degrees of success. These efforts took shape primarily as two distinct workstreams: the Research and Development (R&D) Lab, an in-house innovation team whose charter was explicitly experimental, tasked with creating prototypes and "thought starters" to explore what future news experiences might look like; and a more product team-driven innovation process to create new paid subscription products, such as NYTNow (a news app for younger subscribers); Opinion (an app consisting solely of editorials and op-eds); and NYT Cooking (a recipes app). Although my role was primarily focused on driving research for the company's core product offerings, I had the opportunity to participate in project work related to these innovation efforts, and I developed a first-hand perspective on the challenges (both operational and organizational) of executing more forward-looking product innovation efforts.

The R&D team's work hewed more closely to a speculative and experimental mode of working, focused on exploratory design and engineering projects, with no explicit goal of shipping actual products. The group consisted of a multidisciplinary team of designers, engineers, and data scientists—and fellowships were also offered to academic researchers who would come in for fixed-duration project rotations (one of the R&D Lab team members, Creative Director Alexis Lloyd—now at Google, was VP of Design at Medium when I interviewed her for this dissertation - see chapter 7). This work yielded several interesting forays: visualizations of Twitter data, hardware—software experiments like a digital newspaper box and an interactive bathroom mirror, and other efforts at manipulating data to create new interfaces to the archives, layering news onto geospatial data, and a raft of other explorations. Ultimately, very little of this work found its way into the mainstream product offering (with the exception of some of the archives work), but the team received considerable industry attention and accolades from advertisers, who would frequently tour the lab as

part of on-site visits to the Times building. After several years, the Times disbanded this group in the wake of senior management changes and a growing reluctance to invest in development work that did not lead to tangible product outcomes.

The product team-led innovation efforts, by contrast, yielded outcomes that were more concrete. Working with outside consultants who had previously worked at IDEO and elsewhere, the company set up a series of small "tiger teams" focused on spinning up mobile app prototypes based on opportunity areas identified in a large-scale quantitative research study with current and potential Times subscribers. While these efforts set their sights on more limited time horizons and less adventurous uses of technology than the R&D Lab's projects, they nonetheless represented an effort to challenge the prevailing design and development culture at the Times, which tended towards incrementalism and a pace of work that, to some extent, mirrored the production mindset of a major news provider. With the tiger team structure, the company gave permission for a few small interdisciplinary teams (typically consisting of one or two designers, a handful of engineers, a product manager, and an editor from the newsroom) with wide discretion to explore new stand-alone products that the company would try to market as paid subscription offerings. Of these efforts, only one-NYT Cooking -proved a lasting success, but all of them shipped as products for a period of time, and by and large management viewed these efforts as a success.

These efforts spurred my interest in the question of how to embed longer-term time horizons into digital product development work. At the Times, I saw first-hand how energizing this kind of work can be for designers who finally feel unshackled from the obligation to deliver incremental improvements to legacy products; at the same time, these efforts also revealed the challenges these kinds of projects can pose to team morale. When a small, select group of team members is given the opportunity to "think big," while other team members continue to work on shipping ongoing product work in the here and now, resentments can easily set in. However, to the extent that these opportunities feel accessible to a broad range of team members, they can serve as a powerful motivator and driver of employee engagement. My experience at the Times suggested that successful innovation projects are most likely to take root when they form in organizational proximity to existing product teams rather than from stand-alone innovation teams, but that these "close-in" innovation projects are also inevitably constrained by near-term business performance considerations that may militate against taking bigger risks and constrain the range of possible outcomes. The more speculative and experimental projects, ambitious as they were, tended not to result in direct product outcomes – and ultimately, management expected to see more of a direct ROI on these investments. Anecdotal evidence appeared to suggest that team members enjoyed a higher degree of satisfaction and perceived meaning at work when they felt they were working on projects with both a longer-term trajectory and a reasonable likelihood of shipping, but the company often struggled to articulate clearly defined success metrics for more speculative projects.

While working at the *Times*, I also began teaching as an adjunct lecturer at the School of Visual Arts' then-new MFA program in Interaction Design. For the first three years of the program, I taught a course in design research methods, and I later

conceived and taught courses in design history and design futures (I discuss this course in more depth in Chapter 7). In addition to developing curricular material, in each of these classes I also asked students to work together in project teams on a range of design projects (for example, researching and designing a new mobile app for the Museum of Modern Art, or exploring product opportunities for waste management in New York City). This was my first foray into teaching at the post-secondary level, and it provided me with useful grounding in basic pedagogical strategies as well as the opportunity to engage with early-career interaction designers and explore different approaches to workshop methods and structured group assignments. In addition to deepening my understanding of design theory and methods, this experience also introduced me to the opportunities and challenges of straddling perspectives as both teacher and practitioner. Throughout this period of teaching experience, I began to develop a point of view on both the opportunities and limits of design education. In such a highly applied field as interaction design, many of the students yearned for "real world" perspectives from practitioners; yet one of the most central practices of interaction design was all but impossible to replicate in a classroom: the necessity of working in cross-functional groups. Team-based design work is an essential feature of almost all UX practice in industry, and yet design schools are almost inevitably limited in the opportunities they can offer for designers to gain experience of working with non-designers. In some cases, I tried to solve this by asking team members to take on particular roles (e.g., project manager, researcher, designer), but the skills required to negotiate design outcomes with engineers and product managers in a fast-paced

development environment are typically gained only through years of work experience. The question that began to percolate for me was this: Rather than trying to transform design education within higher educational institutions, might one bring new kinds of educational interventions more directly into the field of practice through situated learning with working practitioners? This would become an animating question for me in the years to come.

After almost seven years at the *Times*, in 2013 I accepted a new position as Research Director at Etsy, a fast-growing online marketplace that was rapidly gathering a reputation for its strong product development culture, idiosyncratic corporate culture, and strong commitment to progressive social values. Founded by a group of artists in Brooklyn in the mid-2000s, Etsy had always embraced a non-traditional approach to business, marked by creative rituals, a "Ministry of Business Unusual," and a continuous deployment environment in which engineers could push code live to the site at any time with minimal supervision. It was a culture that strove to prize creativity, trust, and human relationships over profit and process. At the time, Etsy was a "B Corp," committed to sustainable business practices and a "triple bottom line" approach to business management—a distinction it shared with several other progressively minded corporations like Patagonia, Seventh Generation, Ben & Jerry's, and Warby Parker.

As a practitioner, I felt drawn to Etsy and its strong sense of mission, as well as to a "west coast" work culture that prized flat, self-directed, interdisciplinary product teams. That sense of mission manifested in ongoing discussions about the nature of socially conscious business, where senior leaders in the company would regularly invoke E.F. Schumacher, Gandhi, and the literature of triple bottom-line approaches to business management. The company also invested heavily in its employee experience, with a commitment to team-building, volunteerism, and balancing long-term growth with the impact on local communities. As the company grew, however, it had to navigate difficult tensions and contradictions in realizing that vision. The company had taken a large venture capital investment from Union Square Ventures, followed by subsequent rounds of investment from other venture capital firms (this was a source of considerable internal friction at the time, and a move strongly opposed by some early employees). In the wake of that investment, the newly installed board of directors had pushed for changes in senior management and a commitment to financial growth that would put the company on a path to a profitable "exit," typically involving either an acquisition or IPO (initial public offering) scenario.

As a result, the company had to reconcile a commitment to growth with a business model predicated on helping small businesses succeed. Over time, the tensions between the seller community and the growing corporation came to the fore. The Etsy forums—an online message board system hosted by the company for its seller community—witnessed increasingly vocal concerns about the company's growing corporatization and questioning its commitment to the handmade, artisanal community that had fostered it. For all the good intentions of the employees struggling to keep pace with a rapidly growing online marketplace, the ineluctable logic of capitalism, with its demand for constant growth, posed an inescapable conundrum.

As the company grew, the leadership team continued to engage with existentially difficult questions: reconciling profit-making imperatives with a commitment to social responsibility; balancing the demands of quarterly earnings growth with a stated objective to "plan and build for the long term," and in navigating the challenging terrain of defining the term "handmade" while trying to help its most successful creative entrepreneurs grow their businesses in a responsible and sustainable way. Macro consumer trends seemed to trend in the company's favor, especially the growing embrace of triple-bottom-line economics among major public companies; and at the growing focus on ethics and social responsibility among broad swaths of the technology industry. But as a publicly traded company, the organization also operated under the existential imperative to seek continued financial growth. This tension threatened to manifest in a disconnect between the company's mission and the day-to-day experience of designers and developers working at the level of creating specific product features-who at times struggled to draw a direct connection between their own values (which often mirrored those that the company espoused) and the felt experience of working in a highly performative, data-driven product development environment, whose work often consisted of delivering short-term, incremental product improvements in ways that were largely indistinguishable from the methods used by UX practitioners in other companies.

As a UX practitioner, I found that these tensions manifested most clearly in the challenge of reconciling the company's strategic commitment to the triple bottom line with a set of product development practices that were largely based on processes

drawn from other technology companies: rapid prototyping and experimentation, A/B and multivariate testing, and ongoing qualitative research with both buyers and sellers to help fine-tune the company's marketplace operations and attendant user interfaces. As much as the company's mission provided a shared sense of purpose for most employees, it sometimes felt difficult to connect that mission with the fast-moving, optimization-focused design processes that drove much of the company's product development. The vast majority of this work focused on improving the business flywheel for buyers and sellers; incorporating the needs of indirect stakeholders into this work proved an ongoing challenge.

When Etsy went public in 2014, those tensions exploded into view when its initial post-IPO growth failed to meet investor expectations, and the stock price took a subsequent drubbing—culminating in the eventual firing of CEO Chad Dickerson and the hiring of board member Josh Silverman (formerly of eBay, American Express, and Evite), who introduced a much more disciplined and profit-focused management culture.

It was in this environment at Etsy that I first conceived this research project. Etsy's idealism and belief in changing the rules of business were rooted in a deep organizational commitment to the value of craft, the potential of business to be a conscious force for good in the world, and the principles of alternative economics as espoused by E.F. Schumacher and others. Then-CEO Chad Dickerson would frequently cite Schumacher's work in company meetings, extolling his vision of a distributed and networked economy as the blueprint for a new "Etsy economy" built around small craftspeople leveraging the power of the global Internet to support their livelihood as artists and makers.

During my time at Etsy, I helped build the UX practice, initially as a UX researcher and research manager, and later as manager of the design strategy and design systems teams. My work at Etsy sparked and deepened my interest in exploring alternative approaches to UX practice that embrace progressive values and a commitment to social change. As I embarked on this research journey, Etsy's efforts to use business as a force for positive social change—with all the tensions and contradictions that entails — seemed like a petri dish that was ripe for further examination.

Throughout this period, I was actively engaged with questions that lay at the heart of the company's then-mission statement: to "reimagine commerce in ways that build a more fulfilling and lasting world." How could we at Etsy preserve that ethos and keep the design and development process as humane and people centered as possible, and how could we begin to consider a wider range of stakeholders in our work?

In the wake of the company's IPO in 2015, the company spun off a new non-profit, initially called Etsy.org, dedicated to creating a new business education curriculum for non-traditional entrepreneurs in local communities. I played a role in the early formation of this non-profit, collaborating with Etsy.org founder and early Etsy employee Matt Stinchcomb and the newly hired Managing Director Erica Dorn (with whom I would collaborate extensively in later workshops at Etsy, CMU, Latham St. Commons, IxDA, and the School of Visual Arts; Dorn is now also a student in the PhD program at Carnegie Mellon School of Design), facilitating a planning workshop with an advisory group of scholars and practitioners to explore what the opportunity space might look like for such a program. The organization has since renamed itself The Good Work Institute, and it operates as a stand-alone worker collective in the Hudson Valley dedicated to cultivating and supporting a diverse network of people, initiatives, and organizations grounded in the Just Transition movement, to foster the growth of regenerative, just, and life-affirming communities (Good Work Institute, 2021). I discuss my work with the Good Work Institute in more depth in chapter 8.

While at Etsy, I also introduced a new UX strategy practice, hiring our first UX Strategist, Michael Yap (who appears as an interview subject in chapter 7), and establishing a small team with the explicit mission of driving long-term thinking. The team's charter included working a "cycle ahead" of the current product roadmap, to conduct foundational research and identify opportunity spaces for further design provocations. Initially conceived as a kind of in-house agency that would deliver prototypes exploring new business opportunities for the company, over time the mission of the team evolved into more of a consultative role, in which a UX strategist would be embedded in an existing product team, providing facilitation support for exercises like design sprints and, later, value creation model explorations. It was during this period that I began exploring the Transition Design program at Carnegie Mellon School of Design, and I found the frameworks for wicked problem mapping and stakeholder mapping to be highly pertinent to the challenges at hand. In 2016 I developed and taught a workshop at Etsy on applied foresight techniques, beginning my exploration of how the theories of alternative economics and strategic foresight might be applied in practice with a group of UX practitioners. I discuss and reflect on these workshops in depth in Chapter 7.

After five years at Etsy—and while still conducting my research in the PhD program at Carnegie Mellon School of Design—I accepted a new position at Instagram as Director of User Experience Research, where I ultimately managed a team of 28 researchers working across a range of product and service initiatives (including search, video, commerce, and advertisements). Here my research continued to take shape as I worked with partners in the Facebook, Inc., Learning and Development team to roll out a new version of the workshop curriculum; I also began a fruitful collaboration with the Institute for the Future, engaging its staff as workshop facilitators and taking part in a Design Futures workshop with Jake Dunagan and Jacques Barcia.

At the time, Facebook Inc. was making a concerted investment in seeding longer-term product investments. In addition to making the kind of speculative research-and-development product investments that are common to many technology companies, the organization had also recently introduced a new UX research specialty within the organization called a "Pathfinder" researcher: a role explicitly focused on identifying and understanding long-term trends in user behavior that might inform product development initiatives extending beyond the range of current product roadmaps. In 2018, the company also began investing in a new Responsible Innovation team led by VP of Design Margaret Stewart, specifically focused on integrating ethical frameworks into the company's design and development processes through a set of responsible innovation "Dimensions," including: Autonomy, Civic Engagement, Constructive Discourse, Economic Security, Fairness and Inclusion, Privacy & Data Protection, Safety, and Voice.

As Stewart has written about her team's work:

In the product design context, this means thinking not just short- to mid-term, but investing time to forecast what longer term impacts might be. It means not just looking at the people who use the product as intended, but the people who may misuse it to hurt others. It means considering if and how some people or communities may inadvertently have a negative experience with the products that we build. These examples just scratch the surface of the things we must take into consideration when designing for such a massive and diverse global audience, but it shows the ways in which breadth and depth creates a more comprehensive approach to responsible innovation. (Stewart, 2021)

Against the organizational backdrop of a company under increasing public scrutiny for its impact on the social, cultural, and political landscape, my efforts at introducing a new curriculum focused on embedding longer-term thinking into Instagram's product development processes met with considerable interest among designers and researchers looking to re-envision some of their core practices. Much of the specific project work I conducted at Instagram remains confidential: I cannot discuss the content of this work in depth here. I can, however, reflect on the experience of teaching these workshops (see chapter 8), and I can distill feedback and themes collected from participants in these workshops in exploring how to apply these frameworks in their own professional practices (see chapter 9).

In 2020, I moved on from Instagram and Facebook, Inc., to accept my current role as Head of User Experience at Google News, part of the larger Google Search organization. In this capacity, I lead a multi-functional and partially matrixed team whose job titles span a range of UX-related disciplines: Interaction Design, UX Research, UX Writing, Visual Design, UX Engineering, and Program Management. Here again, I cannot discuss specific product initiatives that have not yet launched, nor can I write in depth about the extent to which I may have introduced alternative economics and strategic foresight methods into this work. Given that Google is my current employer as of this writing, I have decided that the demands of confidentiality and the potential for bias and subjectivity make it too difficult to attempt to cover my work at Google as part of this dissertation. Therefore, this dissertation focuses exclusively on data gathered and my own experiences prior to joining Google in June 2020.

Taken together, these experiences in different professional settings have equipped me with a perspective on UX practice drawn from multiple personal, professional, and scholarly vantage points. My positionality in this research involves frequent shifts, and the knowledge generated from each position is ripe for contesting. I have done my best to bring the spirit of critical reflexive inquiry to the chapters that follow, as I endeavor to fuse these experiences and perspectives into a singular narrative—while acknowledging that these positions may demand at times a preparedness to examine sometimes contradictory positions and subjectivities.

## **7 Practitioner Interviews**

Through a series of qualitative 1:1 interviews conducted from 2019-2020, I engaged in dialogue with UX practitioners working in a variety of roles with commercial enterprises in the US. This section explores the themes and key findings that emerged from these interviews. Figure 17 below depicts a word cloud analysis of the interview transcripts. See section 5.2.2 for a detailed methodological overview on the recruiting, interviewing, and coding protocols used in this analysis.



Figure 17: Word cloud of interview transcripts (2020) © Alex Wright

## 7.1 Summary

As expected, most participants described the effects of short-term business performance goals in shaping their practices as UX designers and researchers working on digital products. Most reported having experienced acute pressure at one time or another to deliver results that compromised their quality of their work and impinged on their ability to practice their craft at the level to which they aspired. It should be noted that participant responses have been anonymized in the verbatim quotations below.

"The fastest path to revenue is always the path that people are going to want to pursue." For many participants, this pressure to deliver quantifiable business results often translated into an organizational focus on delivering small, incremental wins: "There's enormous pressure to make the boss happy, make the numbers, make the conversion rates go up. I see a lot of focus on metrics and data 'in vitro'."

Often, participants reported that these pressures emanated from cross-functional partners on their teams at work, especially those who work on the so-called "business side" of organizations like product managers, agency client partners, and executive stakeholders. "I hear PMs [product managers] say 'Can we just do best effort? Can we just insert whatever here?' So they can just check a box. It comes down to resourcing, time investment, and a lack of willingness to redo something that didn't work."

Moreover, several participants felt that intensifying performative pressures and the ever-increasing measurability of design outcomes via A/B testing and other quantitative assessment tools was not only affecting their own work as practitioners but was also beginning to constrain the horizons of the larger community of practice: "Everything is more constrained and redundant. Everything kind of looks the same on the Internet right now." That sense of shrinking horizons recurred throughout several of the interviews: "It feels like the ground we are standing on as research and design professionals is eroding. The problem spaces that researchers, IAs [information architects], and UX practitioners once had maybe five or ten years ago feels like it's narrowing. This could be due to specialization, deskilling, or aspects of our practice getting absorbed by different roles like product design. Part and parcel of specialization is the problem spaces themselves are becoming more narrow."

When asked to describe the root causes underlying these extrinsic pressures to compromise the quality of their work, several underlying themes emerged: many participants pointed towards organizational pressures, the performative demands of working in in-house teams, and work cultures that prioritize real-time feedback loops and measurable outcomes. Some went a step further, ascribing these challenges to the profit-seeking influence of working within an economic system rooted in industrial capitalism: "[W]e are living in a time when we are seeing lots of negative externalities coming home to roost. We are seeing the negative externalities of the industrial era." Give the widespread frustration that participants voiced about the corrosive effects of short-term business pressures on their work, it was a significant surprise to discover that many of these same practitioners also voiced a pointed skepticism about speculative design and opportunities to engage with long-term focused design

projects. This animus had typically grown out of direct personal experience. Many participants reported having worked on large-scale projects that failed to launch over the years for a variety of reasons: organizational churn, changes in business strategy, loss of executive sponsorship, or the sheer complexity of engineering large-scale software systems.

One participant described a recent project experience in which a team kicked off a project with an explicitly long-term, multi-year horizon using applied strategic foresight techniques adapted from the Institute for the Future's toolkit: "The north star brainstorm was great. We came up with all these ideas ... We all came out feeling empowered and excited. We created a deck with scenarios and showed it to stakeholders for feedback. And then a month or two later, the deck showed up in a Q&A session, but by then it was so diluted and different than where we had started. It felt thrashy and scary." Ultimately, the project did not move forward. One major barrier that emerged in this process was the difficulty of selling stakeholder teams on the value of preparing for the possibility of less-than-desirable futures. "One problem is that futures planning sometimes involves considering distinctly non-rosy futures for certain businesses," the participant said. "It can be difficult for the team to go there because the team may not want to consider depressing or non-unrealistic futures."

Another participant described trying to lead a design futures project using market forecasting and scenario planning techniques. This project also failed to proceed beyond an initial planning stage: "We haven't published the futures work yet, nor did we get as far in the process as we hoped. We did stakeholder and expert interviews, and we did scanning work or future-spotting, and synthesized that work into 3–4 future scenarios that were very preliminary." In the end, however, the project failed to proceed because there was no strong executive sponsor, and there was an overall lack of organizational readiness for this kind of work: "The futuring work we were explicitly taking on had a 5- to 10-year time horizon. The company has only just started to talk about a three-year horizon. So the organization just had different priorities. What we were doing was perceived to be a distraction from the near-term work. And it was. That was kind of the point of it! We needed people to care about that work in order to take it forward. And there just didn't seem to be emotional, spiritual, or mental bandwidth to get excited about it."

One participant described the tension felt in the team between cultivating a long-term perspective on product opportunities and needing to deliver tangible results to customers in the here and now: "Right now we have this grand vision for where we want to take the product portfolio, but we're not totally able to effect that change." Others spoke of their experiences working as part of in-house R&D-style organizations and of the relative merits of this organizational model, compared to companies that attempt to embed innovation practices within teams that are simultaneously shipping products in the near term: "What was successful was the way the [R&D team] was formed initially was that we had the explicit executive remit to think further out. And when you do that kind of future-facing work in organizations, there's this inevitable tension about who does that work. There are two ways to do it: You can have the corporate R&D lab, or you can have people who are doing the day-to-day work

committing to doing more of that kind of work. The latter tends to be very difficult because near-term priorities always tend to fill the maximum space available. The former can be very successful, but the challenge is how do you drive that work back into the organization, embedding that into the products and so forth."

Other participants cast considerable doubt on the efficacy of "siloed" innovation teams within larger organizations. Viewed through the lens of a product development organization, the corporate R&D model seems fated to disappoint, given the structural challenges of integrating this kind of work into mainstream product development organizations. However, when successful, these organizations focus not on shipping products but on "research through making, through designing these speculative things. The point for the most part was not to roll out beta products that would roll off the assembly line. These were provocations. They were boundary objects."

For practitioners working in mainstream product development teams, these kinds of purely speculative and provocative long-term projects seem to have acquired a bad reputation as little more than elegant vaporware. Much as some might aspire to do this kind of work in principle, many participants felt the reality of working in for-profit environments severely limited the likelihood that these kinds of projects would meaningfully influence organizational strategies.

Making matters more difficult, the widespread adoption of Agile software development methods and embedded, cross-functional design teams further militate against the possibility of designing and building commercial products with explicitly long-term time horizons: "[L]ong-term design doesn't really have a place in Agile. Seeing the whole is difficult in Agile development." As a result, most participants felt that it was becoming progressively harder to justify the value of long-term focused design work in digital product development settings. "I think it is definitely hard to do longer-term thinking for a couple of reasons," said a participant. "One being that we have now internalized a best practice of incremental work that's outcomes-based and not being too precious so we can get things out the door."

For practitioners who are well versed in these contemporary software development methods, the notion of long-term thinking also feels inextricably bound up with a bygone era of waterfall-style software design, in which designers would create fully formed mockups and detailed specifications before handing off polished artifacts to engineers for implementation – often with disappointing outcomes. "This is why designers have a terrible reputation: It's always to infinity and beyond!" The complexities of software engineering often rendered these fully articulated visions of complex software systems too difficult to implement, typically leading to launch failures and sunk costs: "The value of that long-term thinking was obfuscated by how complicated and beautiful software really is." Some participants also reflected with a degree of bitterness on their experiences of working on grandiose projects in the era of waterfall design and seeing those projects also fail to ship: "We used to do long-term thinking, but most of it was a complete waste. So it's probably good that we are not doing that. We have yet to replace the fantasy that we were doing with the reality of actually doing it."

One participant who transitioned into industry after an academic career reported
appreciating the fast-moving culture of a technology company, in comparison to the relatively slow time scales of projects in university settings: "[T]he thing I miss the least about academia is that almost every project is on a five-year plus horizon." Others reported being on the receiving end of proposals from high-profile design agencies that felt overwrought and failed to align with the ongoing work of their in-house design teams. Some also pointed to a longstanding perceived attitudinal bias, in which agency designers sometimes held in-house design teams in low regard. One participant shared a lengthy and admittedly salty anecdote about the experience of working with a well-known design agency. "I had this incredible design team and a big budget. So I called IDEO. And they were like, 'Well, we don't do anything for less than a million dollars.' I said, that's fine, but I want you to collaborate with my design team. And they said, 'Well, when we do that we find that most in-house designers have to unlearn everything they've learned.' I hung up the phone, thinking, 'Fuck you, IDEO.' You can quote me on that story."

Recalling one previous, heavily scoped project, one participant recalled working with a client intent on building an elaborate suite of software applications: "I was trying to refocus them away from this software fantasy city they were trying to build in a kind of fever dream. And it was clear to me that the chances of actually building that were close to zero." While the framing of "long term" seemed to carry some conceptual baggage for many participants, most nonetheless aspired to redirect their practices towards project work shaped by more systemic, wider-angle concerns: "I like the big picture thinking. That's what I love about UX. We have those muscles and skills in our wheelhouse to create that vision, more than any other discipline (product management, engineering). We can inspire."

Several participants felt less inspired by the prospect of trying to reach towards a particular time horizon, being more interested in simply widening the scope of their projects. "My theory about this is that designers don't care about long-term work in the time sense of it," said one participant. "Designers care in a holistic way about the thing they are trying to make. What you're calling long-term thinking I think of as holistic thinking." For many of these participants, they looked for ways to balance their desire for more holistic project work with the gratification they experienced when products actually shipped to customers: "If there's not a clear line of sight to the customer reception of the product, then I get frustrated and feel like I'm laboring for nothing. For me job satisfaction is tied to a closed loop with the customer." Others saw a natural alignment between personal values, systems-level thinking and taking a longer-term perspective on the work they were doing: "To the extent you can have principles about what's important and good for the world, then it becomes interesting to think about what happens in the future."

How then do these participants try to realize more broadly focused projects against the backdrop of escalating business pressures, while avoiding the pitfalls of investing time in grandiose, unbuildable products?

What I have noticed and heard [those] in leadership across organizations in different sectors say is that they recognize the need to have a lot more ideas

come in that they can iterate on to get shots on goal, find successes, and get new revenue streams. They need to innovate. But they don't want to put time and effort into every cockamamie idea that comes up, and the bucket of good ideas is very tiny. So where can we get good ideas? (Anonymous participant, 2019)

Throughout the course of the interviews, participants regularly mentioned several commonly used design tools. Many cited design thinking methods like workshop facilitation, journey mapping, and "Lots and lots of paper." Others pointed to the importance of fostering team cultures that nurtured the conditions in which more holistic, sustainable design work could happen.

Many participants highlighted the importance of individual agency and initiative—rather than organizational planning processes—in bringing these projects to life. "The way I've gotten people to care about the work is to not ask them to care about it until it's done and the value is clear in retrospect," said one participant. "People don't know how to ask for this kind of research even if it can be beneficial to them. And so I do a lot of organizational listening, look for patterns, identify groups with shared interests, and then scope research I believe can answer a question no one has thought to ask."

Others—especially UX researchers—noted that they found their work most fulfilling when they were able to incorporate generative research methods to explore undefined problem spaces: "I feel very happy when it's generative research, less when it's evaluative." This belief in generative design research methods also stems largely from successful past experiences. "I noticed this pattern that products that began with a qualitative research process were often the ones that actually made it out into and stayed in the market," said one participant. "I began to believe that research was foundational to design practice and to making products and services that could last." Finally, many participants also spoke about the centrality of personal values to the work they do, of the importance of "doing work that matters." They reported feelings of intense professional dissatisfaction when their values felt threatened by extrinsic pressures to meet short-term business performance targets. "For me, one of my own central tensions is between the individual and the organization," said one participant. "Can I be inside this large organization and feel that I'm able to live in alignment with my own values? That there's a way to be an individual and a part of an organization?" That tension between personal values and the extrinsic pressures of organizational life come to the fore as designers progressed towards more senior levels in an organization. "I have mixed feelings," said one. "On the one hand it's great to solve bigger picture problems. It's interesting because theoretically you can have more impact [with long term projects], but the actual impact comes from making things that people use every day. I feel conflicted about that."

Some of these pressures were felt most acutely among mid- to late-career practitioners. "The people who have been doing UX for the last seven or eight years have decided they now want to rise up in the organization. These poor fuckers! Now they can no longer tell themselves the story that they're making the world a better place with their cool practice. Because now it's laid bare in front of them. You're not pushing this button to give the rat in the maze a better life." When participants felt that business pressures put their ability to realize these values at risk, they reported declining job satisfaction and, in more than one case, actively considering a change in careers. "I feel like I've peaked, and the arc is coming to a close," said one. Several practitioners reported feeling burned out in their current roles, leading them to formulate strategies for reinventing themselves professionally. "I'm 47. I'm going to age out. If I turn 57 and I'm still in a design leadership role in a major tech company, I'd be surprised." Participants imagined themselves ultimately pursuing alternative careers as job coaches, brewmasters, surfers, artists, and ice cream parlor owners.

The frequency with which practitioners voluntarily shared a lingering desire to do something else—while perhaps just a symptom of ordinary human restlessness—might also point towards deep levels of dissatisfaction stemming from a perceived lack of agency and meaningfulness in their current professional situations (cf. Madden and Bailey). If so, then it is legitimate to ask what kinds of interventions might be useful in helping practitioners activate their personal values more directly in their professional practices and in exploring the attendant relationship with job satisfaction and their ability to initiate and successfully execute more holistic, forward-looking design projects.

# 7.2 Key Findings

A few major themes emerged from these interviews:

# 1. Short-term business pressures are real

Every participant interviewed spoke to feelings of adapting their practices under pressure to deliver results under unrealistic time pressures. Most also talked about the challenges to practicing their craft at the level to which they aspired, and reported experiencing tensions between their own professional aspirations and the quality of work they felt able to deliver.

# 2. The boundaries of UX practice are shrinking

Most participants felt that, over the past 5–10 years, it has become harder to take on work that is explicitly focused on the long term. Participants also felt that the scope of UX roles is narrowing, as multi-functional teams distribute responsibilities once considered the purview of designers. Some also felt that the contemporary experience of the Internet has moved towards it being a place of sameness and conformity, leaving less room for creativity.

# 3. Yet "long term" projects carry reputational baggage

Many participants reported past disappointing experiences trying to ship projects that were focused on the long term. Key challenges included team continuity, lack of executive sponsorship, and a tendency for wide-angle projects to become watered down by too much input. Some participants associated long-term work with the bygone era of waterfall design, feeling that this kind of work is incompatible with Agile software methods.

## 4. Many participants experienced ongoing cognitive dissonance at work

All participants spoke about the importance of realizing their personal values through their work—and about the challenges of doing so in their current environments. Yet many participants also felt torn between aspiring to do meaningful, big-picture work and the gratification that comes from building a product that ships. Some participants reported that they were actively considering changing careers.

These interviews point to several operational tensions that most practitioners seem to experience in their work (see figure 18 below).



Figure 18: Operational tensions in UX practice (2019) © Alex Wright

Based on these identified scenarios, there are several questions that might lend themselves to further research:

- Do practitioners outside the United States, working within a different set of cultural norms, experience these performative pressures with the same degree of intensity?
- How do factors like age and career maturity factor into practitioners' relative interest levels in doing work that is focused on the long term?
- How do practitioners approach wicked problems in their current work? Do designers in non-US markets feel more intensely engaged with these

problem spaces?

# 8 Professional Development Workshops

"Learning is the engine of practice, and practice is the history of that learning."

-Étienne Wenger (1999, 96)

Building on the theoretical foundations described in chapter 4, and drawing heavily on my own perspective as a practitioner looking for ways to shift my own practices towards more sustainable, long term-focused outcomes (see chapter 6), in 2016 I began developing a new workshop curriculum intended to enable other UX practitioners to engage with this material and apply it to their professional work. This work was also heavily influenced by my exposure to the transition design framework under development at Carnegie Mellon School of Design, with its focus on equipping designers with theories and methods for addressing societal wicked problems. It also took shape within the context of my own professional practice, and as such also represented a testing ground of sorts for developing the vocabulary and methodological toolkit for shifting my own professional practices. This chapter describes the evolution of the workshop curriculum, discussing the goals and context for each workshop, methods used, lessons learned, and an evaluation of outcomes based on participant feedback and on my own observations.

Although the content of the workshops changed considerably over time, all of these workshops ultimately coalesced around exploring five central questions:

- 1. How do personal values shape UX practitioners' professional choices?
- 2. To what extent do they feel empowered to bring those values forward at work?
- 3. What extrinsic forces (organizational, societal, political, economic) mitigate against their ability to realize those values at work?
- 4. To what extent does the experience of engaging with theoretical material and design methods from the realms of alternative economics, meaningful work, and strategic foresight enable them to effect change in their work practices?
- 5. Finally, how might a deeper process of reflection and engagement with new theories and methods influence their ability to seek alignment between their inner values and the work they do?

In approaching the curriculum design, I identified four high-level developmental phases to help scaffold the curriculum: preparation, inner work, frame creation (cf. Dorst, 2015), and problem solving. Table 4 below maps the workshop exercises to these stages, followed by a more detailed description of each method. Note that not every method was used in every instance of the workshop, but every workshop adhered roughly to this four-stage structure. See section 8.2 for a fuller consideration of these methods and reflections on the educational outcomes.

Warm-up Inner work Frame creation Problem solving	Warm-up	Inner work	Frame creation	Problem solving	
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The Thing from the Future	Values self-assessment	K-J Analysis	Experiential prototyping
		Horizon Scanning	
Look Back to Look	Resource Mapping		Backcasting
Forward		Scenario Planning	
	Capital Roulette		Personal Theory of
Envisioning Cards		Futures Wheels	Change
	Values "mash-ups"		
News from the		Wicked Problem	
Future		Mapping	
		STEEP Analysis	

Note: Appendix III includes a more detailed listing of which exercises were used in each workshop, with the number of participants engaged in each activity.

# 1. Warm-up

Most of the workshops opened with an "icebreaker"-style exercise, designed to prime participants to prepare to consider divergent future possibilities by activating their current knowledge of trends that might serve as "signals of the future," and to help the group warm up and get comfortable with each other before starting to collaborate in earnest. Methods used in this stage included:

# • The Thing From the Future

Developed by futurists Stuart Candy and Jeff Watson, an imaginative story-telling game that challenges participants to envision a range of possible futures by constructing triplet-style sentences based on selected combinations of cards taking the form: In a \_\_\_\_\_ Future / There is a \_\_\_\_\_ / Related to \_\_\_\_. (Candy, 2015). The purpose of this exercise is to spark participants' imaginations and help them get comfortable with envisioning more provocative and socially conscious visions of possible futures.

## • "Look Back to Look Forward"

An adapted version of a warm-up exercise from the Institute for the Future's Foresight Essentials curriculum, intended to provoke participants to take a retrospective view of a particular topic in hopes of identifying signals and drivers of change. Participants are given a few minutes to consider a given phenomena (e.g., recorded music), and consider how that phenomenon has changed over a period of time—to facilitate a group discussion about the underlying patterns revealed by a particular series of historical developments.

## • Envisioning Cards

Based on Batya Friedman's work on Value-Sensitive Design (Friedman, 1996), these workshop prompts challenge designers to consider the effects of their work over the long term on indirect stakeholders, in the process challenging them to articulate the core human values that should underlie their work.

## News from the Future

A headline-writing exercise and signals-based forecasting technique adapted from the Institute for the Future, in which participants gather "evidence of the future" based on secondary research and begin to cluster them in a way that reveals new patterns and possibilities; participants then attempt to craft a news headline reflecting a possible future state.

#### 2. Inner work

Each of the workshops included at least two of these exercises focused primarily on enabling a process of internalized reflection, whereby participants could identify and discuss their personal values in relation to their work; as well techniques for evaluating the resources available to them in their work through the lens of alternative forms of capital. Methods used included:

#### • Values self-assessment

In an attempt to explore how personal values intersect with participants' sense of meaning and purpose at work, I collaborated with Erica Dorn (then at the Good Work Institute), to develop a set of prompts based on James Clear's list of human values (Clear, 2016). Participants used these prompts to select and prioritize their personal values, then identify a set of obstacles and opportunities for realizing these values in the context of their professional work.

## • Resource Mapping

In this exercise participants are challenged to consider alternative forms of capital (Roland, 2011), and identify resources available to them in their current professional circumstances. After a brief introduction to the concept of alternative forms of capital, each participant then draws an illustrative pie chart identifying resources that are currently available to them. The intention is to help

participants reframe their conceptions of value, and consider the ways in which one form of value (e.g., social or environmental) might be transmuted into another (e.g., financial or political).

#### Capital Roulette

An experimental game based on Ethan Roland's eight forms of capital (Roland, 2011), using a game spinner to allow participants to select a form of alternative capital to work with in conjunction with a set of scenario planning exercises.

#### • Values "mash-ups"

In this exercise, participants take their self-identified values (from the values self-assessment exercise), and pair up with another participant to explore the intersection between their values and discuss possible opportunities for juxtaposing those values as an input to product or service ideation. The goal of this exercise is to help participants feel empowered to articulate and act on their values with colleagues, and to imagine the possibility of applying those values directly to product roadmapping decisions.

#### 3. Frame creation

In almost every one of the workshops (with the exception of the Purposeful Work seminar), much of the group work centered primarily on some combination of exercises designed to help participants frame the overall problem space and arrive at a group consensus on areas to prioritize and potential paths forward.

## K-J Analysis

Also known as cluster mapping or affinity mapping, this technique, invented by Japanese management theorist Jiro Kawakita in the 1960s (Spool, 2004) is a well-established method for enabling groups of individuals to arrive at consensus on a particular set of goals or problem definition statement. The technique involves using sticky notes on a white board to solicit "bottom up" input from the group, then silently clustering topics together on the board and collaboratively developing larger themes and opportunity statements to guide further discussion and development.

## Horizon scanning

An exercise in gathering and analyzing signals of change by looking at social, cultural, technological or industry trends. We then used the KJ Analysis method to cluster and label higher-level groups of trends that emerged from the exercise.

## Scenario Planning

Building on Jay Ogilvy's foundational work on developing tools for long-term organizational planning (Ogilvy, 2002), I developed a variation of his 2x2 scenario plotting grid to enable participants to sketch out a range of potential outcomes by honing in on two critical axes of uncertainty and using these as forcing functions to accelerate a discussion of possible futures.

## • Futures Wheel

An adaptation of this well-known technique originally developed by Jerome

Glenn (Glenn, 1994), further adapted by the Institute of the Future as part of an in-house training program offered at Facebook. I worked with the Facebook Research team to incorporate this method and set of design prompts into the workshop format.

# Wicked Problem Mapping

Drawn from the core Transition Design curriculum (Irwin, 2017), this framework provides a tool for modeling the dynamics of a complex system with multiple groups of stakeholders, to identify opportunities for interventions to trigger systemic change. The tool enables teams to identify root causes and consequences, and to frame current or planned initiatives in relation to the issues they hope to address.

## • STEEP Analysis

This analytical technique, originally known as the PEST technique, invented by strategic planning scholar Francis Aguilar (1967) allows participants to identify and categorize drivers of change through the lens of sociological, technological, economical, environmental and political analysis. It has now become a standard part of the toolkit for corporate strategic planning exercises, but is far less well-known or used in UX circles.

## 4. Problem solving

Finally, each workshop concluded with an effort to help participants find a path towards applying the workshop exercises towards their own projects and work practices. Most of the workshops involved some level of sketching and prototyping activity, yielding product and service concepts at varying levels of fidelity, dictated primarily by the length of time available in each workshop. In some cases, participants were also encouraged at the end to turn their lenses inward once again and engage in a process of reflection and intention-setting to help inform their next steps following the workshop.

## • Experiential prototyping

Sketching out low-fidelity images of possible products, services, and narrative storyboards intend to bring interaction-level detail to the future scenarios identifying in the scenario planning exercise.

#### • Backcasting

Using the potential future opportunity spaces identified through the scenario planning and experiential prototyping exercises, participants then engaged in group discussions to try to work back from these prospective futures to the present day, attempting to identify specific next steps (e.g., product or service interventions) that would enable their organizations to begin moving in the direction of a preferred future state.

## • Personal Theory of Change

This exercise challenged participants to identify and articulate their personal values, to help them begin to situate their work within a wider context of interdependent systems "dancing" together. This exercise aligns closely with the

transition design focus on posture and mindset (Irwin, 2017), and ultimately sought to create the conditions where participants could identify opportunities to leverage and activate their own inner values to exert direct influence on the systems at hand.

# 8.1 Workshop Summaries

This section summarizes each of the workshop sessions in more detail, with a discussion of outcomes and learnings from each successive iteration.

## 8.1.1 The Good Work Institute

The earliest glimmer of this research took shape during my time working at Etsy, when in the wake of the company's initial public offering the company's leadership team decided to devote part of the IPO proceeds towards the funding of a new non-profit organization. Initially named Etsy.org and led by early Etsy employee Matt Stinchcomb, the new outfit started out with a loosely defined mission to create a new business education curriculum.

As discussed in section 8.1.3 below, Etsy at the time envisioned itself as a transformational force in the online marketplace industry, one that would challenge the capitalist status quo and introduce a new, small-scale approach to networked commerce redolent of Schumacher's "Small Is Beautiful." That organizational spirit of challenging the prevailing capitalist status quo created the conditions in which the organization felt it could justify investing in a new social enterprise venture. One early

collaborator in the project was Judy Wicks, a Philadelphia-based entrepreneur and author of *Good Morning, Beautiful Business* (Wicks, 2013), where she writes: "I'm helping to create an economic system that will respect and protect the earth—one which would replace corporate globalization with a global network of local living economies. Business is beautiful when it's a vehicle for serving the common good" (Wicks, 2013).

April 23, 2015, I collaborated with Stinchcomb and Etsy.org's then-Managing Director Erica Dorn to facilitate a "convening" of business and non-profit leaders drawn from a wide range of professional backgrounds. The goal of this session was to help the nascent non-profit establish its charter and identify a set of priorities to inform curriculum planning as it assembled its inaugural cohort of fellows. Participants in this session included:

- Rev. Donna Schaper, senior minister at Judson Memorial Church
- Gary Chou, entrepreneur and faculty member her at SVA
- Kyla Fullenwider, social designer and entrepreneur
- Jessica Lawrence, Executive Director of the NY Tech meetup
- Chuck Lief, president of Naropa University
- Sam Willsea, Director of Operations at Schumacher College
- Caroline Woolard, Brooklyn-based artist and organizer
- Caitlin Dourmashkin, executive director of Evergreen, an industrial

development non-profit

• Alexa Clay, economic historian and author of The Misfit Economy (2015)

Over the course of a half-day planning session, we set out to devise the initial outlines of learning objectives, which would enable micro-entrepreneurs from non-traditional backgrounds to acquire new skills, perspectives, and personal connections that would enable them to start and/or sustain their businesses in ways that would both support personal growth and contribute to a healthy and sustainable ecosystem.

Focal questions for the group discussion included:

- What are the skills and attitudes needed to heal the Earth and build good communities and durable economies?
- What does "regenerative" mean? How can this be further refined?
- What models for leadership/entrepreneurship development are most effective/promising from your experience?
- What is widely missing in entrepreneurial leadership development?
- What is the right duration of a leadership/entrepreneurship program? Size?
- Inclusion: What methods/design aspects are critical to making Etsy.org's program demographically diverse?
- How is entrepreneurial/leadership support best rendered on an ongoing basis?
- How can the cooperative model be best integrated into the work of Etsy.org?

After an initial warm-up period and open discussion about these topics, we moved into a more structured consensus-building exercise relying on the KJ Analysis method to source new ideas and problem statements to help shape the curriculum. Table 5 below depicts the high-level themes that emerged from this collaborative planning exercise and served as a primitive design for curriculum planning purposes:

Systems thinking	Network design	Lifecycle thinking	Understanding place
Communication skills	Deep listening	Intergroup dialog	Principles of cooperation
Catalyzing change	Exploring new business models	Alternative forms of capital	Lean/Design Thinking methods
Regenerative business	Rethinking "scale" to consider inner vs. outer dimensions	Right size/right speed	Valuing openness and mindfulness over outputs
Personal values	Social justice (fairness, equity and inclusion)	Authenticity	"Non-delusionality: Honesty, comfort with uncertainty

Table 5: Workshop themes from Good Work Institute curriculum planning exercise

Over the weeks that followed, the working group began developing a curriculum informed by these principles, manifesting as a series of weekly workshops and counseling sessions with the first cohort of Good Work Institute fellows in Brooklyn, a diverse group of local entrepreneurs drawn from throughout the local business community, including people working in clothing design, food business entrepreneurship, financial planning, cooperative bookkeeping, and other professions. Most of these businesspeople were non-traditional entrepreneurs, largely without any formal business training.

Several weeks later, the Institute ran a follow-on workshop with the cohort, which I co-facilitated along with Dorn and Wicks (referenced above). The purpose of this workshop was to introduce participants to the concept of regenerative entrepreneurship, and share perspectives on the possibilities of connecting small businesses within a specific, place-based ecosystem in order to build and nurture strong and sustainable local economies.

The structure of this work involved asking participants to reflect on their personal experiences starting their businesses, and then to relate that work to their sense of place, to working in a community, and further understanding the nested relationships that tie individuals to broader and broader circles of belonging, e.g.: Personal sphere > Place > Community > Broader support systems (e.g., food, water, energy, waste, social systems).

The group discussed how the process of regeneration begins with a baseline understanding of interdependence and interconnectedness (of people, places, social and natural systems, etc). Participants also contrasted this world view with the more "separated" worldview that often seems to inform modern business: a zero sum game in which businesses compete in a finite marketplace, yielding either winners or losers, and a mentality focused on survival and domination vs. cooperation and shared stewardship of the larger ecosystem.

In this model, entrepreneurs tend to measure their worth in terms of material wealth

rather than assessing the extent to which their businesses contribute to the larger ecosystem. By contrast, the worldview of the regenerative entrepreneur is more about interconnection, founded on cooperation rather than competition, and partnership rather than domination. To paraphrase the Earth Charter, this mode of business is about "being more, not having more."

Wicks suggested reenvisioning Adam Smith's famous image of the "invisible hand" of the marketplace by challenging the notion of "market fundamentalism," suggesting that a reimagined invisible hand can work as a positive force rooted in the collective consciousness, "an invisible hand of enlightened self-interest guiding our decisions towards building an economy based on sharing, caring, and cooperation that would, in fact, serve the interests of society." Wicks went on to argue that business has the power to solve social problems as long as people are motivated by a desire for the common good, rather than narrow self-interest.

Regeneration, then, starts with the act of reconnecting: with people, nature, and by clarifying our personal values to help us connect with our inner selves. Businesses, she argued, have the mission of serving life: through customers, employees, the community and the larger social and natural systems around us. The key lies in maximizing the relationships between people and these interdependent systems, not in maximizing profits. To illustrate the power of systems thinking, Wicks emphasized that "there is no such thing as one sustainable business. It must be part of a sustainable system" (wicks, 2013, 190) So for example, she realized that in order to run a sustainably minded local restaurant she would need to help cultivate a sustainable local food

system, paying fair prices to local farmers and, in at least one case, making a direct loan to a favored local supplier. She also recognized the need to share resources like knowledge, tools, and even infrastructure like vehicles and storage space. Together, this network started to find its voice in local public policy changes, and organizing "Buy Local" campaigns. Wicks also started to get involved with like-minded businesses and community activists elsewhere in the world, e.g., the Zapatistas and other pro-social movements in Central America working on local sourcing and building regional supply chains and global fair trade relationships. Finally, she closed with a reading from her book in which she points towards a more expansive vision for how enlightened businesses might effect change in the world: "by building a new global economy in which every community has food and water security and locally produced renewable energy, we are creating the foundation for world peace." (Wicks, 2013)

Over the months that followed, Etsy.org would continue to evolve, eventually renaming itself the Good Work Institute, to address confusion about its relationship with Etsy (the organizers realized that there was a widespread misperception that the organization was simply Etsy's philanthropic arm, when it was always envisioned as a stand-alone non-profit in its own right). After completing work with the inaugural cohort in Brooklyn, the organization relocated its operations to the Hudson Valley, where after convening additional cohorts GWI further evolved to reinvent itself as worker self-directed non-profit cooperative, where it continues to operate to this day from its base in Kingston, NY.

My own involvement in GWI began to taper off during this time as the organization

relocated to its new home in the Hudson Valley and I returned focus to my primary role as Director of UX Research at Etsy. This collaboration with the nascent Good Work Institute introduced me to the literature of regenerative entrepreneurship, systems thinking, and alternative economics—conceptual foundations that resonate closely with the concerns of Transition Design. The foundational work that went into planning this curriculum proved seminal in my subsequent efforts at designing a professional development curriculum for UX designers rooted in these concepts: specifically, the focus on inner values alignment, the introduction of alternative forms of capital as a framing device, and the use of personal reflection and dialogue as a method for helping participants contribute to and shape an emergent dialogue. While this work would evolve considerably over the coming years—especially as I began to explore the possibilities of futures studies and strategic foresight methods, and incorporating best practices in professional development—the GWI experience remains the seed from which this research first took root.

#### 8.1.2 Purposeful Work Seminar / Good Work Forum

In March 2017, Erica Dorn and I co-facilitated two workshops in Pittsburgh, in association with the Good Work Institute. Building on the foundations of the GWI curriculum, we developed a workshop format intended to explore the relationship between personal values and finding a sense of meaning and fulfillment at work. Here we hoped to leverage some initial learning and best practices from the evolving GWI curriculum—particularly around applying the lens of alternative forms of capital in professional settings—in a more condensed workshop setting that might ultimately be

more accessible for working professionals.

For this exercise we recruited two distinct sets of participants: A group of Design Master's students (including several aspiring UX practitioners) at Carnegie Mellon School of Design, and a group of local creative professionals recruited in partnership with the Latham St. Commons, a "living laboratory" started by CMU professor Kristin Hughes to address the social, educational and economic needs of residents in Pittsburgh's Garfield and Friendship neighborhoods.

These workshop offerings took shape as two separate but interwoven programs:

#### 1. Purposeful Work Seminar / CMU School of Design (March 8, 2017)

This workshop consisted of a two-hour interactive session that drew a 25-person cohort composed primarily of graduate students at CMU (drawn mostly from the Design and Public Policy programs), intended to help them identify and prioritize a set of core personal values to guide their future professional work.

After initial introductions, the workshop opened with a solitary reflection exercise in which each participant was given a set of 30 paper slips, each containing a one-word value statement. The values were initially drawn and then further adapted from James Clear's *Core Values List* (2015) (see Appendix 3). We asked each participant to winnow this list down in stages to a final list of three values that resonated most strongly. We asked participants to get together in pairs and conduct 1:1 interviews with each other, probing on the personal resonance of each selected value, followed up by small group discussions on potential obstacles they anticipated in realizing these values in their future professional lives. Finally, we reconvened the entire workshop for a group "harvest" of key learnings from the exercise.

Among the themes that emerged from this group of students when asked to speculate about the challenges they anticipated in their future careers:

- Coping with pressure to earn, especially in light of student debt loads
- Apprehension about the fixity of job roles and responsibilities in organizational settings
- Potential loss of self-sovereignty and agency
- Risk of long-term resignation and complacency

After the workshop, we solicited input from participants on the exercise via an informal group discussion. Most participants reported finding the workshop engaging, but also felt that the two-hour format felt insufficient to explore the breadth of topics raised. Some also felt that they lacked sufficient background on these topics, and that they might have benefited from having access to a few relevant readings beforehand. While some of the participants had previous exposure to alternative economics and design theory (largely by dint of their exposure to Transition Design in the Carnegie Mellon Design School curriculum), others felt ill-equipped to engage in meaningful discussion on these topics. All participants, however, felt that the exploration of their personal values felt quite fruitful, and that their professional development to date had given them limited opportunities to explore the inner dimensions of work. Most

participants felt that the workshop might benefit from an even deeper focus on the question of values; and that this exercise helped them clarify their intentions and expectations around what they hoped to gain from future professional employment.

This exercise also highlighted the limitations of working with design students for an exercise focused on the question of finding meaning at work. Although some participants had prior work experience, their current status as students inevitably made discussions about professional work somewhat hypothetical; and as a group they lacked a shared context of a particular set of organizational structures and processes within which to situate these learnings. As a result, Dorn and I came away feeling that while this exercise seemed directionally useful, it would be difficult to draw firm conclusions about its effectiveness without access to participants in a more strongly situated professional learning environment.

#### 2. Good Work Forum / Latham St Commons (March 8, 2017)

In this workshop, we hosted a group of approximately 30 local Pittsburgh residents, many of them creative entrepreneurs, for an evening gathering organized by Kristin Hughes and Mary Lou Arscott, both Carnegie Mellon faculty and co-founders of Latham Street Commons, a community-based non-profit in Pittsburgh's Friendship neighborhood that operated from 2016-2017, describing itself as "a living laboratory that focuses on improving the health of all people by addressing their social, educational and economic needs" (Latham Street Commons, 2016). The organization sponsored a series of local projects (such as "living labs," job training programs, and an effort to develop common spaces for creative entrepreneurs in the neighborhood. The workshop took place in the offices of GBBN Architects. Participants came from a wide range of backgrounds, including a weaver, a jewelry maker, clothing designer, the owner of a graphic design studio, two woodworkers, a startup founder, the owner of a local community arts center, and one Pittsburgh City Council staff member. Most participants were referred by word of mouth; one found out about the event through the NextDoor app and another from a mention in a local newspaper.

At the opening of the workshop, we canvassed the room for input on what participants hoped to get out of the exercise. Responses included:

- Desire to put professional skills to better use in the community
- Learning how a business can do more for the neighborhood
- Looking for professional coherence in a diverse career background
- Wanting to make connections with the community
- Struggling to find work related to culture change, and interested in learning more about social entrepreneurship
- Learning more about how to devise sustainable business models
- Looking for a career change
- Wanting to help others learn to build a business through networking

Much of this initial discussion centered on exploring the role of entrepreneurship in a community's ecosystem. Erica and I presented an opening talk where we introduced Roland's framework of the eight forms of capital (Roland, 2011), with a focus on how to leverage a wider range of available resources in ways that might help one build a regenerative business. We talked at length about entrepreneurship, and the challenge of expanding our working conception of entrepreneurship and the opportunity for highly localized, place-based entrepreneurship in fostering healthy local communities. Much of the discussion centered on the question of how to decenter capital in one's work, and embracing multi-dimensional ways of thinking about value exchange.

Whereas the CMU Design workshop focused primarily on helping participants identify and name a set of personal values, here the centerpiece of the program involved asking participants to explore the range of resources available to them in their work lives. Piloting a new exercise that we dubbed "resource mapping," we asked participants to use the eight forms of capital as a framework for visualizing the resources currently available to them in the shape of an eight-sliced pie, each representing one of the eight forms of capital. We then invited them to engage in a period of solitary reflection and sketching on large sheets of roll paper to explore how these forms of capital manifested in their own lives. Participants engaged in free-form sketching for approximately twenty minutes, at which point we invited the participants to break into three groups of 7–8 each, for a moderated discussion to further reflect and explore how they might apply this framework in their professional lives.

Figure 19 below shows an example of these initial participant sketches:



Figure 19: Participant sketch, Good Work Forum, March 17, 2017

# Findings

As expected, we learned that some aspects of the new curriculum worked well while others needed considerable refinement. Participants responded with particular interest to the eight forms of capital framework. "This makes me nervous ... in a good way," said one participant. "You are tapping into my head. This is where I'm trying to take my business," said another. Other participants talked about the difficulty of de-centering financial capital in their lives, and the need to take basic subsistence needs into account. "It's a privilege to be imaginative," said one. "If making money is the only goal I can make choices easily to work towards that goal, but it's more complicated than that and there's a need for balance, a need to take other things into consideration," said one participant. Others talked about the importance of craft skills and community connections in creating a successful local business, and the importance of believing in what they do. After the evening event concluded, a large number of participants stayed to continue talking with each other; there seemed to be genuine enthusiasm for the discussion and a desire for participants to continue building connections and stay in touch with each other.

While the exercises in the 2-hour workshop seemed fruitful, the time constraints of the forum format left many participants wanting more. The group share-outs and solitary sketching exercises seemed highly engaging and fruitful for most participants. In several cases, participants began to sketch together of their own accord, discussing and building on each other's ideas to further evolve these visualizations, and in some cases collaborating on the creation of shared artifacts that represented a fusion of their values and professional aspirations. At the end of each session, we spent the last ten minutes asking participants to reflect in a structured way on the exercise itself, sharing feedback on what worked, what could be improved, and inviting them to identify a single "take-away" from the workshop. In a post-workshop feedback exercise, some participants reflected on their own learning from the exercise. One reported coming away feeling that "I need to feel like there is transparency and honesty in my workplace." Another reported "leaving feeling energized to ensure my work reflects my values." Some participants pointed to ways in which the workshop could be improved: "Felt rushed," wrote one. Another suggested that we could do a better job of upfront

discussion framing to "set us up with what we may expect to take away from each exercise."

As a pedagogical exercise, these workshops represented a preliminary attempt at locating the intersection of personal values with the experience of finding meaning in one's work, and exploring opportunities for introducing alternative economic frameworks into such a dialogue. Roland and Landua's "Eight Forms of Capital" (2011) featured prominently in both workshops, while Max-Neef's construct of need states and Illich's (1978) notion of conviviality emerged somewhat more organically through dialogue with students in the CMU workshop (not surprisingly, given the ambient awareness of Transition Design within the School of Design's overall pedagogical mission).

Both workshops met with a broadly positive response from participants, who largely seemed to feel like the exploration of inner values offered a valuable lens for considering their current and future professional aspirations. Participants also responded with considerable interest to the framing of alternate forms of capital, though many felt they would have benefited from more background on the topic. The workshop activities —values mapping (for the CMU workshop), and resource mapping (in the Latham St Commons workshop)—seemed like the most engaging and useful parts of the workshop; although several participants nonetheless struggled to tie these exercises back to specific outcomes in their work lives. Most participants reported that they simply wished for more time, especially around the presentation of the initial subject matter, and creating more space for active discussion and reflection among the

participants. After digesting the participant feedback and our own observations during these sessions, Dorn and I identified several opportunities for improving the workshop curriculum:

- Creating a more sequenced "scaffolding" for the presentation of subject matter, possibly involving sharing reading material in advance
- Altering the balance of lecture and discussions to allow for more of the latter and less of the former
- Developing alternative methods for delivering this material outside of a conventional, time-limited workshop format

Altogether, these early workshops felt partially successful but clearly revealed opportunities for further refinement. In the months to follow, I would continue to iterate on the workshop design as I embarked on the process of introducing workshop interventions in more clearly situated learning environments with working UX practitioners.

#### 8.1.3 Etsy School

Building on these early workshop explorations with the Good Work Institute and CMU Design and Latham St. Commons, I began to consider how some of these theories and methods might translate into a set of learning tools for professional UX practitioners, starting with my own immediate professional environment at Etsy (see chapter 6 for a further description of the evolution of my role at the company). In April 2017, I began piloting a new workshop curriculum targeted specifically at UX practitioners and other product development professionals working at the company. At this point I also began to incorporate a more intentional approach to identifying and framing learning outcomes and leveraging best practices in curriculum design, thanks in part to the mentorship and guidance of Stacie Rohrbach at Carnegie Mellon University. In particular, I began to leverage McTighe and Wiggins's construct of essential questions as a means of framing group discussions and reflective activities (McTighe and Wiggins, 2013).

I also strove to situate this workshop within the particular organizational context of Etsy, a company already invested in considering alternative forms of capital and a triple bottom line-focused approach to its business operations (see further discussion of my role at Etsy and the organization's commitment to socially conscious business practices in chapter 6).

For the initial workshop I recruited 24 participants to take part in an initial exploratory workshop. These included a range of Etsy employees drawn from several different professional specialties including: Product Designer, UX Researcher, UX Strategist, Information Architect, Brand Designer, Engineer, Product Manager. I developed the initial version of this course in two consecutive waves as part of the company's "Etsy School," an open educational program where anyone at the company could elect to teach a class about a topic of their choosing—which seemed like an apt opportunity to experiment with creating a program with a built-in audience of engaged team members. The company saw Etsy School as an expression of its commitment to the triple bottom line, by creating space for a bottom-up, employee-driven educational
program interwoven with its broader culture of making and experimentation. For context, other classes offered that year included Embroidery 101, Brush Calligraphy, Lockpicking, Laser Cutting, Scotch Tasting, and Childbirth, to name a few. Most classes tended towards light and entertaining topics, but they did at times veer towards more serious and applied topics like SQL programming, and running blameless post-mortems (a method widely used at Etsy to foster organizational learning in the wake of software project launches).

For this course, I set out to pilot a professional development curriculum built on the earlier workshop with GWI, as well as my initial research forays at CMU into alternative economics, purposeful work, and the possibilities of post-capitalist experience design. I also wanted to begin experimenting with layering in new perspectives from the world of futures studies (working with CMU associate professor and current dissertation advisor Stuart Candy), and incorporating best practices in instructional design (working with CMU associate professor Stacie Rohrbach).

Here for the first time the curriculum rested firmly on the three theoretical foundations outlined in chapter 4: alternative economics, futures studies, and meaningful work. Structured as a three-part course meeting on weekday evenings, each session consisted of a brief lecture on material drawn from these domains, along with a set of foundational readings (see Appendix I for syllabi and reading lists). The course also incorporated a set of design methods drawn from the realms of futures studies, past transition design seminars, as well as a few original new design prompts.

Building on educational theories developed in Richard Mayer's book Applying

the Science of Learning (2011), I approached each session with a view rooted in two core principles: 1) limited capacity (that people can only process small amounts of material in their verbal and visual processing channels at any one time); and, 2) active processing: that meaningful learning occurs only when learners have the opportunity to apply the material to their own personal or professional situations. By providing a small number of inputs coupled with ample time for participants to process the material in the context of their own work, I hoped to create conditions in which a process of collaborative, situated knowledge construction could take place.

To that end, I built each class session around a single reading—for example: Stewart Brand's The Order of Civilization (Brand, 2000)—with a 20-minute lecture and brief discussion, followed by an interactive activity that would take up the remainder of the one-hour class time. At the conclusion of each class, I asked students to reflect on the experience and answer a brief one-question survey distilling a single learning or "take-away" from that week's class. The purpose of the survey was not just to gather evaluative feedback, but to encourage participants to reflect meaningfully upon the class and identify their own learning moments to encourage deeper learning and long-term retention of key concepts from the class.

For the guided discussion section of each session, I prepared a set of discussion questions using McTighe and Wiggins' (2013) criteria for framing so-called essential questions, namely:

Open-ended

- Thought-provoking and intellectually engaging (sparking debate)
- Call for higher-order thinking (analysis, inference, evaluation)
- Point towards important, transferable ideas within/across disciplines
- Raise additional questions
- Require support and justification, not just an answer
- Recur over time

The course began by introducing the theory and literature of futures studies and strategic foresight, and introducing essential techniques like horizon and environmental scanning, forecasting, and experiential prototyping. Participants prepared by reading Stuart Candy's Strategic Foresight (2011) and Stewart Brand's The Order of Civilization (2000), as well as a McKinsey report on Measuring the Economic Impact of Short-Termism (Barton, 2017).

Learning objectives for the first session included:

- Grasping a process and context for envisioning futures to understand the relevance of these workshops to practice
- Gaining familiarity with strategic foresight concepts to help participants frame their work in a broader context
- Developing future scenarios to become comfortable brainstorming uncertain situations
- Beginning to bridge current and future practices

For the in-class exercise, we conducted a warm-up exercise using *The Thing From the Future*, followed by a guided discussion of the assigned readings, and some initial exploratory sketching. Participants responded favorably to the prompts and in-class exercises, with an engaged discussion about the challenges of incorporating long-term perspectives into their work, and a series of provocations and sketches that flowed out of the in-class exercises pointing towards speculative product experiences extending well beyond the Etsy ecosystem.

After our initial foray into strategic foresight at a macro/social/environmental scale, the next week the class shifted focus to the more immediate realm of company strategy at Etsy. We grounded the discussion in a survey of the history of capitalism, the rise of a post-industrial society, and the emerging literature of alternative economics. Participants prepared by reading Ethan Roland's *The 8 Forms of Capital* (2011), and optional readings including John Mackey's "Capitalism: Marvelous, Misunderstood, Maligned" (2014), Donella Meadows's "Leverage Points: Places to Intervene in a System" (1999) and John Elkington's "Enter the Triple Bottom Line" (2004).

Key learning objectives for week two included:

- Grasping key alternative economic concepts to create a theoretical foundation for reframing project goals and outcomes, such as the triple bottom line, the eight forms of capital, and post-capitalism
- Understanding how to apply foresighting techniques to Etsy's business

planning cycle

• Developing rough prototypes for new products/services/policies to create tangible representations of how these alternative futures might work

For this week's in-class activity, I developed an experimental game called "Capital Roulette" (see figure 20 below) which presented Roland's eight forms of capital as an exercise prompt in the form of a simple game spinner, which I fashioned by hand using a couple of vintage game board spinners (purchased on Etsy). Once participants selected a form of capital to work with via the spinner, they worked together in groups with a worksheet designed to support a basic scenario modeling exercise. First, they identified a set of environmental factors that might influence the trajectory of future events; then they identified two critical variables worth considering in this context (e.g., Global warming, artificial intelligence, Bitcoin, the price of slime, what Beyoncé thinks).



Figure 20: Capital Roulette game board © 2017 Alex Wright

Using an adapted version of Jay Ogilvy's scenario plotting matrix (2004), they then plotted these criteria on a grid and imagined a series of more or less desirable outcomes from these eventualities—and how these might affect Etsy's business.

Finally, they began to sketch interactive experiences to illustrate a range of future products and services that might take shape in the context of these developments.



Figure 21: Participant sketch, Etsy School workshop (2017)

For our final class meeting, we brought the discussion in to focus more narrowly on participants' own work, exploring how we could relate concepts of strategic foresight and alternative economics to their professional lives. As preparation, participants were asked to read the MIT report on "What Makes Work Meaningful, or Meaningless" (2016) and optionally Meg Wheatley's "Finding our Way" (2007), as well as an excerpt from E.F. Schumacher's Good Work (1979).

Learning objectives for week three included:

- Reflecting on the nature of purposeful work to create a bridge between current and future practices
- Identifying and prioritizing a set of personal values to inform future career choices
- Visualizing what it would mean to realize those values in work and in the world, to identify leverage points between the personal and professional spheres

For this week's in-class exercise, we co-facilitated a revised version of the values mapping exercise that Erica Dorn and I created in the Purposeful Work seminar (see section 8.1.2). For this exercise, each participant was given a set of 30 paper slips, each containing a one-word value statement drawn and adapted from James Clear's *Core Values List* (2015). Each participant then winnowed this down through progressive stages of evaluation to a list of three "top" values. We then asked participants to select a single value to work with, and begin visualizing what it would look like to realize that value in their professional lives. After participants generated a set of drawings they were ready to share, we then paired them with each other to "mash up" their values and visions to create a specific concept for a long-term product or service at Etsy they would both personally feel invested in producing over time.

Finally, we reconvened the entire workshop for a group "harvest" to share and discuss these concepts. At the conclusion of week three, I sent out an end-of-class evaluation survey to solicit feedback and recommendations for improving the course over time. One participant wrote: "A great way to understand the past & future of the world and business, and how Etsy & each of us individually play a role in it." Another wrote: "This class taught frameworks to understand/predict possible futures and how we might apply human, community, and earth-centric thinking to shape businesses in the future." And another: "From the reading and class I learned that there are structured approaches to thinking about the future, and that it makes sense to do so in several contexts including corporate and personal."

On reflection, the Etsy School workshops proved a pivotal moment in the development of the curriculum, as the link from theoretical material to applied methods and tools began to gel in a way that seemed to create meaningful change for many participants. However, the time-boxed limitations of the workshop format and the lack of a direct tie to current product development efforts continued to pose a challenge in measuring the efficacy of this work in the larger organizational setting.

### 8.1.4 IxDA Education Summit

In February 2018, Dorn and I designed and co-facilitated a further iteration of the Practical Futuring workshop with a group of 20 participants at the IxDA Education Summit in Lyon, France. In this case participants came from a range of professional backgrounds—including working UX designers, researchers, and current design students—and geographies, primarily from Europe and North America. The workshop lasted three hours, divided into three parts lasting approximately one hour each.

Having learned from previous workshop exercises the importance of context-setting in advance, we asked participants to review a set of background readings on alternative economics. Advance readings included excerpts from Mason's *Post-Capitalism* (2015), Schumacher's *Small Is Beautiful* (1973), and Roland and Landua's "Eight Forms of Capitalism" (2011). By giving participants a brief exposure to the literature of alternative economics beforehand, we hoped to equip them with a vocabulary and an understanding of foundational concepts that would underlie the workshop exercises.

In contrast to the situated learning exercises at Etsy where all participants shared an employer, in this case participants came from a range of different employers and institutional affiliations. Given the lack of common organizational context for these participants, creating a truly situated learning environment posed a conceptual challenge. We considered creating a hypothetical work scenario in which we would ask participants to role-play within an imagined organizational setting; but this scenario seemed laden with pitfalls and opportunities for our own biases to seep into the project framing. Instead, we decided to leverage the organizational context of the conference setting itself, and asked participants to engage with the question of how alternative economics and strategic foresight techniques might create opportunities for reimagining the future of design education itself. In this way, we hoped to create a situated learning environment that would enable us to pressure-test these techniques in an applied setting, while also creating a co-creative atmosphere in which participants could help inform the evolution of the curriculum itself.

We opened the session with brief introductions followed by a group discussion of the readings. Then, we began to introduce a set of tools drawn from the world of futures studies and strategic foresight. In our first collaborative exercise, the group engaged in a modified version of The Thing From the Future (see above for a more detailed description). Next, we asked participants to work together in teams to explore a range of possible outcomes for design education by conducting a scenario planning exercise modeled after Jay Ogilvy's planning matrix model. As a group, we brainstormed a set of potential uncertainties that might influence the future trajectory of design education. A few core themes quick emerged from these discussions:

- Ethics are becoming more embedded in design practice. Some participants voiced caution about this development, however—given the tendency of some practitioner discussions to fall into the trap of slogans over substance. As one participant put it: "We don't want "ethics" to become the new "empathy!"
- Some participants also discussed the growing specialization of design practices (e.g., designing for AI, voice, embedded interactions) vs. the need to create well-rounded generalists capable of adapting to the future.
- The trend towards self-paced online learning also captured participants' interest, raising questions about the role of credentialing institutions like universities and design schools.
- The changing role of design educators also emerged as a major topic of

discussion. Could/should educators become more like career coaches rather than lecturers—playing a role more akin to consultants who have ongoing relationships with practitioners rather than focusing primarily on the transfer of skills and knowledge that becomes quickly outdated with the advent of new tools and technologies.

 The discussion also highlighted the increasing importance of cross-disciplinary practices (e.g., design thinking becoming an established component of business school and engineering education), and the potential risks of dissolution / blurring of the disciplines.

Using these inputs as a starting point for discussion, we then introduced a scenario planning exercise based roughly on Ogilvy's model (2004), honing in on a set of uncertainties that seemed most critical and actionable, working with participants to map them out using a whiteboard canvas for further discussion. After soliciting input from the group and honing our focus through a process of affinity mapping and forced-rank voting (using sticky notes), we aligned on the trend towards self-paced learning and the growth of disciplinary specialization as two useful matrices for scenario planning. After aligning on these broad opportunity spaces as a group, we then split the participants into four working groups, each of which tackled one of the four quadrants. Each group then began to elaborate on a forward-looking description of how interaction design education might evolve in relation to this range of possible futures (see figure 22 below).



commonplace

Figure 22: Scenario Planning output from IxDA Education Summit workshop (2018)  $^{\odot}$ 

Alex Wright

The IxDA Education Summit workshop highlighted the potential of scenario

planning exercises for UX practice. Although time constraints did not allow the group to

explore these scenarios at any level of experiential detail, they generated considerable

enthusiasm from participants who reported feeling energized by the exercise and

excited about the prospect of taking these ideas further. But again, we discovered several challenges and opportunities for further improvement in the workshop format. In trying to turn the focus of this workshop towards the topic of design education itself, we also began to broach more operative questions about the delivery of educational content and the organizational context in which such interventions might take place—questions that ultimately have enormous bearing on the future of how such material might be delivered to a wider audience of practitioners (a topic I probe on further in chapter 9)..

### 8.1.5 Instagram and Facebook

In August, 2018, I accepted a new position as a Research Director at Instagram (see chapter 6). In this capacity I began developing a new iteration of the curriculum which I began to offer via the Facebook Inc. Learning and Development organization. While the output of these workshops constitutes proprietary information belonging to Facebook, Inc., per an agreement with the company's Academic Relations team I am able to share reflections on the process of teaching the workshop, an outline of the initial curriculum (which I developed before joining the company), and summarized feedback from participants on the efficacy of the exercises and methodologies shared in the workshop.

From 2018-2019, I taught three separate instances of the workshop, with 24 total participants including product designers, UX researchers, engineers, and product managers from teams across Instagram and Facebook, Inc., primarily drawn from the

company's New York City office. In these sessions I continued to explore the intersection of personal values and perceptions of meaningfulness at work, while also integrating more of the strategic foresight tools that I had started to explore in earlier iterations of the workshop. Facebook's broader UX Research team had also engaged the Institute for the Future (IFTF) in a training partnership modeled on their publicly available Foresight Essentials program. Several of the researchers who took part in the workshop had also completed the IFTF training, and were therefore able to offer useful feedback on further refining and iterating some of the methods used in these workshops.

The intention of these workshops primarily involved exposing participants to these methods, and equipping with them with sufficient understanding of these frameworks to apply them in more depth to their own specific product areas. For the most part, the workshops were construed as a skills development exercise rather than a product planning process per se. However, in at least two cases specific product ideas emerged from these workshops that would later evolve into more full-fledged product proposals at later stages of product team planning processes.

Participants reported finding the workshops engaging and enjoyable, while also reflecting on the challenges of applying some of these methods in their day-to-day work. The most fruitful application of these methods proved to be scenario planning, which found purchase in the regular strategic planning cycles that inform the company's semi-annual product roadmapping process. Three years after these methods were first introduced, they still play a role in Instagram's product development process. The company has also invested in a number of other strategic long-term-focused research exercises whose outcomes are not yet publicly visible at the time of this writing.

While I am not at liberty to disclose specific product strategies that emerged from these workshop, I can nonetheless reflect on some of the opportunities and challenges uncovered during the process of rolling out these workshops:

- Participants were particularly drawn to horizon scanning and scenario planning, and towards the possibility of envisioning more divergent product scenarios—as opposed to the more singularly focused "north star" exercises that tended to predominate with many product teams.
- Several participants expressed interest in exploring how to embed their techniques into the formal product roadmapping exercises that drive the company's product plans. At least two teams have since started to embed a form of horizon scanning into their product planning processes.
- Similar to the feedback received from earlier workshop exercises in other contexts, most participants felt that the limited 2-3 hour workshop format did not present sufficient time to explore the material in sufficient depth; many participants expressed interest in a more sustained, longitudinal kind of professional development exercise.

# 8.1.6 School of Visual Arts

In the summer of 2019, I collaborated once again with Erica Dorn to develop a new course in Design Futures for the 2019 summer intensive at the School of Visual

Arts' MFA program in Interaction Design. This five-week course (15 hours total) built on the curriculum previously developed via the earlier workshops (see the sections immediately preceding this one), while incorporating a greater range of background reading and workshop methods drawn from the transition design seminar curriculum, such as wicked problem mapping and multi-level perspective (see appendix III for the full curriculum).

The 10 participants included a mix of professional designers working in a range of in-house and agency roles in New York City, as well as two undergraduates interested in exploring interaction design as a career path. Over a five-week period, we introduced a number of methods drawn from the realms of futures studies, Transition Design, and alternative economics, to gauge how well participants might be able to put some of these practices to work in their current roles — and, at least as importantly, to explore what kinds of obstacles they might encounter along the way.

To create a shared context for the coursework, we worked with the students to identify two so-called wicked problems to serve as focus areas for our project work. Starting from a list of eleven potential problem spaces (including institutional racism, air quality, obesity, adolescent depression, homelessness, opioid addiction, crime, and lack of affordable housing), we worked together to narrow the list to two that seemed personally resonant for most participants, and germane to the experience of working as a design professional in New York:

#### 1. Waste Management

Consumption culture, fast fashion, and on-demand ordering are just a few of the contributing factors to the wicked problem of waste management in the United States; and the evidence is everywhere around us in NYC. Local recycling programs are proving ineffective, while other countries are refusing US refuse and recyclables, and public vs. private management poses a growing dilemma. What role might designers in professional settings play in addressing the problem of waste management in the city?

## 2. Age Discrimination

As the U.S. population continues to age, the population of older workers will continue to grow over at least the next fifty years. Yet age discrimination remains an endemic problem, especially in the tech industry that increasingly shapes our economic, cultural and political lives. What role might designers in professional settings play in mitigating the prevalence of age discrimination in the workplace?

Taking these two problem areas as starting points, we split the class into two working groups and challenged them to begin exploring a few focal questions:

- What are the effects and root causes of this problem?
- Which stakeholders are most affected?
- Where do you see opportunities for systemic interventions (using Meadows' leverage points framework)?

• How might you approach this wicked problem in the context of your own work or personal circumstances?

As the course progressed, we introduced a series of in-class exercises and individual assignments to give students broad exposure to a range of tools and techniques to frame these problems and explore potential design strategies. The illustrations that follow show examples of student work from these exercises.



Figure 23: Wicked problem mapping canvas, School of Visual Arts Summer Program in Interaction Design course (2019)

Finally, each student built on the in-class group exercises to shape an individual project in which they would bring a given scenario to life by designing a set of artifacts to illustrate the felt experience of living in one of these possible future environments. The figures below are illustrative examples of student project work that emerged from the class:



Figure 24: Waste Management: Hybrid Wicked Problem Map-Futures Wheel diagram,

by Danielle Lee (2019)



Figure 25: Waste Management: Mapping the Fashion Waste Problem, by Melinda Chen (2019)



Figure 26: Poof! (an app for UV-based composting), by Karina Tristandy (2019)



Figure 27: Language-agnostic book, by Tery Hung (2019)

In comparison to the shorter professional development workshops that I had run over the past three years, this 5-week, 15-hour course created far more room for exploration and deeper engagement and exposure to these design methods. Even so, most participants felt that they had only begun to scratch the surface of possibilities in exploring how they might integrate these methods into their own professional practices. During the final class, we invited participants to share their reflections on which aspects of the class resonated most strongly, and where they felt it could be improved. Students particularly liked the emphasis on in-class exercises over extended lecturing (a.k.a. the "flipped classroom" model). They also responded positively to structuring the class around a single wicked problem and sticking with it from beginning to end, allowing participants to scaffold their knowledge and build up domain expertise over time.

In terms of opportunities for improvement, participants felt the course could be strengthened by offering more lead time on the individual projects (an inherent challenge with a five-week class), and by weaving the reading assignments more tightly into the contents of each week's exercises. The course seemed to resonate particularly well with students looking to make a career transition from in-house design roles to non-profit or more social and environmental justice-oriented work.

Looking ahead, we felt that a more productive approach might involve giving students the chance to go deeper with a given framework, rather than taking a "survey class" approach and trying to cover such a wide range of techniques in a short-form course. Ultimately, this class felt like a productive foray into how working designers might begin to approach incorporating some of these methods into their work. We might reasonably hope that we were able to create a scaffolding for students to remember and understand something of these techniques, but it remains to be seen whether they will apply, analyze, evaluate, and create in real-world situations.

If we hope to shift interaction design towards more sustainable, long-term

focused practices, it will likely take more than "one-off" interventions like individual workshops or courses. Rather, we need to start thinking about how to build more longitudinal approaches — with ongoing engagement and repeated interventions — that might yield deeper, measurable shifts over time. This course felt like a useful prototype for a more sustained educational intervention, but it remains to be seen how this longer-form training might realistically be embedded into a situated professional learning environment.

# 8.2 Evaluation of Outcomes

Over the course of this research program, I led ten different workshops of varying lengths, ranging from three to 15 hours. Of these, six took place in situated learning environments within the context of corporate learning and development programs at Etsy and Instagram/Facebook. While the selection of methods and materials varied according to the audience, organizational context, and time allotted, all of these workshops shared a common goal: to assess the efficacy of situated learning interventions in helping to shift practitioners' work practices towards more sustainable, long-term focused project goals.

By and large, these workshop exercises were well-received and largely served the intended purpose of preparing the ground for a more in-depth consideration of hypothetical futures and their experiential dimensions—as evidenced by positive feedback from participants in surveys and informal post-class discussions. But open questions remain about the efficacy of these interventions in fostering long-term change in these practitioners' work lives. In the absence of definitive longitudinal data on long-term, I have relied instead on two conceptual frameworks in assessing the efficacy of these workshops: Sandoval's (2014) model of conjecture mapping, and Kirkpatrick's (2016) model for assessing training effectiveness. Though both models have their strengths and limitations (see further discussion below), together they provide a usable structure for assessing the effectiveness of these educational interventions. Conjecture mapping is a form of logic model that incorporates a design research approach, taking the central elements of a learning intervention and mapping those elements to predict how they might work together to produce particular educational outcomes (see figure 28 below).



Figure 28: Generalized conjecture map for educational design research (Sandoval, 2014)

In this model, the researcher starts with a generalized hypothesis, which is then embodied in a set of teaching activities (such as readings, discussions, in-class exercises, and dialogic processes). These in turn lead to a set of so-called mediating processes, in which learners are able to take a series of actions informed by the embodied teaching activities. Taken together, these amount to *design conjectures*. Those mediating processes, in turn, should lead to a set of assessable outcomes for the individual learners involved. The mediating processes and outcomes together amount to theoretical conjectures about how these activities might inform long-term educational outcomes. Figure 29 below presents a conjecture map for a generalized version of the workshops described in chapter 8.



Figure 29: Conjecture map for "Practical Futuring" situated learning workshops (2022)

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The conjecture map shows the relationship between the theoretical foundations and the learning interventions in the workshops. Each method enables a set of associated processes (productive conversation, social constructivism, questioning assumptions)—design conjectures—which in turn create a set of learning outcomes (familiarity with the subject matter, ability to apply new frameworks and methods in professional settings)—theoretical conjectures—that, if successful, would mark a successful learning process.

The conjecture map helps externalize and visualize the logic or strategies that I have theorized lead to the outcomes I seek. Here Kirpatrick is useful in identifying the multiple points of effectiveness, from fairly easy-to-measure short-term satisfaction metrics, to the more difficult challenge of assessing long-term outcomes. To this end, Kirkpatrick proposes a four-step scaffolding of Reaction, Learning, Behavior, and Results (see figure 30 below).



Figure 30: Kirkpatrick's model for evaluating learning effectiveness (Kirkpatrick, 2016)

The first level (reaction) considers practitioners' immediate feedback to the training exercise, typically captured via direct feedback captured either in class or immediately afterwards via a survey. This step maps closely to the post-workshop feedback survey and reflective in-class discussions at the conclusion of each workshop, where participants were asked to share their feedback on questions such as these:

• Did you find the presentation engaging?

- Was it worth your time?
- Would you recommend it to others?
- How would you improve this program?

The in-depth workshop summaries in chapter 8 include a representative sample of survey response and other verbatim feedback on each workshop. The level 1 participant feedback was broadly positive, with most respondents indicating they enjoyed the workshop and would recommend it to others. A few had targeted suggestions for improvement (mostly involving making the workshops longer). A few suggested that they wished they had entered the workshops with a deeper foundation in some of the theoretical material, e.g., via pre-reading assignments.

Both The Thing from the Future and Envisioning Cards were well-received in helping participants start to consider a wider range of systems-level perspectives, and giving themselves permission to explore a range of possible future outcomes. In most cases, participants seemed to gravitate towards mordant or dystopian scenarios, often mixed a level of whimsy or sarcasm that may have belied a certain initial discomfort with the open-ended nature of these workshops. The Look Back to Look Forward exercise also proved particularly effective in more time-limited situations where the situation called for a quick warm-up exercise to help participants get more comfortable in each other's company as learners.

At the level of learning (level 2), the researcher seeks to understand the extent to which respondents were able to gain familiarity with new tools and methods that they can apply in their work. Typically tools here involve skills-based evaluations or 1:1

interviews to assess participants' knowledge. Here I again rely on data gathered within the workshops themselves, primarily in the form of student projects which I analyzed to see if they understood the purpose and application of the tools and frameworks presented in the workshops.

Here the results seem mixed. Not surprisingly, the longer-form workshops at Etsy and the School of Visual Arts yielded the strongest indicators that participants had gained a working familiarity with the subject matter, as evidenced in their final project work. The shorter-form workshops (lasting 1-3 hours), typically yielded much less developed project work; and at best sparked curiosity about the theoretical subject matter among some participants. Of all the methods used, the values mapping exercise was most consistently well-received, playing a useful role both as a foundational tool for helping frame participants' engagement with the rest of the workshop exercises, and as an engaging icebreaker exercise to help get participants comfortable opening up and collaborating with each other. The resource mapping exercise, while only used in the Good Work Forum, also proved highly resonant with this particular cohort of local creative entrepreneurs, but seemed less directly applicable to the experiences of UX practitioners, insofar as the latter are rarely trying to build and sustain their own place-businesses from scratch. However, the experience with this cohort of non-UX practitioners also yielded valuable insights about the importance of non-financial forms of value in giving these participants a deep sense of meaning and purpose in their work—an insight I was later able to apply in formulating the Capital Roulette game as an attempt to introduce the eight forms of capital in a more whimsical and gamified

form for participants working in an industry setting at Etsy. While moderately engaging, however, this exercise ultimately felt contrived and failed to spark the kind of deeper reflections or spontaneous insights that emerged from the other inner-directed exercises. The values "mash-up" exercise, by contrast, proved highly engaging and productive with the same cohort, as participants found that the process of juxtaposing their own values and then applying them through the lens of a product roadmap yielded both new insights and opportunities for innovation and applied design work that seemed to spark considerable enthusiasm from participants. It seems fair to assert that participants walked away with a baseline understanding of new methodological tools—especially relatively self-contained exercises like resource mapping, horizon scanning, and futures wheels. The personal theory of change exercise at the School of Visual Arts Design Futures summer seminar also seemed to provide a meaningful process of career direction-setting for at least some of the students in this course as they prepared to embark on the rest of their professional journeys as UX practitioners.

Participants in the more applied workshop settings at Etsy and Instagram/Facebook often struggled to master or fully utilize more involved methods like scenario planning or STEEP analysis that require access to more resources (like access to high-quality original research, and deeper engagement with foresight professionals working in a shared organizational context). The Horizon Scanning exercise—while useful as a starting point for staking out an initial domain of inquiry, especially in cases where there was an opportunity to give participants a pre-work assignment—proved problematic in this condensed workshop format. Two forces mitigated against successful execution of a meaningful horizon scanning exercise: 1) a lack of rigorous research and analysis support to inform the selection of inputs used (although such support may be more possible in corporate settings with dedicated research teams); and 2) the lack of shared project context, even within the same organization, often led to workshop participants with divergent interests, goals, and positional biases that tended to work against building confidence in the outcome of this exercise. In a similar vein, the driver analysis exercise proved challenging at times—in part due to participants' difficulty in distinguishing between signals, trends, and drivers without more in-depth instruction-but at other times guite effective, depending on the makeup of participants in the room and the level of domain expertise participants held around particular topics. STEEP Analysis also proved difficult to introduce or effectively activate in the context of the workshop, although it did form an important component of the instructions and background reading leading up to the pre-work exercises at Instagram and Facebook. These experiences highlight the challenge of building sufficient familiarity with strategic foresight methods in a highly condensed time period, even with the use of assigned reading materials and pre-work assignments. In order to function effectively in an applied setting, these exercises must be quickly understood and easily engaged, with minimal time for training and demonstration. The most effective of the Scenario Planning exercises likely took place at the IxDA Education Summit workshop, where the group's shared focus on the future of design education, coupled with their high collective level of domain expertise, yielded a series of provocative, actionable, and highly credible scenarios. In the case of the Futures Wheel, participants quickly digested the concept and were able to apply it right away; this exercise also tended to yield discrete, highly actionable concepts that lent themselves easily to lightweight sketching and prototyping at the level of fidelity that was possible to deliver in a workshop setting. In the case of Wicked Problem Mapping, participants appreciated the multidimensional focus of the exercise and seemed to resonate powerfully with the visual framework for identifying points of potential leverage in complex systems. In both cases, participants were able to move rapidly into group workshopping exercises that most participants reported finding energizing and productive.

Considering these findings in light of the conjecture map (figure 29 above), it seems that the processes related to inner work (values self-assessment, resource mapping, reflection, and dyadic dialogue) proved most conducive to the episodic workshop format—presumably because every participant could be considered an expert witness on their own personal experiences. The conjectures related to frame creation—horizon scanning, wicked problem mapping, and project planning—suffered inordinately from the compressed timeline and limited time window for preparation leading up to the workshops. And the problem solving conjectures—involving prototyping, backcasting, and personal theories of change—met with a largely positive response and seemed like activities that participants could comfortably foresee themselves taking part in, presumably because these kinds of "making" activities tend to fall within most UX practitioners' professional comfort zones.

At the level of behavior (level 3), the focus shifts to understanding how the

training has affected participants' behaviors. Have they actually been able to apply these skills? Has the intervention led to any behavioral or process changes in the organization? Here the data is primarily qualitative -- informed by my continued relationships with a handful of workshop participants with whom I have stayed in touch. Here the data looks decidedly mixed. In follow-up conversations with participants ranging from weeks to months after the workshops, a few have continued to use strategic foresight methods as part of organizational planning work (notably at Etsy and Instagram, though I am not able to discuss this work in more depth due to confidentiality agreements). At least three participants went on to pursue more formal training in foresight training via the Institute for the Future, and seem to have used these methods with some success in their roles. For the most part, however, the workshops seem to have offered participants an interesting diversion and opportunity to reflect on their own work and values; identifying a pattern of long-term behavioral changes resulting from these workshops seems like a speculative exercise at best. On this front, however, I will refer to my own reflexive journey as the best available evidence for long-term behavioral change, insofar as I have personally been working with these theories and methods in my own work for six years, and can report without doubt that my own work practices have shifted considerably during this time: especially in the adoption of strategic foresight methods and workshops as part of multiple strategic planning cycles. While I'm not at liberty to discuss the results of these initiatives here, I can assert with confidence that exposure to this material over the long term has, without doubt, shifted my own professional practice in a meaningful way.
Finally, at the level of results (level 4), one tries to understand whether the training had a measurable impact on business results – and ultimately, whether the exercise yielded value to the organizations that invested resources in this effort. This kind of assessment is inherently difficult-to-impossible given the explicitly long term nature of the design processes and the wide-angle societal concerns of transition design. Indeed, one might argue that a search for measurable outcomes as proof of return on investment is in itself emblematic of the results-oriented capitalist paradigm that this research ultimately seeks to disrupt in the first place. But in the context of for-profit company settings in which these workshops took place, any educational intervention must ultimately justify itself within a larger organizational system of inputs and outputs. It therefore seems incumbent to ask whether these workshops had a demonstrable impact on any particular product or service improvements. The most promising indicators here stem from the in-house product work that took place at Etsy and Instagram/Facebook in the wake of these workshops. Of these, I can only point to one specific instance that is now publicly launched: Etsy's carbon-neutral shipping program, which emerged directly as a result of a value creation modeling exercise I conducted with senior leaders that was directly informed by the eight forms of capital framework. While I am aware of a number of other projects that have taken flight in the wake of the Instagram/Facebook workshops, confidentiality concerns preclude me from describing them here. I must therefore demur from offering any firm conclusions based on shareable evidence, but I will offer my own assessment as a practitioner: that culture and process change takes time and patient effort to inculcate within an

organization; and that a better rubric for assessing the efficacy of these interventions is to ask whether they have continued as work practices within these organizations. In at least two cases that I am aware of, they have. But again, given the long-term nature of the subject matter, assessing the level of results at the level of "shipped products" or organizational KPIs is inherently difficult—if not impossible—within the context of this research program.

In summary, the professional development exercises yielded several important findings that have fed into further iteration of the curriculum, and also point towards opportunities for further research, namely:

- 1) The inner-directed workshop exercises (values assessment, resource mapping, dyadic dialogue, and personal theories of change) resonated strongly with almost all participants, equipping them with an improved awareness of their own posture and mindset as designers. The workshops seemed to validate the premise of inner work as a critical fulcrum point for helping participants deepen their perceptions of meaning at work, and improving their self-reported sense of agency in being able to effect long-term systemic change in complex systems.
- In the context of professional workshop settings, introducing rigorous forecasting and trend analysis poses a formidable challenge. Absent a more robust planning process to create research deliverables in advance,

much of the subject matter tended to revolve around subjective observations and hypotheses that participants were able to formulate in the moment. As a result, exercises related to frame creation—horizon scanning, wicked problem mapping, and project planning—proved difficult to conduct in any meaningful depth.

- 3) While the experiential prototyping exercises also suffered from the compressed timeline, these efforts seemed to fall more naturally into practitioners' professional wheelhouses; and these kinds of exploratory sprints, coupled with a process of backcasting to tie these efforts to longer-term possible futures, seem promising.
- 4) Though most participants found the workshops engaging and enjoyable, the format of time-boxed workshops in corporate settings inherently limits the impact of these exercises on organizational goal-setting processes. While they can serve as a useful introduction or sampling of skills and methods, ultimately it will take much more sustained, long-term programming to effect the kinds of inner and outer transformations that would yield a truly regenerative form of UX practice.

Were I to design a further interaction of these workshops, I would hope to design stronger feedback loops to capture longitudinal data about how these practices

actually bore out in practitioners' work lives in the wake of the workshops. As it stands, these findings are largely directional, as I was not able to conduct a thorough educational outcomes assessment to build more confidence in the level of skills acquisition; here a comparative assessment across cohorts might also have been useful. On balance, however, the professional development workshops nonetheless yielded valuable learning that, when combined with the practitioner interviews (chapter 7) and my own autoethnography (chapter 6) provide a workable basis for formulating a set of insights and observations, to be discussed further in the next chapter.

# 9 Discussion of Findings

This research program set out to investigate the barriers that UX practitioners face in trying to incorporate systemic, long-term perspectives into their work, by exploring the utility of design frameworks and methods drawn from the realms of alternative economics, meaningful work, and strategic foresight in helping practitioners to redirect their practices. These objectives are met with the findings outlined in chapters 6, 7, and 8, which discuss the professional experiences of more than 100 US and European UX practitioners currently working in industry. Chapter 6 lays the foundation for this practice-led inquiry with autoethnographic reflections drawn from my own 27-year career as a practitioner. Chapter 7 probes the experiences of 15 senior UX practitioners in leadership roles via one-on-one interviews. Chapter 8 describes the process of introducing a series of design methods in situated learning workshops with more than 125 participants working at different levels of seniority in for-profit enterprises over a four-year period, with an assessment of the efficacy of these methods.

The analytic framework of this research hinges on identifying a set of perceived obstacles to long term-focused work that these participants encounter in their work, while shedding new light on the organizational and cultural pressures that shape these dynamics—especially in the cross-functional, team-based product development organizations in which many UX practitioners now work. The findings from this research point to the inherent challenges of reconciling the performative pressures of for-profit design work with the long-term, systemic concerns of transition design. This research further explores the inner dimensions of these conflicts, and the effects of short-term pressures on participants' perceptions of meaning and purpose in their work. These findings also highlight the challenges of bringing speculative design strategies to bear in a field of practice so driven by mechanistic management methods and UX processes that are deeply enmeshed with consumerist assumptions about the primacy of "users" as the object of design practice.

By interrogating these assumptions, introducing new frameworks for value creation and exchange, and assessing the utility of new methods rooted in strategic foresight and the emerging transition design framework, this research theorizes a new framework for UX practice, along with a set of practices that UX practitioners can incorporate to redirect their work towards more sustainable, long term-focused outcomes that yield a deeper sense of personal meaning and fulfillment. Ultimately, I theorize a new model of regenerative UX practice that seeks to realign the broader field of practice towards wider-angle societal goals, through a process of inner reflection and practice redirection.

To frame this analysis, I have adopted Brookfield's (1988) model for critical reflection, consisting of the following building blocks:

- Assumption analysis Assessing current beliefs, cultural conventions, and social structures to assess their impact on practice.
- 2) Contextual awareness Exploring the cultural and historical context within which these assumptions have taken shape.
- 3) Imaginative speculation Envisioning alternative ways of thinking and

behaving through creative exploration.

4) Reflective skepticism - Questioning claims of truth by suspending or even rejecting one's current knowledge of a particular set of phenomena.

The primary research components of this program—namely, the autoethnography, participant interviews, and workshop interventions described in chapters 6, 7, and 8—focused largely on capturing and analyzing practitioners' current assumptions about their work; while the foundational material in chapters 3 and 4 explores the landscape of theory and praxis in which these assumptions operate. The purpose of this chapter, then, is to focus largely on the third and fourth parts of Brookfield's framework: synthesizing research findings in hopes of laying the groundwork for a process of imaginative speculation about how UX practice might further evolve, and interrogating some of the underlying claims of truth embedded in these findings. Ultimately, this process will lay the foundations for a new set of proposed heuristics for post-capitalist UX practice (to follow in chapter 10).

# 9.1 Emergent Themes

In this section I attempt to capture and synthesize a set of themes that emerged from all three research tracks: the workshops (chapter 8), the practitioner interviews (chapter 7), and my reflexive autoethnography (chapter 6). Before enumerating these findings in depth, let me recap the four baseline assumptions that informed this research at the outset:

- That UX practice in for-profit enterprises is constrained by the performative pressures of free market capitalism.
- 2) That these pressures manifest for practitioners in the form of both extrinsic pressures and inner conflicts that lead to a diminishment in perceptions of meaningfulness in their work.
- 3) That exposure to new frameworks and methods drawn from the realms of alternative economics and strategic foresight can provide a pathway for practitioners to redirect their practices towards more sustainable, long-term outcomes that yield a deeper sense of purpose and meaning in their work.
- That situated professional learning interventions—primarily workshops—provide a viable pathway for effecting a process of change for these practitioners.

The first and second assumptions were largely borne out by this research. In assessing the validity of the third and fourth premises, however, a more complex picture emerges—especially around the viability of the various design methods explored in the workshops, and the utility of the episodic workshop format in fostering a process of meaningful change.

The following sections outline these findings in more depth, before considering the potential longer-term implications for UX practice (in section 9.2).

## 9.1.1 Performative Pressures

As expected, the interviews and workshops confirmed my initial hypothesis that, despite the rising stock of design teams in many organizations, many in-house UX practitioners feel increasingly pressured to deliver incremental short-term results in a way that feels far removed from the more expansive, human-centered ideals that initially attracted them to UX practice. Without exception, participants reported that the constraining effects of short-term financial pressures and cross-functional team structures that often limited their sense of agency and personal fulfillment at work. Most participants cited examples of projects where short-term time pressures compromised the depth and quality of their design work, and compromised the level of wider-angle organizational and societal impact they might otherwise hope to achieve. Participants consistently reported that the prevalence of data-driven design practices (especially A/B and multivariate testing), and Lean/Agile software development methods created incentive structures that reward an incremental, "feature factory" approach to creating UX deliverables - typically highly tactical artifacts like user interface prototypes, flow diagrams, and functional specifications-and constrained their ability to engage in more imaginative or speculative work.

These findings came as no surprise, and are amply borne out by the professional dialogue and contemporary critiques of UX practice. Since this theme is explored in considerable depth in these earlier chapters (see sections 3.2, and chapter 7), further elaboration on this point seems unnecessary here.

# 9.1.2 Inner Conflicts

The effects of extrinsic organizational pressures on practitioners' inner lives forms a

central line of argument in this dissertation; and this theme is also largely borne out by the research findings. Many practitioners report that in recent years they have grown more aware of the extractive nature of traditional capitalist business models, and feel increasingly open to alternative ways of thinking and framing project goals. However, by and large they lack the critical vocabulary to engage with the larger problem of capitalism in much depth. Concepts like regeneration, post-capitalism, and alternative forms of capital have yet to penetrate the mainstream professional UX dialogue. That said, many practitioners were keenly aware of the "ethical turn" in UX practice in recent years, as evidenced by the outpouring of recent rhetoric about design ethics and responsible innovation. However, they struggled to connect these critiques in a meaningful way with their applied work in professional settings. For many practitioners, these critiques seem well-intentioned but difficult to act on in practice, usually falling well short of pointing the way to any meaningful shifts in their UX practices, which have largely remained unchanged for at least a decade. Often these critiques seem to amount to maximalist positions: either exhorting them to disengage entirely from UX work for commercial enterprises, shift focus to academic or non-profit work, or revert practice to a consultative role in which practitioners exert more control over their choice of clients and projects. For many practitioners working in industry, these choices seem untenable. And despite the inner conflicts they sometimes experience, many practitioners also report a deep level of satisfaction with seeing the result of their design work out in the world.

The dimensions of these inner conflicts often play out in highly personal and

idiosyncratic ways. At a surface level, most participants voiced a sense of frustration and in some cases a kind of overarching professional malaise: a sense of powerlessness in the face of capitalist business practices that shape and circumscribe the goals of the projects on which they work. This in turn led to a sense of lost purpose and meaning in their professional lives. Most also felt that these tensions were somewhat exacerbated by working as part of in-house product development teams (as opposed to the agency or studio environments that predominated 10-20 years ago). Some participants reported feeling sufficiently frustrated that they had actively considered switching careers. But it would be overly simplistic to suggest that all participants experienced these tensions in the same way, or to the same degree. As Bailey and Madden (2016) conclude, finding meaning at work is a highly personal endeavor-but the drivers of "meaninglessness" at work seem more predictable, often related to a sense of loss of agency or devaluing of professional craft skills. Making matters more complicated: UX practitioners working in industry must to some extent internalize organizational goals in order to function effectively. When one's livelihood depends on the growth of the company, it is all but inevitable that practitioners end up cultivating a kind of "internalized capitalism," in which they strive to align their personal values with a larger company mission.

Although many practitioners lacked the vocabulary to describe these tensions in terms of industrial capitalism per se—and several nonetheless invoked corporate profit motives as an overriding constraint—many participants also spoke in terms of supporting "the business" as a baseline concern, one commonly held by any employee

in a for-profit organization. Many practitioners thus find themselves caught in a difficult professional paradox: feeling constrained by extrinsic business pressures, yet also conditioned to derive enjoyment from organizational reward structures that valorize incremental, short term-focused work. This dynamic creates a kind of learned helplessness, in which designers often find themselves accepting these constraints as a necessary condition of their material well-being.

In trying to probe more deeply on the dimensions of these inner conflicts in hope of identifying a set of generalizable learnings, the values mapping exercises proved surprisingly powerful for many participants. The process of structured reflection and dyad interviews with peers allowed for a depth of reflection to take place even within the confines of a time-limited exercise. This inner-directed process of values reflection during the practitioner workshops seemed to provide a particularly useful lens that enabled participants both to locate the points of friction between their inner and outer lives, and to identify opportunities for realigning their practices in ways that mapped more closely to those values. Most importantly, this process of inner reflection seemed to beget a natural process of considering more systemic outcomes as part of their work—with the effect of, as one participant put it, "Breaking down my worldview." As another participant put it, the exercise left her "leaving feeling energized to ensure my work reflects my values."

To the extent that practitioners felt constrained by a particular set of role expectations, they seemed to feel that an invitation to bring more of their "whole selves" into the discussion led them to consider the interaction between their organizations and the larger societal, cultural, economic and political systems in which those organizations operate. But these dynamics are inevitably fraught. As Turner (2017) argues, there is a strong undercurrent of 1990s liberation management theory at work in tech companies, in which organizations "urge employees to see their work for the company as a species of personal development." Thus, individuals sometimes struggle to distinguish between a company's business goals and their own personal so-called development opportunities.

While the values mapping exercise resonated strongly with most participants, many nonetheless struggled to find clear pathways for connecting their self-professed values with their day-to-day work as UX practitioners. The most fruitful experiment along these lines came during the final Etsy School and IxDA Education Summit workshops, where participants worked in dyads to "mash up" their values with other participants' values, and to identify specific project opportunities that they felt would enable them to realize their personal values at work in the context of a particular long-term future scenario. Some of the most inventive and engaged product ideas emerged at this juncture where participants had the opportunity to juxtapose their values with colleagues in search of common cause, then mapping those values to specific product opportunities through the lens of scenario planning. This ranks among the most promising methodologies identified in this research, and one that seems ripe for further exploration (see section 9.4).

These findings point towards a latent need for new regenerative practices as a counter-weight to the fundamentally extractive nature of design practices rooted in

capitalism. The value of regenerative design points towards an opportunity beyond Simon's characterization of design as the act of "changing existing situations into desired ones" (Simon, 1988)—the creation and improvement of a particular set of phenomena—but rather towards the more transformational opportunity of nesting oneself within and making contributions to a larger system, as a means to foster beneficial growth and "generate a field of creative energy that makes it possible for living beings to bring forth the best they are capable of, individually and collectively." (Sanford, 2020). This process of nesting—of situating oneself within a system of inner values and outer circumstances—can help create more clarity for practitioners in locating opportunities to intervene in the larger complex systems around them.

Such personal transformations inevitably involve long-term investments and periods of prolonged inner reflection that are difficult to effect within the limited time horizon of a single professional workshop setting. While the research to date indicates a strong potential appetite for such an endeavor with UX practitioners, the constraints of the workshop setting do not allow me to draw firm conclusions about whether and how such a process of longitudinal reflection might play out with cohort of practitioners over time, although my own personal reflexive practice would seem to point towards an opportunity for practice shifts that take shape over a period of years with sustained engagement and reflection (see section 8.3 for further discussion of the limitations of this research).

#### 9.1.3 Limits of Experiential Futures

One of the most surprising—and disconfirming—insights to emerge from this research was the level of skepticism I encountered towards the kinds of speculative design work that forms such a central component of many design futures initiatives. While most participants reacted favorably to the prospect of using strategic foresight methods to help broaden the context and expand the timelines for their project work, many also voiced considerable skepticism about creating design artifacts that seem too far removed from their core work practices of building "shippable" products and services with individual users in mind.

While the notion of future-focused design work resonated with most participants in principle—especially the prospect of planning and designing along multiple time horizons—it became clear almost from the outset that UX practitioners struggle to conceive of doing meaningful design work on timelines stretching much more than five years into the future, let alone long-term time horizons of ten, fifty or even hundreds of years envisioned in the transition design framework. For most practitioners, the outer range of their professional apertures for design work seems to lie in the two- to three-year time horizon. When asked to consider more long-term, speculative kinds of UX design exploration, most participants reacted with a viscerally negative reaction, often dismissing this kind of work as too "blue sky" or "waterfall" to gain meaningful traction with stakeholders in their work environments.

While all design work is, in some sense, a form of futuring (HIII & Candy, 2019), these negative reactions to more explicitly long-term focused speculative design work seem to surface a deep level of discomfort that in-house designers seem to feel with working on projects that they feel stand the risk of having limited or no impact. The guestion then becomes: does the fault lie in some way with the tools themselves, or is the philosophical resistance to speculative design approaches simply a reflection of the discomfort that UX practitioners face with engaging in these more far-reaching modes of practice, given the limited scope of their current roles? The answer is likely some combination of both. Some of these foresight tools might well gain more purchase in a setting where UX practitioners are more directly engaged "upstream" in corporate strategy exercises-something that seems to be happening more regularly with the rise of design thinking in corporate management circles. But at least some of the resistance encountered also undoubtedly points towards an understandable response to what may seem overly exoticized project framing, suggesting that such activities may require more careful framing and calibration in the context of in-house UX teams: to ensure that practitioners can see a viable path from long-term visions to their day-to-day work and productive relationships with cross-functional peers. For many, working fast is not necessarily a problem in and of itself; most designers are perfectly familiar with the challenge of working within time constraints. The frustration stems more from situations where they feel business conditions have limited their ability to influence the vision or strategic direction of a particular project; or in some cases compromised the quality of their craft by not engaging a full range of design activities (e.g., when design is seen primarily as a prototyping function). But it does not therefore follow that they wish to work on explicitly "speculative" projects; nor to create the kinds of world-building

artifacts that may feel quite distant from their core competency in designing user-focused digital products and services.

Most of the participants interviewed reported taking considerable pride in seeing their work out in the world, and to see digital products, powered by software code, working according to their specifications. They also typically derive great fulfillment from improving the lot of individual users, by delivering emotionally satisfying experiences, reducing friction in everyday tasks, or building considered, well-crafted software products. Their frustrations often lie more in the organizational models within which these projects happen, in which they often feel the agency of designers is being steadily degraded. These concerns seem to point towards the need for well-developed "backcasting" methods and frameworks that would allow UX practitioners to engage with experiential futuring exercises in a way that also enables them to identify a set of design moves they could make in the relative here and now.

The question, then, is how to align strategic foresight and speculative design methods with the real-world software development climate of Lean/Agile methods that predominates in so many commercial organizations. While I fully expected that practitioners would point to extrinsic pressures like short-term profit motives, lean and Agile methods, and A/B and multivariate testing, I failed to anticipate several other key factors that prohibit them from working in this way: especially the norms of contemporary product management practice, which are largely geared towards reducing risk and ensuring the efficient use of resources. Product roadmapping exercises almost always focus on 6-12 month development cycles, and work that falls outside that horizon, while tolerated if teams can "self-fund" the work, is rarely awarded the same priority—at best, it is often relegated to "R&D" workstreams which, since they are typically devoid of software engineers, are often not seen as material product investments.

Despite the evident frustration that many practitioners encounter in trying to incorporate long-term perspectives into their work (see section 9.1.2 above), many of them tend to look askance at what they see as overly imaginative "blue sky" design exercises. However they might bristle at the friction of short-term business pressures and data-driven software development methodologies, they also tend to regard "Big bang" speculative design projects as having limited value in their organizational settings. While most reported experiencing frustration and tension with stakeholder demands to deliver incremental design work, they also paradoxically derive a sense of meaning and fulfillment from seeing their work "ship," and from measuring the fruits of their labors in terms of reliable metrics around user engagement and retention—metrics that also often directly shape practitioners' financial compensation.

Given this combination of a designerly bias towards action and the forces of professional self-interest, many participants tend to look askance at what they see as grandiose design initiatives with limited chance of success in the market. For some practitioners, speculative design work harkens back to some of the earlier excesses of waterfall-based product development approaches to which Agile and Lean methods emerged as a response. The risk of compounding faulty assumptions, committing too early to an inflexible product vision, and an inability to iterate in response to ongoing research findings all present formidable risks to any large-scale software project; and such highly-specified (some would say over-specified) projects are in any case all but impossible to deliver using contemporary Lean/Agile methods that are explicitly intended to break products into small pieces to support an ongoing process of iterative development.

While participants reacted favorably to a number of methods drawn from the realm of strategic foresight-like horizon scanning, driver analysis, drawing out consequences (a.k.a. futures wheels), scenario planning, and backcasting-when asked to "design into" a hypothetical future the vast majority turned quickly to established UX design methods like storyboarding and UI prototyping. More speculative methods—like world-building exercises, narrative storyboards, or imaginative "artifacts from the future" — met with either a muted response or outright skepticism. Most of the practitioners involved in this study professed to enjoy the pace of working in industry, liked to prototype and iterate quickly, and derived great satisfaction from seeing their work out in the wild. While they also longed to connect their work with wider-angle societal concerns aligned with their personal values, they evinced pointed skepticism towards engaging in what they saw as overly ambitious work on "vaporware" projects – lofty, aspirational product concepts that make for compelling fodder for the purposes of sales, marketing, or public relations, but never see the light of day as finished products. One participant bemoaned the time and effort lost on a past project where he was asked to design "a software fantasy city" that never came close to materializing. Several participants cited the inherent challenges of

working on big-picture design projects with long development cycles: changes in team composition, lack of executive sponsorship, and a tendency for wide-angle projects to become watered down by too much input from a wide range of stakeholders.

From these conversations and workshop exercises, a clear consensus emerged that the tools of speculative design face considerable obstacles to adoption in commercial UX practice settings. Yet practitioners also clearly saw the risks inherent in the current Lean/Agile climate as well—focusing on feature-level development over a more holistic systems view, the lack of a coherent product vision, and a tendency to prioritize behavioral data signals over design principles and higher-level, systemic goals that are inherently difficult to measure. The promise of speculative design—to situate new products and services within hypothetical future scenarios rooted in everyday life, in order to foster debate about the implications and potential unintended consequences of those futures—may yet offer a potential pathway towards creating visions of the future that might yet allow teams to learn and iterate in the here and now (Dobson, 2021). See section 8.2.3 for further discussion of the implications of these findings for UX practitioners, in which I speculate about the possibility of a new form of lean futures practice.

# 9.2 Implications for UX Practice

Conducting this inquiry over the past six years in different organizational contexts has afforded me the opportunity to assess the efficacy of a number of different

methods not commonly employed by UX practitioners. Given the practice-led nature of this research, one of my primary goals has been to make a contribution to the larger field of practice in the form of actionable methods that UX practitioners can apply in their professional work. But if strategic foresight teaches us anything, it is that the future is inherently unknowable - and given the polymorphity of social, economic, and technological drivers that shape the field of UX practice, it would be the height of designerly arrogance to propose a singular path forward for practitioners. Rather than take a proscriptive approach, in this section I aim to apply some of the very design methods that I have introduced to participants in the workshop, to explore whether the tools of strategic foresight, coupled with related transition design frameworks-might enable a process of envisioning multiple possible futures for UX practice. Three methods in particular seem pertinent here: scenario planning, Geels's multi-level perspective (MLP), and finally an exercise in wicked problem mapping. The following sections apply each of these frameworks in turn to the question of how UX practice can or should evolve in response to a range of changing socio-technical conditions.

The findings and key themes enumerated in the previous section 9.1 serve as a set of baseline hypotheses that we might characterize as an extended exercise in horizon scanning: surveying a particular domain (in this case, the field of UX practice) for emerging trends that we could characterize as signals of the future. By analyzing these signals in search of underlying drivers of change, we can then begin to formulate a set of possible—and preferable—futures for UX practice, and begin to consider the wider-angle implications for how these practices might evolve.

# 9.2.1 STEEP Analysis

If we take the thematic findings presented in the previous section 9.1 as a starting point for envisioning these possible futures, we can leverage these insights to identify a set of drivers of change that could inform a process of scenario planning. For the purposes of this exercise, I will focus primarily on signals gathered from the first two categories (performative pressures and inner conflicts); the third set of findings (regarding the limits of professional development workshops) will form the basis of discussion in sections to follow on limitations and considerations for further research (sections 9.3 and 9.4).

As a first step, STEEP analysis provides a workable framing mechanism for scaffolding some of the key insights gathered to date (STEEP also provides the conceptual foundation for the wicked problem mapping exercise used in transition design workshops). Table 6 below depicts the key themes from section 8.1 in the form of a STEEP analysis:

Factor	Driver of change
<b>S</b> ocial	Growing prominence of UX field; shift in work environment from studios/agencies to cross-functional in-house product teams
Technological	A/B testing and "big data"-driven design processes; rise of Lean/Agile software methodologies
Economic	Persistence of capitalist business practices leading to the continued financialization of "user" (aka consumer) outcomes
Environmental	Climate crisis driving a growing recognition of the extractive nature

Table 6: STEEF	analysis of c	commercial l	<b>JX practice</b>
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	of capitalism and interest in alternative economic frameworks	
Political	The open Internet under increasing regulatory pressure; legislative focus on reining in the tech industry	

As the table above shows, a number of driving forces converge to shape the current state of UX practice. Considering each of these factors and drivers in more depth enables us to consider the potential implications or consequences for UX practice in the years to come.

The social aspect of change—i.e., the trend towards practitioners working as part of in-house teams—has altered the organizational and cultural context in which many UX practitioners work: typically engaging as part of cross-functional teams with colleagues from other disciplines like product management, engineering, data science, and marketing, rather than collaborating primarily with designers and other "creatives," as is often the norm in agency or studio environments. These practitioners inevitably tend to absorb the values and professional viewpoints of these companion disciplines more readily than they might in a client-service relationship, and to see themselves primarily as aligned at a personal level with organizational goals vs. the more detached, dispassionate posture of consultative relationships. In turn, UX practitioners also enjoy more putative influence on these other fields of practice, as evidenced by the growing embrace of design thinking in corporate management circles. Despite their growing numbers and the appearance of having a "seat at the table," however, many UX practitioners nonetheless see themselves as junior partners in these endeavors and lack the level of strategic influence and agency to which they aspire.

On the technological front, the rise of Lean/Agile methods and data-driven design methodologies has led to a perceived narrowing of the horizons of UX practice (as discussed in chapter 7 and section 9.1.1). Yet the embrace of these methods has coincided with a dramatic expansion in the number of UX roles in many organizations, as these more mechanistic design processes fuel the need for practitioners who can respond with "just in time" prototypes and other design artifacts. As a result, UX practitioners enjoy more visibility and may be positioned to exert more direct influence on the professional practices of their peers than they would have in more traditional consultative relationships. While critical and speculative design work has attracted considerable interest and attention (especially in design schools and non-profit settings), this kind of work remains, at present, out of reach for most practitioners working within a short term-focused software development environments that constrain the scope and impact that many UX practitioners can achieve.

If the kinds of speculative world-building and experiential futures that have thus far characterized design futures work remain seemingly unapproachable for most UX practitioners, what other avenues for intervention might be available to them? The professional development workshops (discussed in chapter 8) point towards several promising potential avenues: inner values mapping, backcasting, and experiential prototyping techniques seem like the most accessible kinds of futures-focused design methods for practitioners working in industry. More rigorous project framing exercises (like scenario planning and STEEP analysis) hold promise, but will demand broader organizational commitments and allocation of resources to gain purchase in most organizations. If such conditions do obtain, however, then a rigorous process of backcasting and product roadmapping could well create a viable pathway for bridging futures work with the quotidian realities of UX practice in industry.

The question of whether Lean and Agile UX methodologies will persist in their current form, or give way to newer, more speculative design approaches rooted in strategic foresight and systems thinking, constitutes one of the two critical uncertainties that I will explore further in the next section 9.2.2. Global capitalism remains the governing operational structure in which most UX work still happens. The associated reductionist management approaches and tendency towards financialization of outcomes (as discussed in chapters 3 and 4) thus pose an overarching constraint on current UX practices. These ongoing performative pressures manifest for many practitioners in the form of inner conflicts, and in some cases as a form of "internalized capitalism" that makes it difficult for them to envision practicing their work within any other economic system. This form of learned helplessness (Seligman and Maier, 1967) poses one of the thorniest challenges for practitioners who often otherwise lack a clear theoretical basis for what they do. Yet the global capitalist system may yet give way to new economic systems that would dramatically alter the context in which UX practitioners work; the question of whether and when that transition happens thus constitutes the second critical uncertainty that I will explore in the next section (8.2.2).

While environmental considerations typically do not intrude directly on UX practitioners work unless they are working on explicitly sustainability-focused projects, nonetheless the global climate crisis provides an overarching context in which many practitioners must now work to situate their professional lives. As the planetary consequences of unbridled consumption and extractive economies come into focus, more and more practitioners find themselves drawn to exploring the ethical and long-term dimensions of their work. Ambient awareness of climate change surely contributes to a growing recognition of the interdependence of complex systems, and the role of digital products and sustainable business practices in either contributing to or mitigating these harms. Thus climate change provides an essential framing for interrogating the structures and strictures of global capitalism.

Finally, the political landscape in which so much technology development currently happens is changing rapidly, as policymakers worldwide increasingly seek to regulate the global technology industry and introduce legislation to mitigate societal harms, reduce disruptions to legacy industries, and—in some cases—begin to impose tighter regulatory restrictions to the global open Internet that has ultimately given rise to the explosive growth of UX practice. As the regulatory landscape shifts, press and public scrutiny of technology companies is on the rise, likely contributing to heightened levels of awareness among practitioners of the broader societal implications of their work, and likely underpinning the so-called ethical turn in the UX practitioner community in recent years.

This STEEP analysis offers a framing tool for identifying a set of critical

uncertainties that will inform the scenario planning exercise to follow in section 9.2.2.

## 9.2.2 Scenario Planning

Drawing on the drivers and open questions identified in the STEEP analysis above (section 8.2.1), I have identified two sets of critical uncertainties to inform the next step in this analysis: capitalism vs. post-capitalism, and Lean/Agile UX vs. speculative design.

## Capitalism vs. Post-capitalism

Have we indeed reached a state of "peak capitalism," Mason (2015), Drucker (1993), and others have suggested? If not, then, the fundamental logics of market capitalism seem unlikely to shift in any significant measure; at best we might hope for a modest expansion of corporate social responsibility efforts and environmental impact reduction initiatives. But if we are indeed poised to enter a period of global economic transition, then we can begin to envision how UX practice might evolve in a post-capitalist era marked by a shift towards less consumption, more sustainable ways of working, and concerted effort to make the transition towards a more just and equitable society. If so, then we may begin to consider the ways in which UX practice needs to evolve to support these broader systems-level shifts.

## Lean/Agile UX vs. Speculative Design

At the level of practice, the central question at play hinges on the extent to which

emerging design approaches like speculative design and critical futures gain traction in professional UX circles. While one might argue that this uncertainty is somewhat under the control of UX practitioners to determine, the reality is that a transition away from Lean/Agile practices is unlikely to be driven by the efforts of UX practitioners alone. Rather, it will involve broader-based changes in the cultural landscape that predominates in most companies: a shift at the level of leadership and corporate governance away from short-term, incremental financial performance and towards more holistic, triple-bottom line concerns at the highest levels of leadership that would create the market (so to speak) for more speculative futures exercises. The likelihood of such a macro shift in corporate consciousness remains uncertain at best. Are the organizational and cultural forces that drive current software development and data-driven design methods so entrenched that these practices will persist even amid a broader societal transition towards just and equitables; or will growing interest in speculative design and experiential futures work over time position designers to drive more organizational appetite for funding big picture, long-term focused design futures projects? If so, then we may consider the ways in which UX practice might shift to allow for more speculative and imaginative ways of working that drive towards more long-term, systemic outcomes. Figure 31 below takes these two critical uncertainties as the basis for positing four possible long-term outcomes for professional UX practice:



Figure 31: Scenario plan for a range of potential UX Futures (2022) © Alex Wright

The spectrum of future macroeconomic regimes forms the baseline x-axis, ranging from a persistent state of present-day industrial capitalism, to a new post-capitalist world order (see section 4.1). Along the y-axis lies the range of possible pathways for UX practice: from the present state of short term-focused, iterative prototyping and evaluation that is the hallmark of contemporary Lean/Agile UX work, to the more imaginative and unbounded narrative world-building of speculative design and experiential futures. Juxtaposing these two axes allows us to envision how new forms of UX practice might emerge at the intersection of these plausible futures: ranging from modest improvements to the status quo, towards more expansive and potentially disruptive practice redirections. I will now consider each of these plausible scenarios in more depth, in ascending order of preferability:

#### Harm Reduction

This scenario falls closest to the status quo, in which UX practitioners continue to engage primarily in tightly scoped, short term-focused project work using the well-worn toolkit of current UX methods (see chapter 3). Here the opportunity space lies not in fundamental practice redirection, but rather in the mitigation of harmful consequences. Much of the current rhetoric around sustainability and design ethics falls squarely into this scenario. While this limited horizon might seem dispiriting, it is also the most likely operating model in which many UX practitioners will work for the foreseeable near future. Accepting the constraints of limited horizons may be a useful forcing function in identifying highly targeted design interventions that can nonetheless yield incremental positive impact: for example, responsible innovation around artificial intelligence efforts, mitigating carbon impact, improving accessibility, and focusing on product inclusion and anti-racist design practices. These are the opportunity spaces for incremental "quick wins" that may nonetheless yield societally positive outcomes.

#### **Potemkin Futures**

In this scenario, the continued expansion of the design thinking movement in corporate circles—with its associated expanded investment in UX teams and budgets—coincides with a growing interest in speculative design and experiential futures methods, driven in part by the expanded involvement of senior management

stakeholders in design activities—leading to a tiger alignment between UX work and long term-focused strategic planning cycles—and in part by the continued popularity of these practices in design schools and within the broader UX community of practice. This juxtaposition of future-focused design practices with essentially unchanged corporate profit motives points towards a corporate landscape where the methods of strategic foresight and experiential futures are at some level co-opted in the service of extractive business practices. In the best case, such a transition might plant the seeds for longer term societal and organizational transitions, with UX practitioners finding points of leverage to embed wider-angle societal concerns in their work (here the past experiences of mid-century design-focused organizations like IBM and its subsequent impact on corporate culture, as discussed in section 3.1, may offer a hopeful note). A more dispiriting outcome would involve the creation of ambitious and far-reaching design projects that ultimately serve to reinforce and strengthen existing systems of harm; a kind of "future-washing" that serves to mask the deleterious effects of business logics that privilege financial gains over other forms of value creation and exchange.

#### Lean Futures

In a world where Lean/Agile UX and data-driven design methods persist amidst a broader reconfiguration of the global economic system, the horizons of UX practice might remain limited by the cultural norms of cross-functional development teams and the persistent organizational legacy of technical rationality (Schön, 2005) in management circles. In this scenario, UX practitioners would still face challenges in trying to justify ambitious, long term-focused exercises in narrative world-building and speculative or experiential futures. However, underlying shifts in the economic landscape might nonetheless enable them to embed certain aspects of strategic foresight and other systems-oriented design frameworks into their work. While such efforts might ultimately resemble the outputs of current UX methods in terms of the artifacts created, organizational planning process related to project framing and goal-setting might undergo significant shifts that could fundamentally alter the focus of these efforts. Here Wright's (2015) model of "erosion" seems like a useful reference point. Rather than trying to "smash" capitalism by trying to overturn the core operating processes of an organization, we might instead envision a new form of design futures practice that operates within these frameworks. Lean futures methods could embed new methods and frameworks—such as inner-directed reflexive practices, alternative forms of capital, or a wide spectrum of strategic foresight tools – into existing organizational processes. For example, the increasingly popular design sprint methodology (Knapp, 2016) may provide opportunities for embedding strategic foresight exercises as part of the project framing exercises that typically take place at the outset of these projects. UX practitioners could also leverage backcasting as an approach for engaging with strategic planning activities that rely on foresight methods like scenario planning, futures wheels, or wicked problem mapping exercises – enabling them to define and prioritize new workstreams that are sufficiently discrete to form the kinds of "user stories" that are so central to Lean and Agile development methods. Finally, many organizations offer their teams occasional opportunities to engage in

collective hacking or brainstorming exercises at certain times during the year. The hackathon or "hack day" format – first created by Niels Provos at OpenBSD, popularized at Yahoo! In the mid-2000s, and now widely practiced in tech companies worldwide (Jimenez, 2021) - might also provide an apt venue for lightweight strategic foresight exercises and exploratory prototyping not constrained by the extrinsic pressures of existing product roadmaps. There is a kind of organizational jiu-jitsu at work here: by leveraging the same tools and capabilities that often threaten to constrain designers work—like rapid testing methods, live data capture, and Lean and Agile software development methods involving lightweight front-end engineering—the rapid research prototype holds the potential to transform the forces of organizational resistance into a powerful ally. By creating usable artifacts that a team can use to develop hypotheses-absent more "experiential" deliverables like storyboards, detailed narratives, or elaborate scenario planning exercises – UX practitioners may find useful tools for shifting product team dialogue towards more long-term outcomes. But these interventions will inevitably fall short of the more aspirational long-term goals of transition design. Absent a more multi-layered approach that encompasses a wider-angle range of tools—such as service design, organizational planning, public policy-making, and so forth—there are real limits to what kinds of change a lean futures toolkit could effect. There is not always, after all, an "app for that."

### **Regenerative World-Building**

Finally, the most preferable—though possibly least plausible—scenario involves the emergence of a new global economic order alongside a fundamental re-imagining

of UX practice. In a world where capitalism gives way to a new economic system predicated on degrowth, reduced consumer demand, and a rebalancing of organizational planning processes will evolve to rebalance the importance of financial outcomes in relation to other forms of value creation and exchange. As a result, digital design projects may take shape through a more holistic process of goal-setting involving multiple forms of capital, the consideration of indirect stakeholders, and the embrace of triple bottom line-focused management methods that could fundamentally alter the economic calculus that tends to privilege short-term behavioral and financial outcomes over more systemic considerations. In such a future, UX practitioners would need to interrogate their default tendency towards centering their design practices on individual "users"; and instead explore more systems-oriented, pluriversal, and dematerialized ways of working. At the level of UX practice, this could create the opportunity for some practitioners to move beyond the realm of tactical product and service design deliverables, to engage in new forms of imaginative and speculative work that align with more systemic, long term-focused organizational strategies.

#### 9.2.3 Multi-Level Perspectives

In any of the scenarios outlined above, a series of more- or less- disruptive redirections in current UX practice would need to take place. Any such change will likely not happen in a singular moment but rather over an extended period of evolution in the field of practice and in the broader socio-technical systems in which these practices take place. Here Geels's Multi-Level Perspective (2002), provides a useful lens for understanding the nested layers of change that could effect such longitudinal

shifts. Geels's model proposes three interlocking levels of systems impact:

- 1) The landscape forms the broad scaffolding in which a set of interactions happen—the realm of economic and political systems, cultural norms, or the natural environment. This layer moves slowly and absorbs change over long periods of time. For UX practitioners, the work they do is largely circumscribed the norms and business practices of global capitalism, as well as by the more specific constraints of the industries that tend to govern their work, especially the technology and advertising industries, as well as the educational landscape of design schools that play such a central role in framing their practices. Finally, at the level of technological infrastructure, the Internet itself constitutes a kind of landscape: an open, distributed, networked platform that is increasingly subject to regulation but also architecturally resistant to governmental or industry efforts at top-down control.
- 2) The regime consists of the "rule-set or grammar" of processes, skills and corporate cultures that hold sway in any particular organizational setting. This layer moves more quickly, embodying the forces of the landscape and creating the operating conditions within which practitioners work. Here the UX practice vocabulary of design and research methods, as well as the broader management conventions within which these methods take shape, provide the conceptual framework within which UX work happens. While specific tools, techniques, and artifacts come and go, the broader methodological vocabulary

of UX practice has remained remarkably stable over the past two decades.

3) Finally, the "niche" level constitutes specific technologies and products, which change more quickly in response to near-term economic, cultural, or environmental conditions. They typically provide the most actionable leverage points (to borrow Meadows's term) for effecting systemic change. From a UX perspective, this includes the kinds of artifacts being created (e.g., UI prototypes, journey maps, or UX research reports), as well as the software tools that practitioners use to do their work (e.g., Figma, Sketch, Adobe Studio, UserZoom, or various survey platforms), and the devices and platforms on which their work ultimately manifests (e.g., mobile and desktop computers, as well as emerging platforms like voice interfaces, wearables, AR and VR devices).

Applying this conceptual model to UX practice enables us to envision how design interventions at the niche level of practice (like introducing new types of design artifacts or research analysis) might trigger changes in the broader regime (in the form of new processes or practices), which could then lead to putative long-term shifts in the broader socio-technical landscape. Table 7 below shows a multi-level perspective on the current state of UX practice:

Table 7: Multi-La	vered Pers	pective on	<b>UX</b> Practice	© Alex	Wriaht 202	22
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Niche	Regime	Landscape	
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Tools	Lean/Agile development	Capitalism	
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Figma, Sketch, Adobe	User stories, scrums,	Public markets,	
Studio, UserZoom	kanban methods	advertising and	
		technology industries	
Artifacts	UX processes		
UI prototypes, task flow	User modeling, task	The Internet	
diagrams, journey maps,	analysis, affinity mapping,	Network protocols, open	
research reports	prototyping	standards, regulatory	
		frameworks	
Platforms	Communities of practice		
Desktop, laptop,	Workshops, conferences,	Higher Education	
wearables, voice	industry dialogue	Design schools,	
interfaces, AR and VR		Engineering schools,	
		Business schools	

Envisioning opportunities for productive intervention at the niche level seems straightforward enough: through the creation of new design artifacts, working process deliverables, or entirely forms of experiential world-building narratives that might resemble so-called artifacts from the future. At the landscape level, we might then envision how any of these new niche innovations would necessitate the introduction or refinement of processes: equipping practitioners with the vocabulary and toolkit to embed alternative forms of value creation into their goal-setting exercises, or incorporating strategic foresight methods into established UX processes like design sprints or strategic planning cycles. Ideally, these interventions will in turn exert a slower-moving influence at the regime level: challenging the dominant financial paradigm of global capitalism; influencing the regulatory environments that governs the Internet; and, over time, yielding changes in the educational practices of design, engineering, and business schools to inculcate future generations of practitioners with new frameworks rooted in alternative economics, meaningful work, and strategic foresight as the intellectual scaffolding for the future of digital design practices.

# 9.3 Limitations of this Research

As a practice-led research inquiry conducted largely within the context of for-profit commercial enterprises, this program was constrained at the outset by several limiting factors, mostly having to do with the inherent challenges of conducting doctoral research in a professional setting. The most obvious strictures involve intellectual property restrictions involving proprietary and confidential information, which in turn prevent me from discussing in detail many of the specific project outcomes that emerged as a result of these workshops. As a result, much of the material related to the workshops is descriptive rather than evaluative in nature (with the exception of participant satisfaction feedback, discussed in section 8.2). Further exacerbating this limitation is the shifting locus of this research between two different organizations (Etsy and Instagram/Facebook), which has also constrained my ability to assess longer- term

outcomes in terms of changes in process and culture (or lack thereof) that may have resulted from these workshop interventions. While I have access to anecdotal feedback from colleagues who still work in these organizations, I no longer enjoy the first-hand vantage point in these companies that would allow me to draw firmer conclusions about the extent to which any of these practices have "stuck" in these organizations. And the fact that I no longer work in either organization affords me a more detached position in evaluating the results than I might otherwise enjoy (see chapter 2 for further discussion of my own positionality in this research).

While I fully expected to navigate organizational constraints around intellectual property as a condition of carrying out this research, other limitations have come into focus more gradually as the research has unfolded. Chief among these are the severe time constraints that many UX practitioners (myself included) must contend with in trying to introduce and evaluate new practices in the context of their current professional roles. The episodic, time-constrained nature of the in-house workshop exercises that provide such a primary input for this analysis (see sections 8.1.3 and 7.1.5) imposed significant limits on the depth of material and level of methodological rigor that could be achieved in the context of workshops typically lasting 2-3 hours each. My experience of teaching a more extended, fully developed curriculum to design students at the School of Visual Arts (see section 8.1.6) and to UX practitioners at the IxDA Educational Summit (see section 8.1.4) further validates the limitations of trying to condense large bodies of theoretical material and entirely new practice methods into a series of time-boxed "one-off" corporate training exercises. At best,

these workshops tended to spark interest and enthusiasm, but it became readily apparent along the way that effecting meaningful shifts in practice will require more sustained, longitudinal engagement and a multi-modal approach to learning (see section 9.4 below on considerations for further research).

While these workshops met with a positive response from participants and provided me with an opportunity to test and iterate on the curriculum in highly applied settings, these experiences also point towards some of the inherent limitations of professional development programs as a vehicle for practice redirection. Although investing in learning and development initiatives constitutes a core component of many organizations' professional development offerings, these offerings almost invariably take the form of short-form workshops or self-paced online instruction. While these delivery vehicles are well-suited towards tactical skill-building and regulatory or compliance-related instructional needs (such as learning a new design or programming tool, or ensuring awareness of HR policies around insider training or secual harrassment), they do not lend themselves as well to more engaged educational interventions that attempt to introduce new theories, foster a process of inner reflection, or interrogate the nature of theory itself. The time-constrained format of on-the-job-training, coupled with the time pressures under which most professional UX practices must content, demands a highly focused presentation of material with little opportunity for "deep work" or reflection. As a result, it proved challenging to do more than scratch the surface of the challenges these practitioners face, and while many of them found the workshops engaging and interesting, the long-term efficacy of these

programs was inherently limited.

One might well argue that such explorations are better left to design schools, where students have more time and space to engage in deeper exploratory work and digest new theoretical material. However, my experience of designing and teaching an extended version of this curriculum at the School of Visual Arts summer intensive in interaction design (see section 7.1.6) also highlights two important limitations of traditional design education: 1) the lack of shared context that a shared employer offers in terms of overall organizational goals, culture, and process frameworks; and, 2) the lack of cross-functional perspectives that form such an increasingly important part of professional UX work, but are largely absent in design school settings where students inevitably find themselves collaborating with other, largely like-minded future designers. Given the growing influence of non-designers over design outcomes in many organizational settings, the inability to situate this work within real-world project context posed a significant limitation in evaluating the efficacy of this curriculum in an educational setting.

In both the in-house and educational versions of the workshop, this research would certainly have benefited from a more structured, longitudinal assessment of educational outcomes with participants in these programs. While I have been able to capture some of this feedback anecdotally, this research does not incorporate a sustained methodological effort to evaluate these long-term outcomes. The feedback to date has been directional at best.

The make-up of the participant cohorts in this research also carries a level of

self-selection bias, insofar as every participant agreed to take part in response to an invitation from me or one of the associated institutions. It seems reasonable to assume that all participants harbored at least some level of latent curiosity in the topics of strategic foresight, alternative economics, and meaningful work that formed the basis for the curriculum. The overwhelmingly positive participant workshop feedback likely paints an unrealistically rosy picture of how this work might land with a broader representative sample of practitioners, as any potential skeptics or philosophical opponents of this kind of work would likely simply not have opted to participate in the first place.

Finally, I would be remiss not to acknowledge the limitations imposed by my own position, privilege, and influence over the trajectory of this work. Almost all of the participants in both the workshops and the individual interviews entered this process by way of my own personal and professional networks. It should go without saying that every participant in this research (myself included) enjoys a position of power and privilege that is by no means representative of the broader populace of UX practitioners in the world (many if not most of whom do not currently work in in-house UX teams in large organizations). Almost all of the participants were highly educated practitioners from the US and Europe, with experience working as part of for-profit business entities. Among the interview participants, the majority were experienced managers and leaders with decades of experience working in corporate environments. While one might argue that the broader field of UX practice constitutes a highly privileged professional class to begin with—the present-day Samurai of Wells's technotopian future (further discussed

in section 4.2) (Wells, 1905), nonetheless the UX practitioners who took part in this research enjoyed even more privilege than most.

## 9.4 Considerations for Further Research

Looking back over this course of research over the past six years has yielded a number of insights that point towards opportunities for further exploration. Given the limitations described above—particularly around the constraints of the episodic workshop format, and the difficulty of assessing longer-term educational outcomes—I have identified several areas for further research that I intend to take forward into my journey as a UX practitioner and educator.

### 9.4.1 Longitudinal Interventions

This research has revealed a number of practical challenges in trying to introduce theoretical material and new methods in a condensed workshop format. There is a clear opportunity here to explore new directions in professional development and practice redirection. Drawing on my own experience of incorporating strategic foresight and transition design practices into my own work, I would like to explore how to create more of a sustained program of situated learning with UX practitioners working in my immediate professional sphere. This may take the form of a longer-running series of workshop exercises, coupled with multi-modal dialogues that may encompass asynchronous collaboration methods, and—most importantly—finding ways to apply these practices in the context of existing workstreams or strategic initiatives. To assess the efficacy of these interventions, I would also like to invest in

more longitudinal outcomes assessment, in hopes of deepening my understanding of how these theories and methods might contribute to further evolution of the field.

## 9.4.2 Lean Futures Toolkit

Given the prevalence of Lean and Agile UX methods in industry, coupled with my own conviction in the transformative possibilities of strategic foresight and alternative economic frameworks, there might be considerable benefit to creating a lighter-weight set of methods based on the material developed in this dissertation. By exploring tactical opportunities to embed new methods within existing frameworks—like design sprints, user stories, or other short-term planning activities—a more targeted set of processes and associated templates, a "lean futures" toolkit might hold promise as a means for equipping UX practitioners with useful and usable interventions that may help them redirect their practices and help soften the ground for a transition towards more ambitious, speculative forms of practice over the longer term. One promising line of exploration may involve the development of research prototypes—fully functional interfaces that leverage live data to create realistic software experiences – whose primary purpose is data and insight-gathering in the field. While these kinds of singular product prototypes may lack the world-building power of more speculative methods, and while their scope and impact may be inevitably limited by a reliance on present-day platforms and technological capabilities – nonetheless these kinds of exercises can have salutary effects by enabling teams to develop product-like experiences that are not directly constrained by current roadmap priorities.

### 9.4.3 Distance Learning

While most of these tools and workshop methods were created specifically for use as part of a real-time, collaborative workshop setting in a situated learning environment, the broad lack of continuing design education programs for working practitioners points towards an opportunity to create an accessible, online version of this material that could be made available to a broader cohort of practitioners. This could take shape as either an open source, self-paced educational offering; or potentially as a course offering embedded in an existing design program, possibly as part of a certificate program. The scenario planning exercise on the future of design education outlined in the IxDA Education Summit Workshop (section 7.1.4) points towards several promising such areas for future exploration. Possible venues for such a venture might include established design schools like Carnegie Mellon School of Design or the School of Visual Arts; or looking farther afield, professional design leadership training offered in program like the AIGA Business Perspectives for Creative Leaders at the Yale School of Management, or similar certificate programs at Parsons and the University of Illinois at Urbana-Champaign. An even more ambitious version of this program might involve developing a new certificate program for UX practitioners, perhaps under the auspices of Carnegie Mellon or the nascent Transition Design Institute.

#### 9.4.4 Design Futures for Non-Designers

The rise of the design thinking movement and growing involvement of

cross-functional stakeholders in design activities within many organizations, focusing exclusively on UX practitioners may prove too limiting an endeavor. For these methods and frameworks to gain purchase in business settings, it will require widespread buy-in and alignment with a broad range of cross-functional partners. It is difficult to envision a successful transition towards the regenerative ways of working outlined in this dissertation without the involvement of product managers and engineers, and business managers. Looking ahead, it seems that a ripe opportunity for future exploration might involve developing a version of this curriculum tailored more explicitly to these professions, along the lines of IBM's successful design thinking educational curriculum for non-designers. Such an undertaking might well need to extend beyond the traditional cross-functional product team (usually involving some combination of product management, engineering, data science and marketing), to incorporate a broader range of disciplines and stakeholders like business strategists, legal and policy teams, sales and partnership managers, or communications professionals) who have a clear stake in long-term outcomes and are often well-positioned to represent the perspectives of external or indirect stakeholders. While they are, in principle, representative of different functional areas of expertise, the privileging of these core technocratic functions over other, more diverse perspectives constitutes a significant barrier towards taking broader systems-level concerns into consideration. At best these stakeholders may be relegated to "Subject Matter Experts" (SMEs, in software parlance), who field requests for review or input but who are otherwise often shunted out of the decision-making mainstream. Some organizations also regularly engage with

external stakeholders like industry experts, academic researchers or other affected parties—but these inputs are sporadic at best, and are rarely invited directly into digital product or service planning activities.

# **10 Heuristics**

"All models are wrong, but some are useful."

-George Box (1987, 74)

So far, this inquiry has explored the perceived barriers that UX practitioners face in trying to incorporate long term, systemic perspectives into their work; and assessed the utility of frameworks drawn from the realms of alternative economics, meaningful work, and strategic foresight in helping them redirect their professional practices towards more sustainable outcomes. This research has also touched on the historical evolution of the field, which has taken shape largely in commercial business settings, informed by a set of deeply capitalist assumptions about the importance of growth, scale, and the centrality of the "user" (a.k.a. the consumer) as an object of design practice. The tensions between these capitalist imperatives and the professed humanism and progressive social values of many practitioners contributes to a sense of inner conflict and loss of meaning in their professional lives, as they experience a widening gap between their self-professed values and the kind of work they are routinely asked to perform.

While the bulk of this research to date has focused on primary research with practitioners and a series of professional development interventions, the vexing question remains of how one might ultimately assess the success of such an effort, given the inherently difficult-to-measure long term outcomes involved. In the absence of quantifiable business metrics, how might we empower practitioners with decision-making tools to help guide their work? One approach may involve exploring the creation of a new set of heuristics.

Heuristics are decision-making strategies—or rules of thumb—that support accelerated decision-making in conditions involving incomplete or uncertain information (Mumford, 2005). Although they can sometimes lead to imperfect decisions, research has consistently shown that people are more likely to make sound decisions when they are able to frame their work around a limited set of operating principles, rather than having to embark on the cognitively complex task of searching for and synthesizing relevant information—especially at the early, formative stages of projects. Mumford identifies three kinds of strategies for formulating heuristics: observational, experimental, and psychometric. The heuristics outlined in this chapter fall squarely into the first category, derived as they are from a process of engagement and observation with practitioners working in the field (as outlined in chapters 6-8).

Nielsen and Moloch first introduced heuristic evaluation to the field of human-computer interface design (Nielsen and Molich, 1990; Nielsen 1994), distilling a set of operating principles from past research that provided a generation of practitioners with a conceptual scaffolding for assessing and predicting the likely usability of a particular interface. Bruce Tognazzini similarly proposed a set of "first principles" for interaction design practice (Tognazzini, 2014) that have formed a core component of many interaction design education programs. Along the same lines, Shneiderman proposed eight "golden rules" for interface design (Shneiderman, 2016). These principles-based approaches to design have proved durable and highly useful for many practitioners, serving as a practical toolkit for assessing the likely efficacy of a given interface solution.

Like most UX frameworks, usability heuristics center primarily on meeting the needs of individual users—rather than focusing on wider-angle societal outcomes. Inasmuch as contemporary UX practice tends to reinforce a capitalist value system predicated on financial growth and the satisfaction of consumer needs, usability heuristics are very much part of the problem. A post-capitalist practice of UX design demands a new set of heuristics more tuned to systems-level outcomes than the satisficing of user needs.

How, then, might we assess whether a particular initiative is likely to align with societally transformative outcomes? What conceptual scaffolding might we use to complement—or even supplant—the dominant metrics of utilization, task completion, and "customer"-focused outcomes that so dominate contemporary software project planning?

Drawing on the observations from this research, I propose the following provisional heuristics for regenerative UX practice, as shown in Table 8 below. These heuristics took shape over the course of this research, through the analysis of the interviews, workshops, and reflexive autoethnography, and through a process of applied speculation as to how the findings outlined in the preceding chapters might usefully be applied as a set of guidelines to inform UX practitioners' work.

#### Table 8: Heuristics for regenerative experience design

#	Heuristic	Description	
1	De-center the "user"	Identify and prioritize the needs of indirect	
		stakeholders, both present and future	
2	Align inner and outer	Identify and mitigate points of conflict between	
	values	the system and team members' personal values	
3	Calibrate feedback loops	Ensure that core processes yield timely signals for	
		regulating the behavior of the system	
4	Net-positive value creation	Account for multiple forms of value exchange, to	
		identify opportunities for regeneration	
5	Simulation over specificity	Model the human, lived experience of future	
		worlds, not detailed product specs	
6	Design for unintended	Conduct "premortems" to identify and mitigate	
	outcomes	potential adverse outcomes	
7	Draw out next-order	Consider projects in their next-wider context, to	
	consequences	broaden the understanding of impact	
8	Seek balance	Strive for balance between efficiency and	
		resilience, collaboration and competition, diversity	
		and coherence	

I will now consider each of these heuristics in more depth, and discuss how UX practice might need to shift to achieve alignment with each.

- 1. De-center the user: Identify and prioritize the needs of indirect stakeholders, both present and future. Analyze the need-states and potential impacts on both users and non-users of the system, as well as non-human stakeholders (e.g., the environment, other sentient beings). Where possible, engage these stakeholders directly in the design process through direct engagement, participatory co-design, where possible. Where not possible, ensure that these views are represented through active advocacy by well-informed, engaged team members.
- 2. Align inner and outer values: Identify and mitigate points of conflict between the system and team members' personal values. Ensure that everyone working on the project has the opportunity to articulate their personal values, to surface areas of alignment and/or tension with project goals. If team members' personal values do not align with project goals, then project goals must change. Name the points of tension, and identify opportunities to mitigate them.
- 3. Calibrate feedback loops: Ensure that core processes yield actionable signals

for regulating the behavior of the system. Identify inflection points where value is transmuted, to capture feedback that can be fed back into the system and translated into useful signals to inform timely decision-making. Both positive and negative feedback loops can provide actionable signals for regulating the behavior of the system, but problems arise when the rate of change outpaces the cadence of available data. Ensure that the feedback loops are closely calibrated with the pace at which data is produced and acted on.

4. Net-positive value creation: Account for multiple forms of value exchange, to tally the full cost and benefits of a given product or service: including financial, social, environmental, intellectual, spiritual, cultural, built, political, and individual. Map the entire value creation lifecycle, to identify opportunities to transmute one form of value into another in ways that can heal or restore parts of the larger system.

#### 5. Simulation over specificity

Model the human, lived experience of future worlds, not detailed product specifications. Focus on the emotional texture of living in a particular scenario, bringing that world to life through a deep understanding of the surrounding context of social, cultural, political, environmental, intellectual, and spiritual dimensions that surround it. Design habitable worlds, not usable products.

### 6. Design for unintended outcomes

Conduct "premortems" to identify and mitigate potential adverse outcomes. Unanticipated consequences are, by definition, difficult to anticipate. Rather than try to eliminate them altogether, consider how to control and mitigate the worst effects. Role-play as bad actors to pressure-test the system, identify potential vulnerabilities, and develop mitigation strategies to limit the impact of both benign and malicious interventions.

## 7. Draw out next-order consequences

Consider projects in their next-wider context, drawing out potential impacts at multiple levels of societal impact. Consider a full range of possible implications using the STEEP model (Social, Technological, Economic, Environmental, and Political). Identify next-order consequences in each of these dimensions, then consider continuing to explore secondary and tertiary consequences as well. Having mapped out the consequence in sufficient detail, identify potential leverage points for systems interventions.

8. Strive for balance: Between efficiency and resilience, collaboration and competition, diversity and coherence. All parts must be in right relationship with the whole, in order to contribute to the healthy functioning of the larger system. Look for creative synergies and opportunities for regeneration at the edges of

the system (cf. Fullerton 2015).

Taken together, these heuristics may provide a useful filter for UX practitioners wishing to assess the alignment of their product goals with regenerative design principles. These heuristics are, however, provisional for the time being. Further research and fieldwork will be necessary to assess whether these heuristics prove useful in real world conditions with UX practitioners; and whether their use can be tied to demonstrable project outcomes. For now, I offer them here as fodder for future exploration and evaluation.

# **11 Conclusions**

"Good work uses no thing without respect, both for what it is in itself and for its origin. It uses neither tool nor material that it does not respect and that it does not love. It honors nature as a great mystery and power, as an indispensable teacher, and as the inescapable judge of all work of human hands."

-Wendell Berry (2003)

## **11.1 Contribution to Theory**

This dissertation theorizes a new framework of regenerative UX, a set of theories and methods intended to help UX practitioners working in industry redirect their practices towards more sustainable, long term-focused outcomes that strengthen the alignment between their personal values and their professional project work. Drawing on theoretical frameworks from the realms of alternative economics, meaningful work, and strategic foresight studies, this framework proposes a theory of change that can be summarized as follows:

UX practitioners working in industry experience inner conflicts that stem from a tension between their espoused values and the performative pressures of working in for-profit enterprises that prize incremental improvements and decision-making processes. They feel unreasonably constrained by mechanistic business practices manifesting as Lean/Agile-style software development methodologies and A/B and

multivariate testing methods that ultimately serve to reinforce a consumerist imperative of satisfying individual user need-states. As a result, they struggle to focus their work towards addressing societal wicked problems that might lead towards more just, sustainable, and equitable outcomes, and would align more closely with their personal value systems. The regenerative UX framework provides practitioners with a methodological toolkit to reframe their project work towards more sustainable, long-term focused outcomes: including inner values alignment exercises, value creation models, and strategic foresight tools. The success of this undertaking is dependent on the willingness of UX practitioners working in industry to invest time in professional development efforts, to interrogate their own values, and seek alignment between those values and the wider-angle societal and planetary concerns that are the chief concern of transition design.

Looking forward, I hope to leverage this theory of change to explore how to translate these perspectives into a design language and a set of open-source lesson plans that could be made widely available to practitioners. Ultimately, this theory of change hinges on the question of how well personal, reflective modes of practice can intersect with larger organizational, social, and political systems; and whether a program of applied professional development could serve as a useful design intervention that aligns with the wider-angle concerns of transition design and long-term sustainability.

If there is a way forward, it surely lies in UX practitioners' ability to turn inward, embrace more systemic approaches to design, and to demonstrate the value of these approaches through sustained engagement that shows not just financial return on investment, but also value creation in the form of alternate forms of capital. From an employer's point of view, gains in team health and engagement should follow if UX practitioners feel they have the leeway to invest in more long-term focused work.

Given the nature of UX practices that typically take place within for-profit organizations looking to measure the near-term return on their investment in design, the kinds of limited forecasting activities that currently take shape within UX organizations almost invariably fall into the category of "Continuation" work (to borrow Dator's term). And even within that boundary, practitioners still encounter significant hurdles in trying to extend the timeline of their work towards futures that extend much beyond the 2-3 year time horizon.

It is a tautology to say that long-term change takes a long time, but nonetheless it feels important to acknowledge that the wide-angle success or failure of this kind of undertaking will not be measurable in the near term, given the inherently long-term and uncertain terrain of wicked problems. This then seems like the central conundrum of Transition Design: If we aim to shift design practice towards sustainable long-term outcomes — and if we accept that the future is essentially unknowable — how will we ever know whether we've succeeded? The short answer is that we may never know, but that is certainly no reason to stop trying.

## **11.2 Contribution to Practice**

The workshop methods developed over the course of this research constitute the

primary contribution to the field of practice. Specifically, it offers the following:

- 1) **An open source curriculum** for "Practical Futuring" workshops, appropriate for in-house UX teams to adopt and employ as they see fit.
- 2) **Three new design methods**: values mapping and mash-ups, alternative capital resource mapping, and personal theories of change.
- 3) Observations and assessment of methods used throughout the workshop, resulting in a set of recommendations for which methods resonate most strongly in the context of a professional learning workshop (see section 8.2).

Taken together, these three bodies of work comprise a contribution to the broader field of practice that, as far as I know, has not previously been undertaken. My hope is that this workshop format may evolve in the form of further development on the curriculum by the larger community of practice. I also welcome contributions back to the workshop format itself, which I am hereby granting permission for this material to be freely distributed and widely used, with attribution but otherwise free to use and adapt. I offer this as my contribution to the community of UX practitioners and other fellow travelers from whom I have learned so much over the years.

# **11.3 Heuristics**

The provisional heuristics outlined in the preceding chapter (10) constitute the third and final contribution to knowledge. Insofar as these heuristics are specifically designed to enable practitioners to bridge theory with practice, they fall into a third category of original contribution—one that I hope may ultimately prove the most useful and lasting outcome of this dissertation. By creating this conceptual scaffolding that encodes and activates the theories, principles, and practices that I have developed throughout this research, my goal is to create a simple and lightweight shorthand that might allow future practitioners to apply this framework, without necessarily having to engage deeply with the theoretical material that underpins them. While this toolkit remain largely untested in applied settings beyond my own professional work, looking ahead my hope is to find new venues and audiences to bring these heuristics to bear in real-world settings, capture feedback from practitioners, assess project outcomes, and continue to refine and iterate as needed. The real work of socializing and pressure-testing this framework in professional settings still lies ahead.

# **11.4 Personal Reflections**

Over the past six years, this research has taken me on a journey through several incarnations of professional life: first at Etsy, then at Instagram, and finally in my current role at Google (although all of the data presented herein draws on experiences with the first two employers). My involvement with the Carnegie Mellon School of Design has been the one constant throughline during this time, and my affiliation with the school

and its community of faculty and students has profoundly shifted my own perspectives and professional practices in ways that I would scarcely have anticipated when I first entered the program.

Bridging the worlds of theory and practice has proven challenging at times, as I have on occasion had to navigate critical directional feedback coming from precisely opposite directions in the academic and industry sides of my career. But this dual consciousness has, I think, ultimately strengthened the work and equipped me with an ability to anticipate and respond to potential critiques of this research: from industry, that my work is too "academic" and difficult to put into practice; or from the academy, that it is too constrained by a business-centric view of design practice. There is some truth to both of these critiques, but I have tried my best to find the middle way between the extreme versions of these reviews (that academia is too far removed from the realities of practice; or that industry is too corrupted by profit motives). The truth lies somewhere in between, and bridging theory with practice is ultimately the task of every designer.

My work as a practitioner has followed a long and circuitous path, from my first encounter trying to master the 16-color lo-res palette on my old Apple II+ (circa 1982), to my first brush with the networked world via early dial-up services like BBSes and commercial providers like Prodigy, Compuserve, and later AOL, to the evolution of the web, and a career as a digital design professional that has seen me through the ups and downs of the early dotcom gold rush, building digital products for legacy companies and newer upstarts, and on through to our present age of mobile social networking—I have worked with many iterations of design process over the years. New methods come and go, and the industry seems constantly casting about for the winning formula to solidify its influence.

The work of the past six years has fundamentally shifted my perspective: From a devout belief in the righteousness of the UX approach to design, to a posture of deepening uncertainty and misgivings about the whole enterprise of modern software design. The past few years have thrown into stark relief some of the untoward outcomes of our global networked society, and the recent "ethical turn" in UX practice has opened up a broad and searching dialogue about the role and potential culpability of UX practitioners in contributing to and perpetuating systems of extraction and injustice in the world. At times it seems that a kind of ritual self-flagellation has become *de rigeur* for UX practitioners working at major tech companies. While this level of scrutiny and critical self-examination is necessary and important, at the end of the day I remain a committed optimist about the possibilities of technology as a force for good in the world.

Technology, as Melvin Kranzberg famously put it, "is neither good nor bad; nor is it neutral" (Kranzberg, 1986). But as the modern-day Samurai (to borrow Wells's term) who wield the power to direct its energies, it falls to all of us who practice to shoulder the ethical burden and bend the arc of technological progress towards the most positive societal outcomes possible. I can only hope that this dissertation marks a small contribution towards that end.

# **Appendices**

# I Practitioner Interviews - Discussion Guide

Note that these interviews all followed a semi-structured format, in which the baseline script below was tailored based on the participants' professional background and domain expertise.

- Q: Tell me a bit about your current role.
- Q: How would you describe your professional journey so far?
- Q: What are some of the typical kinds of artifacts you/your team create?
- Q: What's a typical time horizon for the kinds of projects you're currently working on?
- Q: Have you ever tried to take on long-horizon work (5 or more years out)?
  - If so, what were some of the strategies and tactics you used to approach these projects?
  - What kinds of challenges did you encounter along the way?

Q: Do you feel it's getting harder or easier to do long term-focused design work in your current role?

Q: Do you find your work personally meaningful? What are some of the characteristics that make your work seem more or less meaningful to you?

Q: Anything else you'd like to share?

# **II List of Core Values**

Adapted from James Clear (2015)

Authenticity

Achievement

Adventure

Authority

Autonomy

Balance

Beauty

Boldness

Compassion

Challenge

Citizenship

Community

Competency

Contribution

Cooperation

Collaboration

Creativity

Curiosity

Determination

Durability

Empowerment

Equity

Equality

Fairness

Faith

Fame

Friendships

Fun

Growth

Happiness

Honesty

Humor

Influence

Inner Harmony

Joy

Justice

Kindness

Knowledge

Leadership

Learning

Love

Loyalty

Meaningful Work

Openness

Optimism

Peace

Pleasure

Poise

Popularity

Recognition

Reputation

Respect

Responsibility

Security

Self-Respect

Service

Spirituality

Stability

Success

Status

Trustworthiness

Wealth

Wisdom

# **III Curricula**

Table 9 below summarizes the methods that were introduced throughout the research process, along with the venues and approximate number of total participants who took part in each exercise.

Method	Cohort	# Participants
Values mapping*	Purposeful Work Seminar (CMU) Etsy School IxDA Education Summit Instagram and Facebook	25 24 20 24
Capital Roulette*	Etsy School	24
Resource mapping*	Good Work Forum (Latham St. Commons)	30
Values mash-ups*	Etsy School IxDA Education Summit	11 20
Envisioning cards	Etsy School	24
K-J Analysis	Good Work Institute IxDA Education Summit	9 20
Look Back to Look Forward	Instagram and Facebook School of Visual Arts	24 10
Headlines from the Future	School of Visual Arts	10
The Thing From the FutureEtsy SchoolFutureIxDA Education Summit Instagram and Facebook		24 20 24

Table 9: Methods used during workshops, 2016-2020

	School of Visual Arts	10
Horizon Scanning	Etsy School IxDA Education Summit Instagram and Facebook School of Visual Arts	24 20 24 10
Driver Analysis	IxDA Education Summit Instagram and Facebook School of Visual Arts	20 24 10
Futures Wheels	Etsy School IxDA Education Summit Instagram and Facebook School of Visual Arts	24 20 24 10
Scenario Planning	Etsy School IxDA Education Summit Instagram and Facebook School of Visual Arts	24 20 24 10
Wicked Problem Mapping	Etsy School IxDA Education Summit School of Visual Arts	24 24 10
STEEP Analysis	Instagram and Facebook	24
Sketching and prototyping	Etsy School Good Work Forum IxDA Education Summit Instagram and Facebook School of Visual Arts	24 30 20 24 10
Personal Theory of Change*	School of Visual Arts	10

\* Denotes original method developed for these workshops; other methods shown were

adapted from established design exercises.

## **Etsy School**

## Practical Futuring: Integrating Long-Term Thinking Into Your Work

Etsy School | Fall 2017

Thursdays, November 2, 9, 16, from 6-7pm in A-620 (Multipurpose Room) Instructor: Alex Wright | <u>awright@etsy.com</u>

## Class overview

Etsy is a triple-bottom line company, committed to harnessing the power of business for social good. But what does that really mean for our day-to-day work lives? Some of us may struggle to connect the dots between our short-term business and career goals and the longer-term social, cultural, and environmental transformation that underlies Etsy's mission.

In this workshop, we'll explore practical methods for integrating long-term thinking into the work we do, through a combination of readings, discussions, and hands-on activities. Topics covered will include futuring techniques, alternative economics, and an exploration of what it means to do meaningful work.

Every week we'll have one brief required reading that we'll discuss at the outset of class, and a longer list of optional readings that you're welcome to peruse if you have time. Classes will consist of a discussion, a brief talk, and an interactive exercise geared to get us all working together and getting to know each other a bit. Also, there will be snacks. And maybe drinks ;) Learning Outcomes

- You'll become familiar with basic concepts from the field of future studies
- You'll get exposed to new thinking about alternative economic systems
- You'll come away with tools to help you integrate long-term thinking into your work life

Week 1: What do we mean by "Futuring," anyway?

In this section we'll introduce a few basic concepts from the world of future studies,

exploring a few different conceptual frameworks for long-term thinking in the context of

business planning.

# Readings:

- Stuart Candy, Strategic Foresight (required)
- <u>Stewart Brand, The Order of Civilization</u> (optional)
- McKinsey, Measuring the Economic Impact of Short-Termism (optional)

In-class workshop:

The Thing From the Future

## Week 2: Alternative Economics

This week we'll talk about commerce, capitalism, and emerging thinking about new

frameworks for measuring economic activity.

Readings:

- <u>Ethan Roland, "The 8 Forms of Capital"</u> (required)
- John Mackey, "Capitalism: Marvelous, Misunderstood, Maligned" (optional)

- <u>"Donella Meadows, "Leverage Points: Places to Intervene in a System"</u> (optional)
- John Elkington, "Enter the Triple Bottom Line" (optional)

In-class workshop:

Prototyping

# Week 3: Doing Good Work

This week we'll bring the discussion back down to earth, exploring how we could relate some of these concepts to our daily work lives by examining how to integrate long-term thinking into our personal and professional lives.

Special guest:

Erica Dorn, Good Work Institute

Reading:

- MIT, "What Makes Work Meaningful, or Meaningless" (required)
- Meg Wheatley, "Finding our Way" (optional)
- E.F. Schumacher, Good Work (optional)

In-class workshop:

Values mapping exercise

Good Work Institute / Latham St Commons "Good Work Forum"
- 1) Welcome/Introductions (20 minutes)
  - Welcome from Kristin
  - Group introductions (moderated by Alex)
    - o Tell us about yourself and your business
    - o What are you hoping to get out of today's workshop?
    - o What are some of the major business obstacles you're facing at the moment?

#### 2) Erica Dorn talk #1 (10 minutes)

- Role of entrepreneurs as leaders in the community, and the concept of regeneration.
- Focus on designing for potential rather than problems. Entrepreneurs often focus on problem-solving rather than understanding potential in terms of people/place/impact
- How can we tap into a deeper sense of place?

# 3) Journaling (5 minutes)

- What is the impact you envision creating in the world with your enterprise?
- What are you willing to invest? Recognizing other forms of currency that they may be using. Getting at the idea of abundance and potential vs. scarcity
- 4) Paired or Triad sharing (10 minutes)
- 5) Erica Dorn talk #2 (10 minutes)
  - Introducing alternative forms of capital (cf. Ethan Rowland: Financial, Social,

Living, Material, Experiential, Intellectual, etc)

# 6) Exercise (10 minutes)

- Draw a circle and draw a pie representing your forms of capital, identifying where they have value and where they could build more currency
- Measure up how they feel they are in terms of abundance in each of these areas

# 7) Share-out and closing reflections (15 minutes)

• "Harvest" of what happened and talk about next steps

# Carnegie Mellon School of Design "Purposeful Work Seminar"

Goal:

To help students align their personal values with their professional aspirations, in a way that explores the role of designer in fostering cultural change towards more sustainable and socially progressive business environments.

# Learning Outcomes:

- Understand insights and best practices from Etsy and Good Work Institute
- Defining personal values and primary platform
- Redesigning systems to work for all / Solutions for the Commons

# Agenda

Welcome and Intro (10 min)

Learning from Etsy and Good Work Institute (20 min)

Defining personal values and primary platform (30 min)

• Each participant is given a set of cards representing human values plus 3 blank

ones

- Sort into piles you care about and ones you don't (be honest)
- Now narrow it down to 10
- Now select 5 top values
- Alex interviews Erica about her answers (5 minutes)
- Paired exercise to interview each other and rank priorities (10 minutes)

# In Groups of Four:

- What are the potential obstacles you would anticipate in realizing these values in your work? (10 minutes) External and internal factors
- Harvest the obstacles as a group (10 minutes)

# Group case study (40 minutes)

- Identify systemic challenges (e.g., corporate culture, financial pressures)
- Split into groups and design any solution that makes sense: could be long- or short- term
- Offer a recommendation to the commons about how to address this issue
- 4 groups, two working on immediate and two working on long-term change
- Debrief / each group will come back with some kind of presentation

# Reflection (10 minutes)

# Break

Erica interviews Alex re: work experience and challenges (10 min)

# Group Case Studies (30 min)

• Visioning exercise around ethical dilemma

- o Envision a future where values are aligned in their vocation but knowing they are compromised by the existing system in which they work.
- What's the forefront ethical dilemma? Paired workshop format next steps to overcome that ethical dilemma.
- Individual exercise to define an ethical dilemma or trepidations that you anticipate confronting in your future professional life (5 mins)
- Break into groups of 4
- Everyone presents their individual dilemma
- Group picks one to workshop and discusses potential solutions (20-25 mins)

Individual Journaling on Values and primary platform (10 mins)

# Harvest (5 min)

 Debrief + Feedback - Plus / Delta / Pearl of Wisdom (what's the one thing they would pass on to a friend or a stranger) (10 min)

# IXDA Education Summit (2017) - Workshop description

# **Practical Futuring**

# Alex Wright (Etsy) and Erica Dorn (Good Work Institute)

Interaction designers shape the everyday experiences of billions of people across the planet. Yet for all their reach and influence, many practicing designers nonetheless struggle to incorporate long-term time horizons into their work. In an age of big data, A/B testing and Lean/Agile methods, those challenges are growing more pronounced as designers often find themselves working in environments that tend to prioritize short-term, measurable outcomes over more complex, systemic concerns.

While most IxD practitioners espouse the humanist values of empathy and customer-centeredness that are the hallmarks of good experience design, the profession's sometimes narrow focus on "the user" can also work against weighing the broader social, political, and environmental effects of the work they do.

How might interaction designers embed more sustainable, long-term perspectives into their work? What kinds of organizational and/or economic pressures prevent them from doing so? And how could futuring and forecasting methods help us begin to envision a set of alternative futures for interaction design education?

#### School of Visual Arts IxD Summer Intensive

#### Design Futures: Embedding Long-Term Thinking Into Your Work

July 10 - August 7, 2019 / Wednesday 6:00 - 8:50 PM

Instructors: Alex Wright and Erica Dorn

#### **Course Description**

In this workshop, we'll introduce a set of practical methods to integrate long-term thinking into interaction design practice. Through a combination of talks, readings, discussions, and group projects, we'll experiment with applied futuring techniques, multi-layered planning, systems thinking, and other frameworks drawn from the world of Transition Design, an emerging area of study focused on how design might help enable the transition to more sustainable futures.

# Learning Objectives

- Explore the intersection of personal, organizational, and systemic levels of change
- Prototype and apply design futuring methods to workplace challenges and opportunities
- Understand and practice Transition Design for long-term social change

# Syllabus

# Pre-reading:

- Stuart Candy. Strategic Foresight (required)
- Stewart Brand, <u>Pace Layering: How Complex Systems Learn and Keep Learning</u> (recommended)
- John Mackey, <u>"Capitalism: Marvelous, Misunderstood, Maligned"</u> (optional)
- MIT, "What Makes Work Meaningful, or Meaningless" (optional)

#### Week 1: Self and Systems

Welcome and introductions. During this week's class we will set the context and set ourselves up for the full course. We will dive into understanding systems change and our personal relationship to systems with which we interact.

- Welcome
- Introductions
- Overview of the course + Q&A
- Design Futures Discussion
- Values Exercise
- Systems Change
- Closing Exercise

#### Reading

- Fritjof Capra, ,"Connecting the Dots" (required)
- Donella Meadows, "Dancing with Systems" (optional)
- Carol Sanford, "Understanding the Nested Nature of Living Systems" (optional)
- Batya Freeman, "Technical and Moral Imagination" (video optional)

# Assignment

- Personal Theory of Change (500 words)

# Week 2: Futuring - Environmental scanning and wicked problems

- Moderated discussion of last week's readings
- Share out our personal theories of change
- Overview of futuring methods
- Survey alternative economic frameworks
- Wicked problems, ecosystems and value creation

# Reading

- Meg Wheatley, "How Large Scale Change Really Happens" (required)
- Donella Meadows, "Leverage Points: Places to Intervene in a System" (required)
- Ethan Roland, "The 8 Forms of Capital" (optional)
- John Elkington, "Enter the Triple Bottom Line" (optional)
- McKinsey, Measuring the Economic Impact of Short-Termism (optional)

# Assignment

- Wicked Problem Mapping
- Coalesce in teams around a relevant systems-level wicked problem. Within your

team, conduct background research (primary and secondary) on your team's

chosen problem space.

# Week 3: Futuring - Scenario planning

- Guest speaker: Lauren Sherman, Facebook News
- Share research findings on your team's chosen topic space
- Learn additional futuring and foresight techniques such as pace layering, the futures wheel, and scenario planning techniques for organizational change
- Practice wicked problem mapping
- Case study and prototype transition designs
- Find the alignment between your workplace scenario and one of the four wicked problems

# Readings

- Jay Ogilvy, "Plotting Your Scenarios" (required)
- John Camillus, "Strategy as a Wicked Problem" (optional)
- Keith Grint, "Wicked Problems, Clumsy Solutions" (optional)

# Assignment

Working in teams, map your wicked problem space and begin to explore potential interventions.

# Week 4 : Transition Design Team Projects

- Readings discussion

- Transition Design Cont.
- Workshop the problem space with your team and begin developing experiential prototypes

# Reading

Terry Irwin - Transition Design Symposium

# Assignment

Continue working on team projects

# Week 5: Designed Futures

- Final presentations
- Closing reflections

# **Final Project Overview**

- Conduct field research, either in your workplace or your neighborhood to flesh out your hypotheses
- Map your wicked problem to the context you have chosen (either your workplace or another setting)
- Apply a combination of futuring techniques (e.g., environmental scanning, scenario planning, the futures wheel) to identify a range of possible outcomes
- Develop preliminary experiential prototypes to present at the final class

# Final project should consist of, at minimum:

- A concise problem statement with supporting evidence
- The time scale at which you hope to approach this problem
- A clearly articulated theory of change
- At least two distinct experiential prototypes that bring your group's solution to life

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