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Turning Foresight Inside Out: An Introduction to Ethnographic Experiential Futures

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Abstract

This article contributes to emerging hybrid design/futures practices by offering an orienting framework making images of the future more legible and concrete. The Ethnographic Experiential Futures (EXF) Cycle provides, practically, a way of inviting engagement with diverse participants, and methodologically, a generic process drawing on two traditions of foresight (ethnographic and experiential futures), with a view to promoting a more diverse and deeper array of scenarios for public consideration. The structure of the EXF Cycle is derived from hybrid efforts carried out by design/futures practitioners over some years, abstracted as scaffolding to serve future projects in a wide range of contexts.

Keywords: Action Research, Design Fiction, Ethnography, Experiential Futures, Integral Futures, Intermediary Knowledge, Scenarios, Speculative Design.

> "The image must first be received before it can be broadcast."
> Frederik L. Polak, *The Image of the Future*.
>
> "The future is inside us / It's not somewhere else."
> Radiohead, "The Numbers".

Introduction

Just south of Sarnia, Ontario (pop. 70,000), the largest city on Lake Huron, is a place called Chemical Valley. It is home to forty per cent of the petrochemical industry for the whole of Canada (Vice, 2013) — a nation of 35 million — and also to the worst air quality in the country (MacDonald & Rang, 2007). The areas

adjacent to such industrial hotspots, called "sacrifice zones" or "fence-line communities" (Bullard, 2005, p. 85), are typically populated by less politically influential groups; the socioeconomically disadvantaged; people of colour; indigenous communities.

Kelly Kornet, a researcher who had grown up nearby, wanted to gain an understanding of the thinking and motivations of environmental activists from places like Chemical Valley; "how individuals living in conditions of environmental toxicity develop the ability to imagine possible futures and take positive action in their communities." (Kornet, 2015, p. 3) In one-on-one interviews, participants were invited to speak about the kinds of futures that they expected, hoped for, and feared. That stage alone may have sufficed for some valuable forms of traditional analysis, but for this project Kornet was interested in opening up the issues to a wider audience, and as a trained designer, in animating these narratives with the skills at her disposal. So once articulated verbally, participants' divergent futures were materialised in a selection of future artifacts as if they had actually come to pass. This meant creating props, as it were, from the movies in their minds: the industrial accident that they worried could occur at the plant; the laws that they hoped local authorities would properly enforce to restore air and water quality (see Image 1). These were shared at a small exhibition in Toronto, *Causing an Effect,* to which research collaborators and the general public were both welcomed and invited to respond (Kornet, 2015).

Here the designer served a dual role: as a futures researcher eliciting detailed narratives from participants, and as a kind of translator or medium, strategically reifying their thinking and concerns into experiential scenarios so that they could be seen, felt, and talked about more readily. The first stage brought futures to light; the next brought them to life.

This combination seemed to warrant further exploration. Regarded structurally, the phases of *Causing an Effect* recalled another experiential futures project from years before, albeit one quite dissimilar at first glance; an exploration of futures for Chinatown in Honolulu, Hawaii. Possibilities for the neighbourhood were canvassed initially through conversations with local residents — for example, a seldom publicly-expressed anxiety about impending gentrification (see Image 2) — and brought to life via 'artifacts from the future' mounted *in situ* for residents to encounter in the present (Candy, 2010, pp. 228ff). It soon became apparent that still other projects, conceived in different circumstances, had followed much the same arc. The contours of a possible framework began to emerge; something that might be applied for different kinds of participants, modes of design, and contexts of deployment.

The process we describe has the potential to advance and mobilise in new ways a proposition pursued by critical and academic futurists for decades, that the future must be pluralised (Boulding, 1988; Slaughter, 1998; Hurley, 2008), which "opens it up for envisioning and creating alternative futures to the status quo" (Gidley, 2017, p. 44).

What has changed lately, with the 'experiential turn' in the 2000s (Candy & Dunagan, 2016), is that foresight's efforts to map images of the future has begun to be systematically articulated to a full array of strategies for mediating them, and designers are increasingly exploring futures in the plural as well (Candy, 2010; Dunne & Raby, 2013; Yelavich & Adams, 2014; Selin, 2015; Candy & Dunagan, 2017; Escobar, 2018). These developments open promising new avenues for attempting complex collective acts of empathy, conversation, and deliberation in the public sphere.

This article describes the shape and rationale of what we have dubbed Ethnographic Experiential Futures (EXF), a pattern discerned in multiple projects undertaken over time by futurists, designers, and researchers. We distill a framework meant to serve as a set of prompts for adaptation and use in still more diverse investigations to come.

The body of this article is in four parts. The first locates the work in relation to some key elements of futures literature and practice. The second sketches a set of examples, each a fragment of the initial basis for the framework. The third plots the phases of the framework drawn from these cases. Finally, we discuss some opportunities and difficulties that EXF presents.

I. Images of the Future

Critical futures scholarship argues that 'the future' does not exist as such, but is inherently a domain of ideation and imagination. It "cannot be experienced directly, but only though images, thoughts, feelings and the multiple ways these are subsequently expressed in the outer world" (Slaughter, 2018, p. 444). Sociologists Barbara Adam and Chris Groves capture the challenge well: "[E]ngagement with the future is an encounter with a non-tangible and invisible world that nevertheless has real and material consequences" (Adam & Groves, 2007, p. xv). Accordingly a central challenge for futures consists in 'making the invisible visible and tangible.'

The concept of 'images of the future', a kind of mental and cultural construct influential in the unfolding of history, was proposed by sociologist Fred Polak years before futures began to coalesce as a field (Polak, 1973 [1955]), and it has provided part of the foundation on which generations of scholars and practitioners have worked since.[1] As Dator observes: "These images often serve as the basis for actions in the present. … Different groups often have very different images of the future. … [O]ne of the main tasks of futures studies is to identify and examine the major alternative futures which exist at any given time and place" (Dator, 2005).

In the mid-1970s Robert Textor, a younger associate of the great Margaret Mead, and a self-described sociocultural anthropologist and futurist (Textor, 2003, p. 521) based at Stanford University, began to turn attention in this direction. Textor pioneered *anticipatory anthropology*, "the use of anthropological knowledge and ethnographic methods, appropriately modified and focused, to anticipate change" (Textor, 1985, p. 4). He saw its value in terms of confronting a pair of more or less ubiquitous ills: "*ethnocentrism* refers to one's being excessively centred in one's own culture, and *tempocentrism* to one's being excessively centred in one's own timeframe." (Textor in Mead, 2005, pp. 16-17, emphasis added). Ethnocentrism is more widely recognised – its web search results dwarf those of tempocentrism by three orders of magnitude [2]– but the latter represents at least as pervasive a psychological and cultural pathology.

Ethnographic Futures Research, developed by Textor and his students, is a valuable if today often overlooked methodological entryway into this challenging space, offering a process for systematically mapping images of the future held by various individuals and communities. "Just as the cultural anthropologist conventionally uses ethnography to study an extant culture, so the cultural futures researcher uses EFR to elicit from members of an extant social group their images and preferences (cognitions and values) with respect to possible or probable future cultures for their social group." (Textor, 1980, p. 10) A semi-structured interview format is used to draw out participants' projections. "Instead of simply asking 'What do you believe is going to happen?', in EFR you ask: 'Within the context of overall trends and possibilities as you perceive them, what potential changes in your sociocultural system do you (1) want, (2) fear, and (3) expect?" (Veselsky & Textor, 2007, pp. 31-32).

Textor is careful not to be misunderstood as positing a singular future (Textor, 1980, p. 10), and in this he underlines the ontological and epistemological pluralism of the field. Indeed it is a key tenet of EFR, and of the futures tradition we are working in, that every person contains multitudes.[3]

Relatedly, we put the EXF Cycle forward in a spirit of methodological pluralism: EFR's version of ethnography for studying futures is useful, but is not set on a pedestal as the best or only way to do so. Only two of the five cases outlined below use that particular approach.

Thus EFR is one way to try rendering people's futures 'visible' in words. But what happens when we take the challenge of making particular futures 'tangible' seriously? It is this challenge that leads to the concatenation of 'ethnographic' inquiry with experiential futures.

Experiential Futures (XF) is a family of approaches for making futures visible, tangible, interactive, and otherwise explorable in a range of modes. Led by practice and accompanied by a growing theoretical base,[4] XF is grounded in the big-picture agenda of contributing to a social

capacity for foresight (Slaughter, 1996), using material and performative registers to build on the field's traditional uses of theoretical, schematic and verbal exploration (Candy, 2010; Raford, 2012; Kelliher & Byrne, 2015; Selin, 2015). The turn to experience, as a canvas for futures practice, prods at a traditional overreliance in the field on words, and corresponding underutilisation of other media (Ramos, 2006), disclosing a transmedia landscape of alternative ways to use the future. More embodied and media-rich depictions of futures, argue proponents, can make the field more effective in shaping change (Candy, 2010; Candy & Dunagan, 2017). The practitioners and projects of XF are highly intertwined with those of design-led futures-oriented activities which have come into prominence over the same period, since the mid-2000s, including speculative design and design fiction (Dunne & Raby, 2013; Montgomery & Woebken, 2016; Durfee & Zeiger, 2017; Candy & Dunagan, 2017). Yet the task of enhancing futures thinking is medium-agnostic — the best approach is whatever it takes (Candy, 2010, p. 111) — and so Experiential Futures exhibits great variety in terms of the media and engagement strategies used. This can be seen in the examples described in Section II.

II. Five Projects

This section outlines in broad strokes a diverse set of projects that share structural resemblances in combining 'ethnographic' and 'experiential' elements.

Project 1: Causing an Effect

Kelly Kornet worked with lifelong environmental activists from fence-line communities, using EFR interviews to explore their hoped for, feared and expected futures, and subsequently applying design skills to fabricate physical artifacts 'from' the futures they described (e.g., Image 1). The resulting exhibition let her gather responses from some original participants, as well as from a wider public (Kornet, 2015).

Image 1. Artifact from a participant's preferred future, where local environmental regulations maintain air and water quality more effectively / Design & Photo: Kelly Kornet

Project 2: FoundFutures (Chinatown)

In the mid 2000s, futurists Stuart Candy and Jake Dunagan ran a series of informal experiments deploying 'future artifacts' to the public on an unsolicited basis. They called the approach 'guerrilla futures' by analogy with guerrilla theatre, marketing, art, and semiotics (Candy, 2010, pp. 208-257). Initial gestures such as 'droplifting' future products into local shops (Candy, 2007) paved the way to *FoundFutures: Chinatown*, a more systematic effort to bring futures to life at the scale of a community; Honolulu's Chinatown, on Oahu, Hawaii. Bringing backgrounds in anthropology and theatre, they orchestrated artifact deployments and enactments from a series of imaginaries for the neighbourhood, grounded in the particulars of place and history. The set of scenarios was generated after interviewing area residents and business-owners, and then translated into urban installations and happenings (Dunagan & Candy, 2007).

Image 2. Part of an experiential scenario about gentrification in Honolulu's Chinatown / Project directors: Stuart Candy and Jake Dunagan / Artwork: Mark Guillermo / Photo: Matthew Stits

Gentrification concerns were dramatised through signage heralding the (then-unprecedented) arrival of American franchises such as Starbucks and TGI Fridays, and luxury apartments (see Image 2). Another intervention, inspired by the outbreaks of bubonic plague in Chinatown in the early 20th century, hypothesised an epidemic of "Hang Ten" flu. A third posed the question: what becomes of Chinatowns in a future where China is the preeminent superpower? Reactions were registered via direct observation, as well as in the press, and at a free community workshop (Dunagan & Candy, 2007).

Project 3: Making the Futures Present

Designer and interactive narrative professor Maggie Greyson has developed a framework for 'personal experiential futures' to help people more concretely picture their possible future selves

and circumstances, drawing partly on EFR and partly on 'personal futures' practice (Wheelwright, 2009; Draudt & West, 2016).

The process entails interviewing volunteer participants one on one about a range of scenarios they can imagine facing on a 20-year time horizon in their own lives; positive, negative, and expected, and then 'unexpected', too. Not part of EFR's descriptive protocol, the latter is added to probe, challenge or expand prospective thinking. In the same session, researcher and participant co-create rapid prototypes from selected futures (see Image 3), and afterwards the host goes on to develop more polished, real-looking artifacts as a basis for deeper conversation at their next meeting (Greyson, 2016).

Image 3. Rapid prototyping of 'personal experiential futures' artifacts / Project design & Photo: Maggie Greyson

Project 4: 1-888-FUTURES

A series of day-long participatory design workshops was staged by researchers from Situation Lab and The Extrapolation Factory in the mid-2010s.[5] Hosted at the University of Southern California's School of Cinematic Arts in Los Angeles, *1-888-FUTURES* solicited public input in the weeks prior by inviting people to call a toll-free number and record their future dream in a voicemail, together with a mailing address (Situation Lab, 2015).

On the day, workshop participants were assigned a random voicemail to retrieve as the basis for a 'tangibilisation' (Chris Woebken's excellent word) of the dream. (See Image 4.) The makers then recorded a video explaining how the dream recording had inspired their 'future present', and boxed it up to send to the provided address. Afterwards, on social media, some recipients would post responses to the artifact they had opened.

Image 4. Design jam participants ponder how to bring voicemail-recorded dreams to life / Project design: Extrapolation Factory and Situation Lab / Photo: Stuart Candy

Project 5: Futureproof

Conor Holler is a management consultant with a background in improvisational comedy, who undertook a design project to research how it can be used for more serious purposes. 'Improv' is a long standing theatrical tradition (Johnstone, 1981; Halpern, Close & Johnson, 1994) recently fashionable among businesses seeking to enhance their creativity (Kulhan & Crisafulli, 2017). Holler devised an improv format which put topic experts and actors together in front of a live audience, to create scenes from 'possible futures'. "*Futureproof* explores improv's potential to contribute positively to futures practice, with XF work serving as its main conceptual and methodological reference point" (Holler, 2017, p. 3).

The guest expert in genetics, for instance, is invited onstage to describe how genetic technologies might figure in everyday life a generation from now (see Image 6). The host and actors ask some questions, then the players improvise a series of scenes from futures inspired and informed by the opening, for both audience and expert to react to.

Image 5. Conor Holler introduces the guest expert and performers at the premiere of *Futureproof*, Bad Dog Theatre, Toronto / Photo: Stuart Candy

Though disparate these examples share a kind of structure under the surface. In a sense, they could have been formulated by attending to the phases set out in the next section.

III. Surfacing a Structure

Ethnographic Experiential Futures (EXF) emerged from the cases outlined above, initially using *Causing an Effect* as a model. The steps taken there were:

1. The researcher maps her collaborators' images of the future through one-on-one semi-structured interviews.
2. The researcher draws from the interviews to mediate some concrete experiential expression of scenaric ideas in them.
3. Realising the opportunity to make these images accessible to a wider audience and create space for dialogue, she shares or mounts the experiential scenario for people to encounter.

This workflow appears in Figure 1.

Figure 1. A preliminary outline of the generic sequence of phases for *Causing an Effect*.

Some projects added scenarios alongside those described by participants, when researchers wanted to expand the set available for consideration (*FoundFutures*; *Making the Futures Present*).

In support of a more comprehensive discourse, the researcher may introduce, or co-create, some alternative future(s) to extend, challenge, diversify, or in a word multiply those originally described.

Pluralising or multiplying futures being an important structural feature of foresight work, here it is an optional phase between mapping and mediating participants' thinking, hence the modified outline in Figure 2.

Figure 2. Our picture of the generic process evolved after noticing an often valuable, but optional, stage

At a glance now, the three (or four) phases describe an arc from narrative elicitation to experiential expression, and could appear complete. But these projects, in contrast to much speculative design/design fiction, specifically attempt to gauge impact.[6]

The researcher gathers or, once again, **maps** feedback and responses arising from the intervention.

With this follow-up visit to the inner landscape of futures thinking, taking stock of how it has been (perhaps) changed, perturbed or deepened by the intervention, the process circles back to the first stage. Now it may be summarised as follows:

> **Map**$_1$: Inquire into and record people's actual or existing images of the future (probable; preferred; non-preferred; a combination).
> **Multiply**: Generate alternative images (scenarios) to challenge or extend existing thinking (optional, especially in first iteration).
> **Mediate**: Translate these ideas about the future/s into experiences; tangible, immersive, visual or interactive representations.
> **Mount**: Stage experiential scenario/s to encounter for the original subject/s or others, or both.
> **Map**$_2$**:** Investigate and record responses.

This recasts the shape from an arc into a loop or cycle (Figure 3). In principle, it could be repeated any number of times: a first iteration might document anchoring narratives such as those that EFR seeks to capture, while subsequent rounds could challenge or revise them.

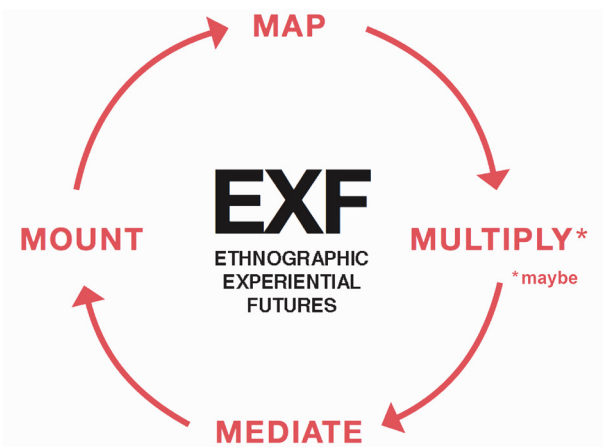

Figure 3. The EXF Cycle

Across diverse goals, media and contexts, a range of projects can be described in terms of the EXF Cycle despite their not having been created using it. Table 1 shows how the architecture of each project reflects the phases identified.

Soon after sharing the draft framework at the Design/Develop/Transform Conference in Brussels (Candy & Kornet, 2017), we encountered a humanitarian activist initiative about girls in Syrian refugee camps being supported in imagining their own futures (Hutchison, n.d.). *Vision Not Victim* had originated in entirely different circumstances tied to neither the futures field nor design,

Table 1. *Five projects broken into EXF phases*

	(1) Causing an Effect (Kornet, 2015)	(2) Found Futures: Chinatown (Dunagan & Candy, 2007)	(3) Making the Futures Present (Greyson, 2016)	(4) 1-888-FUTURES (Situation Lab, 2015)	(5) Futureproof (Holler, 2017)
MAP_1	Elicit images of the future from individual activists using EFR.	Talk to locals and research neighbourhood history for relevant leads and resonant episodes.	Interview participants in workshop to elicit images of the future, using EFR as a backbone.	Public call for brief recordings of people's "dreams" (images of the future); prompted by an automated voice menu.	Invite a subject matter expert to describe possible future scenarios in their area of expertise (genetics, buildings, etc).
MULTIPLY	Step intentionally omitted.	Generate a mix of location-specific future scenarios addressing different issues and trajectories identified as significant for the neighbourhood.	Formulate and probe for an unexpected possible future as well.	Step intentionally omitted.	Actors may be prompted to inflect the scenes they are about to play towards different kinds of scenario, for example, using Dator's generic images of the future (grow, collapse, discipline, transform).
MEDIATE	Derive concrete artifacts from the described scenarios.	Collaborate with a series of art/design teams (one per scenario) to create artifacts, particularly print matter like posters and flyers, "from" the future scenarios.	Create prototype artifacts from selected scenario(s) in the same session in partnership with the participant; then go away and make a higher-resolution version.	Hold a free design jam where participants/ makers (a) pick up a message, (b) fill in a "packing slip", and (c) use an array of provided objects and construction materials to make the dream tangible.	Have actors generate a series of scenes on the fly, responding to and exploring the expert's imaginary, described at the top of the show.
MOUNT	Show the designed objects in an exhibition setting.	Stage or "install" the future artifacts in situ over several weeks (non-overlapping) so people in the area have the chance to stumble across them in the course of ordinary life.	Bring in high-res artifact to next interview.	Have participants/ makers record a short video as part of the event, describing the 'dream' voicemail and showcasing the 'future present' made in response; and packing it up to ship to the address left in the original voicemail.	In improv (i.e., performance that is not scripted but rather created entirely moment-to-moment onstage), Mediate and Mount are effectively merged into a single step.
MAP_2	Capture responses from the activist-participants, as well as the audience.	Gather reactions via observation, press coverage, and a free public workshop focusing on the neighbourhood's futures.	Discuss and capture participant response to the high-res artifact.	Note responses posted by recipients via social media when their future presents arrive in the mail.	Seek feedback from both expert and audience on the futures they have just witnessed.

yet followed the same trajectory (Candy, 2017), underscoring how the structure might genuinely be useful for traversing a wide project design space. To test out that proposition required sharing it more broadly, which is what this article is for.

We now turn to situating the framework in more depth, and considering some of its potentials and hazards.

IV. Discussion

In this section we explore the uses and variations of EXF, but first it will be helpful to locate the work in a wider context and clarify what we are trying to do.

Situating

(a) In relation to futures research

In terms of our primary lens of futures research, we have noted how EXF brings ethnographic and experiential traditions together, spurred in part by a recently articulated methodological need in foresight to enable design-driven "circumstances or situations in which the collective intelligence and imagination of a community can come forth" (Candy & Dunagan, 2017, p. 150).

Foresight scholars often study images of the future that individuals or groups hold (Eckersley, 1997; Hicks, 2002; Hutchinson, 1996; Ono, 2005; Tonn, Hemrick, & Conrad, 2006; Rubin, 2013).[7] They may use scalable quantitative instruments such as questionnaires and surveys, or more qualitative and narrative-based approaches such as essays and focus groups.[8] However, rarely are these futures expressed in a form other than words.

Conversely, the explorations of possible futures emanating from design tend to give form to their creators' own narrative ideas (Dunne & Raby, 2013; Durfee & Zeiger, 2017), whereas EXF projects incorporate map *as well as* mediate images of the future, such that the imaginative 'source materials' come from participants, and lead to results quite unlike speculative design's typical technology-first provocations.

We mean to invite a considered connection between these two operations that are not usually thought about in a joined-up way, let alone carried out together.

This work is approximately aligned with the 'critical and emancipatory' register identified by historian Elke Seefried (2014, p. 4), and partakes also of the 'participatory/prospective' and 'integral/holistic' traditions outlined by Jennifer Gidley (2017, p. 64). However, EXF is perhaps best described using a typology lucidly set out in recent work by Jose Ramos, as a protocol for 'futures action research' (Ramos, 2017, pp. 825–827). In other words we are not concerned with trying to establish foreknowledge of what the future will be, but with helping a nascent design/futures community to extend critical and participatory foresight work into a deeply embodied mode, by scaffolding processes to more effectively explore the futures thinking of diverse communities, using design (meant broadly here) to loop from an interior register to an exterior — thinkable, feelable, discussable — one.

Moreover, any project following the EXF Cycle potentially tackles a need highlighted in 'integral futures' scholarship, to span interior and exterior, individual and collective ways of knowing (Slaughter, 2008).

(b) In relation to design research

Like futures, the design field is also undergoing rapid transformation to better address its potential to shape change at scale. As Bruce and Stephanie Tharp note in their work on 'discursive design' — a genus only recently identified, and a term perhaps more apt than speculative design or design fiction for the various species of project that EXF describes; "If design is going to begin

closing the gap between its present and a greater future, the typical designer will be required to stretch a little more intellectually" (Tharp & Tharp, 2019, p. 19).

In design methodology language, EXF is a framework for 'research through design' (Frayling, 1993; Gaver, 2012), noting especially Bill Gaver's insistence that design "is a generative discipline, able to create multiple new worlds rather than describing a single existing one. Its practitioners may share many assumptions about how to pursue it, but equally, they may build as many incompatible worlds as they wish to live in" (Gaver, 2012, p. 943). One finds a similar orientation in critical futures, for instance Ashis Nandy's wonderful notion of the field as "a game of dissenting visions" (Nandy, 1996, p. 637).

Equally, there are resonances in Liz Sanders and Pieter-Jan Stappers's description of 'generative design research' as "giv[ing] people a language with which they can imagine and express their ideas and dreams for future experience. These ideas and dreams can, in turn, inform and inspire other stakeholders in the design and development process" (Sanders & Stappers, 2012, pp. 8;14).

Thanks to recent conceptual work in interaction design and human-computer interaction literature, we might characterise the EXF Cycle as an example of 'intermediary knowledge' (Höök & Löwgren, 2012; Dalsgaard & Dindler, 2014; Höök *et al*., 2015). The framework sits between the concrete specificity of particular designs (the five projects) and the more abstract register of theories (such as the question of how images of the future bend the arc of history). Through this lens the value of EXF comes from forging 'lateral' connections among prior projects (e.g. Table 1), in a variation on the design research approach described by Gaver as the "annotated portfolio" (Gaver, 2012, p. 944), as well as 'vertical' connections between these specific cases and the EXF 'structure' identified as overarching them, thereby delineating a larger design space (including many more possible projects), and onward to those higher-order questions of how futures thinking circulates in communities and influences change. Stated briefly like this, there is the risk of appearing to dispense too quickly with matters that could take up much more of our attention – but this is precisely the point: the generative, intermediary knowledge object opens up further fronts of designerly and scholarly investigation.

It remains for later work to trace connections more fully with the growing design anthropology literature (Gunn, Otto, & Smith, 2013; Smith et al., 2016); and also with those works presenting ethnographic (or similar) investigations of particular imaginaries, for example feminist (Schalk, Kristiansson, & Mazé, 2017) and afrofuturist (Brooks, 2016; Imarisha & brown, 2015). These worthy endeavours sit at a tangent to our principal aim of extending a resource and invitation to futures practitioners and designers interested in making real-world forays into the hybrid arena of experiential futures, by providing handrails and heuristics for orientation and guidance.

Structuring

What kind of orientation and guidance does EXF provide? We have seen that each stage of the cycle – Map, Multiply, Mediate, Mount, and Map again – admits of wide variation. This may make for strange juxtapositions but it also points towards the power of a framework intended to be flexible. The questions one asks at each stage might be quite similar, but the answers could be as different as their futurist/ designer/ researcher/ participant co-creators see fit.

In this section, then, we suggest how each step can be used to open numerous generative questions for practitioners, so helping shape the design of these hybrid projects.

(a) Map_1

Whose futures are being explored, and why? Are individual, personal-scale mental models especially of interest, or those of a group or community? If the latter, who speaks for the community? What are the elicitation strategies – in writing or interview, in person or remotely, with how much scaffolding and of what kinds? When might existing evidence of future images suffice?

Research collaborators in the cases outlined represent multiple demographics: some of the sort perhaps conventionally orbiting relatively wealthy, Western university-based participatory design projects and invited subject-matter experts; but alongside the usual suspects are residents of a traditionally ethnic-minority urban neighbourhood and environmental activists from fence-line and First Nations communities.

It is exciting to consider how projects to come could partner with and be activated by many more kinds of stakeholder.

In discussing this Mapping phase, we acknowledge potential objections in some quarters to the term 'ethnography' being used so flexibly — perhaps less where EFR is deployed than where imaginative contributions are more rapid or playful. There is a certain license in describing an improvisational theatre format in terms of ethnography, and although it is beyond our scope to weigh in on the contested question of what should count as ethnography (Markham, 2018), we repeat that our aim is to support attempts to animate and embody futures thinking in many contexts. Ethnographic depth is for us a design parameter; a spectrum to be throttled up and down as circumstances require, rather than as a fixed boundary to be drawn and policed in the same way at all times. On the spectrum of depth some projects might be located in the middle ground (*FoundFutures*), and one starts to see how certain kinds of inquiry (conversation with neighborhood residents who might not have much time to spare) could be less effective, or practically prohibited, with a stricter approach. This spectrum view, together with the imperative that format be crafted to fit the case, comports with our aim of enabling not simply *more*, but appropriate, activity in this design space. It might seem strange to say, but rigour or depth are not an unalloyed scholarly good to be maximized at any cost; they are part of a dynamic project design landscape in which more of one thing (e.g. time spent with informants) is bound to mean less of something else (e.g. access for certain participants).

So for initial mapping, EFR could be used, but less formal portals will sometimes be appropriate, be they voicemails from the public or the ruminations of a subject live onstage. One method seemingly well suited to mapping futures in projects to come is Causal Layered Analysis (Inayatullah, 1998), useful for analyzing (Hurley, 2008) and also generating (Kaboli & Tapio, 2018) in-depth images of the future.

(b) Multiply

Should the initially found images of the future be specifically challenged, diversified and expanded? And if so, on a first pass, or later — and in which directions?

To supplement a first set of futures images is an optional variation in the process. One might omit where the goal is to consider primary 'extant' futures (like the activists' motivating narratives in *Causing an Effect*), or where the diversity of the original inputs meets requirements (like the dozens of voicemails recorded by the public ahead of *1-888-FUTURES*).

The key underlying question, often the case in futures practice, is which future stories need to be told, regardless of how they are arrived at or framed — 'surfaced' from prior thought, co-created from scratch, or something else.

(c) Mediate

How, where, and when can the future(s) be brought to life? Whose responsibility is it in the project setup? Might participants be able to manifest their own future concepts directly?

This step is about taking relatively vague ideas or future narratives toward more concrete ones. As our examples suggest, there are myriad ways to make this move, from hybrid design/research exhibition, to rapid prototyping, guerrilla art installation, and improv theatre. Techniques and formats for producing experiential scenarios — 'situations' and 'stuff' from times to come — are covered elsewhere; in particular the Experiential Futures Ladder may offer relevant scaffolding for

this stage (Kornet, 2015, pp. 67–68; Candy & Dunagan, 2016).

There may seem to be a notion in play that people necessarily need help to bring their futures thinking to life – casting the futurist/designer/researcher as coming to the rescue with superior representational skills. This is not our assumption. While it may be true in some cases, aside from the obvious parameter of medium or format for expression, the other central question in the 'mediate' step is how collaboration is set up. 'Design' responsibility might sometimes be located with the researchers (as in the artifacts made for *FoundFutures* and *Causing an Effect*), or more with participants (a kind of 'autoethnographic' experiential scenario creation is integral to *Making the Futures Present*), or with third parties (*Futureproof*; *1-888-FUTURES*).

EXF starts with Mapping because that is where futures work usually starts, and too often, ends as well. But in some cases direct nonverbal mediation could be a starting point — such as hand-drawn (pictoral) images of the future (used by Candy in introductory foresight courses for designers), or the recent Turkish study of children's paintings of potential future technologies (Şeker & Şahin, 2012), or still-life tableaux created on the spot by workshop participants in the emancipatory theatre practice of Augusto Boal (e.g. "the image of transition" in Boal, 1992, p. 173). These quick and dirty representations may be more symbolic than diegetic in how they invoke the future; potentially rich fodder for discussion when 'mapping' to close the loop.

(d) Mount

How, when, where and for whom is the experiential scenario made available?

What it means to Mount an EXF project depends on what and how one chooses to Mediate. These are not neatly separate variables. An improv theatre scene (or Boal tableau) Mediates and Mounts an experiential scenario all at once; there is literally no distinction. But they are separated in the framework because in some formats they are intrinsically different design choices, so the creation of artifacts from a particular future could occur at one point, and be staged for an audience much later.

Of course the circumstances in which a person 'meets' the future can vary considerably — a scripted environment like a workshop (*Making the Futures Present*) is quite different from an unscripted one like a city street (*FoundFutures*), or a private one (future presents received in the mail after *1-888-FUTURES*). There may sometimes be a single 'mounting' event overlaying multiple constituencies (*Causing an Effect*), and capturing the responses of multiple different groups to a given experiential scenario may be highly illuminating.

(e) Map_2

At last, and connected to all of the above, how best to Map responses to the experiential scenario? Whose responses are in scope? Is there the possibility, or need, to bring different views into dialogue, and if so how? Are they to be recorded formally or informally; live or online; privately or with others present; from a captive audience or a parade of passers-by?

A rigorous research approach may call for interviews with the original informants (*Causing an Effect*; *Making the Futures Present*) or a questionnaire filled by an audience (*Futureproof*). Less demanding of participants might be direct observation of those having the futures encounter (*Found-Futures*), monitoring of public responses online (*1-888-FUTURES*), or opt-in feedback mechanisms (like the blackboard prompts inviting visitors' reactions at *Causing an Effect*).

The closing of a cycle may be quite another matter from its opening, with the circumstances of a particular encounter (and thus capture of responses) sometimes being dramatically different from those at the start. Still, the range of options here, including depth and rigour required, can be usefully compared to those in 'Map_1' above.

Conclusion

This article has offered a pattern for hybrid design/futures projects in a kind of action research cycle, pairing moves to surface people's images of the future with moves to deepen the scenarios in play. In examples shared, agendas vary from academic experimentation to documentary, activist, and public deliberation purposes, as well as more personal, quasi-therapeutic, and outright playful ones.

Going forward we picture not only cultural and social foresight-oriented projects being extended, but also uses in more formal and institutional contexts such as businesses, classrooms, governments, and nonprofits. Some of this has already begun, and can be explored in work to come.

For the most part, the projects seen here circle just once, but if pursued past a preliminary pass, the learning loop (or feedforward) shape of EXF could let all parties refine and track evolving images of the future over time. This raises the prospect of supporting social foresight through ongoing community elaboration and deliberation of alternatives — for example, tied to a public election cycle, or to participatory organisational governance. So appears part of the potential for a pattern structurally echoing action research, experiential learning, and iteration in design (Kolb, 2015; Ramos, 2017; Zimmerman, 2003).

Meanwhile, in navigating the framework details and variations in this setting, we must take care not to lose sight of the human heart of the matter: people often find it difficult to think about the future (Tonn et al., 2006), and even in supposedly advanced democracies, often our aspirations and motivating narratives are not present or legible to one other in any form, let alone in idioms designed to "create empathy and build understanding for the perspectives of others" (Kornet, 2015, p. 98), bring the "disruptive energy of laughter" (Holler, 2017, p. viii), or combine "interactive interviews, deep listening, systems thinking and prototyping together" (Greyson, 2016, p. 143).

To end by recalling our motivation, building on some key ideas of the futures field: the development of new and compelling ways of turning foresight inside out appears critical if humanity is to have any chance of developing a distributed social capacity to think ahead; if we hope to escape our tempocentrism, come to better understand each other, and navigate change together. It is our hope that, with this intermediary knowledge framework, others will discover variations that currently cannot be foreseen: We look forward to what a community of EXF experimenters will generate.

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Notes

1. Polak's influence is likely underrated (van der Helm, 2005).
2. A google search for 'ethnocentrism' returns 3,130,000 results; 'tempocentrism' receives 2,040, and the variant 'temporocentrism' has 3,170. Retrieved February 24, 2019.

3. We also acknowledge the co-constructed nature of these imaginaries, where the researcher/designer is involved.
4. *The Sceptical Futuryst* blog documents the emergence of experiential futures dating back to 2006: https://futuryst.blogspot.com
5. Situation Lab is run by Stuart Candy and Jeff Watson http://situationlab.org; The Extrapolation Factory is run by Elliott Montgomery and Chris Woebken http://www.extrapolationfactory.com
6. Some trenchant criticism of speculative/critical design work hinges on a perceived lack of interest, on the part of its makers, in actual as opposed to intended effects (Tonkinwise, 2015).
7. For decades, pioneering futures educator Jim Dator would have incoming futures students each write two short essays, envisioning their lives, and their communities, 25 years out (Troumbley, Yim, & Frey, 2011).
8. The collaboration *Maono*, undertaken with urban youth and artists in Democratic Republic of the Congo, is a notable exception (Van Leemput, 2015).

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