Different Together: Design for Radical Placemaking

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ABSTRACT

This work responds to isolating urban places, and contributes new ways for thinking about placemaking. Progressing through autoethnography and prototyping, we critique design proposals with Lefebvre's theory of utopia. There inhabitants can enjoy and shape their place together without risking depletion of their abilities and motivations to do so. The critique produces political sensibilities that help us make sense of common tensions among inhabitants, landowners, and visitors, and generate possible responses. The critique process itself illustrates how designing through critique with theory can help us think in new ways. This paper contributes a display of how design with critical theory can happen, ultimately to support our abilities and motivations to envision and make places of social flourishing that can respond to our socio-environmental crises.

CCS CONCEPTS

• **Human-centered computing → Interaction design theory, concepts and paradigms**.

KEYWORDS

sustainable HCI, utopia, right to the city, making place, design critique, critical theory

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1 INTRODUCTION

The westernised places we live in have become increasingly theorised and practiced as places of isolated being [91].[1] Here people create meaning in the places they live, and this meaning has historically often been exploited and depleted by top-down and capital-driven forces. The challenge we see is that without shared places that afford lively relations among people and place, it is hard to imagine how inhabitants can accumulate meaning and develop abilities and motivations to envision radically different places that respond to our socio-ecological crises [77]. Critical political theorists offer rich analyses to help us overcome widespread and normative mechanisms of alienation, but architecture, other spatial design, and general design practice struggle to make those analyses actionable. We take up one critical political theory, Henri Lefebvre's theory of utopia, to addressing isolating places. Lefebvre's utopia is a process (not a destination) of inhabitants becoming active citizens (instead of passive consumers) [92]. Here citizens (re-)orient the places they live in for livelier social relationships that support citizens to shape and (re-)appropriate *their* places, instead of those owning these places [92]. It is a kind of placemaking that is radical. What makes this placemaking radical is the struggling away from forces that deplete citizens' abilities and motivations to shape their place [89]. In this paper, we take up the question of what it means for Human-Computer Interaction (HCI) to *design for radical placemaking*.

People, including HCI and Design researchers [22, 61], have in the spirit of Lefebvre been developing political sensibilities to deal with challenges of depleted relations among inhabitants and their places. Political sensibilities are about seeing conditions that make possible some ways of living together at the cost of other ways of living. In particular, HCI design researchers have for some time explored how digital technology can participate in making places [31, 69], and how we can design digital technology to explore how to make places [2, 3, 6, 20–22, 73, 104], also with more than human creatures [19, 60–62, 64]. Works like these have, through empirical studies, design provocations, and research through design

[1] What we call "westernised places" are places that have been designed to be gripped by few, dominating many; a devastating characteristic particularly prominent in places touched by colonialism, imperialism, and capitalism. These places do not need to be located in the minority, "Western" world, and they include places such as airports, shopping centres, and many urban centers.

processes, begun to develop political sensibilities for how inhabitants together can make more flourishing places to live in. With this paper we want to continue this work, and we connect it to the United Nation's Sustainable Development Goal 11 on Sustainable Cities and Communities [50].

This paper contributes an illustration of how designing through critique with theory can help designers to think in new ways. Our instantiation produces four political sensibilities in design for radical placemaking. The political sensibilities are meant to support designers critiquing their understandings of a design situation about placemaking and generating new ideas. The contribution is made through autoethnography, prototyping, and critique. The autoethnography was done with a student housing campus in northern Europe, and was materialised as a context description and design proposals. The design proposals are images and descriptions of possible but imagined digital technologies that address the place's lacking social-recreational affordances [2]. The design proposals are not single concrete solutions to problems of isolation that would be built and deployed. Instead, the proposals became multiple potential responses that through design critique [8] with Lefebvre's theory allow us to better understand challenges and opportunities of placemaking. Through the critique, the design team realised that efforts to enrich social-recreational affordances actually can reproduce their depletion, especially if there is lacking inhabitance agency. We develop political sensibilities that make sense of common tensions among inhabitants with contradictory and evolving interests and under risk of exploitation by landowners and visitors, and generate possible responses to those tensions. As such, designing through critique with theory supported us to think in new ways and anticipate potentially clashing interests. We illustrate this reflective process, which responds to a call in the HCI design community to demonstrate the practice of making critical things and making critical theory generative in design [10]. Ultimately, while imagining new possible worlds through technology design in our time of crisis might seem utopian and impractical, it is realistic if we understand correctly what Lefebvre has in mind. What matters the most is the process of change and not some final goal or fixed utopia, because these things do not exist. What matters is the motivation and ability to strive for and imagine radical change and new possible worlds where we can be different together and flourish socially.

2 BACKGROUND

2.1 Place and Utopia

In this paper we look at how places come to matter. Scholars from various fields underpin our understanding of place as dynamically achieved, produced experientially through socio-aesthetic material encounters and (re)makings of place [84, 107]; economically through capital accumulation's interaction with socio-environmental justice [58]; culturally through citizens' role in (in)formal public dialogue and democracy [59]; and technologically through digitally driven practices [31, 48]. Our ethical stance builds on feminist and materialist perspectives of place, wherein places are open-ended locations with intra-dependent conditions that are particular and changing [7, 83]. These conditions are agentic materials and creatures that carry on with their being and lives in recursive, entangled, and creative ways [57]. What is meaningful about places always comes into being in material and contesting ways where every event invites some possibilities while leaving other possibilities aside; mattering for all but more importantly for some [25, 83].

In line with Lefebvre, what we might call feminist or democratic perspectives have expressed concern for the liveability and liveliness of westernised places across a wide spectrum. In the arts, interventions have been understood as decorative, compensatory, or escapist [78] without intentionally engaging critically with city politics [12]. Other interventions have aimed to enrich the social fabric of an otherwise isolating city [71, 87]. More critical interventions work to awaken residents to their habitual conformity to oppressive practices in the city [15]. Furthermore, urban artistic interventions have been understood to hunt opportunities to publicly express political resistance [66]. Artistic interventions have also been conceptualised as utopian experiments where communities reappropriate decayed places to explore and test alternative visions for their city [55, 66]. In political theory, concern for the urban can be found among many critical thinkers. Debord writes about the modern society as a spectacle that promotes economic development at the cost of authenticity [26]. The spectacle (re)produces loss of consciousness where appearance replaces people's direct experience, separating people from themselves, community, and world. To avoid absorption into the spectacle, Bey writes about temporary autonomous zones or islands (TAZ) [11]. Bey anticipates permanent revolution through "ongoing temporary revolution that continues to replicate, indefinitely" [98]. Such "fleeting pockets" are really a way of being that Bey points out can happen in in cities, for example in no-car areas reclaimed by pedestrians, community gardens, where protesters stand up against police, or the recent Capitol Hill Autonomous Zone in Seattle [98]. Turning to Marcuse, he writes about how the modern society alienates people by superimposing needs that actually are false [81]. While those false needs are accepted, accommodated, and reproduced, people will remain unable to break loose from blind conformity to the dominating ways. Thus Marcuse places hopes for revolution with the marginalised that more clearly recognise their oppression. Similarly, Foucault writes about how discipline can be understood as not merely top-down but as co-arising in internalised ways through the way we move and think so that people do not need policing [39]. Under such conditioning where people become malleable and "useful", people come to accept choice among predetermined options as freedom rather than critically engaging with the given alternatives (cf. [38]). With a focus on technology, Borgmann shows how the modern technological city become "enjoyed as a mere end, unencumbered by means", producing inhabitants that largely float through existence [14]. Works like these show a westernising process of producing homogenised places and isolated, docile inhabitants. The HCI design community have imported and activated similar concepts. For example, Disalvo and Le Dantec use Dewey's publics to explore the formation of groups of people around a shared issue, enabled by the communication of that issue's condition and consequences [28] and possible responses [23]. Similar to Deweyan publics but more loosely conceived, Steup and colleagues use Fine's tiny publics to understand small farmers' social movement [102]. Understood more

[2]We use the term "affordances" broadly in this paper to signal that some action or experience is enabled, rather than deploying Davis' recent reconceptualisation [24].

as social movement, Crivellaro and colleagues engage with city politics through Hauser's politics of everyday talk to explore residents mobilising, positioning, and proliferating values and aims [21]. In a similar spirit of resistance, Disalvo engages with De Certeau's tactics of people negotiating and overcoming institutional strategies for disciplining people [28].

While the aforementioned analyses overlap with Lefebvre's utopia and might elaborate things he does not, we engage with Lefebvre's theory particularly for its usefulness to think through what is important for inhabitants shaping the place they live in and achieving results they control among and away from top-down and exploitative capital-driven structures [74]. Despite Lefebvre's work having taken place in the 20th century in that time's context of public resistance to injustices, imperialism, the Great Acceleration [101], increasing top-down and capital-driven streamlining of life and places, and social engineering [68, 109], scholars widely appropriate Lefebvre's thought today [82, 91], also in HCI to, for example, set the scene for design inquiry in "smart cities" [37, 95], in urban food production [60, 61], and to promote civic engagement through friction [70]. Geographer Mark Purcell offers us a contemporary interpretation of Lefebvre's work that we draw from [89–92] alongside source material [74–76].

2.1.1 Lefebvre's utopia. In the context of Lefebvre's project of planet-wide revolution for radical democracy [76], we concern ourselves with Lefebvre's view on the process of producing place. In Lefebvre's view, places that are largely made by capital-driven and top-down design produce sameness and then reproduce that sameness. Such design that seeks sameness has oppressive effects because it erases differences and possibilities for democratic processes of living in that place, and it hides ongoing harm done in particular to marginalised peoples and bodies [85]. Places of sameness have been called "non-places". Non-places are jarred and stripped of their situated particularity and largely invisibly self-sustained for people in that place [4]. These places' "here-ness" is equalized into "anywhere else-ness"; from alive place to abstract space. Airports are a clear example of this design approach, and it is increasingly visible in other public and private places. Here, place is primarily valued for its exchange value, and more exchange value can be extracted from places where individuals are separated from each other and disconnected from place [92]. Inhabitants become "passive consumers instead of active citizens" [92]. While inhabitants might be familiar with the places they live in, Lefebvre means that they are still alienated in important ways because they become isolated from each other and isolated from the processes of shaping and using their place. In summary, contributing to isolation and degraded liveability and liveliness of mainstream ways of producing place, Lefebvre particularly points at the suppression and exclusion of affordances for multi-vocality, communality, active and diverse social relationships, and (re-)appropriation of place.

In Lefebvre's view of utopia, he urges us to *struggle away* from the oppression of capital-driven and top-down design rather than focusing on confronting, smashing and destroying it [92]. Struggling away is about developing inhabitants' own abilities and motivations to shape their place, which will eventually render the top-down and capital-driven structures unnecessary, obsolete and finally absurd [92]. What Lefebvre envisions in his view of utopia is a transformation of society towards a "collective ownership and management of space founded on the permanent participation of the "interested parties," with their multiple, varied and even contradictory interests" [92]. This transformation is about (re-)orienting places toward the production of more lively, active and diverse social relationships. Lefebvre emphasizes that (re-)appropriation of place *must* be part of these transformations if resistance to top-down and capital-driven design is to avoid hopeless banality [92]. It is here that we connect our work to Lefebvre's utopia; to a process of change without a final or fixed goal; to the enriching of affordances for multi-vocality, communality, active and diverse social relationships and (re-)appropriation of place; and, to the growth of inhabitants' abilities and motivations to shape and enjoy the place they live as part of.

2.2 Placemaking and Digital Technology

In the spirit of Lefebvre, HCI design has engaged with space, place, and placemaking with developments in (eco)feminist geography and science and technology studies (STS) with concerns for experience, politics, rights and (in)justices, and infrastructure. The role digital technology has played in the production of place has been understood across a wide spectrum. On one hand, digital technology have been understood to be so embedded in our everyday lives that the technology is there in our basic sense of how a place comes to matter for its inhabitants, like in the case of getting food in supermarkets that would not function without computers [69]. On the other hand, digital technology have been used in rhetoric that portrays technology as deterministic and utopic, effectively making our lives transcend the physical place we are burdened with [48]. HCI design has along such a spectrum been exploring how technology can matter in the production and imagination of valuable places, emphasised from personal, collective and performative perspectives.

When researchers have looked at the production of place as a personal activity, they have emphasised how this production is a dialogue with technology and design [16–18, 31, 84]. These works point out some qualities to consider in how such dialogic production comes to matter, including social context, constructive narratives, and open-ended exploration.

Researchers looking at the collective activity of inhabiting and producing place have explored how inhabitants' civic dialogue can come to matter for inhabitants' appropriation and urban planning. For example, Asad and Le Dantec show how inhabitants' practices with technology can resist top-down urban planning [2], Le Dantec and colleagues show how urban planning can be supported by making data-platforms as civic platforms [3, 73], and DiSalvo and colleagues show how data can be used for resistance to top-down practices and for the becoming of public space [29, 30]. In particular, Taylor and colleagues show how the production and use of data can take part in placemaking [104]. They show how the production of data is meaningful due to its situated, participatory, and mundane material production. The data, in the hands of residents, becomes a force for learning about their community, shaping *their* place, and mobilizing themselves to work against the place's (re-)production of noise and other pollution. Further work on place-based political practices and sensibilities have also

been discussed in contexts of urban farming [62, 63] and housing estates [22]. For example, Heitlinger and colleagues' Seed Library collects stories from urban farmers about their practices of caring for and saving seeds to nurture stories about sustainable use of land, which works against using and valuing land and property primarily for their exchange value [60]. Crivellaro and colleagues show how inhabitants can resist a housing estate's "regenerative" community project, which is actually largely about whitewashing, erasure of place, and alienation of citizens in their homes [22]. Their study shows a design intervention as a travelling suitcase that afforded vocal capture and sharing of stories among inhabitants. This multivocal digital archive became a living, moving site for resistance and placemaking. The design enabled the mundane to be re-situated against the production of oppressive effects from capital-driven and top-down design. All these works demonstrate a potential of HCI design practice to bring together collectives in practices for placemaking and mutual flourishing.

Furthermore, studies have shown how performative approaches can be used for civic dialogue. For example, Rossitto and colleagues show how individuals that are drawn into an interactive performance become engaged in a creative exploration of the relationality and politics of place and placemaking [96, 97]. Echoing the performativity of these digital interactive placemakings, Fox and colleagues' playful critique of the production of place through data challenges the assumed neutrality of placemaking technologies [40]. By generating parody mappings of Seattle neighbourhoods with keywords drawn from platforms for real-estate and location-based reviews, the designers demonstrate the tension of values at play in the localization of global practices of capital-driven enterprise.

Across these studies of placemaking with technology and artistic interventions, we want to highlight a progression of thinking from early works on the importance of personal experiences of place, to the productive tension of designing for these experiences among and against oppressing globalizing and capital-driven practices that erase the local and the particular. Design in this latter mode creates sites for the capture and performance of particularities of place with the people who inhabit these places and produce them. We pick up these threads together with Lefebvre's view of utopia to look at how design can nurture affordances for social-recreation and inhabitance agency, without reproducing conditions that make possible their depletion.

3 DESIGN PROCESS

This work began with the lived and shared experience of the first author (TFA), a researcher-designer that was a domestic resident at the student housing campus in question for 5 years prior to starting this project. This research through design work [110] progressed through three stages; autoethnography, prototyping, and critique. Before telling the story building our design critique contribution, we show how critique contributions are understood in HCI design research.

3.0.1 Research through design critique. Critique or criticism is a long-standing practice in the arts and humanities to generate knowledge out of artists' objects like film and poetry [9]. Here critique is not about being negative about an object; critique can be about understanding the world using an object as lens, asking questions about the object and becoming sensitive to its (potential) work in the world [9, 27]. For example, we could ask about socio-ecological conditions inviting a particular poem to be made, or how elements of a poem invite certain experiences and reflections in a listener of a particular historical culture (cf. [8]). Importantly, critique can help us "work through and clarify a given puzzling problem space, not to resolve it into a dogmatic theory, but rather to clarify its complex particularities" [9] and implications of actions therein [8]. This makes critique also useful and arguably essential for HCI design research and so critique practices have been appropriated to generate knowledge out of designed objects [8]. As for the arts and humanities, critique can help us become alive to possibilities that a designed phenomenon can invite and leave aside – possibilities that can exceed or overthrow designers' intention to change our world [8, 9]. If we do not critique our technologies before implementing them, we run bigger risk (re)producing undesired ways of being in the world. As such, critique can be positioned in a phase of understanding the problem space in the design process. Especially for us in this paper, critique is a way to identify clues to alternative ways of being and motivate us to explore them further [9].

Our critique is similar to HCI design research that have published critiques on, for example, posthumanist co-habitation [99] and decomposition [79], and anti-ageist design [36]. These critiques look at an object through a theory, identify concrete features of the theory in that object, and then describe those concrete theory features in ways for other designers to use. These critiques are about opening design spaces by translating and instantiating a theory's ontology, and making it more actionable for designers. Our critique object is a collection of design proposals in their social context, and the theory we use to understand our object with is Lefebvre's utopia. Like Ferri and colleagues, we also look at how features of our object work against the theory we use [36]. Ferri and colleagues uses game design theory to look at two games developed to be anti-ageist. They see that ways the games work against some theory elements are ways that the games actually support anti-ageism. When we see how our design proposals work against Lefebvre's theory, we use the critique to think about what features the proposals could have to work for that utopia. Similar to critique outcomes as reflections [99] and design tactics [36, 79], our contribution is not meant to be used as mechanistic dogmatic theory for design [8, 9], but as sensibilities supporting designers to critique and enrich their understandings of a design situation and generate new ideas. Furthermore, our reflective process itself of designing through critique with theory illustrates how design with critical theory can happen, and so responds to a call in the HCI design community to demonstrate the practice of making critical things and making critical theory generative in design [10].

3.1 Autoethnography

For 6 months in situ, TFA followed an autoethnographic approach doing fieldwork to investigate his experience of isolation as a resident alongside the experience of other observed social actors [93]. TFA participated in an annual meeting of the tenant association and conducted a semi-structured interview with its vice-president. In everyday encounters with other inhabitants around campus kitchens, dormitory corridors, and outdoor areas, TFA discussed

Figure 1: Photos of the student housing campus. To the left is a great concrete wall that surrounds and shields off the place from nearby residencies, forests and fields. To the right is a typical kitchen with its furniture fastened to the floor.

issues of isolation in circumstantially open-ended ways and documented these in field notes afterwards. Some of the authors also conducted individual walks in and around the campus and reflected together on how the architecture can matter for sociality. Prior to and following the autoethnography, both during and after his tenancy, TFA collected data about housing managers' interactions and communications with inhabitants through mail, announcements on doors and walls, outdoor signs, their website and social media, and personal interactions. During the analysis, we grouped the data around salient issues about the architecture, the tenant association's struggles, perceptions of isolation from people and place and contrasts to previous homes, and the housing managers' interactions and interventions. From this data we wrote a context description that shows conditions that both make the campus a suitable place for us to engage with Lefebvre, and that contextualises the making of the design proposals. The context description was also shaped by our deepening engagement with Lefebvre and by the creative design work producing four design proposals, where we rationalised aspects of the designs through deeper understandings of the design context. As such, the design proposals and their descriptions respond to the autoethnography and TFA's lived and shared experience as a resident at the student housing campus.

3.1.1 Context description. The student housing campus is run by the housing organisation Stockholms Studentbostäder whose purpose is to build, own, and manage accommodation for students that are part of the city's student union Stockholms Studentkårer [51]. The student union is the housing organisation's principle governing body, but while they represent the city's over 100 000 students to influence politics on regional and national levels, the student union does not work directly with the housing organisation's board managing the student housing campus [65]. Areas around and near buildings are managed by the housing organisation, and the surrounding public places are managed by the Stockholm municipality [100]. The campus was built in the late '60s during a time of intensive urbanisation and large-scale development in Sweden, similarly to many parts of the world, including Lefebvre's France [56]. In the context of a "million programme", the Swedish government sought to build one million affordable quality housings over 10 years through generous state loans, land provision facilitated by local authorities, and industrialised construction [56]. Although not part of the programme, the campus was designed and constructed in similar ways, i.e., affordably and en masse. These places were also criticised at the time for their uniformity, neglected outdoor environments for social and ecological ends [56], displacement of marginalised communities [49], and "[not] taking enough interest in what [people] really desired", which was small houses instead of flats [56]. While there are efforts to improve these places which were experienced as desolate, alienating, and isolating when they were first built, many of them continue to experience segregation and marginalisation [56].

Domestic and international students coming to study in Stockholm, with its lack of housing, typically find themselves in functional yet inhospitable student housing environments. Our campus of study has more than 2000 students [53], and the housing organisation's large turn-around of 50% re-locations every year [52] contributes to the place's transient and temporary character. This character is further reinforced by the architectural design that largely speaks a language of austere functionalism and cost-optimisation. One striking feature is the great concrete wall that shields the campus off from nearby residencies, forests and fields (see figure 1). Overall, the buildings and interiors are generic. The shared kitchens accommodate up to 14 residents, and have chairs and tables fastened to the floor which severely limits social activities and people in kind and number. The small kitchens require relatively intimate social contact among many people, even for those who might not want it.

The campus has a local tenant association to bring inhabitants together and to mediate talks about inhabitance issues with the housing managers. TFA is a previous board member and met with the association on their annual meeting, where he learned that board members were leaving the association because it was run poorly. In a following semi-structured interview, the vice-president noted the lack of engagement from inhabitants saying that *"no one knows about the organisation"*. During TFA's time as part of the association, it ran some successful events like open-mics, Sunday brunches, and art workshops, but often struggled to engage inhabitants.

Figure 2: To the left is a performative outdoor gym constructed on a popular barbeque field in the campus. To the right are beehives put up close to dorms, kitchens, food, and lawns with benches.

In encounters and discussions with other inhabitants, people expressed struggles to engage with other inhabitants and the campus. The campus has a square, but the campus' Facebook group contained photos and comments about anti-social behaviour there and in other shared areas, and problems with litter and dilapidation. There is also a local pub but Stockholm has a relatively high cost of living which might deter students especially arriving from places of other economic backgrounds. The campus houses a small local gym, but as a discussion with a local gym administrator revealed, there is a long waiting list for membership. Two international students from Spain and Italy coming to live at the campus recounted that they were missing communities similar to those they were involved with in their previous cities, like a local pub, a local farming community, the plazas, and a climbing club. In a conversation with two international students coming from warmer and dryer climates in India, they shared that they and some of their friends had barely been outside around the campus in part due to the long, dark, and cold periods of the year, which resonates with how many domestic locals see outdoor social-recreational possibilities in the wintertime. Discussions with residents of different dormitories showed that some get along well with their dormitory mates, whereas other dormitories were shown to have close to no social activity at all, or even various degrees of anti-social activity. One discussion with a domestic student from Stockholm showed their compassion for local lonely people in their work outside of study on a documentary about the problem of isolation in Stockholm which investigates a case about a person having been found lying dead in their apartment in Stockholm for almost 4 years without anyone reporting it [35]. There have been similar reports since (e.g. [108]). Two other domestic students reported that there are many lonely people at the campus, resonating with the documentary maker's sentiment.

Inhabitants can connect with the housing organisation and its managers through a visitor center, their website and social media. The housing organisation supports the local tenant association with, for example, spaces to rent for parties and a room for playing music, and they have engaged inhabitants in "safety-walks" where inhabitants had a chance to share safety concerns in situ with housing managers. While these efforts support affordances for social-recreation and inhabitance agency, the housing organisation also missed out on many possibilities to include residents in the process of improving the campus. One occasion was a resident survey about improving the campus, where the housing organisation collected responses but did not follow up with residents about actions. Since then there has been a number of changes. A barbeque area was removed due to what the housing organisation saw as "problems" with "homeless" people, as they communicated over mail. There was no visible dialogue with residents and likely not with the non-dormitory-residents about what the problems were, and a while later the non-dormitory-residents were no longer seen around. In addition to the removal of these first barbeques, yet another popular barbeque and social area was removed, and a new outdoor gym and sports area was put in its place (see figure 2), which added to the already existing outdoor and indoor gym and the nearby football fields. These changes were made without any consultation with the existing resident-led and not-for-profit gym organisation. This new outdoor gym is located in the middle of the campus facing many kitchen and dormitory windows, which makes the gym seemingly suitable only for people comfortable to stage a performative exercise. Two beehives have also been installed in the immediate proximity of many dormitory entrances and windows. No information was provided on whether the bees could be prone to cause problems around people's food, kitchens and rooms, which otherwise is a common challenge. The housing organisation shares information on a sign next to the beehives and on their website with the phrasing *"Did you know that bees are co-living with our students at Campus Lappis?"* [54], seemingly not even addressing the residents themselves. There is no information about whether residents can take part in the bee-keeping, which makes it seem like more of a marketing performance rather than for community-engaged placemaking and sustainability. One of the few times the housing organisation did invite residents into "dialogue" was when they asked if the residents wanted to learn about the new student housing that was being built. These new dormitories are mostly individual studios without shared spaces. They lie closer to the seafront and they have rents that are proportionally close to double that of the other dormitories, which makes these places available in an isolated manner for wealthier people.

In summary, this investigation finds some efforts for enriched social-recreation and inhabitance agency, but also challenges of top-down and capital-driven design, social isolation and precarity,

oppressive architecture, alienation of place, a lack of opportunities for social-recreational activities regardless of the season, and missed-out opportunities for communality and belonging. These are qualities that resonate with Lefebvre's views of today's mainstream ways of making place. While student housing campuses are worthy in themselves to be explored as more liveable places, and while they might have their own ways of, for example, governance that differ from other urban and rural neighbourhoods, we also believe that such places have something in common with many other places, like Lefebvre suggests. Lacking affordances for both inhabitance agency and social-recreation may be seen in many westernised places, like places run by property management organisations (c.f. [22]) with very large portfolios of houses; where building management companies look after apartment services including hallways, grounds, rooftops and other common areas; in short-term housing buildings, social housing, or urban areas and amenities managed by local councils; in neighbourhoods by business parks and other tech campuses; or in the "death of the high street" where online services and malls on the outskirts of cities depletes a local social fabric. After having seen conditions and challenges of this student housing campus, let us look at how the design process unfolded in response.

3.2 Prototyping

After having started the autoethnography and beginning to engage with Lefebvre and placemaking literature, TFA recognised even more value in addressing the situation. Similar to aspirations of speculative design [34], TFA wanted to take a creative leap and open exploration for radical possibilities rather than only incremental possibilities within the status quo, so he set out to prototype a collection of design proposals. TFA focused on limitations of social-recreational practices by considering affordances in public places accessible to any resident across different dormitories and buildings so that residents could find opportunities for social-recreation even if they ended up living in a dormitory without favourable social-recreational conditions for them, free of charge to be open for residents of any economic background, directed towards getting to know and enjoying each other's company without competition or productivity otherwise often prominent, and in nearby sites that could make the shared, local outdoors more attractive across seasons. TFA drew from situated and bodily design methods [67] as he imagined change while walking, biking, and photographing the student campus and its surroundings. This narrowed down the design space to what already can matter for inhabitants' daily lives and places' fabric rather than thinking about one-off stand-alone installations, and it helped to cultivate a sense of what different sites might mean, what they might be used for, and what they could feel like. The design direction was inspired by ludic design [45] and primed towards qualities generally considered meaningful for social-recreational experiences like spontaneity and playfulness [41, 46], curiosity and interpretative appropriation [42, 43], and unpredictability and serendipity [1]. TFA made design proposals for digital technology through common techniques like collaging and drawing on photographs, writing short stories about them, and detailing how to technically implement them. The designs were positioned in locations that would enrich and draw from qualities and practices already existing there around, for example, sociability, calmness, stumble-upon-ness, accessibility, and soundscape. TFA chose the most diverse and exciting ideas and made them into more deliberate picture collages with narratives. Four design proposals were created through these exercises, the evolving context description, our initial engagement with Lefebvre, and in discussions in the design team, and also as a capture of the lived and shared resident experience of TFA. Before we present the design proposals, let us look at the main part of the design process; the critiquing.

3.3 Doing critique

Up until this point, the design proposals were responding to lacking social-recreational affordances. After the proposals had been made, the design team got more involved in the work, and we engaged more with Lefebvre and placemaking literature. We tentatively started to question how each design could work for different inhabitants, and how that work in turn could impact other influential stakeholders, therein particularly landowners and visitors. During this stage we saw that even if designers and inhabitants would work to take care of isolation, there can still be forces that reproduce it thanks to those very efforts to lessen it [13, 32] through, for example, gentrification [37]. Our tentative questioning evolved into a systematic critique which was an exploratory process of mapping possible tensions and responses [8, 9]. When we critiqued, we asked how the design proposals could support some inhabitants socio-recreationally. Then we asked how that value could matter for other inhabitants, landowners, and visitors. Among these actors we saw tensions arise for each design where actor X's value could work for or against another actor Y, and in turn work for or against that actor X. Some tensions were similar among the designs which made them more salient. When we had laid out tensions, we imagined whether there were any features of the designs that could respond to those tensions, or if there were any other responses possible by slightly re-designing the designs. We grounded this imagining in the context description and Lefebvre's theory. For example, the autoethnography helped us see landowners' tendencies of acting for inhabitants, as warned by Lefebvre, which supported us to see their possible responses to design proposals and tensions with inhabitants. The autoethnography also helped us see existing social fabric that the designs could tie on to, to strengthen elements of Lefebvre's utopia. As such, confidence in the critique results are rooted in the empirical work of the autoethnography and the analysis with a widely accepted theory. After identifying tensions and responses we grouped them based on similarities and differences. We have come to designate the tensions as common, for which research on non-places and tourism offer support (e.g. [4, 94, 103]). We ended up calling each set a "political sensibility" because they helped sensitise us to conditions that invite some ways of living together at the cost of other ways of living.

In this way, designing through critique with theory happened. The critique became an exercise of reflecting on our own work and thinking through how the design proposals could work against and for inhabitants' social-recreation and inhabitant agency, along Lefebvre's view of the role for inhabitants in society. Results of the critique and the design proposals are not final products but tools for thinking through how Lefebvre's utopia can be instantiated in HCI

Figure 3: Screamtree explores an incentive to congregate during the place's weekly screaming-out-the-window practice.

Figure 4: Tunnelbeat is an interactive and musically enhanced tunnel located in the tunnel leaving from the student housing campus. The white tiles are locations of piezo microphones which feeds the soundscape (which would not be marked if implemented).

design. Thus, the intention of our design critique is different from what the intention would be for an otherwise common evaluation of building and deploying design proposals in situ. In this regard our work forms a broader critique of how HCI frames placemaking in design. Design practice is heavily part of norms and culture, and even well-intentioned spatial design may have mechanisms of alienation showing up. Just by looking at the world, we recognise that it is unlikely that anti-alienation values show up by themselves in design processes. Designers may be required to explicitly engage with critical theory, and critique offers one approach for that. In our instantiation, what made Lefebvre's theory particularly generative were tensions that it seeks to accept and negotiate, e.g., tensions between inhabitants, and tensions that it seeks to resolve and favour to one side, e.g., tensions between inhabitants and landowners. While we did only a few rounds of critique, one might do more rounds to find further clashes of interests and imagining further re-design. Such analysis may lead to a greater number of possibilities, on which more analysis can happen indefinitely [88]. We do not explore how many rounds of critique and re-design that may be sufficient, but we do note that critique with theory and through design can be valuable for thinking in new ways. The critique helped us think more expansively about what the implications could be as opposed to what they would be for this particular place and context if we had built and deployed the designs. For example, the critique helped us pick up on potential effects and opportunities about extraction that might otherwise have been hard to see or that might not have happened in, say, a month-long singular deployment. Even though some risks might not have yet happened, it is still valuable to see them and manage them if we want to take mechanisms of alienation seriously and not make more "solutions" that lead to further and bigger challenges downstream. Altogether, critique with theory and through design allowed us to better anticipate potential clashes of interests and recognise opportunities.

4 DESIGN PROPOSALS

4.0.1 Screamtree. At the campus, inhabitants have a tradition of screaming out of their windows for a couple of minutes at 22:00 on Tuesdays [86]. The scream is seen as a kind of nonconforming, cathartic and fun activity; a shared emotional release and a celebration or manifestation of anxiety. Conceptually, the design proposal Screamtree is about inviting inhabitants to congregate during this kind of breaching experiment [15, 66] to allow personal bonds to forge. As a particular concrete implementation of this concept, Screamtree (see figure 3) would be an interactive light-tree that feeds on the loudness of individual screams and alters its visual appearance. As such, Screamtree responds to the lack of socially accepted ways for inhabitants to engage with each other. This design proposal makes use of a landmark tree that already has

Figure 5: Treebells support inhabitants to share histories and experiences. It is located in the woods by the student housing campus.

Figure 6: Phonehat explores semi-anonymous social interaction in a grass field nearby the student housing campus. A caller station is to the left and a receiver station to the right.

evening lights and stands at the campus square, which is a central location typically of little activity at this hour that many people already face from their windows.

4.0.2 Tunnelbeat. One of the main two transitional pathway between the housing campus and the university and city is a tunnel. Although this tunnel is a covered space with evocative acoustic properties which might promote experiences of place, its liminal and transitory character prevent accumulation of social significance. Conceptually, the design proposal Tunnelbeat enhances this acoustically suggestive place to invite musically playful social interactions. As a particular concrete implementation, Tunnelbeat (see figure 4) would feed on rhythmic sounds in the tunnel, like pedestrians' walking, to produce a subtle rhythmic instrumental soundscape that adapts to the passersby's sounds. In this way, Tunnelbeat responds to the campus' lacking recreational areas for social interaction. Tunnelbeat echoes qualities of the design Tunnel Divisions [80] but they diverge on the point where Tunnel Divisions is meant to preserve non-place qualities, Tunnelbeat is meant to transform non-place qualities by enriching social-recreational affordances (and their appropriation as we will see in the critique).

4.0.3 Treebells. About ten minutes away from the residential area, inhabitants can be found strolling or jogging by on a serene coastal path through a forest. Conceptually, the design proposal Treebells is about capturing local histories and experiences in a tranquil place, and supporting inhabitants to share them. As a particular concrete implementation, each Treebell (see figure 5) would be a container with glockenspiel on their bottom, holding a notebook and pen to allow inhabitants to communicate in a contemplative setting. The Treebells invites visits over time by being serendipitously available, moving vertically in and out of reach. This design proposal is inspired by a practice commonly found at hike sites like summits with message boxes where people typically share thoughts, observations, wishes or gratitude. In this way, Treebells respond to challenges of transiency and alienation from place.

4.0.4 Phonehat. The design proposal Phonehat (see figure 6) consist of two connected phone booth-like stations 300 meters apart on a field near the residency area. Around this field, residents can be seen to go for a walk among other visitors. Conceptually, Phonehat is about semi-anonymous social interaction for playfully sharing reflections and coming to insights regarding personal matters. The semi-anonymous interaction is meant to allow relations to develop where users get to know each other more than through entirely anonymous interactions but at a distance that could in the end, paradoxically seeming, contribute to more personal engagement. In this particular concrete implementation, the caller station is located at an outlook, from which calls are made and messages can be sent. The receiver station is located further away below on the grass field, where calls are received and messages are heard. Conversations are scaffolded with a part ludicrous, part serious quiz that feeds a horoscope-inspired advice generator (cf. [44]). The interactive horoscope is only accessible from the receiver station when it receives a call from the caller station, which makes a conversation

between the two a requirement. Messages that are sent from the caller station to the receiver station degrade by distortion through several listenings. As such, Phonehat responds to needs for social and recreational interactions.

5 DESIGN CRITIQUE

The design critique complete the illustration of how designing through critique with theory can help us think in new ways. Situated in a place of isolated being, we describe four political sensibilities that make sense of challenges and opportunities for Lefebvre's utopia among the design proposals, inhabitants, landowners, and visitors. This highlights the importance of critique when designing places. While these political sensibilities may be helpful for designers interested in places that share some characteristics, they should be appropriated and developed within a rich situated understanding of the designers' specific design context. Otherwise the political sensibilities and the designs might not make sense [10], they might be imposing, and they might cause breakdowns or even harm (cf. [5]). Political sensibility 1 and 2 are about inhabitants at risk of extraction by landowners and visitors; sensibility 3 concerns inhabitants' contradictory and evolving interests; and sensibility 4 relates to diverse social relationships.

5.1 Political sensibilities 1 and 2: Inhabitance and extraction

The first tension we look at is about how Treebells and Phonehat comes to matter differently for inhabitants and landowners, which has to do with how placemaking on owned land is involved in global capital-driven practices (cf. [22, 26, 66]). The first tension exposed by Treebells and Phonehat raises the question *how might placemaking technology matter for inhabitants without exposing itself to exploitation by landowners?* Looking at this tension, we start by seeing that Treebells and Phonehat attempt to work against the transient character of the place. Treebells enables the expression, sharing, and capturing of personal stories by weaving them to the temporally serendipitous presence of notebooks in the forest. The design does not force social relations [72] but allows for the accumulation of relations to others in this shared place. Similarly, Phonehat allows sharing of serendipitous personal expressions but in social interaction that is real-time and ephemeral, and so celebrates the moment of being together. Treebells and Phonehat might support placemaking by inhabitants in a way that landowners do not mind. Landowners might even appreciate Treebells and Phonehat so much that their practices are seen as potential resources for marketing strategies to promote an attractive image, as has been done with other nearby social-recreational events of, for example, Walpurgis, light festivals, Pride, and outdoor cinema. Such marketing strategies can exploit and deplete the place and their practices in a cycle of gentrification, something that is a recognised risk in placemaking [37]. From the view of landowners' marketing and business activities, we can see that the ongoing engagement of inhabitants with the places and with the placemaking technologies prevents the place's decay and preserves or even increases their marketing value. When we design for placemaking, we must therefore attend to patterns of how meaning is accumulated and to potential for how meaning can be extracted, how that extraction can be sustained and by whom. Seen through Lefebvre's utopia, this tension shows that Treebells and Phonehat can at first work for active social relationships, but can in turn invite capital-driven forces that gentrify, deplete, isolate, and work against communality and (re-)appropriation of place [92].

Screamtree and Tunnelbeat can be understood to respond to this first tension about how placemaking might matter for inhabitants without exposing themselves to exploitation by landowners. At the same time, Screamtree and Tunnelbeat also expose a second tension, also among inhabitants and landowners. Let us first look at how the design proposals can respond to the first tension. Screamtree addresses the lack of socially accepted ways for inhabitants to engage with each other. By concentrating the screaming practice to a specific location, Screamtree invites an in-person temporary change of norm for social interaction to allow the forging of closer connections between people. However, the concentration of the practice to a specific location might increase the likelihood of disturbing inhabitants in that location that do not want to participate in the scream. Landowners might not want to promote such screaming practice (which they have not done with the regular screaming practice during the six years that TFA was living there) since it would mean promoting disturbances which might work against the landowners' own interests of making the place widely attractive. This suggests that Screamtree has the potential to matter for some inhabitants while at the cost of some other inhabitants, which might discourage landowners to exploit it. Similarly, Tunnelbeat might demonstrate how placemaking technology matters for inhabitants in a way that avoids exploitation by landowners. On one hand, Tunnelbeat fulfills a need for social-recreational affordances in shared areas. At the same time, passing through a crowded or noisy tunnel at night might not feel safe for some inhabitants. Landowners are unlikely to market such practice where some inhabitants feel unsafe in one of the few passages home. Interestingly, Screamtree and Tunnelbeat suggest that a mattering for some inhabitants at the cost of some other inhabitants might discourage landowners to exploit the placemaking practice. As such, inhabitants' contradictory mattering appears to be a way to struggle away from capital-driven and top-down forces, which resonates with Lefebvre's utopia [92].

The second tension exposed by Screamtree and Tunnelbeat is about this contradictory mattering among inhabitants. If the discrepancy is experienced as too big for some inhabitants, the design could have oppressive effects. The perspective of landowners might in some cases be dependent on the perspective of the undermined inhabitants. If the cost of some inhabitants is too big from the perspective of the landowners, the placemaking technology might risk being removed by the landowners. An imbalance might also further serve landowners by, for example, increasing the appeal for specific kinds of inhabitants and promoting increased rents and evictions for other kinds. Moreover, a cost that is too little for some inhabitants might also enable landowners to exploit the practice. This second tension then raises the question (building on the previous question) *how might placemaking technology matter for inhabitants in a way that avoids exploitation by landowners, where the cost does not become too big (or too little) for some inhabitants?* This may require that inhabitants are engaged, either through or alongside placemaking design, to consider the positionality of other inhabitants. Such care comes to the fore in maintaining techno-literate

spaces [106], and can be extended to the everyday maintenance of place with placemaking technologies [61]. We will look at how the design proposals can respond to this tension by inviting ongoing co-design in the next section of the critique where, as Lefebvre emphasises, inhabitants manage their place "with their multiple, varied and even contradictory interests" [92].

Yet a third tension is exposed by Phonehat, Screamtree and Tunnelbeat. They all appear to be involved in enriching social-recreational affordances for inhabitants while at the same time risking excessive local tourism or, as we can call it, extractive visiting. While the design proposals respond to needs for shared social-recreational areas, attracting a large number of non-inhabitants might turn the practice into a kind of local tourist attraction that disperses a sense of community and place sought by the inhabitants. An example of this seen in the autoethnography are large parties of residents and visitors with anti-social behaviour and big amounts of trash is left in shared sites. We can see variations of this possibility for how the collocated experience of Screamtree may accumulate meaning as a visible and participatory event for visitors, which is in stark contrast to its current form as a distributed and somewhat hidden activity. In effect, the placemaking technology may succeed only in making place for "itself" and not for the productive co-habitation of place by residents. This third tension raises a number of questions important for designers placemaking: when is the sense of community and place too dispersed, and how is that justified and by whom? And, *how might placemaking technology matter for inhabitants without exposing itself to extractive visiting*? This tension shows the importance of viewing and making a place as a process, rather than destination, which would support inhabitants to continue to shape their place along their evolving interests, as suggested by Lefebvre. Treebells can be understood to respond to the question about how to avoid extractive visiting while supporting inhabitants to appropriate their place with active and diverse social relationships. Treebells' quality of serendipitous availability accommodates a longer-term engagement which might be ill-suited for rare or one-time visits that can be typical for visiting or tourism, especially for things that are not exceedingly spectacular.

In this first part of the critique we have made sense of some tensions and responses of the design proposals' workings for inhabitants among extractive landowning and visiting, which is to say, we have developed some political sensibilities. The first political sensibility is about how placemaking technology could matter at a non-excessive cost of some inhabitants to avoid landowners exploiting the placemaking practice. This first political sensibility aligns with Lefebvre's view that inhabitants should struggle away from landowners' exploitation and manage their own multiple, contradictory and evolving interests [92], but we are left wondering how inhabitants can be invited to managed those contradictions. We will elaborate on this in the coming part of the critique. The second political sensibility is about how placemaking technology could matter for inhabitants in a way that avoids inviting extractive visiting by designing for serendipitous availability. We did not encounter views on extractive local visiting in our reading of Lefebvre, yet the critique shows this potential impact of relations between inhabitants at different spatial scales which do resonate with Lefebvre's view that a place should be open to lively, active and diverse social relationships that do not risk the depletion of inhabitants' motivations and abilities to manage their place [92]. Both these political sensibilities concretise possibilities for inhabitants to appropriate their place, which Lefebvre emphasises as *necessary* if resistance to top-down and capital-driven design is to avoid hopeless banality [92].

5.2 Political sensibility 3: Infrastructuring

We pick up the tension on how inhabitants can be invited to manage their varying and contradictory interests in radical placemaking by noting that Screamtree and Tunnelbeat are entangled in contesting mattering among inhabitants; some inhabitants might not like the locally concentrated screams, and some might not like the congregated or noisy home-passage tunnel at night. We can also imagine that some form of stalking would be possible through semi-anonymous interactions with Phonehat. The first political sensibilities shows that there could be a possibility in keeping tensions alive and balancing them to avoid landowners and visitors from extracting and depleting meaning of placemaking. An open and ongoing dialogue among inhabitants (and designers) is needed to understand each other and to deal with these tensions in the ceaseless unfolding of place, according to Lefebvre's utopia. Such perpetual placemaking resonates with concerns in HCI design literature about commitment over time with communities where typical timescales and framings of research engagements that are not in accordance with evolving community ambitions may contribute with counterproductive impacts [13, 33, 105]. The context description shows lacking dialogues between landowners and inhabitants, for example in the removal of social-recreational affordances (greenery and barbeque areas), the locked kitchen furniture, sparse dialogues on improving the campus, and the construction of a performative gym and marketing-oriented beehives. HCI design work on infrastructuring offers one possible way to see how we can design for an open and ongoing dialogue, or indefinitely long-term (re-)appropriation of place by inhabitants that Lefebvre's utopia calls for. Infrastructuring is about "the work of creating socio-technical resources that intentionally enable adoption and appropriation beyond the initial scope of the design, a process that might include participants not present during the initial design" [23]. Infrastructuring is a process about "[allowing] *others* to develop attachments to *their* issue and agenda" [23]. When we look at the design proposals, we see three ways they might contribute to radical placemaking through infrastructuring.

The first way the design proposals might accommodate infrastructuring is about designing for out-of-function. Designing for out-of-function is about, not implementing technology until it is broken, but implementing or programming a technology for a set amount of time to then simply make it out-of-function. We can imagine that designing for graceful out-of-function can make a design readily available for re-location, re-making, or full questioning, putting mandate into the designs for inhabitants to re-negotiate them. Such an ongoing design process would accommodate the campus' large turn-around and inhabitants' fluctuating preferences and needs. Designing for out-of-function is about capturing and shaping what matters over time, and so activates elements of Lefebvre's utopia on affordances for appropriation of place, communality, and multi-vocality [92].

The second way the design proposals might accommodate infrastructuring is about designing for levels of appropriation. Designing for levels of appropriation is about, not only designing for appropriation of content, but also for the structures and materials that hold that content. Regarding the appropriation of structure, with Phonehat we can imagine inhabitants managing the quiz questions and not merely appropriating its content by playfully reflecting with the quiz. With Tunnelbeat we can imagine the inhabitants composing the style of the soundscape and not only interacting with the soundscape in the tunnel. And with Screamtree, we can imagine the light response to be programmed by inhabitants and not merely interacted with. Regarding the appropriation of material, we can think of it as designing for deconstruction and re-use of parts. In these ways, designing for levels of appropriation can be seen as designing for open-source, which invites inhabitants into radical placemaking by becoming active, growing social-recreational relationships, and appropriating place across many levels [92].

The third way the design proposals might accommodate infrastructuring is about designing for traces of appropriation. Designing for traces of appropriation is about accumulating meaning and inspiring further appropriation. Firstly, we can look at traces of appropriation as products that come from inhabitants using the designs. For example, Treebells' full or old books might be placed and read in a shared space in the campus as an archive of inhabitants' shared experiences. And with Tunnelbeat, we might imagine the soundscapes also to be archived and played in a shared space. Such traces might be a way for inhabitants to accumulate meaning, which resonates with research showing that leaving something behind can allow for accumulation of cultural value and belonging, such as in cultural heritage installations among marginalised communities [47]. In this way, we can imagine placemaking technology to afford history and meaning to accumulate without closing down future appropriation of the technologies. Secondly, in addition to products coming from using the technology, we can also consider the designs as traces of appropriation or a hacking of the place itself. The fact that the place is appropriated can be recognised by inhabitants and might serve to inspire them to think about how similar qualities might be achieved through other low- and high-tech changes to the place they live in. In other words, traces of appropriation of place might grow further possibilities and motivations to imagine and appropriate place in multi-vocal and communal ways, as encouraged by Lefebvre [92].

This third political sensibility about designing radical placemaking technology to do infrastructuring work through out-of-function, levels of appropriation, and traces of appropriation, supporting inhabitants to ongoingly balance tensions, accumulate meaning, and inspire further placemaking. Importantly, for the designs to not fall to the ground as mere one-off installations but to be sustained, appropriated, and balanced as inhabitants see fit, we can imagine that all these possibilities to infrastructuring can be weaved into already existing fabric or infrastructure of practices shown in the autoethnography of, for example, the local tenant association and their art workshops, or the housing organisations' efforts to dialogue with inhabitants through safety-walks. This political sensibility extends HCI design's understanding of infrastructuring, and concretise elements of Lefebvre's utopia by showing how radical placemaking technology could support places' orienting to more lively, active and diverse social relationships, where inhabitants are invited to appropriate place and manage contradictory interests [92].

5.3 Political sensibility 4: Diverse social relationships

When we orient places towards inhabitants' "multiple, varied and even contradictory interests" [92] it follows that it is valuable to explore rich and diverse possibilities for social-recreation. The importance of this was noted in the autoethnography, for example in terms of differences in whether someone might want to performatively stage their exercise, and regarding the kitchens that require somewhat intimate social contact. Like Lampinen and colleagues [72], we argue placemaking should not only be outward-oriented and require everyone to engage with it; part of placemaking is to be sensitive to different kinds of socialising and being together. To accommodate different preferences to socialising with placemaking technology, one might consider two qualities we derive from the design proposals: anonymity and temporality. Temporality refers to the temporality of a social interaction, ranging a spectrum of real-time to non-real-time interaction. Anonymity refers to the extent another person is identifiable within an interaction. To help designers see how these qualities can be used in their own designs, these qualities are exemplified in the designs in the following way. Phonehat opens opportunities to develop a kind of relation where users get to know each other more than through entirely anonymous interactions but at a distance that could in the end, paradoxically seeming, contribute to more personal engagement. Similarly, but affording a higher degree of anonymity, Treebells, in its quiet location, lends itself to a personal and contemplative expression with its pen-and-paper communication and serendipitous availability. On a more outward-oriented note, Tunnelbeat affords more visually identifiable and real-time social interaction in the musically fed and rhythmically aligning tunnel-soundscape to invite face-to-face social-recreational experiences. Similarly to Tunnelbeat, Screamtree affords real-time social interaction and little anonymity with its close social distance and screaming break from norms, inviting unusual face-to-face connection. In addition to these particular qualities for social interaction, the designs might contribute to sites where people can be together and hang out without engaging explicitly with the technology. At the same time, the designs can also contribute to some people avoiding these sites in order to avoid their particular opening for socialising (we can here see the importance of placemaking for infrastructuring). This fourth political sensibility is then about how designers can use the interaction qualities of anonymity and temporality in their designs to afford a rich social diversity in recreation. This sensibility aligns with Lefebvre's view that we need to orient places towards more active and diverse social relationships and for inhabitants' multiple, changing and contesting interests [92].

6 CONCLUSION

The westernised places we live in are increasingly theorised and practiced as places of isolated being [92]. This work is situated in one of those places - a student housing campus in northern Europe. The challenge we see with places like this is that without shared

places that afford lively relations among people and the place, it is hard to imagine how inhabitants can accumulate meaning and develop abilities and motivations to envision radically different places that respond to our socio-ecological crises [77]. To overcome widespread and normative mechanisms of alienation, critical political theorists offer rich analyses, but design practice struggle to make those analyses actionable. We take up Lefebvre's theory of utopia to respond to isolating places and explore what it means for HCI to design for radical placemaking. Here inhabitants can enjoy and shape their place together without risking depletion of their abilities and motivations to do so.

This paper contributes an illustration of how designing through critique with theory can help designers to think in new ways. Our instantiation produces four political sensibilities in design for radical placemaking. Grounded in autoethnography, prototyping, and critique, the political sensibilities make sense of common tensions among inhabitants, landowners, and visitors, and possible responses. Political sensibility 1 and 2 are about inhabitants at risk of extraction by landowners and visitors; sensibility 3 concerns inhabitants' contradictory and evolving interests; and sensibility 4 relates to diverse social relationships. With these political sensibilities we want to support understandings and imaginings for utopia, where utopia is a process of change without a final or fixed goal where we enrich affordances for multi-vocality, communality, active and diverse social relationships, (re-)appropriation of place, and grow inhabitants' abilities and motivations to shape the place they live as part of [92]. The political sensibilities are not meant to be used as stepping-stones or mechanistic and dogmatic theory for design but to support designers' general orientation to placemaking. When applied in places that share characteristics with ours, they are meant to help us tuning in to relational tensions and possibilities that can exceed or overthrow our intentions [8, 9].

This work illustrates a value of thinking critically without intervening. By spending time designing and not implementing, we came to see some things that we actually should be thinking about. Critiquing with theory and through design helped us pick up on potential effects and opportunities across relations that might otherwise have been hard to see or that might not have happened in, say, a month-long singular deployment. We came to recognise problems of extraction and possibilities for avoiding it, explored the idea of small discomfort for bigger gain, and saw possibilities for inhabitants further accumulating meaning and imagining placemaking. Regardless of whether some risks might not have happened, it is still valuable to see them and manage them if we want to take mechanisms of alienation seriously and not make more "solutions" that lead to further and bigger challenges downstream. Design practice is heavily part of norms and culture, and even well-intentioned spatial design may have mechanisms of alienation showing up. Just by looking at the world, we recognise that it is unlikely that anti-alienation values show up by themselves in design processes. While critical theory offers anti-alienation values, they may not be straightforward to operationalise in design practice. One might not simply read theory and go ahead designing. HCI design researchers have requested better display for how to make critical things and how to make critical theory generative [10]. With this work we show how designing with critical theory can happen. We illustrate a reflective and iterative process of critiquing and designing with theory, where design ideas evolve and situated sensibilities for a critical theory are formed. We encourage designers to explore designing with theory through critique as a complement to using theory from which to launch design work or analyse results, and as an extension of using critique to extract theory elements out of designs for other designs. In our instantiation, what made Lefebvre's theory particularly generative were tensions that it seeks to accept and negotiate, i.e., tensions between inhabitants, and tensions that it seeks to resolve and favour to one side, e.g., tensions between inhabitants and landowners. Importantly, this work happened through a rich situated understanding of the design context, without which the application of critical theory might make little sense [10], or even be imposing and cause breakdowns and harm (cf. [5]). Similarly, appropriating the political sensibilities is likely to happen better in concordance with rich situated understanding of the design context. Critique in other contexts, with other designs, theories, and by other designers is likely to give other understandings and generate other ideas. Lefebvre's theory has not necessarily changed through this work but it has become more nuanced for a specific context and hopefully more actionable. Altogether, and based on our experience with previous design research, we see that critique can complement the repertoire of placemaking at least alongside participatory approaches. In particular, we see a strength in critique to allow greater chance to anticipate clashes of interests and to think through those tensions that can seem like dead-ends but might become productive ways forward.

Future work might explore any of the main tropes of this paper. There is scope to evaluate the political sensibilities in different ways, like designing with them all, implementing them, or exploring them with other stakeholders. Here work could also explore how inhabitants can deal with issues arising with landowners or land stewards when implementing placemaking technology, and how visiting can be productive for inhabitants. There are also wider opportunities to engage with Lefebvre's utopia in other contexts to develop and implement further sensibilities. While this study focuses on one theory, future studies may activate other critical political theories for HCI, and even find synergies among them. Future research could also look to contribute more to intermediate-level knowledge around an approach of designing through critique with theory, where design happens situatedly and tightly crosspollinated with theory.

Finally, we note that regardless of the intention of some inhabitants and designers in what a design like Treebells might afford, it may produce a treasured site for sharing personal narratives, or it can become hateful or trash. While imagining new possible worlds through such design and technology practice in a time of crises might seem utopian and impractical, it is realistic if we understand correctly what Lefebvre has in mind. The valuable insight that Lefebvre offers, and that we try to elaborate for HCI design, is that what matters here is that the design is not a finite thing that produces a finite place. What matters is that the design is open for inhabitants to perpetually re-appropriate and enjoy; producing a place of active and diverse social relationships and collective management that invites multiple, contradictory and changing interests to participate. What matters most is the process of change and not some final goal or some fixed utopia, because these things do not exist. What matters, especially now in times of crises, is the will

to imagine and strive for radical change and new possible worlds where we can be different together and flourish socially. There is a sense in which once we have started, we are already in "new worlds" together with many other researchers, designers, urban planners, and people who imagine and strive for radical change for more mutually liveable places.

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