

Design Futuring for Love, Friendship, and Kinships: Five Perspectives on Intimacy

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ABSTRACT

Human relationships, intimacy and the role of technology within it constantly change, catapulted in 2020 by COVID-19. We take this social rupture as an opportunity to reimagine possible futures for love, friendship, and kinships. Through design futuring and related approaches, we offer five prompts we developed for imagining alternative futures exploring a diverse range of intimacies. Through generating responses to the prompts, we offer alternative intimate futures as well as reflections on how such 'prompts for futuring' can be generative for design research. Our work extends calls for diversifying design futuring, imploring design researchers to consider diverse and inclusive ways of designing for futures, especially for human relationships and intimacy.

CCS CONCEPTS

• **Human-centered computing** → Human computer interaction (HCI); HCI theory, concepts and models.

KEYWORDS

Design Futuring, Love, Intimacy, Relationships, Speculative Design, Design Fiction

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1 INTRODUCTION

Design futuring and related methods offer approaches for imagining alternative future technologies, practises, and systems [2] [5]

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[9] [10] [23] [55]. The Futures Cone is a widely used model that enables discussion about possible, plausible, probable, and preferable futures [14] [55]. While we appreciate the value of the Futures Cone and its widespread uptake, we are conscious of limitations of the model: for example, it compresses diverse human experiences into a singular point of 'the present' and implicitly embeds assumptions around linear time and 'progress'. If design futuring does not explore alternative approaches, there is a danger that the visions created will miss many meaningful futures—and fail to capture the richness and diversity of possibilities for intimacy in love, friendships, and kinships. To be inclusive to alternative futures and alternative ways of design futuring, it is also imperative to consider diverse ways and approaches.

Our interest in reimagining intimacy stems in part from ways in which COVID-19 has transformed our lives and interpersonal relationships [16]. While the pandemic's evolution and effects on daily life vary greatly from place to place; experiences and expectations of love, friendship, and kinship and the role of technology in enabling intimacy within these relationships have undergone dramatic changes for many. This global rupture offers an opportunity to reflect upon recent developments and to re-imagine future possibilities for our connections with others.

In this paper, we apply five perspectives to design futuring that explore diverse approaches to speculating about love, friendship, and kinship. We developed these perspectives – Parallel Presents, Meet (with) Speculation, Epithelial Metaphors, I Am Time, Uncertainties Cone – as a self-organised international group of academics interested in a participatory approach to design futuring [24]. The perspectives draw on our own cultural and professional backgrounds and aim to support design futuring that moves outside prevalent notions of technological progress and foregrounds interdependent, relational agencies. We refer to this collection of perspectives as an un-manifesto to signify the diversity and contradictions between them. In this paper, we build on this un-manifesto by adapting the perspectives into a visual set of prompts (presented at the end of this paper as its own booklet) and then applying these to reimagining love, friendship, and kinship.

The paper is organised as follows: in the next section, we provide a concise exploration of the field of design futuring and an introduction to the theme of intimacy in love, friendship, and kinships.

We then explain the process we used for developing our prompts: e.g. collaboration between authors and a description of each perspective. We conclude the paper with a discussion of the diverse speculative responses generated using each prompt and consider their interrelationships. Readers are invited to explore the prompts, presented as a booklet attached to the end of this paper, before reading the discussion. You can select any prompt to develop your own visions for the future of intimacy, love, and relationships and the role of technologies within them.

2 EXPANDING APPROACHES TO DESIGN FUTURING

Design futuring is a term we use to refer to an orientation to design that among other approaches encompasses Speculative Design and Design Fiction [32]. It involves the creation of props, either artefacts or stories, that explore how technologies might transform the social practises and contexts in which they are embedded [9] [11]. The Futures Cone [14] [55] is the most commonly used model to reflect upon the potential impacts of technology. It focuses the designer's imagination through four lines of inquiry; possible, plausible, probable, and preferable futures. However, it can limit our ability to imagine different socio-technical trajectories by representing a mosaic of human experiences as a singular point 'the present' and implicitly embedding notions of linear progress [24].

Amidst calls to expand [32] and diversify [24] design futuring, alternative approaches to design futuring suggests critiques of predominant perspectives. For example, challenging the pretence that technology can make the world better [48]. The Pataphysical lens of imaginary problems and solutions [48] invites absurdist parody of contrived problems and then designing prototypes that offer no solutions. As another example, embodied speculation [5] invites designers to use the lens of tangible interaction for prototyping experiential objects. These welcome participants to reflect upon the future through the senses taking speculation beyond the screen to situated and sensory explorations. Others suggest a literary lens for creating new perspectives about design; for example, taking Magical Realism as a resource for design [46]. Here designers are invited to blend the pragmatic with fantasy to speculate about how different spaces and places could be interconnected through irrational (supernatural) means. Jenkins et al. [28] break away from the limitations of dystopian-utopian duality to consider generating broader more nuanced scenarios, in their case of a future supermarket, utilising Dator's "four corners of a possibility of space" [12]. These four corners focus on continued social and economic progress, a collapse that affects progress, constraints to salvage what can be preserved, and lastly "stories about futures where something unprecedented shifts our trajectory entirely—a transformational image of the future" [28].

Within HCI, design futuring has already expanded into everyday contexts, such as a tool for young children to critically reflect and question the status quo of technology design and use [51] [41] [26] [22]. Experts have employed design futuring to reflect on their own work; e.g., Child-Computer Interaction experts envisioned interactions with children in the year 2077 [7], and a diverse group of adults reimagined human friendships and romance through critical perspectives [47]. Further still, HCI researchers have envisioned

paper abstracts for CHI 2039 [3] or, resisting forward progression, offered "fables to think with for the present" through utopian fabulations [23]. While the versatility of design futuring is growing in HCI, the desire for diversity of approaches is still unquenched. We identify an opportunity for more work at the intersection of design futuring and reimagining human relationships. With our work on applying five diverse perspectives to imagining the future of relationships and intimacy, we add to conversation and offer situated, cultural, aesthetic, and philosophical approaches to design futuring.

3 LOVE, FRIENDSHIP, INTIMACY IN HCI

Some level of intimacy is at the core of all our relationships and technologies can mediate, facilitate, or even arouse intimacy. But within the HCI literature the concept of intimacy is rarely defined. Papers show a wide range of definitions, from "sexual intimacy" [54] and "intimate touches" [49] to "intimate remote communication" [27]. Our definition of intimacy encompasses these various dimensions. We understand intimacy to be fluid and context-dependent - "data is not intimate per se, nor is intimacy a property of the data" [28] - and recognize that it does not appear in isolation; it is instead "shaped by, even as it shapes, relations of race, class, gender, and sexuality" [42].

COVID-19 caused many to rethink relationships. As people avoid close contact, new methods of meeting, collaborating, and sharing have quickly emerged. While some places return to 'normal' and others face renewed travel restrictions in winter 2021, the dramatic changes we have all experienced suggest an opportunity to reflect upon and reconsider what the future of intimacy might entail. Many HCI projects explore computer-mediated intimacy. Tactile, touch, and haptic communication dominate the field (see e.g. [18] [33] [34] [37] [39] [40] [44] [49] [53]). The focus is on heart rate, hugs, kisses, and holding hands, thereby clearly referencing culturally specific notions of romantic love. Furthermore, many of the prototypes/propositions discussed are developed in the context of (romantic) long-distance dyadic relationships [36] or relationships with family members [13] [29] [31] [45].

Other forms of kinships, such as with friends, blood-relations, or strangers, also embody various levels of intimacy, less commonly explored. These gaps have been highlighted in critiques of intimacy in HCI (e.g., [4] [30]), along with methodological issues ([21] [36]). Our paper begins to explore an inclusive approach to intimacy which includes friendship and other forms of kinship, such as connections with strangers and with the more-than-human, such as everyday items, voice assistants, etc. [43]. We engage diverse approaches to design futuring to explore these less-conventional understandings of intimacy such as with friends, strangers, pets, nature, and the self.

Our work offers a broader exploration of approaches to love, friendship, and kinship. We extend the critique by [21] that intimacy-related devices are often discussed in positive terms by those who deploy them, but their long-term implications tend to be unexamined. Technology's role in intimacy is rarely addressed critically, even though the introduction of technology might change the "dynamics" of intimacy [42]. We propose that the alternative



conceptualisations of time and progress offered by the five perspectives in this paper can support critical reflection on potential long-term outcomes of technology. They may also be used to question the assumption that technology will, and should, develop into ever more corners of our lives, however private and personal those corners might be. If these assumptions are not challenged, then design futuring can only question what kind of technological progress we want, rather than the more fundamental question of whether continued technological progress is desirable.

4 PROCESS

Developing perspectives for design futuring: The motivation to create diverse approaches for design futuring grew out of a 2020 DIS workshop on Speculative and Critical Design in Education: Practice and Perspectives [19]. Several attendees continued monthly discussions. We considered alternative ways to think about the future, asking where and what is the future? We sought to imagine diverse perspectives to design futuring, seeking inspiration from our own personal, cultural, and professional backgrounds. We all have diverse backgrounds - design, fashion, technology; and belong to different cultures - Indian, European, American; and live in different parts of the world, with many of us living outside of our natal cultures. When imagining these perspectives, we first outlined them individually and then, with this rainbow of experiences and cultures, refined them collaboratively, expanding each beyond their initial shapes. We dreamed five perspectives through this process and documented it in [24].

Adapting prompts for imagining intimate futures: From early 2021, we sought to apply these perspectives to design futuring specifically around intimacy. We developed prompts that invite reimagining alternative futures around love, friendship, and kinship from the different perspectives. Each prompt adapts key elements from a perspective into specific suggestions and questions for reflection intended to facilitate imagining intimate futures from that particular perspective. These prompts are presented in a booklet at the end of the paper. They are in no way a complete explanation of each perspective, or its potential; rather the prompts are one particular way of focusing a perspective around imagining intimate futures. The narrative focus for each prompt is the topic of intimacy - love, friendship, and kinships. Each prompt consists of steps that explains how to apply each perspective.

Generating five responses that imagine intimate futures: After developing the prompts, each author tried responding to their own, documenting their experiences and refining the prompts. Next, for each prompt another co-author generated a response along with reflections and critiques. All authors then collaboratively refined the textual descriptions for context and clarity. This occurred via virtual meetings, email, and online documents over a year. There was no aim to unite the experiences; rather we value the expansive

and divergent possibilities offered by the prompts and responses. We next present a brief overview of the five perspectives.

5 FIVE PERSPECTIVES FOR DESIGN FUTURING

Our prior work offered perspectives to open up design futuring [24], briefly summarised here.

Parallel Presents explores contemporary realities existing alongside our present moment in fictional parallel worlds. A parallel present shares a common history with our own world up until a point at which it branched off: a key event or juncture whose alternative outcome initiated a separate path forward. This juncture can be a factual historical event, such as a war or election, or entirely fictional. Rather than foregrounding technological advancement, Parallel Presents invites imagining preferred presents around alternative sociocultural and material arrangements [52]. Adapting this for reimagining relationships, we seek to foreground the deeply social, cultural, and material historical and present-day influences surrounding how we approach interpersonal relationships.

Meet (with) Speculation proposes a conceptual relationship with the figure Speculation (they/them), who personifies the act of speculating and persistently reminds their interlocutors to queer binaries such as present vs. future, to notice their own assumptions, and to acknowledge multiple futures from multiple perspectives. Inviting Speculation to reimagine relationships, they foreground how present and future may blur together, and how different people move along different life trajectories, aspirations, and milestones.

Epithelial Metaphors engage a metaphor of epithelial cells, which cover organs of the body, forming separations while also facilitating exchanges across porous membranes. Rather than moving across time, this metaphor foregrounds moving across conceptual space. Rather than linear progression, this metaphor foregrounds relationality and organic growth. Drawing from artistic tactics of obscurity [1] [8] [38] [58] [59] and designerly tactics of ambiguity [17], Epithelial Metaphors invite intuitive conceptual associations and surprising contrasts. Turning this lens, or *lorgnette*¹ [35], toward reimagining relationships may invite intuitive, creative encounters and paradoxical boundaries/exchanges.

I Am Time foregrounds cyclical, iterative processes of change and spirituality. From millennial cycles to human lifespans, to annual seasons, to a single step; from varying perspectives such as the far away future dreams of a child, to an elder for whom the years are rushing by, to a tree that outlives them all. It asks where, then, is the future, and for whom? Turning this lens toward reimagining relationships invites considering different timescales and ‘seasons’ of transformation, in which different beings may encounter one

¹Lorgnettes (“impertinents” in Spanish) were fashionable ladies accessories [35]. Often worn to observe and criticise, we mention them as a wink to ‘reading diffractively’ [19].

another, and whose cycles may run alongside one another for a time.

The Uncertainties Cone playfully critiques design researchers' attempts to project far into the future with the Futures Cone. This perspective calls for recognizing the limits of one's perception and agency, embracing uncertainty and humility, and gratefully recognizing interdependencies. For reimagining relationships, it invites embracing the limits and uncertainty of what we may know about one another and asks how these limits might be generative for alternative modes of relation.

6 FUTURING THROUGH: RESPONSES

From our prior work on the five perspectives, we contribute five new prompts inviting design futuring reimaginings specifically around intimacy and relationships. The prompts are in the booklet appended to this paper. Here, we present two responses to each prompt, one from the prompt's creator and one from another member of the research team. Each response leverages the prompt to reimagine intimacy and relationships. Our reflections explore what intimacy can mean, covering people, spiritual relations, and materials, underlining the diversity these perspectives can offer. We also present a critique to each prompt highlighting its strengths and weakness.

6.1 Parallel Presents

Creator's reimagining response: Parallel Presents re-imagines the present day, questioning cultural, political, and technological norms. It therefore invites us to imagine worlds without many of the aspects of contemporary love and relationships that we might take for granted – whether swipe-left culture, the consumerist appropriation of Valentine's Day, or the veneration of the nuclear family. These worlds might challenge dominant notions of progress by imagining interruptions to real-world technological developments. For example, what would social media be like if cultural norms forbade photography of human faces? What would video conferencing tools look like if they were made to support exchange between friends rather than work? What would emojis look like if we encouraged open conversations about sexuality and female health? Alternatively, we could consider how high-level policy decisions might impact on our ideas about relationships and kinship. How might we connect with the trees in our community if policies that fully recognised their value for life on Earth had been enacted fifty years ago?

Co-author's reimagining response: This parallel present world branched off from our own in the 1900s. To give a bit of the historical development leading to this parallel present world, the nuclear family as a social structure dissolved generations ago. Responding to the rise of biotechnology in the twentieth century, prominent cultural thinkers and influential socialites alike began re-interpreting traditional 'bloodline' bonds as merely correlations in DNA sequences, not binding kinship. Only the 1% in the wealthiest upper echelons of society continued to cling to bloodline ties, leveraging them as contractually binding forms of property and inheritance. Adoption of children skyrocketed in popularity and rapidly became normalised after chemical contaminants in drinking water infrastructures, including long-trusted bottled water brands,

suddenly led to widespread infertility. A key historical distinction in this particular environmental health disaster is that it also affected upper middle class white populations. This led to widespread public outrage at corrupt international corporations and toothless government policies for the disaster. Public outrage was quelled when the UN "uncovered" evidence of international bioterrorism as the cause of contamination. Realizing that the scope of global distribution networks for food and water was an effective vector for terrorist attacks, nations rushed to expand their surveillance networks. This included tracking the social ties of everyday citizens.

Meanwhile, to gain more legal recognition for burgeoning forms of "chosen family", people began adopting interpersonal Social Contracts. Growing out of wills and prenuptial agreements, Social Contracts outline rights and responsibilities between two or more people in terms of finances, property, and caregiving. A number of templates were developed, and people could choose from a diversity of models for how they felt a particular interpersonal relationship should work. Local services sprung up to help adapt templates to individual needs, facilitate discussion in choosing and adapting templates, and arbitrate conflicts or navigate dissolution of contracts. Teens who were legally adults could now be adopted by an elder. Some people, at the risk of seeming old fashioned, chose to affirm their parental ties to bloodline parents. Gay marriage gained widespread legal recognition as one of only many templates for Social Contracts. Polygamy was another template permitting member combinations of all genders. Some pairs or groups of people agreed to produce and raise children together, sans marriage. BFFs (Best Friends Forever) finally gained legal recognition, hospital visitation rights, and paid leave for caregiving responsibilities.

Social Contracts also made social networks explicitly legible to government surveillance. People could be linked to "terrorists", or document that their social network did not warrant government suspicion. For most, this legibility provided the benefit of showing many degrees of social separation between them and anyone the government deemed suspicious. These people enjoyed privileges and conveniences granted for being trustworthy, such as express lines at airports and the ability to return online purchases. For others, this legibility of one's social network amplified the security threats they experienced via relational ties to "suspicious" persons. Of course, people still engaged in undocumented interpersonal relationships without a Social Contract. Such undocumented relationships offered the thrill of secrecy (e.g., for an affair), or a way to maintain relations with people unfairly marked "suspicious" while not hurting the social standing of the unmarked party. Yet, repeated planned contact between persons lacking a Social Contract was itself considered suspect and cause for investigation—hence the choice by most casual friends to adopt a standard, lightweight Social Contract designed for acquaintances or activity buddies.

Critique of the approach: Parallel Presents prompted me to rethink social norms and societal values over reworking technology. It also invited me to reconsider the social implications of existing technologies and how very different social or societal implications, or prevalent interpretations or reactions, might have ensued instead. Worldbuilding is hard. I'm a designer, I'm accustomed to thinking through the design of technological things, not through reimagining social relations. This was a good challenge. This prompt was a good way for me to dip my toes into design fiction approaches, which

have been gaining popularity in design research in recent years (e.g., [6]).

6.2 Meet (with) Speculation

Creator's reimagining response: Meet (with) Speculation, through this type of reflection we can analyse what values we take for granted and which we cannot wait to change. Beyond the reflectivity, this perspective offers an opportunity to ground futures in the present, acknowledging that these futures come from 'somewhere', considering what we want to change and how we might want this to change. The different steps we take show us that time does not run on the same frame for each and every one of us; we neither start from the same point of acceptance for example, nor are we looking for the same things. Changes in the future are not the results of one big change, they present an interplay of changing values, new milestones and shifting perspectives. This exercise allows one to explore this. Through the dance one enters into, moving forward and backward, we understand better how the present influences the future - and how the future we build can help us reflect on the present.

Co-author's reimagining response: Sisters: Through this approach, I explored the deeply personal relationship I have with my younger sister (my only sibling), who recently took on the burden of travelling during the pandemic to visit me. Taking two sheets of paper, one for the present and one for the future, I listed the present strengths in our relationship and my hopes for the future. As we grow old together, gain experiences that are somewhat similar or widely different, and settle into our own person, we still appreciate our special sisterly bond. Our present is a culmination of a shared childhood and adolescence, with diverse and different professional and adulthood experiences. Where do we go from here - into the future? Meet (with) Speculation urges us to reflect on the present, as a consequence of the past, and consider a future, as a deliberate consequence of steps taken in the present. Further still, it urges us to consider a multitude of relationships we participate in, in the past, present, and future - within a family, with a sibling, and with oneself. What should change? What should not? As I reflected on these questions and my relationships with my family, sister, and myself, I listed, on the sheet marked for the future, things I hoped for in my relationships for the future. There is a certain kinship in sisterhood - of facing the world together, having each other's backs, and always having a safe place to turn to when things are overwhelming and difficult. Given the shared childhood, we also share many common relationships with other family, relatives, and friends and are a united front in our interactions with others. But do we still know everything about each other? Should we in the future? Many questions came to mind as I tiptoed from the present into the future.

Critique of the approach: Meet (with) Speculation urges us to consider the tiny steps from the present to desirable futures, considering what should change and what should not, and even ask what is now. What is a family? What does it mean to be sisters? It further nudges us to consider the many aspects of human relationships and kinships, beyond the typical Hollywood tropes of "two people in falling love", to more nuanced elements and experiences of human bonding and togetherness, that transcend the binary, into

opportunities for mutual growth, understanding, and shared and diverse pasts, presents, and futures. It builds on previous work in HCI which urges us to consider the heterogeneity of (queer) communities [50]. I liked the dancing metaphor - for some elements of change it is a carefree dance towards the future, while for others it requires maintaining a delicate balance, like tiptoeing, from the present to the future. While the approach foregrounds the steps in the presents, I found myself foregrounding the present into shared experiences of the past: maybe the present and future sheets of paper are actually lying on top of the past. A past which undeniably influences the present and can also impact the future, guiding the steps as dos and don'ts. Standing and stepping on written sheets of paper was quite a new experience - something not common in the Indian context where we ask books for forgiveness even if we accidentally touch them with our feet, as that is akin to disrespecting knowledge. But the visual metaphor of standing on the present and future was powerful and empowering, that a desirable future is several conscious and actionable steps away from the present. Zooming out, for the dance from the present to the future, rather than a waltz or tango, one can imagine the placement of the feet typical to Bharatanatyam - heels together and toes pointing outwards in opposite directions. Can present decisions move us away from certain futures and towards some pasts? Or can the relationships we imagine include one we have with ourselves or with objects around us?

6.3 Epithelial Metaphors

Creator's reimagining response: Epithelial Metaphors focuses on exploring creative imagination through an analysis of the many cultural and material angles of a theme, with the double gaze or lorgnette of criticality and positionality, by engaging subjectivity and lived experience. In the case of intimacy and relationships, it imagines how to impact a shared relational space through the analysis of cultural and material angles represented or symbolised by artefacts and nature, to effect desirable change. This analysis requires a contemplative approach, establishing a relationality that expands beyond the mundane of everyday objects and surroundings into the realm of personal significance, and creating an augmented awareness of the complex nature of our lives, which we can take for granted. Applying this mode of futuring superimposes a layer of subjective imagination to the networked elements that ground us in our realities, highlighting their plural nature and potential for socio-cultural connections. It activates sensory and reflective memories and observations, interlacing them with the experience of the intimate relational space and the natural surroundings, drawing a symbolic ecology of the personal space.

Co-author's reimagining response: For this, I chose two artefacts in my immediate vicinity, shown in Figure 1. Their personal significance is around the joy of making things myself, even when they are rough around the edges. Enjoying scrap material more than a refined product. Enjoying the warmth of the sun through the window. Enjoyment from the senses—light, colours, warmth, rough unfinished pine—as a respite, a source of solace, from unfixable problems in society, from grief and rage. A reminder not to get too comfortable, too secure, too settled—stay ready to pack it all up and start over if things suddenly crash. Stay ready to work hard.



Figure 1: (left) Light streams in from the window, filtered by dichroic film into colorful sunbeams. (right) A ray of green light from the window streaks across a desk of unfinished pine.

Stay scrappy. Finding joy in the small moments and a lifetime of adaptable creativity. Despite my selection, I'm not quite sure what the two artefacts are: the window and pine, or the light and dichroic film? The ephemerality of colored sunbeams that shift and fade throughout the day, against the built environment of window, wall, and desk?

When asked about the artefacts' temporality, I am reminded of how capitalism and consumerism have enabled me to be so ignorant of how these artefacts came to be. After a bit of Googling, I estimate the pine took 25 years to grow to harvest, plus time for processing, and shipping. A few months ago, I moved into an empty house and bought the pine to make a desk. As for the dichroic film, it seems to be a proprietary industrial process by 3M. This piece is a leftover scrap from an unrelated project. These artefacts point to my relationship with the global economy, harvesting natural resources, industrial processes, and history of this old house in this gentrifying neighbourhood. The artefacts help me cope in the present and stay poised in a particular orientation toward the future.

Critique of the approach: While I felt invited to freely associate around these artefacts, I also felt that surely I was leaving out many important aspects. Perhaps I should have attempted greater coverage of the expanding network of material connections, forming an epithelial web of interrelated cells. Perhaps another person and I could jointly select the same artefacts, reflect individually, and then compare the differences. Our prompts aim to solicit diverse perspectives on design futuring and, indeed, my main critique is simply unsated curiosity about what other possibilities might stem from others' engagements with Epithelial Metaphors. I like the potential of this perspective for integrating diversity at the intersections of narratives in a Pluriverse [15].

6.4 I Am Time

Creator's reimagining response: In I Am Time, we mindfully and consciously consider the first, second, and nth cycle of an experience. With each cycle there may be an internal, external, or spiritual transformation, visible only on the nth cycle or occurring multiple times by then. Taking the example of waking up in the morning, one can consider how it differs from the day-to-day, season to season, year to year, or with personal-life situations such as living alone or living with someone. How different are the series

of steps when waking up alone in the summer vs. waking up next to someone in the winter? What wakes one up and how does it make one feel? What is your ideal morning routine? How well do you manage it? How does your routine, or any changes in it, affect your relationship with your phone? Or your partner? By mindfully reflecting on the everyday experiences of waking up, we can zoom out to consider the transformations occurring through different seasons, years, romantic or other family relationships, considering the past, present, and future. What are we grateful for, what needs to change, and how can we achieve internal / external transformation through the cyclic experiences of waking up every morning?

Co-author's reimagining response: At a time when climate change has become irreversible, new solidarity platforms have emerged across the world. The imaginary world of Cyclconnect is one of them, which revolves around spiritual principles. A cult/religion has formed around it, developing algorithms that analyse relational cycles to calculate individual transformations. The platform members are divided into verticalists or Wizards, who see interactions as means to accrue power and spiritual growth, and organicists or Ascens, who believe spiritual growth is ungraspable. While wizards keep most of their knowledge to themselves, Ascens share as much as possible every chance they have. In this scenario, a couple living in an advantaged part of the world, work together towards helping one group at a time. Each day, the Wizard wakes up before sunrise and reviews their work to date. As the Ascen joins for breakfast, the Wizard shares the summary of events: on this particular day, the community from South Chimberley that they have been supporting for about a year is almost finishing their integral plan to combat the constant rains. The Ascen and the Wizard agree that it's time to move on. The Winter season is beginning, and they believe this to be the best time of the year to plant a new seed and start working on a new project. For the past year, the South Chimberley community has led a very interesting project, moving from understanding the disaster, to mitigating the damage, to finding a solution to prevent further damage while accepting the new life conditions under perpetual rains. The Ascen and the Wizard have gained knowledge and experience from assisting throughout the process. As this cycle closes, the Wizard will seek a position in advisory leadership, while the Ascen will make sure that a window remains open for conversation with the 'Permanent Rain Community'.

This perspective moved me to review some of my own concepts and understanding of spirituality and intimacy with my Self. Imagining a story, I found myself stepping into a middle ground, equidistant between two approaches that I would have considered opposite, but which I now perceive as complementary. I notice how my bias towards one extreme and discomfort with the other were neutralised. As I positioned myself at the centre, my body and mind felt more relaxed and I was able to write more easily, recognising signs of both trends within myself. My imagination drifted towards speculation in the third-person, but the sensations in my body brought in the first-person perspective as well, then both overlapped. Clearly my scenario is influenced by references of science fiction in literature and film, however drawing from personal incursions into the world of spirituality through Zen meditation and observations of my daily life. Writing about this has been a very embodied experience, and indeed a spiritual exploration of Unity in

concept and being, a non-duality of sorts. It is my conclusion that, while change occurs cyclically, there are aspects of life that remain the same. But the longer we get to live, the better we can notice what changes and what doesn't. The seasons become catalysts to discover our 'true' or unchanging selves.

Critique of the approach: The I Am Time perspective is very focused on experience and learning, as it is by repetition and small change that children naturally learn about the world, by replicating acts repeatedly and observing variability. It is transcendental in its approach to understanding life as an array of cycles with different dimensions. In it, the conception of time is organic and graspable only as it is lived, and the future is a progressive byproduct of variation in regular activity. This experience of time catalyses the future, as also reflected on by previous research [32]. As change occurs within the confines of what is known, consciousness expands by repetition and iteration and our agency for the future is driven by seasons and familiarity as much as the unknown. This perspective offers possibilities for generative design: a few elements that remain, others that are affected by change, which increase in complexity and optimization as time moves forward. And in doing so, perhaps it highlights the impossibility of static perfection when tested by the passing of time. The main limitation that I see in it, is that there is a factor of inscrutability in spiritual transformation, which may make absolute transcendence difficult, or in practical terms may make total change an impossibility. For example, however many times a critique is made about any particular situation, the conditions of life may be such that are consistently conducive to similar outcomes beyond possibility for change. By accepting the cyclical manners of the phenomenal world, this perspective highlights the surprising ways in which Nature 'makes things work' even when they may seem imperfect to the critical human eye. As I was imagining my story inspired by this perspective, I projected what is known to me into a plausible future, without questioning it critically, but accepting it as an existence.

6.5 Uncertainties Cone

Creator's reimagining response: One author took the pinprick visions of the Uncertainties Cone as a way to start 'pen pal' relationships revolving around the exchange of photos or audio. The intentionally limited media exchange became like viewing a tiny pinprick hole opening into others' lives. Sometimes these pen pals were long dormant social media connections, and she (the author) could not readily remember how they knew each other face-to-face. The already-vetted social media connection mitigated (though not eliminated) the risk of harassment or catfishing. Although with pen pals so far there is some contextual background and ongoing textual conversation explaining or inquiring about the shared media, she is curious to reduce the degree of contextual information and keep correspondences around emerging aesthetic or topical themes from the images and sounds themselves.

Co-author's reimagining response: "I finally take a break and sit down on the sofa. I heard the 'ping' which feels like ages before and struggled to concentrate anyway. I open the 'rabbithole' app and see what other doors into people's lives have opened for me. With a sigh I click away the three pictures of genitalia that have opened up. Intimacy means something else to me. Or at least I

am looking for something else right now. The person I have sent a picture of my funny wall clock has replied with a picture of a street lamp. I wonder what it means. Is it night where they are? Is this actually where they are? Is this an invitation? Where are they leading me? I take a deep breath and reply with a story of the time when the light outside my house broke and I slept better than ever before." This little snippet describes an idea for a social media platform that is devoid of assumptions about people's lives, beings and the type of relationship they have - or will develop. Like the uncertainties cone, the website only allows short glimpses into other people's lives, allowing bigger pictures only to emerge if the people involved invest time and dedication. What has to be stripped away for us to engage in truly uncertain relationships? Sadly, this immediately brings up safety and trust. But as consenting adults, can we take this risk to follow down a rabbit hole and see where others take us?

Critique of the approach: Uncertainty is complicated and this perspective takes uncertainty to the extreme. This perspective might work better for experienced designers than beginners, as it asks us to take risks and forget what we know. By opening up to uncertainty we lose our safety net of experience, method and maybe even control. But when we allow ourselves to be taken away, we might have the opportunity of breaking out of old patterns. As the small end of the cone turns out into the world, limiting our vision, the larger side is open to us, putting the focus on our needs, wishes and experiences. This perspective can therefore also be an empowering exercise, allowing us to take a deep breath and ask what it is that 'we' see. Applying this approach to intimacy, relationships and kinships has reminded me how often we rely on categorization and labels for ourselves and others. This not only relates to the complex interplays between gender and sexuality, but also to the type of relations themselves. Social media apps force us to describe ourselves in a couple of words, dating apps ask whether we are looking for sex or friendship and in everyday life we are introduced to coworkers, lovers or friends of friends. Using this perspective of the uncertainties cone forces us to break open these boundaries and dig into the minute, the mundane, the momentous. Through applying this lens, I started to see the internet again as a realm of opportunity, a playground, a space for uncertainty. This prompt also relates to design research and interactive art's (e.g., [25] [56] [57]) growing interest in Glissant's notion of opacity, or accepting what cannot be transparently known about the Other [20].

7 DISCUSSION: ZOOMING OUT ON THE FIVE PERSPECTIVES

While each perspective draws from individual histories and positionalities, we recognize there are overlaps. For example, in Parallel Presents we find that each perspective recognizes a co-existence of multiple realities that spread out into simultaneous moments. They all consider how decisions made in the past contribute to creating the present. They each invite us to reflect upon how we got to 'this' point and why. They facilitate curiosity about the present moment and ask us to 'look around' rather than to march ever 'forward'. While Epithelial Metaphors, like Parallel Presents, explores the angle of simultaneity rather than progression, it differs

from it by proposing to think in fields rather than linearly, i.e., by freely establishing associations between events that don't necessarily fully coexist in a particular moment, but are bound by culture and meaning. Like *I Am Time*, *Epithelial Metaphors* is dependent on experiential significance, juxtaposing past, present, and future, much like we do when we dream.

The breaking of a linearity or acknowledging a more chaotic continuity, is also proposed as acceptance of queerness in *Meet (with) Speculation*. By contrast, *The Uncertainties Cone* is more focused on establishing criticality in a singular point of time, creating the conditions to analyse designerly activity in a sort of time bubble. Looking around rather than forward or up, by being grounded in this world and not another like *Parallel Presents* does, *The Uncertainties Cone* sidesteps the uncertainty of looking forward which is most common in futuring, by looking sideways instead. If attended to from the spiritual inclination of *I Am Time*, it acknowledges that the multidimensionality of time collapses in the limitations of our vantage point. From this position, could cycles of time coincide, fuse/merge, dissolve: what is that point (peephole) in the bigger scheme of things? In *Meet (with) Speculation*, the other perspectives share a questioning of taken for granted norms. For instance, the very idea of moving 'towards' the future; why not 'turn away' from the future? There is also an integration between internal narratives and external experiences. For *I Am Time*, each perspective attunes to time as subjective and nonlinear. Instead of a metronome of regular ticks, time is an internal rhythm - different for different people. Each accommodates the randomness to time presenting opportunities to connect to it at random cyclical points.

In applying these perspectives, we have drawn out relationships as diverse as family, the materiality of our surroundings, and our spiritual relationship, in addition to relationships that are (yet) missing (formal) descriptors. While they only show a small range of possible types of relationships and kinships, the examples shown here go beyond the types of mediated intimacy so often showcased in HCI. Of course, this type of speculative work cannot replace long-term evaluation that is so often missing in the field. Nonetheless, we argue that these perspectives have the potential to bring in novel and diverse views on relationships, friendships, and kinships - as well as the role technology plays in it. Our applications of these perspectives already differ in the way in which they foreground technology and to what extent they observe, explore, and foreground underlying perspectives and conditions. While they have been made within a capitalist, hetero-normative society, the resulting ideas, and reflections offer alternative visions. This exploration is only the beginning of engaging with the prompts to explore their potential for design futuring, and we share them here to invite your responses and evaluations. In the future, we will develop the booklet further to a point where it can be distributed like a zine or used in workshops in a wide range of settings.

8 CONCLUSION

This work explores how expanding approaches to design futuring can contribute to reimagining alternative intimate futures. We offer five prompts, derived from five alternative perspectives to design futuring and invite readers to generate their own alternative futures around love, friendship, and kinship. To test the generativity of our

prompts, we created responses to the prompts that each provide a different, partial reimagining of potential intimate futures. Overall, our work contributes to emerging efforts to expand approaches to design futuring and diversifying visions of intimacy in HCI.

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A APPENDIX

The booklet on *Design Futuring for Love, Friendship, and Kinships: Five Prompts for Imagining Intimate Futures* is available in its original layout on Medium at <https://medium.com/@speculative.sponges/five-prompts-for-imagining-intimate-futures-3bf973b6f227>.

Design Futuring for Love, Friendship, and Kinships: Five Prompts for Imagining Intimate Futures

Authors
(in order of appearance)

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and
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In this booklet, we present five prompts that invite you to explore your own future ideas of intimacy. We invite you to start with any prompt and do as many as you like, creating your own adventure. Each prompt has a visual representation and a written explanation. We invite you to take your own path through the prompts, focusing on different aspects of love, friendships, and kinships. We suggest you also pause for reflections and take stock of what you have experienced. Each journey through the prompts will be different.

These prompts can be useful in many ways. They can be inspirational at the beginning of a project or kickstart design futuring activities for beginners and experts alike. They can be a means to view your own project in a new light and reflect on your values and perspectives. The visual representations for each prompt are deliberately ambiguous; this is intended to support different ways of futuring, beyond what is possible through text alone. We do not claim that these prompts make up a complete set of ways to think about the future; they only open up a conversation as to what alternative ways of futuring might exist and how to get there. The prompts follow no specific order to encourage open exploration.

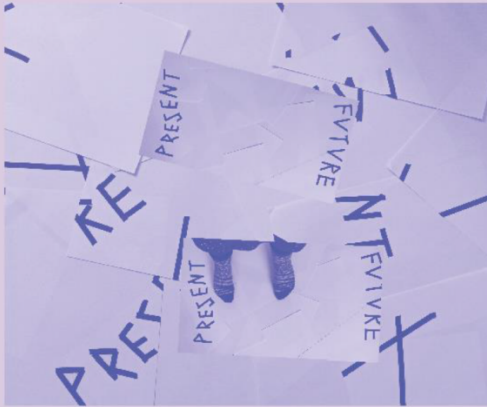
Parallel Presents

Consider your experience of the social and cultural norms surrounding intimacy, love and relationships. What frustrates you about the contemporary situation? Choose one issue and imagine that the related social and cultural norms, and the practises that are associated with them, are reversed, challenged or otherwise transformed in a way that appeals to you.

Use this idea as the core 'what if' of a parallel world. This parallel world will be much like our own, save for the norms and practises that you have chosen to transform. It is the present day there; with this perspective, you cannot project into the future and therefore you cannot base your idea on speculative technologies. You might want to imagine a world in which some real-life technological developments did not occur or unfolded very differently.

If you wish, repeat the process, exploring the same issue in different ways to create multiple parallel presents. This perspective asks you to speculate sideways into parallel contemporary realities.





Meet (With) Speculation

What if “Speculation” is not this abstract concept, but this entity that you can interact with? They not only remind us of the variety of shapes and forms love, friendship and kinship might take, but also enable us to look beyond the present/future binary. This exercise is designed to help.

1. Take two sheets of paper: the present and the future
2. For each thing in the relationship that remains unchanged, stay in the present. Each thing that changes is one step closer to the future.
3. Reflect on what remains the same, what you would prefer to change, what you take for granted?
4. Take steps towards a new future, rooted in the present

Like Speculation, you stand with one foot in the present and one in the future, blurring distinctions between the two.

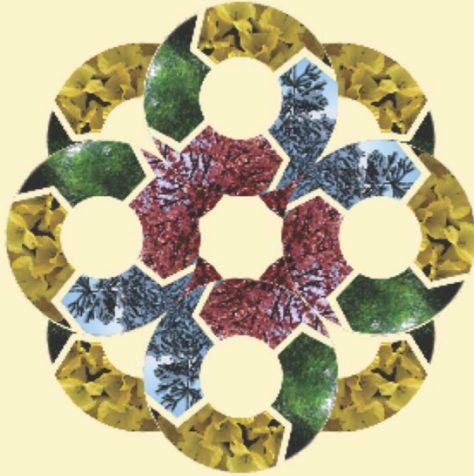
Epithelial Metaphors

This prompt proposes that time is an organic and mysterious fabric, like body tissue of epithelial cells, in which the future is intricately enmeshed with the past and present in generative and creative motions. This suggests that whatever material artefacts humans produce will inevitably contain elements of culture and evolution that connect them to each other, in a weave of meaning and interpretation.

Looking at human relationships in this manner, each individual has agency and produces and reproduces what is and what may become. Each person's interactions with others and objects add up to the networked layer of human existence that shrouds our planet. There is generative potential in the creativity of our interactions with other humans and objects. Or is it the other way around? Follow these steps to explore some aspects of a relationship in your life:

- Time fabric – Present: Bring your senses to this present moment; what is around you? Pick two objects in your surroundings. In what ways are they connected to you? In what ways are they connected to each other? Are they adding value to your world or subtracting from it?
- Time fabric – Objects: Reflect on the juxtaposition of these objects from a temporal perspective: what different timelines do they represent? How long have they existed for, how long did it take to make them?
- Time fabric – Relationships: In what ways do these objects connect you to other human beings? Choose one relationship to focus on. What role do these objects play in that relationship? For example: emotional attachment, degree of utility, modes of interaction, etc...
- Time fabric – Nature: How much of Nature is present in the objects of your choice? In what ways do these objects connect you to the natural world?
- Time fabric – Future: According to your reflections, create/generate a few ideas for improvement or changes of these objects... how could they be better, or worse, or simply different?





I Am Time

The I Am Time perspective to design futuring emphasises cyclic and transformative experiences of an individual, or even groups and communities. For this exercise, consider the following steps:

1. Pick a regular activity or experience with regards to the relationship you are reimagining in the future. (e.g. waking up next to your partner every day)
2. Go through the different parts of the activity / experience. You should write these down. (e.g. opening your eyes in the morning, seeing someone next to you still sleeping, closing the alarm, etc.)
3. The images in the circle represent different seasons, pick any one.
4. Keeping the season you selected in step 3 in mind, consider how the parts in step 2 change (or not) (e.g. waking up in the winter adds an additional step of turning on the bedside light as it is still dark outside). Please write this down.
5. Mindfulness: breathe slowly for 3 breaths
 - inhale 2 3 4, exhale 2, 3, 4;
 - inhale 2 3 4, exhale 2, 3, 4;
 - inhale 2 3 4, exhale 2, 3, 4.
6. Consider what you would change in your routine / activities in steps 2 and/or 4 in the near or far future, to
 - transform it from the mundane to something special or different,
 - or vice versa: transform it from something special to the mundane,
 - transform it to support your future self in some way considering also in what way and your future vision of yourself.

Consider whether a past version of yourself has been transformed (or not) by parts of the activity / exercise and how that makes you feel now.
7. Repeat steps 3 - 6 as many times as you like and stop when you're ready to move on.

Uncertainties Cone

"Illegibility, then, has been and remains, a reliable source for political autonomy." --Scott, *Seeing Like a State* (Scott 1998)

"Riffing on the title and strategy of the Guerrilla Girls, Burqa Girls understand the subversive potential of invisibility as a position of power." --Kazmi & Anuradha, *Burqa Girls Project* (Kazmi & Vikram 2021)

"We clamor for the right to opacity for everyone." --Glissant, *Poetics of Relation* (Glissant 1997)

Digitally mediated communication, such as text messages or social media, offer less information than typical face to face interaction. Intentions may remain illegible; there can be misfires in tone or double entendres. Much of what people physically do when using digitally mediated communication remains invisible to the other party -- did they reply to your text message while on the toilet? Does it matter? People may maintain public facades and finstas only for friends (Xiao et al. 2020), yet their deeper selves remain opaque.

These limits to knowledge, these uncertainties about the other, are often framed as challenges to overcome with digitally mediated communication. Legibility, visibility, and transparency are assumed to be beneficial for knowing others. Illegibility, invisibility, and opacity are assumed to be challenges for intimacy and meaningful interpersonal relationships. We often want to know more about others, to understand them more clearly, more transparently, to foster interpersonal connection and more meaningful relationships.

Yet what if the most meaningful relationships rely on a foundational respect for what one cannot know about the other? I glance at a stranger on the street and appreciate that their life is just as complex and storied, if not more so than, my own life, without feeling an urge to reveal more about them. I gaze long and lovingly at a family member that I live with, yet I know they lived decades before I was born - they can tell me



stories, but there are depths to them I will never know, and some stories they may not wish to tell. In their eyes looking back at me, I can never be fully certain of their interior world.

This prompt explores reframing illegibility, invisibility, and opacity as desirable characteristics for some modes of interpersonal connection. The Uncertainties Cone is a twist on the typical Futures Cone; while the Futures Cone suggested seeing far into the future, the Uncertainties Cone invites embracing uncertainty and humbly accepting unknowability.

In reimagining relationships, what if we intentionally designed for limited access to only tiny, incomplete, pinprick windows into others' lives? How might embracing the uncertainty of digitally mediated communication be generative for meaningful connection? How might embracing illegibility, invisibility, and opacity open possibilities for alternative modes of relation?

We may only trace a few breadcrumbs a correspondent has chosen to leave for us detailing evidence of their lives. We may never 'truly' understand one another, whatever that means. We may strive to represent ourselves accurately; we may most accurately be multiple. We may keep a correspondence, or we may never talk again.

For this prompt, imagine a digitally mediated relationship that embraces uncertainty, illegibility, invisibility, and opacity.

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