Designing to Reflect Our Better Nature

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Abstract
We present a set of technologies designed in our research group where the focus has been on highlighting the nuanced but critical agency of people to shape interaction with their world using and through computers. Our design stance emerged by critically seeing technology's existing power and authority. Taken separately, design traits that promote agency are visible but not necessarily salient. This demo presents different technologies that approach this design direction from different angles and in different contexts. Through this demo, we hope to widen the discussion on the role of design to bring about a kind of power and authority that reflects us not as compliant consumers but more in terms of our better natures.

Author Keywords
design; interaction; power; reconfiguration

CCS Concepts
•**Human-centered computing** → **Interaction design;** *Interaction devices; Interactive systems and tools;*

Introduction
We present a few technologies that implement design responses to a current state of affairs that our lab perceives as problematic. Akin to junk food, modern technologies built into the fabrics of our lives are often very charismatic [1] but

offer shallow promises of "better" and consumption-driven design sensibilities. We are concerned that interaction with systems designed from this perspective – that often use coercive mechanisms to enhance superficial engagement – encourage people to be more submissive and compliant and less reflective. They get us used to the idea that our job is to comply with the system's demands. They offer us little or no meaningful recourse to push back on behaviors, demands or characterizations that we object to [3].

Our design approach begins by identifying this undue deference to a computing system as problematic. We argue that designers should routinely explore and cultivate alternatives to coercive computing practices. This is not critical design but a response to critical design. We look for small moves within the larger design spaces that that may be used to promote enduring human values. Here we focus on two projects that emphasize: (1) understanding other people's point of view (ThoughtSwap) and (2) maintaining a clearer picture of our own purposes (CritiSearch). Additionally, (3) we will include one end of a third remote-communication project (FamilySong), providing an alternative motivation for its construction and design.

We see computing systems as operating within a larger socio-cultural context that is often taken for granted or invisible. Our designs reconfigure interactions [2], but in a way that encourages human control and reflection. Two design principles inform this:

Zensign
Zensign is the concept that what we *exclude* from design is as important as what we include [3]. Extra features are a distraction, which is a form of the exertion of power. Zensign helps us to reflect on the positionality and ideologies that, when embedded in the technology, may rob users of their agency.

Example topic areas for discussion during ThoughtSwap demo:

Envisioning future directions of interaction design

Experiences from the field

Nature of broader impact

Design as an ethical endeavour

Contesting borders and intersections

Critically seeing CritiSearch

The design of the technology is not the design of the system. Technology should either expose the larger system or at least leave mental space for integrated use-practices that may not be apparent.

Technology Takes a Back Seat
In our designs, technology takes a back seat to the negotiation of human purposes. The power of the technology is made visible in the way that the systems are embedded in the social fabric – as mediators and enablers. It is not treated as omniscient.

We demonstrate how some of our systems operate in practice.

ThoughtSwap

ThoughtSwap is a background technology that supports a larger social practice concerned with promoting *conscientious discourse*. (Figure 1). The goal is to get to unmediated face-to-face discussion. But a brief encounter with ThoughtSwap technology changes the infrastructure that enables the discussion. Two key ideas are (1) provision of *contained anonymity* and (2) reorientation from asking, "What do you believe?", to asking "What does someone else believe?" Contained anonymity means that, although the responses that people type are posted anonymously, everyone knows that they come from someone in the physically present group. Swapping people's thoughts is accompanied by the request that people defend not the thought that they contributed but someone else's. Mutual interdependence is manifest in that each must rely on others to represent their point of view.

For the demo, we will schedule sessions at posted intervals where we solicit ThoughtSwap replies to prompts and convene discussions based on those responses.

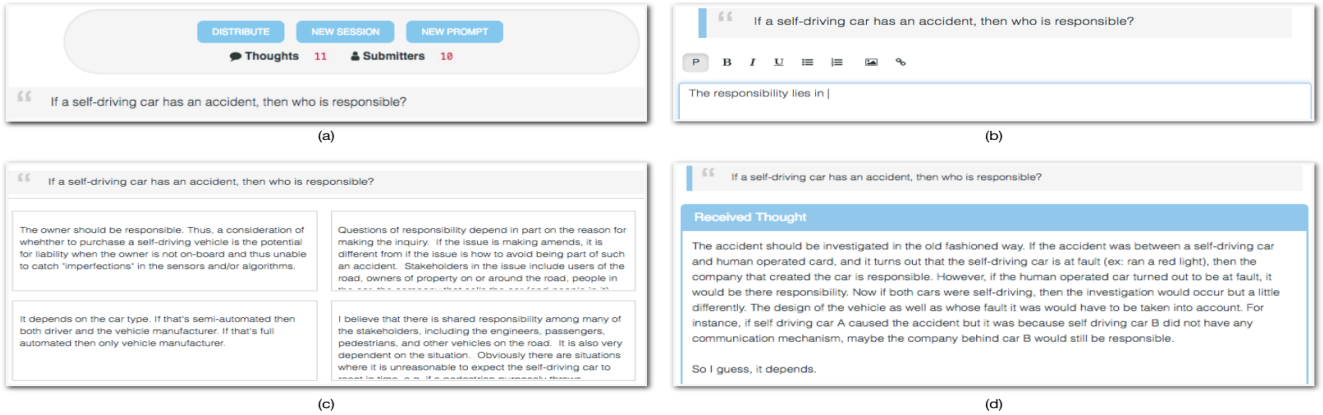


Figure 1: Screenshots from ThoughtSwap: (a)The convener types a prompt and shares it with the participants, (b) The participants see the prompt and can type anonymous responses, (c) The convener sees the responses and can redistribute them, and (d) The participants receive someone else's response to consider and re-present.

Figure 2: FamilySong connects remotely-located family through a synchronized shared-music environment.

CritiSearch

CritiSearch is a web-application that helps users take control over search results by enabling them to focus on the physical arrangements they see on the screen. They can mark hits with "thumbs-up" or "thumbs-down" as they sift through the results, without being accountable to the search engine. A sorting feature can pull helpful results to the top and drop unhelpful results down (Figure 3).

When a user runs a search query, the arrangement of the search results is decided by the search engine. The accepted practice to change the arrangement is query reformulation. Rather than reflecting on their own search purposes, the user must speculate on the search engine's rationale. CritiSearch's light-weight structure supports user focus on their purpose without the system's imposition.

Our CritiSearch demo will allow visitors to try this alternative search interface.

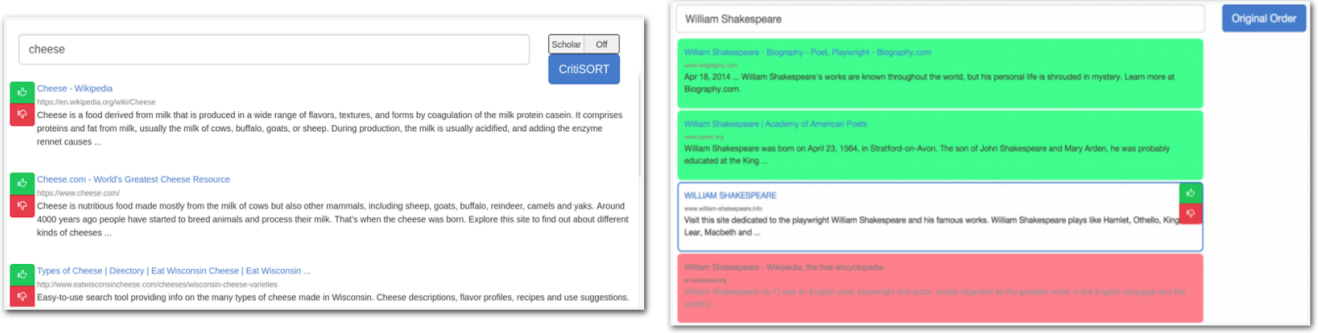
FamilySong: A Third Demo

FamilySong (FS) connects internationally-separated family members using synchronous playing of music [4]. It is offered as a separate demo, focused on the different roles of different family members, but will have two physically remote ends to represent separated family members. At this end, we emphasize how FS changes power in the realm of music by allowing us to reconceptualize music as a *shared, synchronous* experience rather than an individual one.

Discussion and Conclusion

ThoughtSwap invites deeper dialogue with other human participants. It makes it easier for participants to express themselves while keeping their identities private. It makes the collective responsible for responding to a full range of

Figure 4: Each side has a hand-crafted wooden box through which they can share and listen to music with their remotely-located family members. To simulate remote-sharing, we will keep one box at our end and another box will be at the other demo.



(a) (b)

Figure 3: Screenshots from CritiSearch: (a) Users can enter a search query and the results can be upvoted or downvoted, (b) The sort feature puts helpful results at the top of the page while moving results marked as unhelpful down below unmarked results.

Figure 5: FamilySong increases opportunities for connection by providing unobtrusive shared experience.
FamilySong too espouses the value of zensign and the subtlety of ownership.

ideas, but it also requires that the individual be present to witness and perhaps shape the response that their thought receives. Swapping thoughts also promotes examination and thereby promotes interdependence.

CritiSearch facilitates creative dialogue between the user and the technology by presenting the search engine as the dialogue partner. It treats search as an exploratory, creative process rather than a process in which the user's informational need must be known to the user and the technology.

FamilySong reorients technology's focus on the individual listener to a collective experience.

Minimal, transparent designs support user focus on important purposes, skills and abilities. By demonstrating these technologies together, we hope to draw attention to the technology's impositions and present ways in which our design can support users to reconfigure the power differences. We want to draw attention to limitations on design imagination in a purely consumption-driven model and the potential for designs that reflect our better nature.

References

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