Pause: A Multi-lifespan Design Mechanism

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ABSTRACT

At times, inaction may be a wise course of action. This insight lies at the heart of the design mechanism of *pause*. In this note, we explore the construct of pause, its rhythms, and nuances of enacting pause. Throughout, we draw on our experience engaging with pause in the multi-lifespan design of information systems for transitional justice. Five rhythms are identified: periodic hiatus, pending future event, responding to the socio-political climate, (temporary) closure, and laying fallow. In addition, we provide heuristics for managing pause and then restarting the design process. We then explore the scalability of pause from longer (e.g., multi-lifespan design) to shorter timeframes. We conclude with reflections on the potential benefits and open questions about pause as a design mechanism.

Author Keywords

Multi-lifespan design; pause; design mechanism

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous

INTRODUCTION

At times, inaction may be a wise course of action. This insight lies at the heart of the multi-lifespan design mechanism of *pause*. Though simple to state, pause is a nuanced and unexpected mechanism, rarely found in most design approaches. Yet, used well, pause can be a game changer in how designers navigate complex socio-technical design challenges and uncertainties, in particular, over the longer term.

Multi-lifespan design [2, 3] differs fundamentally from most modern day design approaches that seek fast solutions to both small and large design problems. In contrast, multi-lifespan design engages problems that by virtue of the problem structure are unlikely to be solved within a single human lifespan – for example, problems tied to limitations

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© 2017 ACM. ISBN 978-1-4503-4655-9/17/05...\$15.00 DOI: http://dx.doi.org/10.1145/3025453.3026031

of the human psyche to heal from cyclical violence or to slow moving natural processes such as reforestation. Pause fits naturally within this design framing. To be sure, pause requires a certain sort of temporal spaciousness; the longrunning processes of multi-lifespan design allow enough room to embrace pause, or even multiple pauses.

"Pause," as a design mechanism, shares some sensibilities as well as some important differences with the "implication not to design (technology)" as articulated by Baumer and Silberman [1]. They call attention to design processes that result in the conclusion that the better course of action is not to build a technology. In contrast, this work focuses on identifying places and ways in which pausing (not fully stopping) the design process may be beneficial to a design. Pausing carries with it the possibility of and commitment to restarting the design process at a later time; it stops short of a hard-edged categorical decision to discontinue or to not design a technical solution. Indeed, one of the challenges for pause entails communicating clearly when a lack of action comprises an instance of pause versus an instance of pulling the plug on a design process.

Given the temporal aspect of pause, it is also useful to consider connections to the slow technology and slow design movements; these movements emphasize technology design to support the user's reflection [4, 5, 8, 9]. As Hallnäs and Redstörm [5] write: "slow technology...is not supposed to reduce cognitive load or make digital information and computational resources more readily available. Slow technology is not about making technology invisible, but about exposing technology in a way that encourages people to reflect and think about it" (p. 204). Slow design is less about slowing down the user experience per se and more about reconfiguring the nature of the user experience itself. Grosse-Hering and her colleagues [4] write: "This is not from designing interactions that require more time per se, but by stimulating the user to use more time for those parts of the interaction that are meaningful and less for those that are not meaningful" (p. 3431). In contrast to slow technology's and slow design's focus on the user experience, our work on pause pertains to the temporal cadence of the design process itself.

Here we examine one mechanism for slowing down the design process: that of pause. Throughout, we draw on our experience engaging with pause in the multi-lifespan design of information systems for transitional justice. Our focus is

the Voices from the Rwanda Tribunal project [10], a historically significant collection of 49 video interviews conducted in 2008 with personnel from the International Criminal Tribunal for Rwanda (ICTR). The collection has been made publically accessible online at www.tribunalvoices.org. Engaging with Rwandans, the international justice community, and global publics, this ongoing research explores how information systems and design can support the long-term processes of transitional justice in Rwanda and elsewhere [3, 6, 11, 12].

In this note we explore the construct of pause, its rhythms, and nuances of enacting pause. We provide heuristics for managing pause and then restarting the design process. Then we extend the scalability of pause from longer (e.g., multi-lifespan design) to shorter timeframes. We conclude with reflections on the potential benefits of pause as a strategic design mechanism.

CONCEPTUALIZING PAUSE

Pause entails stopping temporarily from an action with a commitment to restart. Looking from the outside in, at the time of stopping it can be difficult to distinguish a temporary stop (pause) from a final one. Yet much is at stake with this distinction. After all, "stopping" a project in progress often carries with it negative connotations. In milder versions, stopping a project midstream can be interpreted as abandonment that carries an assumption of lack of interest. In a stronger version, stopping midstream can be interpreted as a determination of non-viability – that is, failure. Thus, at the point where one institutes a stop there is a moment of labeling which is paramount: Is this pause? Or is this failure?

Our experience indicates numerous circumstances for which pause might be a legitimate design response. The changing state of technical infrastructure and technology penetration is one: if significant improvements or changes are anticipated that would enable a different range of design solutions, then pausing to allow those technological changes to occur may be strategic. Changing socio-political conditions are another: certain design solutions may not be viable in certain socio-political contexts; pausing to allow those socio-political changes to occur may also be strategic. Third, limited financial and other resources may dictate pause, requiring a hiatus in the project work until further resources can be obtained. Lastly, from the individual researcher perspective, pause may be useful to address fatigue or other personal circumstances (e.g., birth of a child, death of a loved one).

RHYTHMS OF PAUSE

Not all pause is alike. When to pause, for how long, and under what conditions to restart take on different cadences – what one might think of as the rhythms of pause. Here we explicate five rhythms of pause that arose in the course of our multi-lifespan design work with the Voices from the Rwanda Tribunal project and illustrate each rhythm with an example from that work. Some of these instances were

intentional from the beginning, while others were emergent, arising in situ.

1 Periodic Hiatus. This form of pause refers to an aspect of a project that requires regular but not continuous attention. For example, maintaining the archival copies of the Voices from the Rwanda Tribunal collection fits with this notion of periodic hiatus. Specifically, the archival copies are reviewed every two years and refreshed every five years to ensure on-going data integrity and access. Otherwise, the archival copies remain untouched.

2 Pending Future Event. In this form of pause, an aspect of the project is on hold until a specified amount of time passes or particular conditions are met. For example, two interviews in the Voices from the Rwanda Tribunal collection will be released pending specified future events. In one case, an interview is sealed for a specific duration (i.e., 30 years) and in the other case tied to a specific occurrence (i.e., until all first instance trials have been completed by the ICTR). In the latter case, the specific date initially may not be foreseeable.

3 Tango: Responding to the Socio-political Climate. Another form of pause is entangled with the rhythm of changing socio-political conditions. Here, agile assessments of key stakeholders and political contexts are employed to determine if and when a good time to act has arisen. Until such a determination, the project may pause. For example, with the Voices from the Rwanda Tribunal project, aspects of the on-going interaction design evolved (and continue to evolve) in response to the Rwandan government's evolving legislation that governs speech related to the 1994 genocide (e.g., Genocide Ideology Law). Specifically, we have put on hold development of an unmoderated online discussion forum, so as to ensure compliance with current Rwandan law [6]. We continue to monitor the development of Rwandan law on this topic, with an eye toward new interaction design opportunities.

4 (Temporary) Closure. In some instances, an aspect of the project is halted without clarity concerning whether or not this aspect would be restarted at some future point. In this circumstance, this aspect of the project hovers between pause and closure until a final determination is made. We encountered such an instance with respect to the design of an information portal for transitional justice in Rwanda, that would link various materials tied to transitional justice in Rwanda, including documents from the ICTR, the traditional Rwandan Gacaca courts, interviews from the Voices from the Rwanda Tribunal, and other sources. While initially appealing to a complex set of stakeholders, as the political conditions changed, interest in (and, hence, the viability of) the information portal waned. Until finalized, we consider this form of pause to be temporary closure and note that in some ways it comprises a special case of responding to the socio-political climate (described above).

5 Laying Fallow. — This form of pause serves the purpose of refreshing people, resources, or other aspects of the project. Such fallow periods aid with project sustainability and can act as a counterpoint to what might be experienced as relentless project workflow leading to burnout. (i) With respect to research, technical, political, and other partners, this form of pause can provide an opportunity to harmonize the project rhythm with other commitments – to other projects, people, or circumstances – preserving collaborative relationships over the longer term. For example, in the Voices from the Rwanda Tribunal project we have worked with our partner organization Never Again Rwanda [7] on a range of related projects with fallow periods in between: in 2009 (workshop with youth), 2014 (information portal for transitional justice in Rwanda), and 2015 (research method training for Rwandan NGO research staff) in part, in response to that organization's shifting agendas and capacity. (ii) Within the project team, laying fallow can take the form of personal (or personnel) pause. For the kind of longer-term commitments associated with multi-lifespan design, project team members will need periodic opportunities to refresh, akin to the academic practice of sabbatical. As opposed to leaving the project permanently, in some instances team members will rejoin the project after a period of downtime with renewed vigor and insights. As the Voices of the Rwanda Tribunal project enters its ninth year, several team members have practiced this form of pause.

PAUSE IN ACTION: HEURISTICS

During the course of pause, not all activities cease. Rather, certain on-going activities are critical to managing pause and enabling meaningful restart. We highlight heuristics for a pause and restart process, largely in sequential order.

Articulate a Rationale and Rhythm for Pause. When considering the possibility of pause, a helpful early step entails articulating a rationale for pausing the design process. As noted earlier, motivations for pause might include anticipated change in technology, change in sociopolitical conditions, lack of resources, or researcher circumstances. Once a rationale has been established, then an appropriate rhythm for the pause can be identified accordingly (e.g., periodic hiatus, pending future event, tango, [temporary] closure, or laying fallow), including which aspects of the project need to be paused and potentially for what duration (e.g., scope, timeframe).

Initiating Pause. Based on the identified rhythm, the specific event or circumstances that trigger the enactment of pausing can be identified. When the trigger occurs, pause is initiated.

Documentation. Minimizing a loss of knowledge and experience during the period of pause is key to enabling a smooth transition when restarting the project at some later point. Toward this end, it is important to judiciously collect and document relevant project knowledge, personnel, and

processes, not only prior to but also during the period of pause.

Managing Expectations and Maintaining Relationships. Oftentimes, pausing an aspect of a project may also pause engagement with related team members as well as external partners, many of whom will need to be re-engaged when the project restarts. Moreover, some may interpret pause as abandonment and, reciprocally, lose commitment. As such, some effort to manage expectations and maintain relationships is warranted. Particularly, the rhythm of pause and expectation for restarting need to be clearly communicated with appropriate frequency.

Monitoring for Restart Conditions. Depending on the rhythm of a given pause, different information gathering practices will be needed to enable restart conditions. For example, a pending future event requires researchers to attend to a particular timeframe or event as a basis to restart. In contrast, a tango rhythm requires researchers to attend broadly to a social-political climate at reasonable intervals with an eye toward when certain conditions are met to determine when to restart.

Restarting: After Pause. Based on the identified rhythm and monitored conditions, the specific event or circumstances that trigger the action of restarting can be identified. Depending on the conditions, starting after a pause may entail a number of complex activities including re-engaging with partners, refreshing knowledge about the project among team members, reviewing and reassessing project goals, and revisiting project personnel and research partnerships.

Calling the Shots. A person or persons will need to be unambiguously in charge of the pausing process and empowered to make relevant project decisions. Their duties entail ensuring a clear rationale and rhythm for pause, initiating the pause, adequate documentation, management of expectations, maintenance of relationships, and monitoring for restart conditions. They also have the crucial responsibility to determine when to restart the project.

PAUSE IN ACTION: SCALABILITY

To illustrate pause-in-action, we describe an example from our experience with the Voices from the Rwanda Tribunal project, that of periodic hiatus. In addition, to explore the broader applicability of pause beyond multi-lifespan design, we provide a hypothetical scenario of pause within a shorter-term design project, that of a pending future event.

Periodic hiatus. ———— As mentioned above, maintaining the archives of the Voices of the Rwanda Tribunal collection requires periodic attention followed by long periods of quiet. When we began this project, our first goal was to secure the archival copies of the collection. After the collection was safely tucked away ("initiating pause"), we stepped back to consider the long-term ongoing maintenance of the collection. At that point we conducted the necessary research to determine what sort of cycles

would be needed for what types of maintenance activities (i.e., a 2-year review cycle which examines the replica sets to identify emergent issues, and a 5-year refresh cycle which generates new replica sets). That resulted in a detailed archival schedule with accompanying rationale for procedures ("articulate a rationale and rhythm for pause," "documentation"), which was shared among stakeholders. The documentation was used as a boundary object to help ensure shared expectations for periodic refresh among the research team and the staff at the University of Washington (UW) Libraries Special Collections where the archival copies are stored ("managing expectations and relationships"). Inspection of those documents positioned the research team and the library staff to discuss roles and responsibilities (e.g., who would be responsible for doing what and when; "calling the shots") as well as surfaced questions about long-term resources for maintaining the collection. The regular periodic nature of the maintenance made the restart conditions - a particular month and year - readily visible ("restarting"). We generated new replica sets in 2014 and are poised for the next refresh to occur in 2019. The maintenance documents and shared expectations continue to guide our long-term planning for the project, particularly with resource allocation and seeking future funding for preserving the collection.

Pending future event. In terms of timescale, pause is not limited to multi-lifespan design, but can be also useful for projects at shorter timeframes. In particular, as design researchers increasingly engage with uncertainty whether it pertains to their research setting (e.g., shifting online social space, conflict settings) or project resources (e.g., funding, human resources) – pausing a project may be an effective design strategy. Here we describe a hypothetical scenario in which uncertainty arises: designing a new chat room for a small online community of critics on film and television. To understand the context, researchers decide to monitor and collect online conversations for one month in order to conduct social network analyses and content analyses. However, about two weeks into the study a post goes viral on the Internet, drawing public attention to the website. Thousands of new users subscribe to the community including trolls and spammers. Social dynamics change, norms are disrupted. The design team discusses the emergent situation. The team decides to put the data collection on hold for three months ("initiating pause") and restart when the community has re-stabilized ("articulating a rationale and rhythm for pause"). Data collected prior to and immediately following the viral post are annotated and archived ("documentation"). In the interim, each researcher focuses on other projects ("managing expectations"). After three months, the project leader monitors web traffic for signs of stabilization ("monitoring for restart conditions"). If conditions are met, the project restarts ("restarting: after pause").

REFLECTIONS ON PAUSE

This note contributes an argument and associated practice for pause as a strategic design mechanism. Granted, all design projects at some level of granularity have periods of inactivity. That said, as demonstrated here, a meaningful distinction can be made between project inactivity per se and the use of pause as a strategic mechanism in design. One that is particularly suited to multi-lifespan design; though, as illustrated above, can be used effectively with projects at shorter timescales.

The benefits of an explicit design mechanism of pause are at least three-fold. First, the capacity to use pause intentionally and strategically in the design process, as warranted by project goals and changing conditions. Second, the ability to plan for lapses in project activity (e.g., the heuristics above provide useful guidance on how effectively to navigate these lapses). And, third, a language for communicating about project inactivity that is distinct from project failure.

We conclude with some open questions about pause as a design mechanism - questions that point toward considerations for future work and further design reflection. One set of questions concerns how to determine the pause. What markers indicate that pause might be a viable or even preferred mechanism at a given point in the ongoing stream of a design process? How do researchers know when to restart? These questions go beyond simplistic responses such as marking a calendar. While some pause rhythms embed relatively straightforward stop and restart conditions (e.g., periodic hiatus), others rely on nuanced assessments of socio-technical change (and resulting climate) that can defy ready judgment. Relatedly, could pause be determined after the fact, say at the time of restarting? For example, could a post-hoc determination of pause serve as a helpful rhetorical move? Might the language of "pause and restart" (rather than that of "reviving or resuscitating failing projects") ease the reinvigoration of research activities with external partners? Another set of questions concerns assessing the usefulness or lack thereof of any given pause. How does one meaningfully evaluate the impact of a pause in the design process when there are no visible actions? What evidence could be brought to bear?

While powerful, pause is a mechanism to be used judiciously – based on thoughtful rationale with reasonably well-articulated restart conditions. Going forward, we hope others working within different contexts and timeframes will expand the rhythms of pause. Furthermore, we hope this work will inspire a broader conversation about reimagining the parameters for successful design processes.

ACKNOWLEDGMENTS

We thank all those who have participated in the Voices from the Rwanda Tribunal project over the years. This material is based upon work supported by the National Science Foundation under grant no. IIS-1302709.

REFERENCES

- 1. Eric P. S. Baumer and M. Six Silberman. 2011. When the implication is not to design (technology). In *Proceedings of the SIGCHI Conference on Human Factors in Computing* Systems (CHI '11), 2271-2274. http://doi.acm.org/10.1145/1978942.1979275
- Batya Friedman and Lisa P. Nathan. 2010. Multilifespan information system design: a research initiative for the HCI community. In *Proceedings of the SIGCHI Conference on Human Factors in Computing* Systems (CHI '10), 2242-2246. http://doi.acm.org/10.1145/1753326.1753665
- Batya Friedman, Lisa P. Nathan, and Daisy Yoo. 2016. Multi-lifespan information system design in support of transitional justice: evolving situated design principles for the long(er) term. *Interacting with Computers*, iwv045. http://doi.org/10.1093/iwc/iwv045
- Barbara Grosse-Hering, Jon Mason, Dzmitry Aliakseyeu, Conny Bakker, and Pieter Desmet. 2013. Slow design for meaningful interactions. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '13), 3431-3440. http://doi.acm.org/10.1145/2470654.2466472
- 5. Lars Hallnäs and Johan Redstörm. 2001. Slow technology designing for reflection. *Personal and Ubiquitous Computing* 5: 201-212.
- Lisa P. Nathan, Nell Carden Grey, Milli Lake, Trond Nilsen, Elizabeth Utter, Robert F. Utter, Mark Ring, Zoe Kahn, and Batya Friedman. 2011. Multi-lifespan information system design: investigating a new design approach in Rwanda. In *Proceedings of the SIGCHI* Conference on Human Factors in Computing Systems (CHI '11), 591-597. http://doi.acm.org/10.1145/1753326.1753665

- 7. Never Again Rwanda website. 2016. Retrieved September 19, 2016 from http://neveragainrwanda.org
- 8. William Odom. 2015. Understanding long-term interactions with a slow technology: an investigation of experiences with FutureMe. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (CHI '15), 575-584. http://doi.acm.org/10.1145/2702123.2702221
- 9. Carolyn F. Strause and Alastair Fuad-Luke. 2008. The slow design principles: a new interrogative and reflexive tool for design research and practice. In *Proceedings of Changing the Change* (2008).
- 10. Voices from the Rwanda Tribunal website. 2016. Retrieved September 19, 2016 from http://www.tribunalvoices.org
- Daisy Yoo, Milli Lake, Trond Nilsen, Molly E. Utter, Robert Alsdorf, Theoneste Bizimana, Lisa P. Nathan, Mark Ring, Elizabeth J. Utter, Robert F. Utter, and Batya Friedman. 2013. Envisioning Across Generations: A Multi-lifespan Information System for International Justice in Rwanda. In *Proceedings of the* SIGCHI Conference on Human Factors in Computing Systems (CHI 2013), 2527-2536. http://doi.acm.org/10.1145/2470654.2481349
- 12. Daisy Yoo, Katie Derthick, K., Shaghayegh Ghassemian, Jean Hakizimana, Brian Gill, and Batya Friedman. 2016. Multi-lifespan design thinking: two methods and a case study with the Rwandan diaspora. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (CHI '16), 4423-4434. http://doi.acm.org/10.1145/2858036.2858366