Balancing the Timing and Pacing of Design Creation

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ABSTRACT

In this position paper, I argue for a need to balance the timing and pacing of design creation. Because designers and design researchers have agency in the way in which design processes are temporally designed, Research through Design (RtD) should explore the benefits and drawbacks of both slow and fast approaches to design and identify when one approach is most relevant. I relate this argument to research on hackathons and game jams as well as emerging explorations of generative AI in the context of creativity.

KEYWORDS

design processes, fast design, slow design, hackathons, creativity

INTRODUCTION

My perspective on **how time impacts the creation of design artefacts** is influenced by my research on both long-term and slow-paced design processes as well as short-term and fast-paced design processes [8, 10]. To address this, I combine research on how people design and develop technology with a nascent field of research: the study of how people's decision-making is impacted by how they perceive time and temporality. Novel technology often comes with the promise of accelerating design processes and thereby innovation, a recent example being the surge of accessible Generative AI (GenAI) tools in late 2022. However, only focusing on speed and acceleration in design processes of technology risks not only neglecting the value for creativity of slowing down and making time for reflection, but also risks contributing to adverse effects such as:

undermining creativity: Creativity needs incubation time, i.e., time away from an ongoing task to do something differently and returning to the task with new perspectives [14].

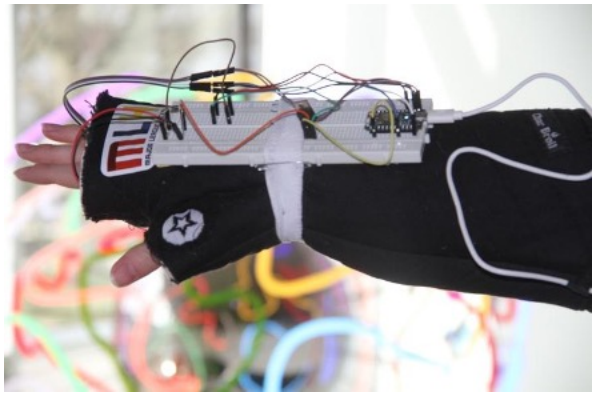

Figure 1: A rough prototype demonstrating an idea developed during a 36 hour long hackathon [22].

excluding people from participating in the design of technology: Diverse people need different paths of participation, for example lower paced participation where people can contribute on their own terms. To create meaningful technology for diverse people, we need tools to accommodate such paths of participation [9].

worsening the climate crisis: With GenAI there are many benefits for accelerating innovation, however many challenges arise too, including an increase in the carbon footprint of this technology which necessitates research on when and how it is meaningful to utilise GenAI [17].

Especially now in the light of genAI technology where promises of sped-up productivity is made, we need a renewed appreciation of slowing down. However, in this position paper, I argue that we need not only to slow down as a counter move to genAI, but to create a nuanced perspective on time in design in general. "Fast" design is not necessarily better than "slow" design and vice versa, rather I argue it is about finding the right balance or rhythm of design, and identify when a certain pace is needed for creating design artifacts. In the case of genAI, the promise of acceleration may seem attractive in some cases but we need more research on *when* it makes sense to accelerate the creation of design artifacts. As a case in point, hackathons and game jams are interesting examples on short-term and fast-paced creation of design artifacts. Hackathons have been described as:

> "time-bounded participant-driven events that are organized to foster specific goals or objectives. The scaffolding of each event is planned by a team of organizers to support its goals or objectives. People that participate in an event often (but not necessarily) have different backgrounds and bring different expertise. Their primary motivation to join an event is to work on a shared team project that interests them, although there might be additional incentives such as prizes and networking opportunities. During the event, teams attempt to create an artifact (e.g. software or hardware prototypes, slides, video, document) that can be shared with other participants. It is also acceptable, and sometimes even desirable, if they do not manage to create anything. Participants are encouraged to be bold and work on things outside of their area of expertise." [13]

Game jams are similar to hackathons but with a game development focus. As illustrated in the quote, it is sometimes even desirable if participants in hackathons do not manage to create anything. However, the tangible things of hackathon design – often in the form of rough prototypes, see figure 1 – is only one part of the equation.

A part of the reason why it is sometimes desirable to not even create anything, is because *creative risk-taking* is generally encouraged during such hackathons [12]. In other words, the value of the formats do not necessarily lie in the tangible things created during hackathons. What other things might then come out of hackathons and are attracting participants and organizers? If we look at the things of hackathons from a *program theory* perspective, we can look beyond the tangible things of

hackathons, i.e. the immediate and tangible output, but also explore these design events' outcome and long-term impacts [11]. **Outcomes** can be described as short- and medium term consequences derived from the **output** (the immediate tangible and intangible product emerging from the process), while **impact** can be described as the long term effects [11]. For example, hackathons and game jams have over the years been used for many different purposes, but a main one for many participants is for *learning* outcomes [2–4, 15, 16, 20, 21, 23, 24].

From creativity research, we know that we need both slow and sometimes even "unconscious" effort to arrive at creative ideas (incubation) [26] as well as conscious more or less structured effort (including creativity methods [7]). In this position paper, I have highlighted hackathons as a kind of method for developing creative ideas. For genAI, I believe we need more research to mitigate potential adverse effects (such as lowered critical thinking [18]), however efforts are being made to explore how this technology may accelerate creativity [6]. We need to find a balance as designers between using tools for speeding-up for productivity and slowing-down for reflection. When do we need to slow down and stay in the struggle without jumping to tools which may potentially help us skip through the creative struggle in design, such as by using genAI tools? For example, **desired difficulty** has been argued for in design education [25] and "is a learning task that requires a considerable but desirable amount of effort, thereby improving long-term performance [...] Research suggests that while difficult tasks might slow down learning initially, the long-term benefits are greater than with easy tasks [19]" [27].

When engaging in design in RtD, we do not only create knowledge based on the things we design, we also create knowledge from the design process leading to the design artifact [5]. As argued here, temporal aspects – such as slowing down and speeding up – impacts both the process itself as well as the resulting design artifact. How we pace design creation impacts creativity: do we allow ourselves to stay with the difficulty of design or do we seek to skip the struggle and jump to a conclusion as fast as possible? Furthermore, how do these different approaches lead to different ideas – and thereby different RtD products – being developed? How might we as designers and design researchers obtain a nuanced balance of how we time design, and navigate between fast and slow paces when creating design artifacts? When is it meaningful to speed up – even if we risk not creating anything – or slow down? Moving forward, I propose to explore the **timing and pacing** of the creation of design artifacts in design as well as design research. As designers and design researchers, we have agency in shaping aspects of temporality, as actors "often have a degree of control in the way processes are temporally designed, spaced, and executed" [1]. How might we support researchers and designers in framing time and temporality as dimensions that should be actively considered in design processes, in order to achieve desired effects on access, creativity, and types of design thinking? [10]. A part of this is developing frameworks and tools to identify when and for how long the creation of design artifacts

should be timed and paced in a specific way, for example by speeding up (participating in hackathons or using genAI tools) or slowing down.

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