

***ctrl+R*: Reflections on Prompting Reflective Game Design**

Rebecca Goodine, Dr. Rilla Khaled

Concordia University
1455 De Maisonneuve Blv. West
Montreal, Quebec, Canada, H4G 1M8
(514) 848-2424 ext 4061

rebecca.goodine@mail.concordia.ca, rilla.khaled@concordia.ca

Keywords

reflection, learning, game design, creativity, game jam

INTRODUCTION

“Reflective Game Design” (or “RGD”) is an alternative design agenda from which to design, deconstruct and make sense of play experiences (Khaled, 2018). Although certain game designers are designing with reflection in mind through means like alternate controllers and unconventional design tactics (Marcotte, 2018; Mekler et al., 2018), the process by which reflective ideas grow over a project’s lifespan remains unclear. In this presentation, we will explore multiple levels of the research question of, “*What makes a reflective game?*” We will first trace the lineage of our game design tool called *ctrl+R* that is intended to prompt new - and reflective - ideas among game makers. We will secondly review the preliminary qualitative data collected from a test run of *ctrl+R* during the Global Game Jam 2019, before reflecting on our learned insights about the contexts of making that we will continue to apply during further *ctrl+R* development.

RGD observes the intermittent interactivity of games and proposes that “deeply reflecting on a game experience requires engagement with levels of game understanding and complexities of insight approaching that of the game’s designer” (Khaled, 2018, p.24). Reflective games use one or more tactics of *clarity over stealth*, *disruption over comfort*, *questions over answers* and *reflection over immersion* (Khaled, 2018) to prompt new ways of thinking about games on the part of the player. In cataloguing commonalities for reflective games broadly, we observed that design patterns alone did little to reveal the underlying tacit knowledge at work in the creation of reflective experiences: simply recognizing a reflective game experience did not shed light on how to design for reflective experience (Marcotte & Khaled, 2017). Seeking to explore the effect of intentional reflective game design, we began iterating on a game design tool that uses layered questioning to spur reflective development on a given game design idea.

The first phase of this work involved several iterations of physical card and tile games that could be shuffled and unfolded by an individual designer as they saw fit for their project. Figure 1 shows a relatively early analogue prototype of *ctrl+R*, involving self-directed question and answer explorations, using pen and paper.

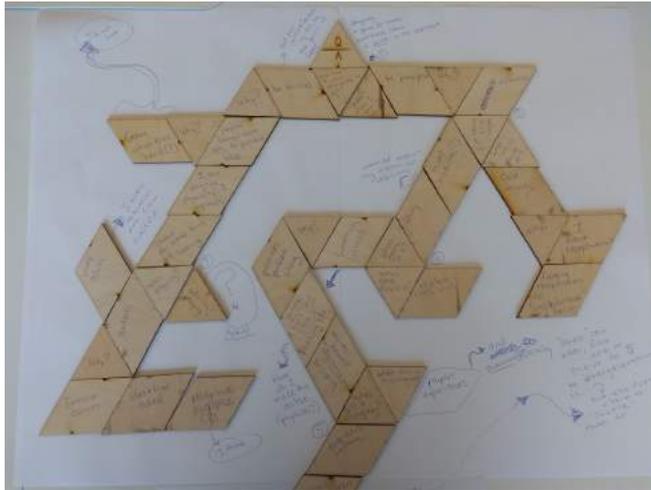


Figure 1: A mid-stage reflective tool prototype, where tiles direct the visual spread and commentary of reflective, creative threads surrounding budding ideas.

This general tactic of describing and revisiting an idea was eventually adapted into a digital second phase with *Twine*, a free open source tool for telling interactive stories. The resulting tool, called *ctrl+R*, presents designers with a series of eight random digital “card” questions that are intended to prompt previously unconsidered creative avenues. *ctrl+R*’s question set is influenced by Dialogue Mapping and root problem finding in the face of difficult to navigate “wicked” problems (Conklin, 2006). Noting that reflection can take many forms and be interpreted through a variety of lenses, rather than prescribing a formula for RGD creation, our intent was to help designers explore a solution space shaped by critical reflective reasoning. See Figure 2 for screenshots of *ctrl+R*.

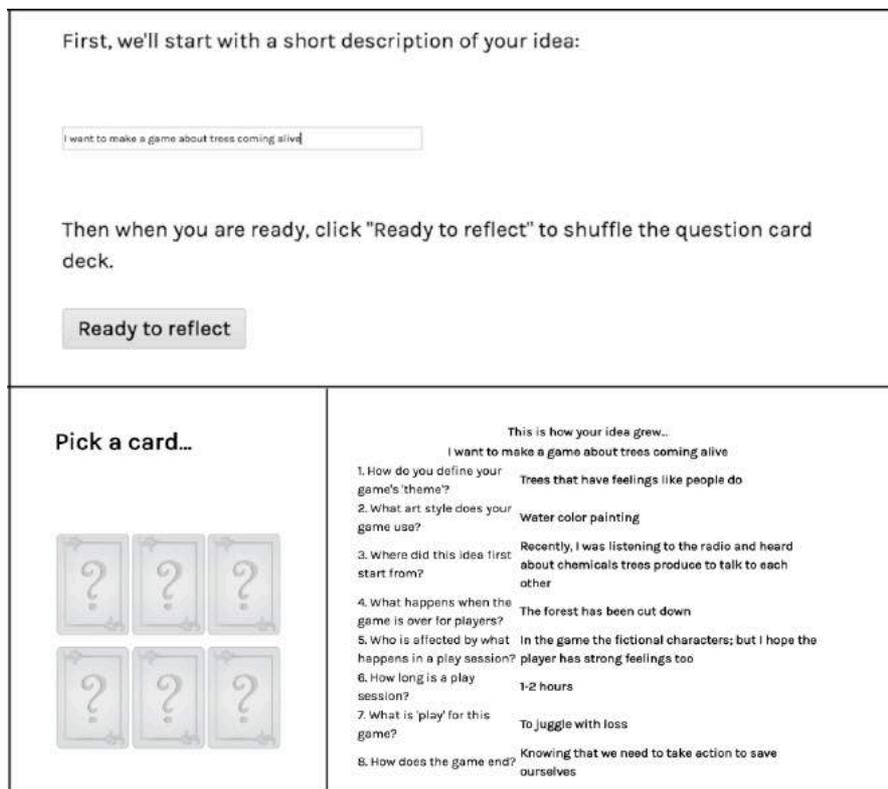


Figure 2: Screenshots from *ctrl+R*.

An essential component of design research, and particularly design research-creation, is documentation. Well-kept records of design process “materialise tacit design knowledge, support balanced subjectivity, and illuminate the often abstract design problem space” (Khaled et al., 2018). Leveraging *Twine* in our tool facilitated such record keeping, as we were readily able to develop a custom plugin for it that exports user responses into an external spreadsheet. Such records can potentially help designers and design researchers alike.

To gain insight into how game designers might interact with *ctrl+R*, we deployed it with eighteen game “jammers” during the Global Game Jam 2019. A game jam is an occasion for game creation that is similar to “a hackathon focused on game development” (Global Game Jam®, 2018). During this study, we collected two forms of qualitative data: the game ideas input into the tool itself, and a post-game jam survey that probed designers about their created game as well as their experience of *ctrl+R*. Both of these data gathering occasions were hosted digitally, firstly through the *ctrl+R* tool during the jam and afterwards through an online follow up survey link.

In order to address the first level of data collected through *ctrl+R* during the jam, we employed Grounded Theory (GT), “a general methodology for developing theory that is grounded in data systematically gathered and analyzed” (Strauss, Corbin, p.273). Given that our design research with *ctrl+R* is ongoing, GT enabled us to create informed categories from coded participant responses, while also affording for future maneuvers in design and research directions. The coding of our participant responses yielded three categories of response type; those that were *gameplay-centric*, those that were *author-centric*, and those that were *game design-centric* (Fig. 3).

Category	Description	Example Response
GAMEPLAY-CENTRIC	These answers addressed the experience of the gameplay to the hypothetical player, including feelings, themes, thoughts, and interactions.	<i>It challenges people to reflect on their choices and, on new playthroughs, find new options they didn't get on the first run</i>
AUTHOR-CENTRIC	These answers were direct opinion statements from the authors, acting as insights into their creative process that could not be gathered without the tool or by only studying the end game artifact.	<i>we're brainstorming the context around the house and which angle to use to tell the story</i>
GAME DESIGN-CENTRIC	These answers addressed the making of the game, including its design, its promotion, plot, archival, and distribution.	<i>Input : Keyboard. Material : PC</i>

Figure 3: By coding participant responses, we found three response categories.

In summary, through our review of the development and application of *ctrl+R*, we shed light on the highly context-dependent phenomena of tacit design knowledge (Marcotte, Khaled, 2017). Rather than solely relying on end game artifacts as proof of reflection, we seek to holistically describe the activity of reflective game design. From our emergent GT-informed categories, we can better articulate how designerly reflection enters into the creative process. Not only does such work lay the foundations for future iterations of *ctrl+R*, it yields insights into how both context and intention relate to RGD, and opens a conversation around potential tools and their limits with respect to this mode of design and making.

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