Gamechanger: Digital games as simulative models for human services.

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INTRODUCTION

Digital games can influence both - players' awareness of and responses to timely and critical social problems, through 'persuasion' (Bogost, 2007). Digital games for change (DG4C) typically create awareness about complex, social issues. A preliminary study of 175 games (July, 2020) featured on the Games for Change NYC organization's website (Games for Change, 2020) through content analysis was conducted to explore whether the games were created to raise awareness or initiate tangible action. The games aim to address diverse social issues dealing with civic, climate change, mental health and other issues. While all the 175 DG4C intended to raise awareness, only 49 games (28%) were wired to initiate any form of action such as donating, volunteering and petitioning. The findings highlight a gap in games intended to initiate action from the top-down (policy level) in the field of human services, hence, forming the basis for this study.

DIGITAL GAMES AS PROCEDURAL MODELS

Newsgames, a sub-category of DG4C integrate journalism in their content, allowing for an immersive, experiential view of current events, documentaries, simulation of systems and more (Bogost, I., Ferrari, S., & Schweizer, B., 2012). Unlike traditional narrative mediums such as stories and performances which 'create models that display the characteristics of the source system', videogames can 'represent reality as a dynamic system that can evolve and change' (Frasca, 2001 pp. ix). Bogost, Ferrari & Schweizer (2012) highlight games such as SimCity (Maxis, 1989), World Without Oil (Eklund, 2007), Airport Insecurity (Persuasive Games, 2005) to demonstrate how videogames act as procedural models. These games simulate how things work through models that people can interact with, the interactions also serve to provide input for the model - a capacity Bogost (2007) termed as procedural rhetoric. World Without Oil simulates a fictional oil crisis, SimCity simulates urban planning with the

constraints of urban dynamics and Airport Insecurity models airport security checks. By providing an immersive experience of services or scenarios, these games can provoke, persuade, and inform their players. We apply these learnings to address the knowledge gap identified by Bogost (2007) in understanding how game design strategies and dynamics can be leveraged to increase the impact of persuasive games, particularly focusing on the context of improving human services.

DIGITAL GAMES FOR SIMULATING HUMAN SERVICES

This study explores how the simulative experiences of human services can be leveraged to initiate tangible action at both the top-down (decision-makers, service providers) level and the bottom-up (those experiencing the issue and the general public) level as ways to maximize the impact of DG4C. Human services is an interdisciplinary field of study intended to meet human needs and improve the overall quality of life of service populations, focusing on remediation and improvement of problems (National Organisation for Human Services (NOHS), n.d.). Simulating homelessness services for instance can demonstrate and identify systemic inefficiencies as experienced by individuals facing housing injustices, leading to targeted action.

We demonstrate this through the in-depth analysis of the award-winning text-based game of Spent (McKinney, 2011) through gameplay. Spent collates statistical data and personal stories to convey homelessness experiences as data-driven scenarios to describe systemic inefficiencies and policy failures. The player role-plays someone living on minimum wages and navigates their everyday decisions such as buying groceries, health insurance, finding housing, getting a job, making car payments, etc. Each decision has a 'result'. The decision related to opting for health insurance demonstrates the Affordable Care Act's most basic plan sets the adopter back by 60$ per paycheck. Multiple choices that led to being overdrawn on the bank account illustrates that bank fees and overdraft charges disproportionately affect low-income groups. By day 13, the balance dwindles, the character is unemployed again, and their car is repossessed. The game was created to raise awareness amongst the general public and allows the players to donate to the cause of homelessness.

The game's true potential however, lies in offering decision makers the vantage point of the ways policies and services impact people at the individual level through delivering an experiential understanding of systemic and policy inefficiencies. This simulation allows decisionmakers to engage in procedural rhetoric through a simulation of existing systems and policies such as the feasibility of living on minimum wage. For instance, healthcare policymakers can assess and lower the pricing of health-plans, financial service providers can evaluate the effectiveness of overdraft fees for low-income individuals.

The in-depth analysis of Spent (McKinney, 2011) illuminates ways to maximize the potential of DG4C in initiating action at the top-down and bottom-up levels for human services contexts through the lenses of service design and experience design. Game designers and researchers can strategically apply these lenses in their designs of digital games for effecting top-down and bottom-up change through game dynamics, narratives and experiences. Game designs can be geared to improve service delivery and policies in human services through interactive service and experience design. Game design can also hardwire mechanisms for players amongst the general public to donate, volunteer or petition for specific causes by offering

titillating interactive experiences. Thus, change can be initiated that goes beyond awareness to tangible action at both the top-down levels (from a service design perspective) and bottom-up levels (through experience design).

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BIO

Prithi Yadav is a PhD student, designing for social change at the QUT Design Lab, Brisbane, Australia. An architect, urbanist, and design strategist, she finds her balance in design - the space between artistry and analytics, stories and statistics, chaos and control. Prithi's research focuses on exploring the role of design as an intervention to bridge the gap between awareness and action in the field of human services. Her research draws from the disciplines of design research, data analytics and game studies, to create a design intervention that creates an awareness of the issue of homelessness, as well as influence actionable strategies.