



The Impact of Multi-tasking on Website Design:

Flow Theory, and the Systems Model of Creativity

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Table of Contents

ABSTRACT	1
INTRODUCTION	2
INTRODUCTION TO THE PROJECT	2.1
PROJECT ROLE	2.2
EXEGESIS STRUCTURE	2.3
THEORETICAL PERSPECTIVE	3
THEORETICAL FRAMEOWKRS FOR THE BASIS OF RESEARCH	3.1
KNOWLEDGE DERVIDED FROM THEORY FOR CREATIVE PRACTICE	3.2
METHODOLOGY	4
OUTLINE OF PBE	4.1
PRIMARY METHODS OF PBE	4.2
ADVANTAGES AND DISADVANTAGES OF PBE	4.3
APPROPRIATENESS OF PBE FOR WEBSITE DESIGN ANALYSIS	4.4
ANALYSIS OF RESEARCH MATERIAL	5.0
SYSTEMS MODEL OF CREATIVITY	5.1
PRE-PRODUCTION	5.2
PRODUCTION	5.3
POST-PRODUCTION	5.4
CONCLUSION	6.0
LESSONS FOR CREATIVE PRACTICE	6.1
BIBLIOGRAPHY	7.0

1. Abstract

The online environment requires website designers to undertake a broad range of tasks to produce a coherent product. It is a complex role involving multiple creative systems, with ‘many overlapping concepts’ (Wineman 1996: 27). Utilising Practitioner Based Enquiry (PBE) methods, this paper will investigate how multi-tasking impacts on a web designer’s ability to coordinate several domains and fields and their experience of flow, with reference to both Systems Model of Creativity and Csikszentmihalyi’s Flow Theory respectively.

2. Introduction

2.1 Introduction to the Project

The Pastor’s Kids (PK) Camp website is designed to promote the camp event to teenagers through a mystical design theme. Facilitating lasting friendships between the users is a fundamental goal of the website, and therefore most of the website features are interactive. It includes a House sorting quiz, message boards, an introduction video from camp leaders with hyperlinks to their YouTube channels, five cinemagraphs, a 30 second advertisement, and resources for parents. This project spans multiple creative systems that were coordinated and housed in Wix’s online infrastructure, which provided the memory capacity, domain accessibility, and mobile compatibility required to create a comprehensive multi-media experience.

2.2 Project Role

My role as a website designer encompassed many traditional production roles, including writer, graphic designer, producer, cinematographer, and editor. ‘The web merges all these separate disciplines into an integrated communication medium’ (Wineman 1996: 27). The designer’s task is to coordinate several elements of the website in terms of prominence and quality, in order to affect a result from a given market demographic (Parker, Bellucci, Torlina, Zutshi, & Fraunholz 2015). These elements include written content, navigation, multi-media, and interactive features (Ibid). I have prior experience in creating special effects (SFX) features in Adobe After Effects, editing in Final Cut Pro X (FCPX), but not in website construction or graphic design (Project proposal 2016). This required extensive research into the functions and limitations of both fields, and negotiation of these constraints with the clients, Andrew and Michaela.

2.3 Exegesis Structure

In view of the involvement of multiple creative disciplines, this exegesis will review Csikszentmihalyi's Systems Model of Creativity and in particular, how the scalability of these systems affects a web designer in coordinating multiple fields and domains (1988).

Considering all three production phases, the impact of multi-tasking on a practitioner's experience of flow will be examined through a Practitioner-Based Enquiry (PBE) framework, detailing entries in a production journal, work in progress reports, and data logs.

3. Theoretical Perspective

3.1 Theoretical Frameworks for the Basis of Research

Website designers should create a cohesive online experience that involves a range of media (Wineman 1996). To do so, they must grasp the symbolic structures of the domains and the rules of the fields they are attempting to synchronise (Csikszentmihalyi 1996). The impact of multi-tasking on this creative process will be evaluated using the premise of Csikszentmihalyi's Flow Theory, which stipulates that when an individual's skills are equivalent to the challenges they face, among other conditions, they may enter an autotelic state wherein the activity is conducted flawlessly, with complete focus (1990).

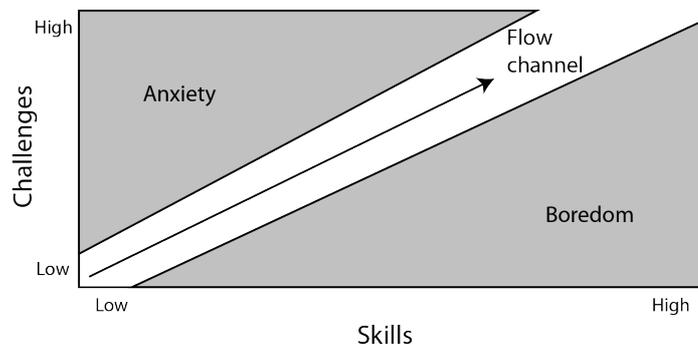


Figure 1: Flow Theory (Sala 2013: 1).

This criterion will be used to investigate a practitioner's experience of flow whilst multi-tasking. Furthermore, Koestler's conception of holarchies (1975) provides some insight into the interdependence of Csikszentmihalyi's creative systems. Holarchies are comprised of holons, or subsystems that contribute to something on one scale, but at the same time is a complete system per se (McIntyre & Thompson 2016). The premise that knowledge can be

transferred from one creative system to another will form part of the theoretical framework of this analysis into a practitioner's experience of coordinating multiple creative systems. That is not to say that the creative systems in which practitioners operate are purely enabling or constraining, but rather that they provide the conditions for creative activity, and thus the options and limits that professionals must work within (McIntyre & Thompson 2016).

3.2 Knowledge Derived from Theory for Creative Practice

The Systems Model proposes that practitioners internalise the rules of the field and the knowledge of the domain to produce novelty. The scalability of systems provides practitioners with some explanation of the flow of ideas and knowledge between vertically and horizontally integrated holarchies, which indicates that creative systems are interdependent. The hypothesis that skill acquisition in one area can be complementary in another may facilitate a website designer's productivity when coordinating multiple creative systems (McIntyre & Thompson 2016).

4.0 Methodology

4.1 Outline of PBE

PBE 'encompasses a self-reflexive examination of the practitioner's own activity through a process of participation' (McIntyre 2006: 4). This methodology draws upon the recorded observations of researchers, as well as evidence associated with the activity, which will be taken from the duration of my role as a website designer.

4.2 PBE and its Role in Creative Research Practice

Skill development stems from practitioners reflecting both in and on action, thus continually assessing the outcomes of their work through both qualitative and quantitative means (Schön 1983). Bourdieu's concept of habitus postulates that professionals develop a '*sens pratique*', or set of dispositions and literacies that incline them to behave in certain ways that is 'not always a conscious obedience to rules' (Bourdieu 1993: 5).

Having verifiable information is crucial for understanding how practitioners understand the rules and conventions of their field, especially when creative decisions are made without

calculation or obvious reason. A production journal enables practitioners to deconstruct and comprehend their tacit knowledge, extract the relevant methodologies from successful outcomes, and reproduce these procedures for future use (McIntyre 2006). PBE complements this evaluative approach with verifiable items from the production process for a balanced analysis (Murray & Lawrence 2000).

4.2 Primary Methods of PBE

A production journal is an important literary tool that enables researchers to develop their technical and intellectual comprehension of the activity by providing an experience-oriented dialogue of the production process (Murray & Lawrence 2000). Journal reflections therefore ‘add a much needed “insiders” perspective to the total available stock of knowledge on creativity’ (McIntyre 2006: 4). A self-reflective insight of the production process can ‘offer a means by which practitioners may aspire to transform, remodel and recast such practices to achieve personal goals’ (2000: 7). The analysis will offset this subjective insight with verifiable artifacts including production schedules and data logs, which contribute an objective depiction of the evolution of the project, allowing for the formation of different analyses in the future.

4.3 Advantages and Disadvantages of PBE

As a self-reflective methodology, PBE incorporates personal observations and value judgments that present clear limitations in terms of objective analysis. On the creative process, Csikszentmihalyi states that ‘an important breakthrough usually follows a long period of gestation in the domain’, which may obfuscate the source of production contributions for the researcher (1988: 332). They may over or under record data, particularly when exposed to an autotelic experience (McIntyre 2006). This analysis includes a range of artifacts from the production process to counterbalance such issues, and facilitate the formation of alternative research conclusions.

4.4 Appropriateness of PBE for Website Design Analysis

A production journal is critically important for independent projects where one individual is responsible for all creative decisions. However, given that ‘everything we do is located in, and therefore affected by, social structures’ that have been internalised by the practitioner, a journal can assist in articulating the motivations for my creative decisions, as well as recording external contributions to the production (Wolff 1981: 9). It will also assist in

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cataloguing creative decisions that proliferate when coordinating multiple domains and fields
and relating theoretical approaches to production processes.

5.0 Analysis of Research Material

5.1 Systems Model of Creativity

Csikszentmihalyi's confluence approach is characterised by 'dynamic links of circular causality', which obfuscate the origin point of the creative process (1996: 329). However, the ideas that I considered early in pre-production were informed by previous domain structures, and this is where I will begin the analysis. Following Koestler's theory of holarchies, I will examine each website feature as its own subsystem in order to demonstrate the interdependence of multiple creative systems, culminating in their synthesis on the website (1975).

Systems view of creativity

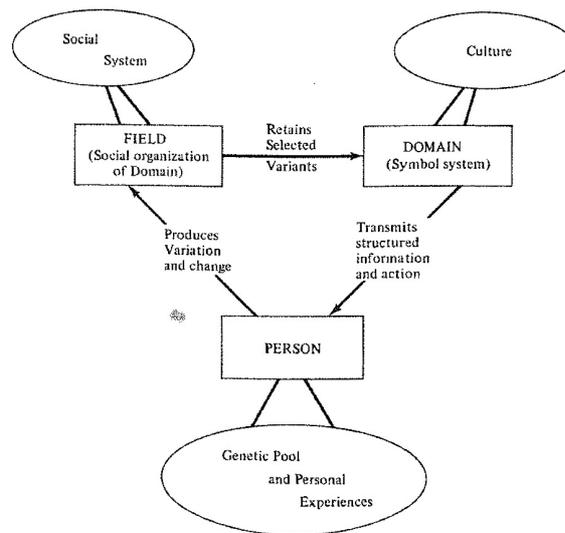


Figure 2: The Systems View of Creativity (Mihalyi Csikszentmihalyi 1988: 329).

5.2 Pre-production

Planning the website began with negotiations with the clients, in which we discussed the website's narrative, structure, features, and overall brand. By examining existing domain structures and negotiating the field's expectations, I delineated the website's genre and purpose in accordance with the requirements of the key demographic, stated as being children

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of pastors ‘aged 13 – 19’ (Written Proposal 2016: 7). Given the integral nature of interaction in the web environment, the expectations of this demographic informed all design plans. Unlike highly institutionalised fields like film or painting, where complex distribution systems have specific requirements for entry, the online environment is characterised by the free flow of information and low barriers to access (Wineman 1996). Arguably the users constitute a website designers field, without whom an interactive site would have no purpose, appeal, or continual participation. The user is comparable to a cultural intermediary, who can ‘legitimise certain works as creative and deny that status to others’ (Sawyer 2006: 214). However, traditionally intermediaries have been characterised by a high knowledge of the rules and conventions of the field (Bailin 1988). I had no such experience in HTML or javascript coding, which is why Wix was chosen to provide the infrastructure necessary for a professional interactive site. This lack of skills elicited anxiety at this stage: ‘can’t make or find a scoreboard widget’ (Production Journal 2016: 1).

To compensate for a lack of graphic design knowledge, I researched examples of website design schemes to understand the selection criteria of the field. For practitioners to succeed in producing novelty, they must first know the structures of the domain that they seek to reformulate (Csikszentmihalyi 1996). My examples included ‘Pottermore and Fallen London – balance of interactive narrative, user community, and promotional material’ (Production Journal 2016: 1). Both sites demonstrated excellent colour schemes, which is vital for website design as it indicates the tone and prominence of information conveyed (Wineman 1996).

I reformulated the design scheme of PK Camp several times, beginning with a medieval theme that was rejected by the clients. I accepted their feedback and remodeled the logo:

‘Clients want a contemporary, modern style. Scrap medieval theme, try stamp-like mountain shapes for logo’ (Production Journal 2016: 2).

This small modification influenced the whole website design for me. Through my experience of Pottermore, I recognised that a logo is almost graphic shorthand for the website’s overarching theme; that continuity is fundamental to the graphic design field.

Continuity is also crucial to filmmaking, without which the advertisement would lack semantic sense and fail to impart the key promotional message for the PK camp. Several scenes were rearranged during the storyboarding process in order to make the narrative more intelligible without any dialogue. Due to their requisite knowledge of the field, specifically montage theory, I incorporated feedback from my tutors into subsequent drafts, which

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resulted in a clearer linear montage sequence. ‘Moved scene 8 to 3 to make the packing sequence smoother’ (Production Journal 2016: 2). The final, shortest draft was better suited to a 30 second advertising format, and an online medium where traditionally audiences will not watch long-form content (Wineman 1996).

Graphic design is a complete and rich field in itself, and yet it is also a subsystem of filmmaking that encompasses mise-en-scene, colour grading and more. ‘Inside this nested world, system within system, one system is no more or less important than the others operating below or above it’ (McIntyre & Thompson 2016: 2). In practice I found that continuity is a shared quality of these creative systems, and that skill development in one field assisted in another; that instead of diverting attention from a task, the interdependence of creative systems fostered multi-tasking. This promoted ‘a balance between challenges and skills’ that constitutes one of the nine elements of flow identified by Csikszentmihalyi (1996).

5.3 Production

My main production duties included filming the advertisement and introduction video. I had planned for the introduction video to resemble a vox pop, entailing less technical knowledge, time, and resources than the advertisement, as recorded on 21 August:

Filmed the YouTube video with camp creators. Got specific about the aims of the camp. Awkward at first, but natural interplay once started. Total filming time = 1 hour (Production Journal 2016: 2).

Originally, two days were assigned for production work on the advertisement (Production Schedule 2016). Several issues disrupted this plan, including a lack of required equipment to produce a 90-degree overhead shot, inexperience with ISO measurements resulting in overexposed footage, and sound contamination. I formulated clear goals for the afternoon session of filming after noticing these mistakes while data wrangling. Therein I was more attentive to these goals than the timeframe, and received immediate feedback from the camera playback function. The parameters of the camera frame became customary, and executing a good take became an end unto itself, a manifestation of the conditions of flow (Csikszentmihalyi 1996). This sense of concentration seemed to flourish in an environment designed for one specific task, which engendered a high level productivity for only two days of filming. During two days, 177 clips were shot (Data Log 2016). This suggests that single tasks are more conducive to an experience of flow than multi-tasking, which is supported by a

recent psychological study that showed interruptions, or switching between tasks, negatively impacted the rate and quality of productivity (Skaugset et al., 2015). As Csikszentmihalyi states, ‘when the challenges are just right, the creative process begins to hum, and all other concerns are temporarily shelved in the deep involvement with the activity’ (1996: 118). The following shoot date, 28 August, entailed a clear set of objectives to be completed, allowing for full concentration on reshooting scene 7.

5.4 Post-production

Cinemagraph design largely took place in October (Production Schedule 2016). Despite having previous experience in producing SFX in Adobe After Effects, I lacked the necessary graphic design skills to create the original artwork for these animated backgrounds. To supplement this shortcoming, copyright compliant images were taken from databases like Pixabay. With this resource, I created a natural valley scene with animated mist, which presented a new set of issues:

Misty scene will be the background on the home page. Struggling to find a series of images that thematically flow from one page to another. I also don’t know how to seamlessly loop videos (Production Journal 2016: 3).

When I struggled to resolve these problems, I switched between the tasks of editing the video content and trying to locate a scoring widget. Task switching in post-production was much easier at a desktop environment, where interruptions felt more like breaks: ‘Made some progress on the splash animation, stopped to work on the ad edit for a bit’ (Production Journal 2016: 3). Skaugset et al. propose that ‘control over the timing of interruptions, the relatedness of the primary and secondary tasks, and the complexity of the interruption’ all impact the effect of task switching.

Several breakthroughs in one subsystem assisted in the progress of another. For example, a teal colour appeared throughout the advertisement, which was also present in the misty cinemagraph, resulting in this colour forming the central motif of the website. When I failed to find a scoreboard widget, I instead made a sorting quiz with an aqua background. The quiz results contained a passkey to the House Common Room page, similar to Pottermore, where users can communicate in discrete groups. This shaped the website’s information architecture, which determined the layout of text throughout the site. ‘I think one thing that I do is bring ideas from one field of knowledge into another field of knowledge’ (Linus Pauling, in

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 Csikszentmihalyi 1996: 118). In post-production, creative systems formed integrated,
 dynamic webs that facilitated the whole design process.

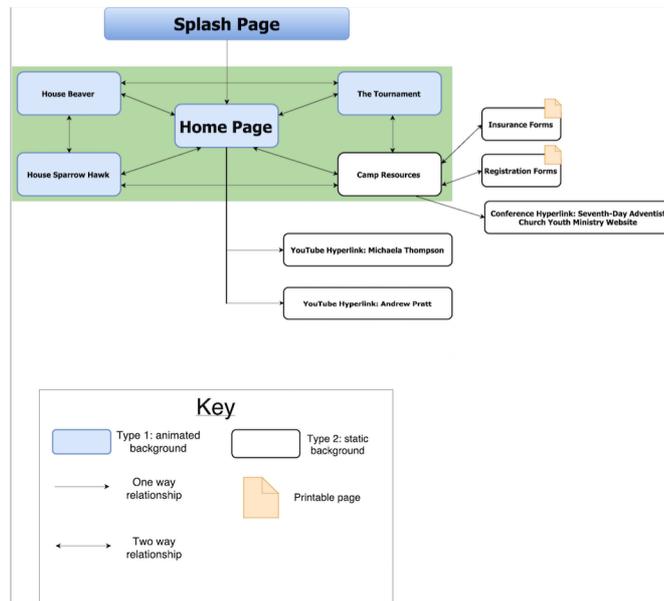


Figure 3: PK Camp Website Information Architecture (Work In Progress Report 2016: 1).

I refined the rough edits of the video content with the advice given by tutors to make quicker cuts and tighter timelines. The clients also proposed adjustments to the colour scheme on the Beaver House page for enhanced legibility. At this intersection of creative subsystems, the rules of the website holarchy, particularly accessibility and functionality, took precedence. Once the finishing touches were in place, including images and hyperlinks, I tested the website on several browsers and platforms. File incompatibility meant that the cinemagraphs did not work on a mobile platform: ‘need to make a parallel design scheme that mirrors the motif of the website & House specific colours’ (Production Journal 2016: 4). With the rules of graphic design and the feedback of the field in mind, I applied the site’s core colour scheme to a new set of limitations. In areas where white text was unreadable, the design was again altered for legibility. The mobile site, as a subsystem of website design, carried a new set of works and practices to consider that ‘in conjunction, enable and constrain complex and collaborative creative action’ (McIntyre & Thompson 2016: 3).

6.0 Conclusion

6.1 Lessons for Creative Practice

The evidence produced from a PBE approach demonstrates that a website is a complex holarchy, comprised of vertically and horizontally integrated subsystems that each serve the cohesion and functionality of the site. By immersing myself into several domains, and considering feedback from the field, I developed new competencies during the creative

process. In my experience, the acquisition of knowledge in one system assisted in another, enabling me to meet the demands of the task and enter a state of flow whilst coordinating multiple creative systems (Csikszentmihalyi 1988). That is not to say the impact is wholly beneficial, as I found it depended on environmental factors like the type and timing of the tasks, consistent with a sociocultural view of creativity (Wolff 1981). Overall, this project demonstrated to me the importance of domain and field knowledge to the formulation of novel products.

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