CREATIVE CONSCIOUSNESS: BECOMING A REFLECTIVE DESIGNER

A Synthesis Project Presented

by

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Critical and Creative Thinking Program

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ABSTRACT

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May 2011

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Directed by Professor Carol L. Smith

As a graphic designer, I was drawn to the CCT Program in part because I desired to strengthen my thinking skills as a creative professional. Through being reflective, I aimed to "get more in touch" with my process to better understand it and see how I might improve my approaches. Scholarship on reflective practice in design education and design practice is a growing body of literature, which inspired this synthesis project. This paper looks at Schön's theories of reflection-in-action and reflection-on-action, models for reflection in the design process provided by Ellmers, Brown, and Bennett, and Reymen, and various reflective practice tools (such as journals, weblogs, and critical incident questionnaires). I then adapt and apply select elements of these models and tools, experimenting with them during the process of developing book cover design concepts for this paper. I document my reflections on both my design process and my experiences using the tools.

Observations made about my approaches to concept development included the use of language as a powerful tool, awareness of "the voice of the critic," benefits of seeking feedback and trying new creative thinking tools, and a desire to improve approaches to preliminary design research and to evaluation of design concepts. Perceived strengths and limitations of the reflection tools included the journal and the written self-assessments being the most convenient and easy to use during the design process, the checklists being more technical and less easy to

use in reflecting freely, but beneficial for use in reacquainting with the design project if time has passed between design sessions; and the weblog (blog) being most useful for more refined, concise reflections, forcing the blogger to re-articulate their process in order to speak to an audience. In general, documenting reflections on the design process immediately following a design session was highly beneficial to my goal of "getting more in touch" with my process and beginning to think about the strengths and areas to improve in my approaches.

This paper concludes with considerations about transferring reflective practice from my solo practice to a collaborative work environment, building a community of creative professionals, being a designer who is also a feminist, and brief thoughts on improving design education.

Dedicated to the Critical and Creative Thinking family.

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CHAPTER 1

INTRODUCTION: INTROSPECTION

"This professional growth without personal transformation is impossible"
(Goleman, Boyatzis, and McKee, 2001)

My background in graphic design began in 1996 when I joined Artists for Humanity (AFH), a non-profit after-school arts program for Boston public high-school students. We were paid to work hands-on with mentors on design projects such as logos and corporate holiday cards, for clients such as Reebok and WJAM 94.5. I remember sitting in history or math class, doodling in my notebook, eager to go be at AFH among other young artists. I had a notebook with me almost everywhere I went, filled with sketches, poems, contemplations, and journal entries. Without being intentional about it, I was reflecting every day in these notebooks.

Following high school, I would continue on to Bunker Hill Community College where I took courses in graphic design, printmaking, and darkroom photography. But at the age of twenty, I was not yet ready to commit to college or the notion of a career. I would not finish my Bachelor's degree in graphic design until I was twenty-seven, when I graduated from The New England Institute of Art. I finally knew in my heart that I wanted a career in the visual communication arts. After about a year of working as a graphic and web designer for an information technology company, I became aware of my desire to heighten my creativity in developing design concepts, the overarching idea behind a design. The concept development phase is an early phase of the design process, where the idea generation and development for a given design project occurs prior to actually creating the visual design layout using hand-rendered illustration or computer design software. I was fairly confident in my computer design

production skills, as I had been using the design software since 1996. But it was the thinking side

of the design process, prior to the actual design production, that I was drawn to. I felt that I had

lost that introspective connection to my creativity that came so freely when I was younger and

life had not yet gotten in the way. I sometimes felt as if I was just "going through the motions" in

my nine-to-five job as a designer.

The Desire for Deeper Reflection

In reflecting on my undergraduate education, I felt that the program was not as strong as

it could have been in its emphasis on thinking skills, research, concept development skills, and

time for reflection and writing throughout the curriculum. We were required to take one general

course on concept development, and were only required to do a minimal amount of writing—in

the form of a design brief—in each design course. As in most American educational programs,

we moved quickly from project to project, from semester to semester, without much time for

reflecting on *how* we arrived at our design solutions and *what* we learned from our processes. I

recall most of my design class critiques being focused on the product outcome, the visual layout

choices made by the student, without much discussion first on the thinking that occurred in the

concept development process. Ellmers (2006) affirmed this for me as an area of concern in

education, as the main interest of his study was:

> …the loss of learning opportunities in traditional graphic design pedagogy due to a
> primary focus on project outcomes without formalized design project discourse. A
> component worthy of further investigation is the role reflection can play to provide a
> framework for engagement with the design process to enhance learning outcomes…
> (p. 1)

My desire to grow as a thinker and lifelong learner is undoubtedly what drew me to the

Critical and Creative Thinking (CCT) Program two short years after receiving my Bachelor's

degree. In two of my first semester classes, "Creative Thinking, Collaboration and

Organizational Change" and "Inside the Creative Process: Exploring Blocks and Finding

Creative Ground," I was introduced to this concept of intentional reflection. Reflecting was not

something I intentionally did, but perhaps subconsciously did, while working as a graphic

designer. Much like college, I moved fairly quickly from design project to design project, from

client meeting to client meeting. The goal was to get the product done, not to stop and think

about *how* I was approaching it, *how* I arrived at my solution, and *how* I might make

improvements in future projects. After my first summer of CCT classes in 2009, I wrote in my

Reflective Practice Portfolio:

> This summer was the first time in my life I can recall actively reflecting on my creative
> process. This is something I never before realized I took for granted. By learning how to
> reflect on it, I can now improve upon it. In CCT-612, I learned how important it is as an
> artist to reflect in order to grow…This course opened my mind to what I can be capable
> of by further understanding my creative process and how to foster [creativity]. It also
> gave me confidence that I can teach others how to do the same, which is something I
> hope to do in teaching graphic design. (Ciampa-Brewer, 2009)

Fast forwarding to today, the primary impetus behind this synthesis project is my desire

to become better at developing and executing creative ideas, to become a more effective and

successful creative professional, and to be self-directed in my quest for lifelong learning. For the

last year I have been running my own freelance graphic design business. While I may have more

creative freedom as my own boss now, I also spend a lot of time doing business and

administrative duties. By developing a reflective practice regimen, via this synthesis, that I can

fit into my graphic design practice and creative life in general, I hope to refresh that connection

with my creative process and forge newfound personal and professional growth.

The goals of this synthesis are to examine the relationship of reflective practice to the

design process, share my experience developing as a reflective practitioner with other creative

professionals through documentation of reflection during a design project, reflect upon what I have learned through this process and what potential limitations of the reflection tools are, and think about my goals for the future as a creative professional, as a feminist, and as a hopeful future educator.

Synthesis Paper Overview

Chapter 2 explores the value of reflection to the designer's process, first by reviewing a selection of the literature on reflective practice theories to provide the reader with an overview and then by reviewing a selection of the literature on reflective practice application in design education and design practice. From this literature review, I extract and adapt applicable reflective practice tools to experiment with in my project and later evaluate, such as the use of journals and structured reflection "checklists."

Chapter 3 documents the concept development process of designing a book cover for this synthesis paper while experimenting with the various models and tools for reflection. This documentation includes excerpts from my sketchbook, digital designs in development, and commentary on my process. I then highlight what I learned through reflection about my approaches to concept development and what I aim to improve in the future. Chapter 3 concludes with an evaluation and discussion of any potential limitations I feel the reflective practice tools may have in my professional design practice.

Chapter 4 brings to light the consideration of transferring these reflective practice techniques from a solitary working environment to a design-team environment, and discusses the potential limitations of this shift. It presents my ideas on: building a local, interdisciplinary community of designers and other creative professionals interested in contributing to each

other's lifelong learning; fostering relationships with mentors; being a feminist and how my values might influence my work and professional choices as a designer; and my thoughts on improving design education. As a final reflection on this synthesis project, I conclude with thoughts on where I have come through this synthesis experience with reflective practice in the design concept development process and on my transformation through the CCT program in general.

CHAPTER 2

WHY, HOW, AND WHEN TO REFLECT?

"Mirrors should reflect a little before throwing back images."

~Jean Cocteau, *Le Sang d'un Poète*

Throughout my work in the Critical and Creative Thinking program, the theme of "reflection" kept resurfacing for me. I began to think about what it really means to be a reflective practitioner and what this would mean for me as a graphic designer who strives for creative and professional growth. In the CCT Action Research course, I sought literature that would help bring this to light for me. This chapter provides a selective overview of theories of reflective practice, followed by literature on reflective practice application in design, more specifically. The selected literature was chosen because I found these theories and models: a) resonated most with my personal goals for reflection, and b) could apply not only to design fields, but also to creative work in general.

Reflective Practice Theory: A Selective Overview

Let me first briefly define some of the terms used in this paper. A definition of reflection that resonates with the goal of self-directed, lifelong learning is provided by Daudelin (1996):

> Reflection is the process of stepping back from an experience to ponder, carefully and persistently, its meaning to the self through the development of inferences; learning is the creation of meaning from past or current events that serves as a guide for future behavior. (p. 39)

Reflective practice emphasizes the use of reflection in professional or other complex activities as a means of coping with situations that are ill structured or unpredictable (Moon, 2004, p. 80),

which a design problem often is. At the heart of every design project is a design problem (Cloninger, 2007) that needs a design solution. The design process in a nutshell, while varying between disciplines, generally involves the phases of: pre-design (research, idea generation, concept development), design (development, production, testing), and post-production (implementation of the design product into a given environment) with evaluation and refinement happening in epicycles throughout.

The notion of 'reflective thinking' can be traced back to the writings of John Dewey, a pioneer in education reform and psychology. In *How We Think*, Dewey (1933) suggests that reflective thought is active and deliberate thought. Inspired by Dewey, Donald Schön (1983) introduced us to the term 'reflective practice' in his first book on the subject, entitled *The Reflective Practitioner*. It is perhaps the most quoted book on professional expertise (Eraut, 1994) and reflective practice, in which Schön introduces his theory of reflective practice through the lenses of case studies in the following professions: architecture, engineering, town planning, psychotherapy, and management. While Dewey's model seems to be analogous to a model of scientific inquiry in its linear fashion, Schön seems to be more interested in the artistry and fluidity of intuitive and cyclical thinking in professional practice. Schön is seen as the founding father of literature on reflective practice in design activity (Reymen, 2003), and conceives two modes of reflection: reflection-in-action and reflection-on-action. In *The Reflective Practitioner*, Schön (1983) uses the examples of the improvising jazz musician and the baseball pitcher to illustrate his theory of reflection-in-action, or "thinking on your feet," "finding the groove," and "learning by doing." (p. 54). In short, reflection-in-action can be defined as thinking about what one is doing while one is doing it (Schön, 1987), whereas reflection-on-action is the act of reflecting on an action *after* it has occurred.

The case of the architect can be seen as Schön's archetype for reflection-in-action. Here

he observes a twenty-minute conversation between an architecture student and her 'master'. The

student is working on a design for an elementary school, and the 'master,' whose expertise and

reflective thinking is the true object of Schön's observation, is coaching her through the process.

What Schön (1983) claims to observe in his analysis includes these key points: the design

process is a "reflective conversation with the situation" (p. 163), the situation being the design

problem; and good designers reflect-in-action on the situation's "back-talk" (p. 103). Designers

work by naming the relevant factors in the situation, framing and reframing the problem, making

moves toward the solution, and evaluating those moves (Reymen, 2003). These 'moves' are

responses to the design problem, and there is an ongoing conversation occurring between the

designer and the developing design. Dorst (1997) says of Schön's conversational metaphor:

> [I]t captures both the interactive nature of the reflective design mechanism and the 'satisficing' (or negotiating) nature of design activities…the completed design will be a negotiated settlement between the designer and the design task. (p. 76)

According to Schön (1987), reflection-in-action does not require a 'stop-and-think' (p.

26). This would imply that a professional, if reflecting-in-action, would be continuously thinking

and doing, thinking and doing. Reflection-*on*-action, however, does require a "stop-and-think."

Schön briefly introduces us to reflection-*on*-action when he looks at the potential limits of

reflection-*in*-action, including the idea that thinking interferes with doing. He argues that these

potential limitations of reflection-in-action "contain grains of truth, but they depend on a

mistaken view of the relationship between thought and action." (Schön, 1983, p. 278) and

"Continuity of inquiry entails a continual interweaving of thinking and doing." (p. 280). Take

the examples of the baseball pitcher or the jazz musician—examples Schön uses to illustrate the

idea of "thinking on your feet" even in performances where time for reflection is short, Schön

believes that skilled players can learn to think about their actions whilst performing them. In the case of the architect, the pace of action can be slowed down for reflection-in-action as well as reflection-on-action, the process of making sense of an action after it has occurred and possibly learning something from the experience (Eraut, 1994).

Although influential, Schön's work has not escaped criticism. Eraut (1994) sees Schön's use of the term 'reflection-on-action' to be less problematic (p. 146) than 'reflection-in-action' because it is clear that it takes place after an action has occurred. However, he still sees some inconsistencies in Schön's differentiation of the two. In fact, Eraut believes it is necessary to extract the term 'reflection' out of Schön's theory altogether "as it has caused nothing but confusion" (p. 148). Eraut writes:

> Several critics have argued that Schön fails to sufficiently clarify what is entailed in the reflective process itself. My own view is that he does not have a simple coherent view of reflection but a set of overlapping attributes…There is insufficient discrimination between the rather different forms of reflection depicted in his many examples; and this overgeneralization causes confusion and weakens this theoretical interpretations…

One important variable that Eraut (1994) believes Schön disregards is that of 'time:'

> When time is extremely short, decisions have to be rapid and the scope for reflection is extremely limited. In these circumstances, reflection is best seen as a metacognitive process in which the practitioner is alerted to a problem, rapidly reads the situation, decides what to do and proceeds in a state of continuing alertness. (p. 145)

I would agree with Eraut that Schön's writing on reflective practice is quite general and at times even vague, and that reflection-in-action can be seen as metacognition. However, in defense of Schön, I believe he does in fact acknowledge time as a potential limitation: "The pace and duration of episodes of reflection-in-action vary with the pace and duration of the situations of practice." (Schön, 1983, p. 62). As mentioned, he believes that a skilled player can learn to think

about their actions *whilst* performing them—the essence of reflection-in-action as opposed to reflection-on-action.

Although Schön himself does not provide diagrammatic representations of his theories to help the reader understand, later writers on reflection and experiential learning, such as Wainwright, Shepard, Harman, and Stephens (2010), do provide a diagram (Figure 1), that I found helpful in visualizing the cyclical nature of Schön's stages of the reflection process (see *The Reflective Practitioner*, p. 50, for more information on "knowing-in-action").

In summary, I believe Schön's ideas of reflective practice are of merit to design practice for a variety of reasons. As designers, we should aim for improving our practice of visual communication. Schön (1983) stated: "When a practitioner does not reflect on his own inquiry, he keeps his intuitive understandings tacit *and* is inattentive to the limits of his scope of reflective attention." (p. 282). This speaks to some of my goals for becoming a reflective

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┌─────────────────────────┐
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│   Reflection-in-Action  │
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│     Experimentation     │
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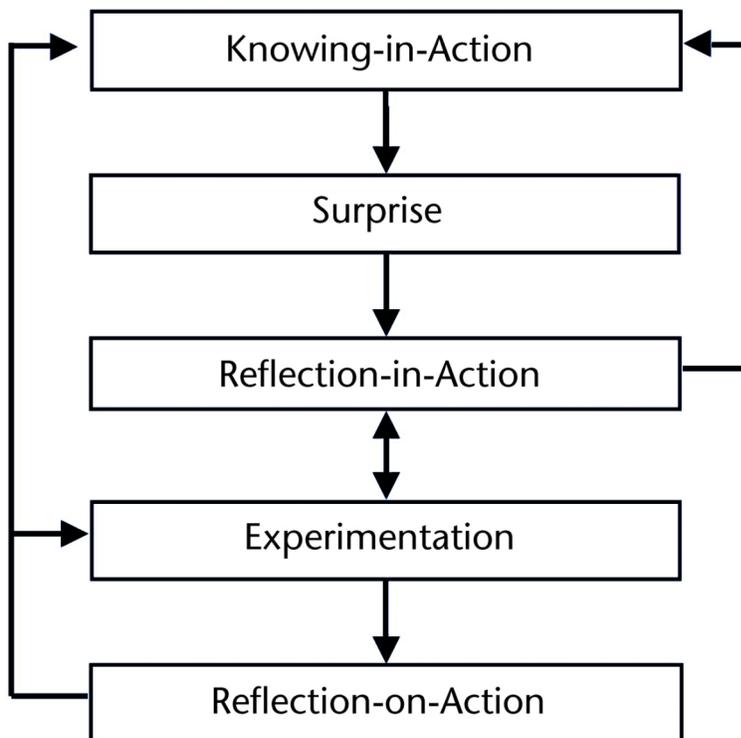
Figure 1: Adaptation of Schön's model of reflective practice (Wainwright et al., 2010, p. 76)

practitioner—getting more "in touch" with my creative process, and becoming more aware and conscious in my approaches and how I can become more creative as well as effective with them. I have looked at a selective overview of reflective practice in this section to begin to gain an understanding, but as Johns (1995) has suggested:

> Knowing what reflection is does not necessarily enable practitioners to use reflection in a meaningful way to practice. The literature on becoming a reflective practitioner is limited in answering these questions beyond theoretical accounts. (as cited in Platzer, 1997, p. 110)

What the literature in the next section aims to do is look at ways in which to adapt these theories to applicable frameworks for use in design practice.

Reflective Practice in Design: Applications

What are Models that Support Reflection in Design?

Building on the theory of Schön, reflection-in-action takes place when the design professional is 'surprised' by a unique situation during the design process, whereas reflection-on-action involves contemplation of actions from the recent past (Ellmers, 2006). I would add that reflection is a skill to be practiced. So how does a designer actually apply these theories to design practice?

It might seem intimidating at first—to add another task into the already complex mix that often is the design process. Designers are often "thrown into" ambiguous design situations (Dorst, 1997). As I expressed in Chapter 1, I have often felt like I was just "going through the motions," quickly from project to project, to get the jobs done. Reliance on intuition can often occur in any creative process, and using one's intuition is not always a bad thing. But as Cloninger (2007, p. 14) points out, "As long as you're going to have a creative process, you might as well be intentional about it."

Reymen (2001, p. 86) suggests that a designer should step outside of the 'designerly way of thinking' (Cross, 1994 as cited in Reymen, 2001) every once in a while, if they want to be in control of the design process (by means of regularly scheduled reflections). Because design practice produces a designed artifact as an outcome—an advertisement, a building, a piece of furniture or clothing, or a website, for example—assessment of design is usually focused on that artifact, rather than the process employed by the designer. Widely known designer Bruce Mau would argue that the process is more important than outcome (Cloninger, 2007) to the designer him/herself. Cloninger elaborates:

> As a designer, if you only pursue what seems right to you at first, if you jump right into the development phase without first researching the problem, if you never explore alternative design solutions, you will always wind up with a similar outcome. (p. 14)

We are taught and practice the textbook steps of the "design process" during our design education—understanding the problem, research, concept development, design production, testing, implementation, etc.—which provide us with an important guiding skeleton, but there are many intricate sub-steps that can vary from project to project. How often do we have the chance as students and then as busy professionals to step outside of our process to reflect on it and to consider whether our approaches are as effective as they could be? This section examines some models and tools for applying the theories of reflection to design practice, and continues to think about the questions: *Why* is reflection helpful to learning and to designers? *How* would we go about using reflective practice as designers? and *When* can/should we reflect as professional designers*?*

Ellmers (2006) conducted a study of final year, undergraduate graphic design students at The University of Wollongong in response to his observation that they sometimes have difficulty transferring their knowledge forward from project to project. He posits that understanding the

design process is important because it can "provide a platform to transfer expertise to different design contexts" (p. 3). This study implemented a reflective framework into the existing problem-based learning framework in the design studio classroom. In Ellmers' model (Figure 2), the students are given a design problem for which they create a solution through a cyclical process of action-based activity and reflection-in-action (p. 6). Upon completion of their final design product, they are required to submit a written reflective assessment of their process.
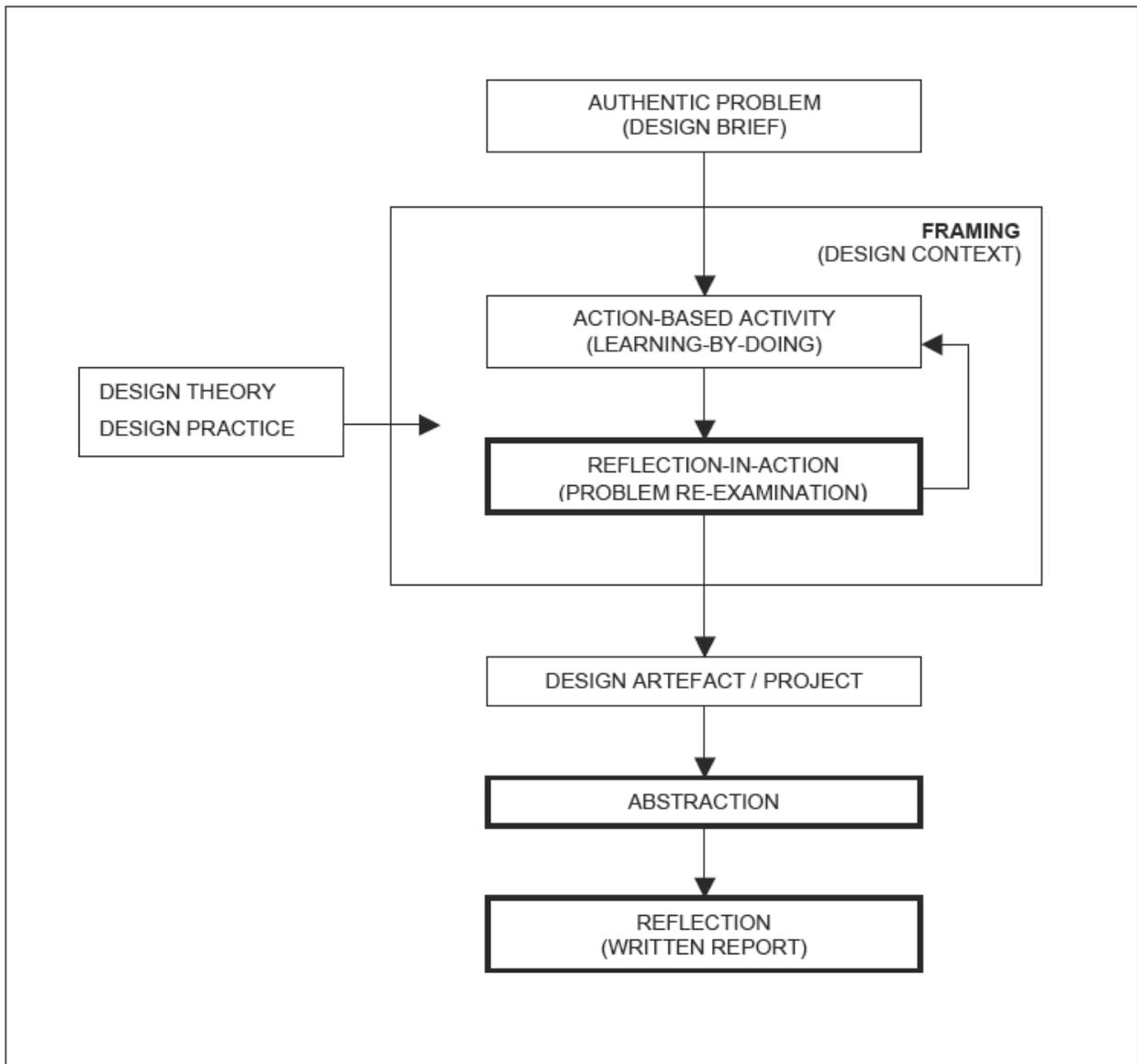
Figure 2: Ellmers (2006) Reflective Framework (p. 6)

Written self-assessments are another aspect of the CCT Program pedagogy that have been vital to deepening my learning. I do not recall doing self-assessments during my undergraduate graphic design education and I can see very clearly now why Ellmers includes this in his framework for design students. The inclusion of a formalized assessment task motivates and focuses the student to engage with the final stage of reflection and provides them a platform to articulate their learning (Ellmers, 2006, p. 6). As a professional designer aiming to become a reflective designer, a mode of self-assessment would seem to be an important element to consider including in my own plan for reflection.

Ellmers' (2006) observed, over 12-18 months, anecdotal evidence suggesting improved learning and engagement in the students through the implementation of a reflective framework as compared to before the intervention. In an effort to gather more systematic data, he followed up with an anonymous online survey of the students, with a 51% response rate in which he asked fourteen questions seeking feedback on the delivery of the framework. He found:

- 75% agreed or strongly agreed that the lecturer had encouraged them to reflect on what they had learned; 10% were uncertain; 10% disagreed; and 5% strongly disagreed.

- 60% of those students agreed or strongly agreed that the reflective assessment task aided their understanding of the design process; 10% remained uncertain; 30% disagreed; and 5% strongly disagreed. This perhaps suggests, "further work is needed developing and/or clarifying the assessment task in relation to the design process."

- 50% agreed or strongly agreed that formalizing reflection provided an effective model for thinking about practice; 40% remained uncertain, suggesting that "further

work needs to be done within the subject to scaffold the linkages between reflection and thinking about practice." (Ellmers, 2006, p. 8)

Ellmers does not include the specific questions or instructions given to the students for the written self-assessment in this particular study, which slightly limits our understanding of exactly how the students were led to reflect-on-action. In a later study by Ellmers, Brown, and Bennett (2009), however, more specific expectations of the students' are explained, which helps us better understand the application of reflective practice in a design process.

In that study, Ellmers et al. (2009) executed an intervention with final-year undergraduate graphic design students at The University of Wollongong, using a "structured critical reflective learning framework." The framework (Figure 3) is based on principles of reflective practice, problem-based learning, and experiential learning. This study explores the notion that structured critical reflective practice has the potential to support enhanced cognitive engagement and transfer of knowledge in design education. While Ellmers' (2006) framework required a written reflective assessment from the students at the end of the project only, the 2009 framework (Ellmers et al., 2009) increased and expanded the written reflective tasks throughout the entire design process. Perhaps this change was in light of Ellmers' (2006, p.8) "future directions" for "Inclusion of further teaching and learning material engaging with the process and techniques of reflection." The 2009 structured framework involves a 1200 word written reflective/assessment report required by the students at three milestones during the development of the design project, and a concluding 4000 word reflective assessment task that directed students to reflect on the whole project (p. 10). The tasks are structured in four key sections:

> …describing the design process, summarising critique feed back, identifying critical incidents, and making observations about the design experience. The final reflective assessment task incorporates the same key sections, although omitting feedback (as no further feedback takes place once artefact submitted), but adding two new sections,

identifying new learning, and how the experience could impact on future practice. The tasks guide the student to capture, in a formalised manner, their design experience and thinking during these key discrete stages. (Ellmers et al., 2009, p. 10)

I find this framework to be very impressive for an undergraduate design curriculum, and having now experienced the CCT program with its emphasis on reflective practice, I believe these kinds of reflective writing exercises would have been highly beneficial to my undergraduate education.

The *Reflection during the project* and the *Reflection on the project* elements of Ellmers et al. (2009) framework draw from Schön's theory of reflection-on-action. In the required written reflections, the students were prompted to identify and describe what they believed were critical moments, or critical incidents, in their design process/outcomes and explain why (p. 8). "Critical incidents" can be identified by reflecting on significant events or milestones in an experience or process, and will be covered in more detail later in this chapter. We can see the importance of deliberate articulation to this framework—Ellmers et al. state: "While it could be argued that reflection is inherent or implicit in project-based and studio-based learning models, by formally articulating reflective practice, the new framework seeks to highlight for the student the role reflection plays in the learning process." (p. 7). I would like to put forth that this could also be true of professional design practice. One might imagine that reflection is inherent in the designer's process, but I would like to explore, as part of my own plan for reflection, how deliberate articulation of the events in a design process can benefit my learning from that experience—as opposed to just "going through the motions".

As the study is ongoing, Ellmers et al. (2009) were unable to yet give concluding data on the effectiveness of the implementation of the framework, but preliminary findings and observations from the case study suggest that structured critical reflection can play an important

Learning supports	Learning sequence	Ideas from literature
Principles of; • Design theory • Design practice • Design cognition • Reflective practice Assessment tasks • Design proposal • Interim reflective report 1 • Interim design presentation • Interim reflective report 2	**Authentic problem (Design brief)** Design context ↓ **Design activity** ↓ **Reflection during the project**	• Project-based learning • Studio-based learning • Reflection-in-action (Schon) • Mechanism of reflective practice (Valkenburg & Dorst) • Structured reflection (Reyman et al) • Experiential learning (concrete experience, reflective observation)
Assessment tasks • Design artefact • Interim reflective report 3	**Design artefact** ↓	
Assessment task • Final reflective report	**Reflection on the project (Project = artefact + process)**	• Reflection-on-action (Schon) • Problem-based learning (abstraction, reflection) • Experiential learning (abstract conceptualisation, active experimentation)

Figure 3: Ellmers et al. (2009) Structured critical reflective learning framework (p. 7)

role in encouraging cognitive engagement and knowledge transfer in design students (put into own words or cite). This framework could be adapted to professional practice.

While Ellmers' notable studies are focused on graphic design students and education, the dissertation of Reymen (2001) offers a structured model based on a four-year study of professional designers in the areas of architecture, software engineering, and mechanical engineering. Reymen's model is a design method based on two main concepts: the systematic description and analysis of design situations and design activities by means of forms and

checklists; and the idea of "design sessions," introduced to stimulate designers to reflect

regularly during a design process (p. 158).

Reymen (2001) defines *reflection on a design process* as "an introspective contemplation

of the designer's perception of the design situation and of the remembered design activities" (p.

21). She maintains that structured reflection on the design process can help designers to improve

their process, outcomes, and proficiency. By reflecting explicitly on the design process, in a

systematic way and on a regular basis, designers can plan and carry out suitable next design

activities effectively and efficiently (p.1). Reymen was also influenced by Schön, and focuses

her research on reflection-*on*-action because she finds it "most appropriate for supporting

structured reflection" (p. 21). I would interpret her reasoning for that to be due to the somewhat

ambiguous nature of the reflection-*in*-action theory, which might seem to have less structure

inherently than the "stop-and-think" deliberation of reflection-on-action.

Vital to Reymen's (2001) method is the emphasis on the designer reflecting on a

description and *analysis* of a design situation:

> In order to perform reflection on a design process seriously, a good overview of the
> design situation and design activities is necessary. For creating these overviews, implicit
> choices must be made explicit. Making these choices explicit can improve
> communication between designers and stakeholders; if the overviews are also written
> down (in a specific format), it can help to remember important experiences and it can
> even stimulate the re-use of design knowledge. The description of the design situation
> and design activities may be analysed to judge the progress in the design process, to
> compare the current state of the product being designed with the desired state, to get
> insight into the relations between properties and factors, and to evaluate the interactions
> with the design context, in order to generate ideas for possible next design activities. (p.
> 73)

Reymen offers a structured way for designers to reflect, addressing *when* and (partially) *how* to

reflect. She notes that "It does not explicitly guide a complete design process" (p. 74), which

satisfies the purpose of this synthesis project because I am only seeking tools for reflection and

my project is experimental. A brief overview of the five steps in Reymen's (2001) method includes:

1. Planning a design session with times for reflection.

2. Defining the subtask for the session

3. Starting the design session with reflection by using her detailed reflection forms and checklists

4. Designing during the core of the design session, leaving time for reflection at the end

5. Ending the design session with reflection using her detailed forms and checklists

Reymen (2001) defines a design session as "a short period of time during which designers are designing, for example, one afternoon" (p. 35). Because a design project could span the course of several months, there may be numerous design sessions for a given project. Her method might then seem daunting, but I imagine that an adaptation of her method could be beneficial once done regularly and habitually. Her complete forms and checklists, which she intends for use at the beginning and end of a design session, can be found in Appendix A. The three forms and three checklists include: FORM Properties & Factors, FORM Relations, FORM Design Activities & Transitions, CHECKLIST Description Design Situation, CHECKLIST Analysis Design Situation, and CHECKLIST Analysis Design Activities & Transitions.

At first glance Reymen's method, forms, and checklists seem objective in the tasks they list and questions they pose for reflecting on the design process/development of the design product. However, she does include questions regarding *how the designer feels*, which indicates that she has involved an element of attention to emotions. Moon (2004) discusses the role of emotions in reflection. Emotions may arise and have an influence on learning as learning requires the self, and they are likely to be present in deep reflection. This does not mean that

CHECKLIST FOR INVENTORYING PROPERTIES AND FACTORS

Design task (properties)
– <u>Product being designed</u>
– What is the desired state of the product being designed?
– Which main problem must be solved?
– Which representation of the product being designed is desired? (medium, level of detail)
– What are desired properties of the product?
– Which representations of the desired state of the product being designed have been made?
– What is the current state of the product being designed?
– What are properties of the product being designed at this moment?
– What are the important problems to be solved at this moment?
– Which representations of the current state of the product being designed have been made?
– <u>Design process</u>
– What is the desired state of the design process?
– What is the deadline of the design process?
– What is the budget for the design process?
– What is the capacity of the design team?
– Which other properties of the design process are desired?
– Which representations of the desired state of the design process have been made?
– What is the current state of the design process?
– Can the deadline of the design process be met?
– Who are the members of the design team?
– Which part of the budget has already been used?
– How is the design process supported (machines, software, tools, secretary, room, methods, procedures, environment, etc.)?
– What are problems in the design process at this moment?
– Which representations of the current state of the design process have been made?

Context of the design task (factors)
– What is the current state of the design context?
– Which related design tasks have been defined?
– What are important factors in those related design tasks?
– What are the current and the desired state of the overall design task?
– What are the important stakeholders and their concerns?
– What are important processes in the product lifecycle?
– What are important factors in these processes?
– What is the company strategy regarding product planning?
– How does the companies vision influence the design task?
– What are important competitors?
– Which norms and laws are related to the design task?
– What is state-of-the-art knowledge related to the design task?
– Which representations of the current state of the design context have been made?
– What are possible trends in the design context?
– What are possible changes in related design tasks?
– What are possible changes in the processes of the product lifecycle?

Figure 4: An example of CHECKLIST Description Design Situation (Reymen, 2001)

reflection always involves emotions or always concerns the self, but that reflection must demonstrate a practical ability to manage personal emotions in relation to the subject matter of the reflection (Moon, 2004).

In comparing the models of Ellmers (2006), Ellmers et al. (2009), and Reymen (2001), we can see that a) Ellmers' two models focus on graphic design education while Reymen's model is intended for professionals (yet each of the models could be adapted to either educational or professional situations); b) Ellmers draws from Schön's theories of reflection-in-action as well as reflection-on-action, where Reymen specifies her inspiration from reflection-on-action; and c) Ellmers uses written reflective reports, while Reymen uses more systematic forms and checklists. I find the models and structure of both Ellmers et al. and Reymen to be intriguing as a designer and valuable to integrate into my own practice. In the next section I look at more specific tools that can aid in reflective practice, and will conclude the chapter by synthesizing elements of the models and tools to develop my own plan.

What are Tools that Support Reflection in Design?

In addition to the written assessments introduced by Ellmers (2006) and Ellmers et al. (2009), and the reflection forms and checklists introduced by Reymen (2001), this section looks in greater detail at other specific tools we can use in reflection during and/or after the design process, including journals and blogs. Such "tools" are mediums for recording one's reflections.

Critical Incidents: Badke-Schaub et al. (1997) developed a training method to enable a designer to reflect on his/her design process, using a diary sheet and a critical situation sheet (Reymen, 2003). Similarly, Reymen's checklists (Appendix A) include a question for reflecting on critical situations, which are defined as "situations that have an important influence on the

further direction of the design process or the product being designed." (Reymen, 2001, p. 99).

Resonating with Reymen's method, Tripp (1993) emphasizes that most critical incidents begin

with a concrete and detailed description of an event, or in our case, a design problem or process.

Tripp defines critical incidents as follows: "Incidents happen, but critical incidents are produced

by the way we look at a situation: a critical incident is an interpretation of the significance of an

event." (p. 8). As a designer who aims to learn from my design process via being reflective, a

personalized adaptation of a model for identifying critical incidents may be valuable to my plan.

Brookfield (1995) developed the widely known Critical Incident Questionnaire (CIQ) for

a classroom setting, which consists of five questions aimed at getting students to focus on

significant happenings in their learning experience:

The Classroom Critical Incident Questionnaire (Brookfield, 1995, p. 115)

1. At what moment in the class this week did you feel most engaged with what was
   happening?
2. At what moment in the class this week did you feel most distanced from what was
   happening?
3. What action that anyone (teacher or student) took in class this week did you find most
   affirming and helpful?
4. What action that anyone (teacher or student) took in class this week did you find most
   puzzling?
5. What about class this week surprised you the most?

Keefer (2009) believes that "While the CIQ as Brookfield envisioned it has remained the

same, there is evidence that the particulars of the questionnaire may need to develop" and "As

the CIQ is a qualitative tool, it seems it should be adaptable based on learner and instructor

needs." (p. 181). As a CCT student, I have used an adaptation of the CIQ by Professor Peter

Taylor, and found this kind of focused questionnaire to be valuable to reflecting on and learning

from my learning experience. If an adaptation of this kind of questionnaire was used at intervals

during and after a design process, it could be beneficial for reflection and self-directed learning

both in an independent or team working environment. For example, question #4 could become: "What action that anyone (you as a designer, or anyone on your design team) took during the project this week did you find most helpful to the design process?" One way in which Tripp suggests we can generate critical incidents is by looking for events that were both typical and atypical. We might ask ourselves, "Do I notice any patterns in my design approaches? Did anything unexpected or unique occur in this process or design session? How did it come about?"

Ellmers' (2006) reflective writing assessment task asks the student to identify critical incidents from the design process and contextualize them within the outcomes of the final design artifact (p. 7). The significance of this is the act of introspection, the act of examining through reflection what has been done before moving onto the next project or next semester, thereby getting in touch with their process and becoming independent learners. Also valuable to learning from their process is the act of comparing their reflections to the outcome of the design artifact. In Ellmers et al. (2009) study, students were required to identify what they believed to be critical incidents, explain why, and then describe possible alternatives to their final design artifact. They were also asked to identify and generalize what they learned from their experience and how they might approach a similar design problem in the future (p. 8). This goes beyond the thinking I recall being required to show in my undergraduate design projects, and presents a valuable technique to adapt (perhaps as an abridged version) as a growing professional.

In all of these examples, the focus on critical incidents resonates with the idea of being intentional and strategic as a designer and as a reflective practitioner, and with my goal of getting more "in touch" with my design process. By reflecting on critical incidents and revealing significant themes, it seems that we could gain a better understanding of our professional practice. Whether reflected upon in a free-write journal entry, or identified with the help of a

guided questionnaire, we can use critical incidents in a strategic way. The beauty of creating

quick, guided questions (as in Brookfield) for identifying critical incidents, as opposed to a more

thorough report (as in Ellmers et al., 2009), might be that in professional practice time is likely

to be limited. Focused questions could possibly help maximize the use of time spent reflecting,

and the questions used could evolve over time as a designer grows.

Journals: As I reflected upon in Chapter 1, I remember being a teenager and always

having a notebook or sketchbook on me, in which I was always writing or doodling. As an

undergraduate graphic design student, we sketched for design projects of course, but there was

minimal writing or reflective writing. As I got older, busier, and started working as a designer, it

seemed that the only time I was sketching was for a specific design job, not on my own time, and

I had long stopped writing for my own enjoyment. Throughout the CCT Program however,

reflective writing was a key element of the program's pedagogy. Not only was it extremely

beneficial to my learning and exploration, it revived in me the pure enjoyment of writing and

developing ideas through writing. The acts of writing and sketching can be seen as two

complementary manifestations of thoughts onto paper.

I see two different types of approaches to using a journal as a tool for reflective practice:

one being a stream-of-consciousness free writing or sketching (Gibbs, 1988); and another

involving a more focused, structured kind of documenting using guided questions to reflect

upon. Whether keeping a journal for daily personal reflection, or for reflection focused on a

specific design project, Walker points out:

> [A] significant element in reflection is the association of ideas: the bringing together of
> new and old in a way that can be the basis of working to integrate them. The use of
> writing can create a dynamic in the person in which the person's existing knowledge is
> held in a more fluid state so that whatever new knowledge comes, it can be more easily
> integrated within it. (p. 65)

Walker (1985) suggests the use of a writing portfolio to help provide a record of the significant learning experiences that have taken place, to help the participant come into touch, keep them in touch, and foster creative interaction with the self-development process that is taking place. As a designer I want to foster learning from my approaches, build upon old knowledge and transfer it to new situations (when appropriate), make new connections, and create new ideas. Through the process of writing and articulating the design process events, we can learn about ourselves as creatives and build our collection of creative ideas.

My experience using journals during the CCT Program has provided me with a designated space in which to "think things through." As a designer I have faced ill-defined problems and have had to walk away from a project to return later with a clearer mind. In thinking about how using a reflective journal might benefit me in those situations, I believe that either free-writing or identifying critical incidents in the journal could help me "think things through" the problem and have something to look back on later to learn from my actions. Davies (1998) discusses the use of learning journals in art and design at University College Worcester (UCW): "In order to identify and articulate critical incidents it requires of the students a metacognitive disposition in which they reflect on the important aspects of their learning." (p.8).

Ellmers identifies some possible concerns with the journal as a learning tool, such as "procrastination, superficial and unreflective entries, waning enthusiasm, and unwillingness or inability to reflect" (Ghayle and Lillyman, 1997 as cited in Ellmers, 2006, p. 7). Ellmers (2006) suggests using the journal to document critical incidents from the design process as potential solution to these concerns. Clifford (2002) presents some other challenges to journal writing, such as the issue of time consumption and self-discipline. These are issues that might arise for busy professionals in trying to develop reflective practice habits using a journal. Boud (2001)

addresses the issue of time but suggests that journal writing can be used as a vehicle for learning in our professional practice:

> Although there may be few opportunities to write in the heat of the moment when events are rapidly changing, enough information needs to be recorded to prompt fuller exploration when there is time to do so. On some occasions, it may be possible to schedule time for reflection…Journal writing can be used to prompt an awareness of new features of the situation, plan new interventions that can be implemented almost immediately, and observe the effects. (Boud, 2001, p. 13)

The potential weaknesses of using journals (issues of time consumption, discipline, etc.) might be addressed by being strategic about using them, using guiding reflection questions, identifying critical incidents, and setting regularly scheduled times like before and after design sessions, as Reymen suggests. As creative professionals, keeping an ongoing journal could be a way for us to realize any recurring design habits we might have, to realize our strengths and weaknesses by looking back on entries or simply through the act of writing itself, and to collect and build on ideas. As Clifford (2002, p. 110) states, "Not only the journal itself, but revisiting the journal, contributes to reflection."

Moon (2004) encourages drawing, doodling, or any other form of depiction in a reflection journal, "as long as it is meaningful" (p. 180). In 1981, the sketchbooks of one of the most influential designers of modern architecture were published. *Le Corbusier Sketchbooks* (1981) gave an inside look into the mind of an artist. Visual notes (Crowe & Laseau, 1984) are described as simply the graphic equivalent of written notes. Designers can use visual note taking as a means of recording experiences and developing ideas through drawing. The authors suggest that a notebook is a good tool for keeping a record in one place, providing ready "food" for thought.

Quayle and Paterson (1989) affirm the use of "journal-keeping and visual note-taking throughout the design process to encourage internal dialogue and personal debriefing through a

change in thinking-mode" (p. 32). They believe that thinking-mode changes are necessary throughout the design process, and these techniques can be developed as a habit to encourage continuous reflection-in-action. A focused activity the authors give as an example of facilitating a change in thinking-modes is a free-writing exercise in an architecture class. The professor asked the students to free-write about their project, specifically referring to the values on which their design was based. Students were then required to compare these written descriptions with their products. A creative professional could also use this exercise, by completing the free writing and then comparing that reflection to the goals of the project and the design product outcome. Free writing can be recorded in a journal, but differs from identifying critical incidents in their "free," stream of consciousness nature. Free writing can however be directed by a guided question, a reflection activity facilitated by Professor Taylor in CCT courses.

I have looked at some of the ways in which a journal can be used as a tool for reflection. It could be used for daily entries, or perhaps only weekly. Using a journal might entail a free flow of words or sketches, a more strategic and systematic responding to specific questions or identifying of critical incidents. Sometimes just getting things out onto paper with a pen or pencil helps me both clear my mind and generate ideas. In all cases, keeping a journal means keeping a record of these thoughts that can be reflected back on.

Blogs: The use of weblogs (blogs) has more recently been discussed in the literature as another tool for reflection. While journals are traditionally handwritten or typed in a private document, a blog is a frequently updated website with dated entries that can be commented on by visitors (Wopereis et al., 2010). Maloney (2007) looks at the blog as a tool in comparison to sketchbooks and reflective journals in a small study of undergraduate graphic design students. He points out that while students in graphic design are used to handling various hardware and

software for design projects, it is less common for them to use communication technologies to support metacognitive activity such as reflection. This raises the question of whether or not professional designers would be more likely to use blogs for reflection.

There are countless design blogs on the Internet today, primarily focused on design products, techniques, people and trends in design, versus showing reflections on design process. I think that the articulation of the design process in a clear and concise way to communicate it to others on a public blog could benefit my own learning about my approaches. "I think the research, process and development of a project is really important and interesting and blogs encourage both reflection and justification of an idea." (p. 5), said one student participant in Maloney's study. The idea of exposing the process and development to the public invites feedback via a blog and inspires how I might use one in my practice.

A blog also serves as a place to build an online community. The blogging designer might upload images of their design process along with documented reflections. This written articulation and demystifying of the design process to the public—designers, non-designers, and clients included—could help gain more respect for designers and their role in society (Swann, 2002). Swann (2002) encourages the documentation and sharing of design case studies, stating, "the case study is an opportunity to reflect and record the process and product for future refinement." (p. 59), but suggests that one of the major obstacles in this sharing might be a fear it will "give away" some perceived competitive advantage. "Systematically documenting this process is more than a chore for design consultant, who generally are not trained in these skills, and it might appear to demystify the special skill that is being marketed." (p. 57). Aside from fear of revealing a "special skill," a creative individual might be shy of sharing the details of their process due to fear of judgment by others. Inviting the public in on our reflections and our

process brings the center of reflection away from the self exclusively, and invites feedback and new insights from others, who we may learn from. A design blog could also serve as a professional website that potential clients or employers can visit. In this case the designer would want to organize and present the case studies or reflective compilations in a way that best communicates the highlights of the project's process.

MacColl et al. (2005) introduced blogs to multiple undergraduate design studios with the goal of encouraging timely reflection by students as the design work was being done, rather than just before the submission deadline, as was seen before when they used written journals. Students were asked to post weekly reflections on their individual blog, briefly outlining their planned tasks for the week, what they had achieved, and what they were planning for the coming week. The experiment was viewed as successful, as many students embraced the use of the reflective blogs and reported continued use of them. Based on the evidence of student feedback and tutor observation of the blogs in Maloney's study (2007), "the private and personal nature of reflection commonly found in learning journals did occur to a large extent" (p. 7), which was surprising to the authors because of the public nature of them. Continuous reflective activity on the blogs was also observed.

In a study by Wopereis et al. (2010), analyses of blogs used by student teachers showed reflection on critical incidents, but did not show deep reflection or "spiral reflection" (p. 245). The results of questionnaires at the end of the study showed that the students perceived the blogs as useful tools for reflection-on-action. This would imply that blogs are not practical for reflection-*in*-action, which occurs more rapidly during an experience. As another design student in Maloney's (2007) study wrote about the use of blogs:

> I write in a notebook most days and then transpose that to the blog and upload images. This can be time-consuming but it does make me think about my work, which helps me

to generate new ideas. It's very useful that a tutor can look at work and give feedback…(p. 5)

This method of transposing journal-written reflections onto a blog might serve as a *second* reflection-on-action, further enhancing learning.

Depending on how a blog is used, it might be more time consuming than simply journaling, but it can be used in a structured way to benefit reflection. A focus on critical incidents might be reflected upon, for example. Visitors to a blog might appreciate brief and to-the-point reflections, and perhaps the accountability of sharing with an audience would further inspire refinement of recent reflections, thereby enhancing a designer's self-directed learning.

Other Tools: Quayle & Paterson (1989) also suggest additional techniques for encouraging reflection in design education. I have selected my two favorites from their article that I believe can be easily adapted to a professional design practice:

1. The Design Re-Think and Re-Draw: Re-thinking and re-drawing after a period of time allows incorporation of new ideas that evolve from reflection on new experiences, attitudes and evaluations.
2. Role-playing: [Designers] can increase their ability to recognize their own and other people's feelings, to develop empathy toward others, and to explore problem-solving strategies. (Quayle & Paterson, 1989, p. 39)

Role-playing would work well with a creative team for trying to understand the users and audiences for a specific designed product or message after appropriate research has been done.

Quayle & Paterson leave us with us with this thought: "The use of reflection techniques must be approached with an element of caution— overindulgence of almost anything can lead to indigestion." (p. 41). This is useful advice for the development of my own plan for reflective practice. My goal for this synthesis project is to experiment with my own adaptations of some of the methods and tools, keeping my plan simple yet as thorough as possible, and to evaluate my experience and outcomes to determine future practice approaches.

In conclusion, writing and drawing are ways of thinking. They are ways of observing, recording, analyzing, communicating, and building ideas. I chose to examine these particular tools because they are practical mediums for recording thoughts. One might think that the proposed tools and models for reflection could detract from the creativity of design due to their structure. But I would argue that this structure, would not interfere with the freedom of idea generation (especially if used after a session rather than during it), but rather would be used as a structure for encouraging reflection at appropriate intervals during the design process. Commercial design especially does require structure—it is not a free-flowing form of self-expression like a Jackson Pollock painting. The issue of time consumption is a valid concern for busy professionals, and these techniques are simply adaptable suggestions for exploring reflective practice. While it might seem easier to establish a reflective routine as an independent creative professional, I believe that most of these tools could be adapted to a team atmosphere. I discuss some of my ideas about this shift in Chapter 4.

A Personal Plan for Reflective Practice

I believe that developing and continuing (beyond the CCT program) my own habits for reflective practice will be an important aspect of improving my processes as a designer, help me become a more effective professional, and help bring me more deeply "in touch" with my design process and professional choices. I am interested in finding a balance between a structured design methodology, reflection-on-action, and the 'artistic intuition' Schön's reflection-in-action refers to. The structured models introduced in this paper should not undermine creativity with their structure, but rather structure and creativity should compliment each other like a yin and yang of critical and creative thinking (non-respectively).

This plan for reflective practice is experimental, and subject to change as Chapter 3 progresses, and beyond this paper. Prior to laying out the elements of my plan, I would like to

reflect on: "What do I want to accomplish with this experiment?" The following journal entry is

a free-write based on that guided question.

March 10, 2011. Free-write journal entry:

Last week at the CCT open house, one of the speakers talked about how he saw the CCT program as his own experimental studio for things he was passionate about. That really resonated with me because I too have thought of my experience in the program much like that. Peter Taylor sent an email today to the writing support group with a link to a book called Let Your Life Speak (Palmer, 2000). I read the excerpt and was inspired. It too resonated with me, as I near the end of the program, because I was just saying last week in the writing support group how I felt that through free writing I was beginning to bring more of myself into writing Chapter 2 of my synthesis. The excerpt from the book spoke of coming into one's vocation, one's inner voice, inner self, and being what one was born to be (a "calling"). I feel very lucky to have the opportunity to be on a career path that is a job I love to do, but I am still striving to be more fulfilled in different ways and areas of my life. I long to one day, say 25 years from now, open my own "tea haus" or cafe where musicians can play, artists can sell their work, and I can be a homeopath/designer in the back office or upstairs! Or start a pilot school where children grow fruits and vegetables and do yoga as part of the curriculum! But back to the question at hand— What do I hope to achieve through a plan for reflective practice? By becoming more intentionally reflective, I want to be more in touch with my thinking/cognitive process when I am designing, to learn from things I try, things that work or things that don't work. I want to really hone in on my creativity because I aim to become a creative director, to continue to foster this reflective practice that I have become aware of and have reaped the benefits of in my learning during my time in the CCT program. I want to be a lifelong learner in many ways. I want to continue to practice a skill that I can share with other designers who might one day work with/for me- I would definitely want to foster a reflective kind of environment. By setting up a regimen to experiment with various tools, I want to see which ones work for me, which ones don't, and although this is only a short experiment, I hope to get into some kind of a rhythm that can change with me as I grow.

It seems that there are two different ways in which I could be reflecting in this synthesis

project and in my future practice, in regards to the design process:

1. Reflection on my feelings/emotions in the experience—This might relate more to the

   creative process as an artist and also to my experience using the reflection tools.

2. Reflection on the details/logistics of the design process/project itself. Reymen's model seems applicable here. Her guided questions address the details of the design project, design problem, goals, etc.

Perhaps these two viewpoints need not be segregated, and I foresee some overlapping of the two kinds of reflections being inevitable and necessary to my learning.

Borrowing selective elements from the theories, models, and tools presented in this chapter, I created a plan for reflective practice, which I experiment with during the process of designing book cover concepts in Chapter 3. Table 1 shows how and when I planned to experiment with the tools, though not all tools are used for every design session, taking Quayle & Paterson's advice (1989) not to overindulge. The selected tools were chosen for foreseen practicality within a three-week design process. Schön's theories of reflection-in-action and reflection-on-action are central to my plan. Critical incidents as a tool have been woven into journal writing and written assessments. The written assessments were borrowed from Ellmers et al. (2009). Since my project has only a ten-session time frame, I will complete two (shorter) written assessments instead of four. Reymen (2001) is very thorough in the range of reflection questions she covers in her Checklists. I decided to narrow her questions down to what I feel is essential and manageable for the scope of my project, which predominantly spans the concept development phase of the design process. The completed reflection checklists used during my process can be viewed in the Appendix section of my synthesis (see Appendix E). I decided to exclude Reymen's forms because of their technicality, which I felt was unnecessary for my more conceptually directed project.

(TOOL)	BEFORE	DURING	AFTER
Journal		- Reflection-in-action: Brainstorming and Sketching during sessions	- Reflection-on-action after each session and after whole project - Reflection on critical incidents
Blog		- At milestones during the process - Upload reflection-on-action to blog and invite feedback	- Reflection-on-action after a session or after whole process
Checklists (Adapted/modified from Reymen, 2001)	- Before whole project - For preparation before a session	- Reflection-on-action during the whole project	- Reflection-on-action after a session and after whole project
Written Self-Assessments (Adapted from Ellmers et al., 2009)		- Interim written reflection at project mid-point, including attention to critical incidents	- Written reflection-on-action at project end-point, including attention to critical incidents

Table 1: Tools for reflective practice experiment

It also seems essential to my learning to reflect on the reflection tools used, on how I feel each one is or is not helping me in my goals for reflection. An example of a rubric, inspired by the self-assessment rubrics developed by CCT graduate Kelly Freeman (1999), has been adapted in Table 2 for my experiment. My hope for the rubric is that if used throughout the course of the experiment, I can quickly document self-perceived strengths and limitations in using the above tools. The rubrics are used after each design session, after using the reflection tools.

Tool implemented: (Name of Tool used)

	SESSION NUMBER:	1	2	3	4	5	6	7	8	9	10
Reflect on progress using "plus" (+) for Shows Improvement or "delta" (Δ) for Needs Work											
Ease of use		Δ	Δ	+	+	+					
Able to keep up with regular use		Δ	Δ	+	+	+					
Feel more in touch with design process (more aware of approaches to design process, decision making, better able to articulate process, better able to reframe design problem and make changes based of reflections)		Δ	+	+	+	+					
Critical Incident Questions: Ease of use, ability to respond to questions and identify critical incidents based on these questions.		Δ	+	Δ	+	+					

Table 2: Example of self-assessment rubric

This chapter began to explore the Whys, the Hows, and the Whens of reflective practice, and this is only a selection of the literature that exists. Reflective practice in design education and practice is a growing discourse in which my interest has grown throughout the CCT program. This synthesis project has given me the opportunity to explore this topic and apply methods of reflection to a personal design project. The next chapter takes the reader through this design project and reflective practice experiment.

CHAPTER 3

THE REFLECTIVE PRACTICE EXPERIMENT

"A diary means yes indeed." ~Gloria Steinem

In order to experiment with reflective practice in a design process, I wanted to create a design project that could be manageable in a short time frame and also embody what my synthesis is all about. My advisor, Professor Carol Smith, and I were on the same wavelength in thinking that designing a concept for a book cover *for* my synthesis report would be an appropriate (and fun!) project. As I am particularly interested in reflecting on and becoming more creative in the concept development phase of the design process, I decided that the end product did not need to be one complete book cover design, but rather a few different design concepts just as I would present them to a client.

To set the scene in which these design sessions took place, I spend the majority of my time doing freelance design work in my home studio, at my desk or sometimes on the floor if I am experimenting with materials, assembling something, or if I just want to sprawl out all of my visual resources and inspirations. There are ten design sessions that I reflected on for this synthesis project. In each session I spent about two to four successive hours actually developing concepts on paper or designing on the computer, and anywhere from fifteen to forty-five minutes before or after doing reflection using the various tools from Chapter 2. Journaling was the least time consuming, and the checklists and the blog were the most due to the length of the checklists and the technicality of the blog (something that gets easier each time I use it). In the post-session journal entries (Appendix D), I combined reflections on the design process and critical incidents of the design session with a brief reflection on my experience using the reflection tools.

Figures 5 and 6: Photographs of home studio

This chapter first takes you through the design concept development process with excerpts from my sketchbook and reflections on key points, and then concludes with a self-assessment of my reflective practice experience and lessons learned in this process. Full-length reflections on each session (using the journal entries/critical incident questionnaires, reflection checklists, and written self-assessment tools) can be viewed in Appendices C-F. The blog can be viewed online at http://thereflectivedesigner.tumblr.com.

The Book Cover Design Project

Session 1: Initial Brainstorming

The first concept brainstorming session (Figure 7) was initiated after reviewing the creative brief (Appendix B), a form I complete in preparation for a design project based on a questionnaire and informational interviews with a client and initial research and ideas. The creative brief is always subject to change, but gave me some good jumping off points for idea generation. Early ideas shown in the brainstorming list of words and phrases were

(unintentionally) a mix of more visual ideas in my mind (i.e. "mirror" and "tiles"), and more

verbally descriptive ideas or action words (i.e. "unraveling" and "looking closely"). The point of

the brainstorming sessions is to let ideas flow freely, not editing them. These were all words that

were on my mind that day.
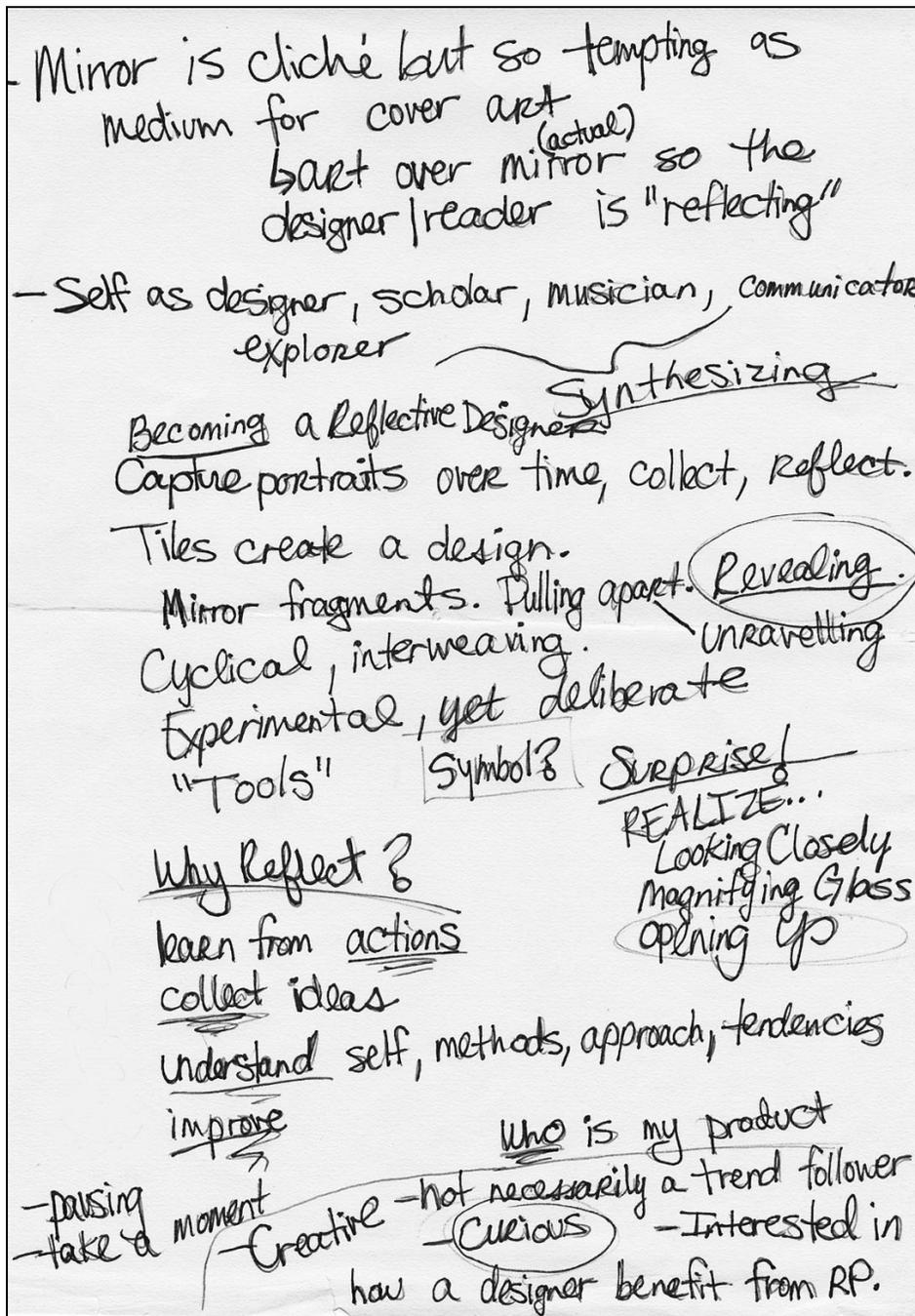
Figure 7: Initial brainstorming, Session 1

During the brainstorming I began to ask myself questions such as "Why reflect?" and "Who?" This strategy could either be seen as helpful for guiding thoughts, or as being too critical too early in the process. I must have felt that I hit a wall in my brainstorming flow, because at this point I decided to use an *Oblique Strategies* card (Eno & Schmidt, 1975). The *Oblique Strategies* cards are a published set of cards that each state a (seemingly random) phrase or question, and are popular for using to get un-stuck in creative problems. The card I selected very coincidentally stated "Be less critical more often." Figure 8 illustrates how the *Oblique Strategies* redirected my brainstorm to a more open flow of words. This card made me realize an
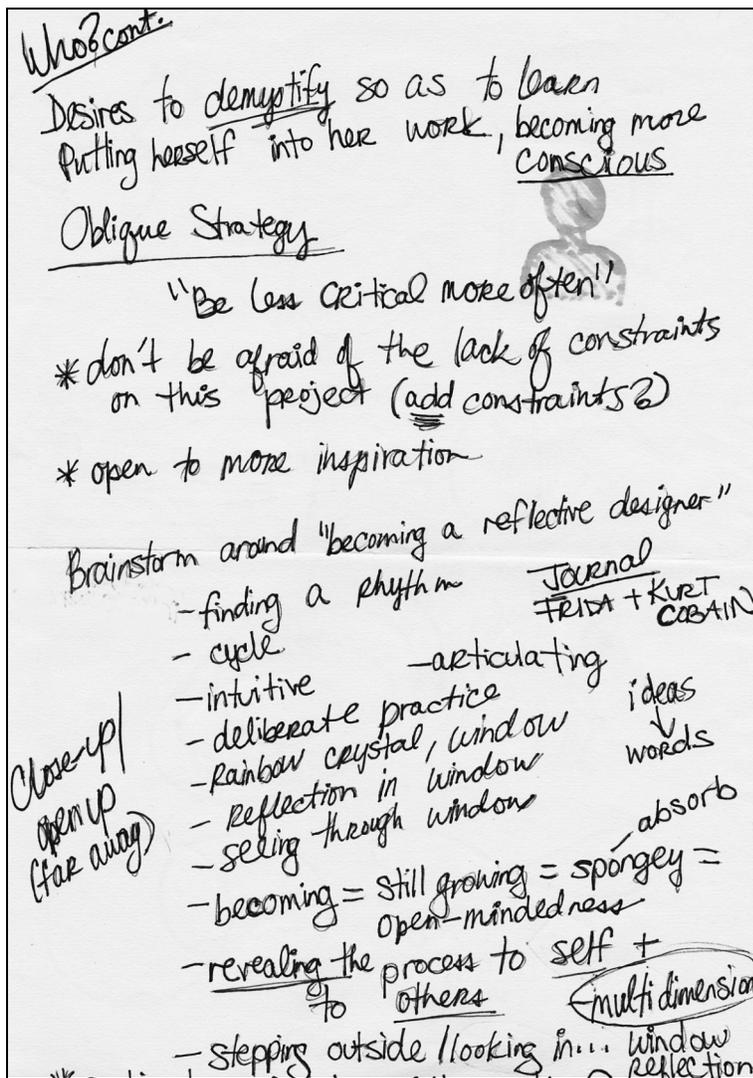

Figure 8: Continued brainstorming using *Oblique Strategies* card, Session 1

insecurity I have had in the past about being too critical too soon in the creative process. I will experiment with *Oblique Strategies* again when I might need some creative stimulation, using more of them in a session or perhaps creating my own set of cards.

Session 2: Initial Sketching and Continued Brainstorming

Figure 9 shows initial sketching, at which point I was beginning to translate the verbal concepts that most resonated with me into very loose visual representations. Still trying to wear "The Green Hat" (de Bono, 1985)—the creativity hat, and not the hat of the judge or critic at this point—these early sketches are a mix of very abstract or even meaningless shapes (overlapping circles; "pixels"), and slightly more concrete ideas (a window or a magnifying glass).
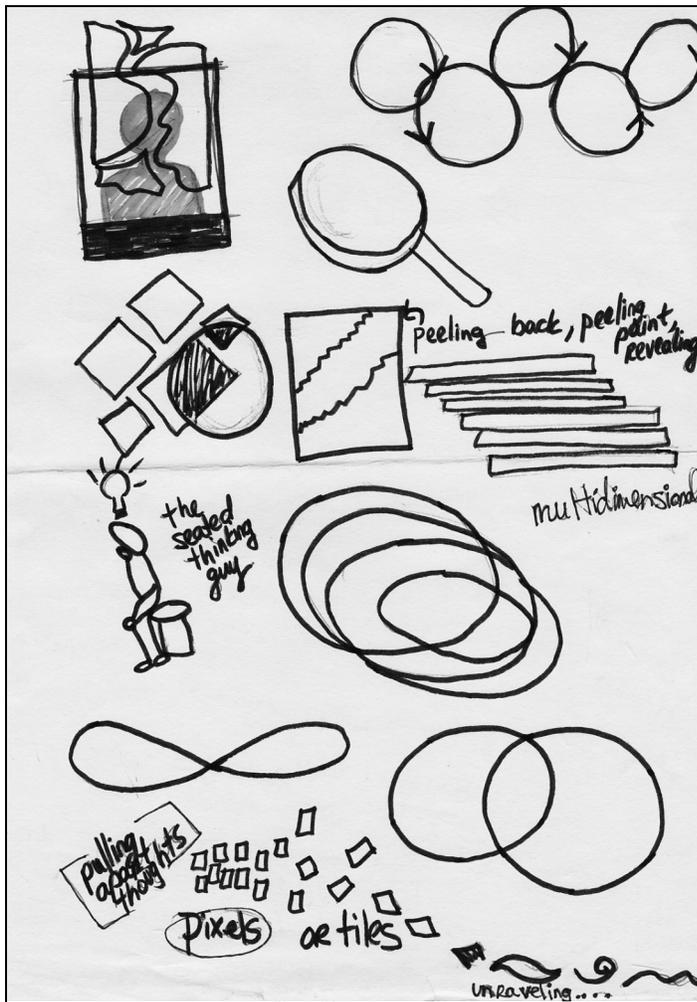

Figure 9: Initial visual brainstorming sketches, Session 1

I usually continue working on design concept sketches through the second session, for client design projects. In this experiment, however, I really wanted to refrain from moving forward too soon—I wanted to spend more time brainstorming, thinking about what I was trying to convey, and generating ideas in writing. In my post-session reflections after Session 1, I felt that I needed to do more research to get more visual inspiration, so prior to Session 2 I did that. I looked at various design books and architecture books, since this was my audience, just to keep my eyes open for any inspiring ideas. I had also changed the working title for my synthesis by this point, so additional thinking needed to be done with respect to these changes. Figure 10 shows excerpts from this second brainstorming process. The idea for adding "Creative Consciousness" to my title popped into my head one day—I realized that the phrase represents the goal of my reflective practice, but it is also a bit ironic because I do not remember *how* the idea for the title itself came into being! With the new title, new ideas emerged in this second brainstorming session, both verbal and visual, as you can begin to see in Figure 10.

One of the words that emerged for me was "layers"—the idea of layers of a design or of building something, layers of a design process, "seeing" all the layers when reflecting back on a process, and in being conscious, "seeing" the many layers and dimensions of things. Another descriptive word that relates to a look and feel for a design was "airy," which was quite different from the "layers" concept.

After I felt satisfied with my brainstormed list of generated ideas in Session 2, which of course is a subjective decision to make, I wanted to organize my many thoughts. Figure 11 exhibits a mind map I created at the end of Session 2. A mind map, a tool I obtained during the CCT program, is a diagram used to organize thoughts (or words), usually around a central idea. The act of making these connections, on paper, among the various verbal concepts helped me to

Brainstorm after Research session today

Updated Working Title:
"Creative Consciousness: Becoming A
Reflective Designer"

Consciousness
Reflection
Reflection-in-Action / Reflection-On-Action
Form + Function
Creative + Critical

AIRY — space for thoughts, reflection
Layers — Complexity of Design

Balance of
Critical + Creative
Airy yet layered
light

Conscious
aware
intentional
digging
exploring
exposing
open book
opening
seeing all the
layers
seeing what to do
next

seeing in the
past to see
in the future

"Consciousness"

Figure 10: Verbal brainstorming, Session 2
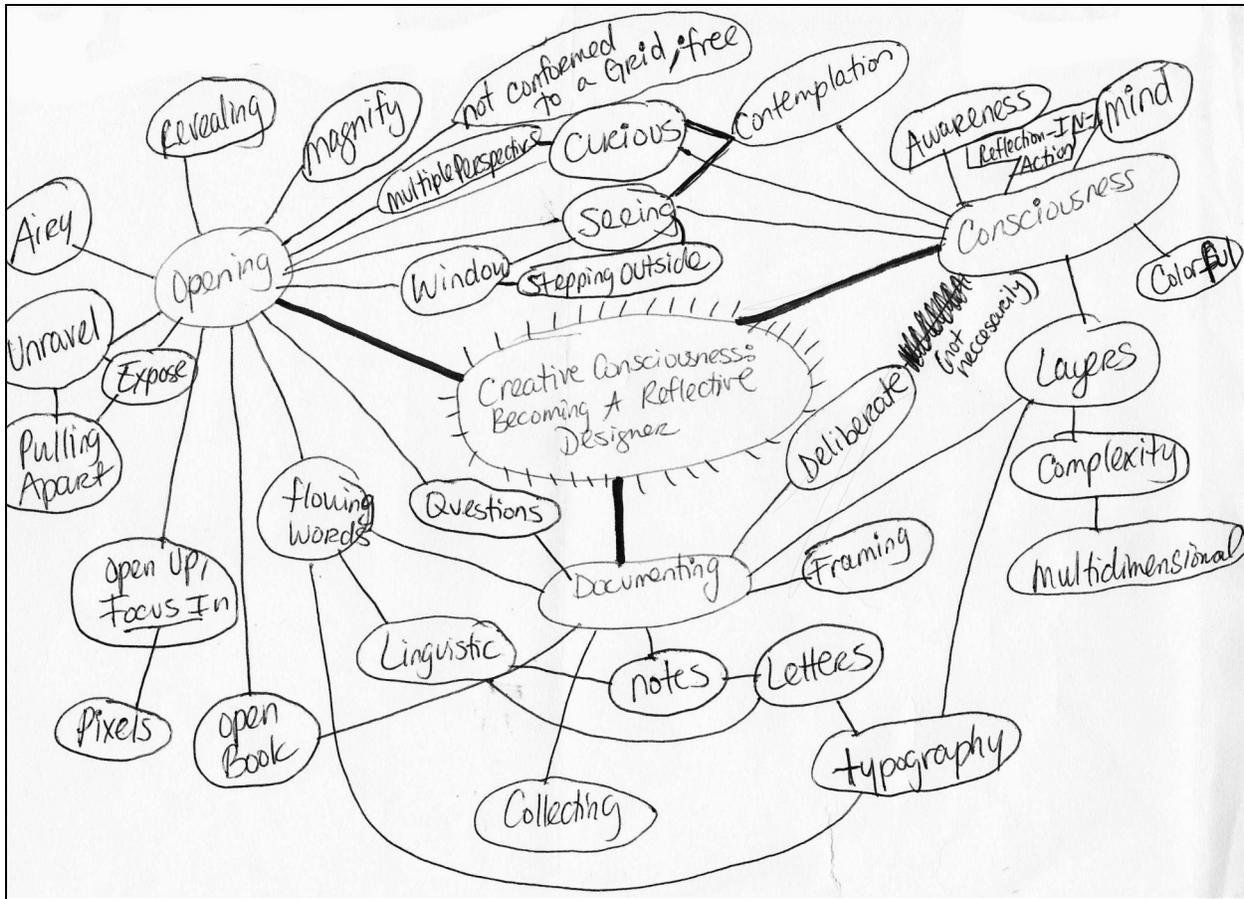
Figure 11: Mind map, Session 2

see some dominant themes emerging. This was the first time I had used mind mapping in the design process, and I found it to be a great tool as well as a critical incident in this concept development process.

Sessions 3 & 4: Developing Visual Thoughts

Sketches from Sessions 3 and 4 are illustrated in Figures 12 through 18. "The Green Hat" remained on while I tried to generate as many rough sketches as possible, not judging, just letting ideas flow. Again, the early sketches are often just "warm-ups," but the mirror idea and the idea of "layers" kept resurfacing for me.

Figures 12 and 13 display early visual thoughts, both with the title and with shapes. In

Figure 12, I was just doodling and playing with the ideas of "layers of type" and of "a process" (the squares going from light to dark/from large to small and close-up), and making the word "reflective" as if it was reflecting on water. In Figure 13, I continued to play with simple shapes, layering them, a sort of abstract sketch.
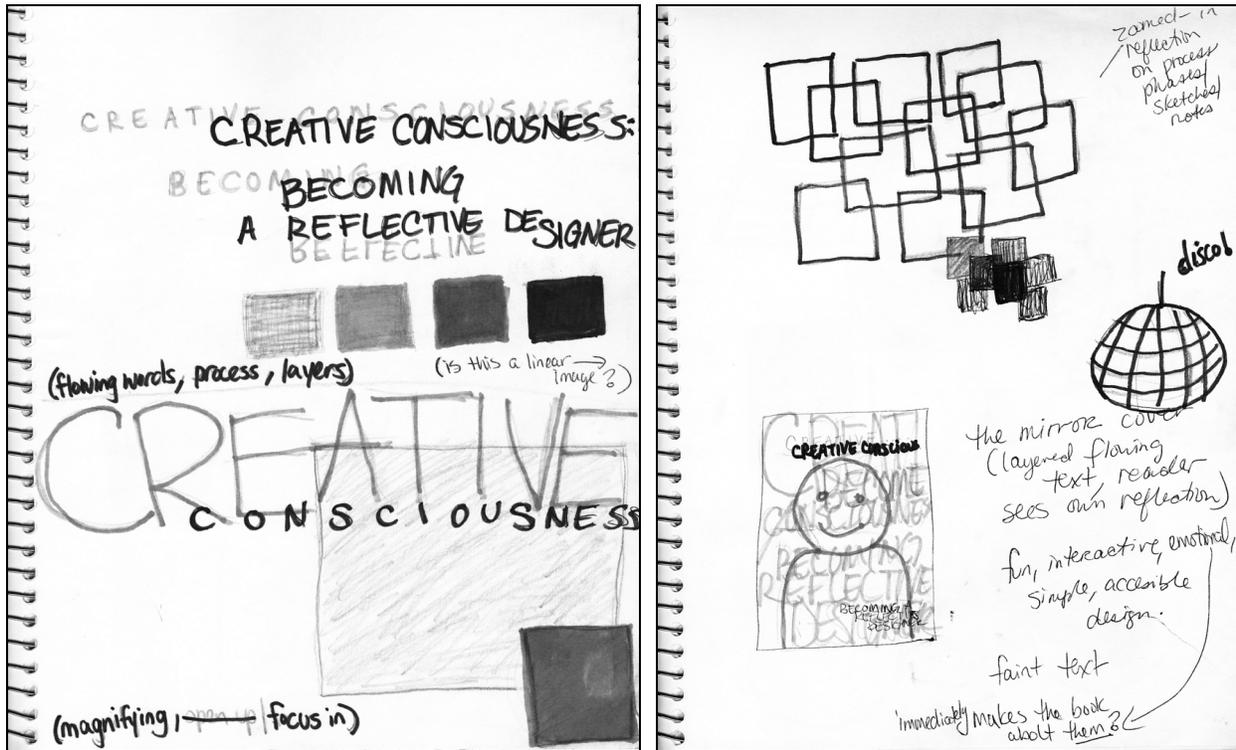
Figures 12 and 13: Visual brainstorming, Session 3

The disco ball in Figure 13 was a random thought—Perhaps the mirror idea made me think of it. In this early phase of the mirror-cover concept, I was not yet sure how something like this would be executed. At this point it was just an idea. I thought maybe the title could be printed onto clear adhesive sticker and adhered to a mirror, but was not thinking too deep into the logistics quite yet. What I liked about the mirror concept was the idea that the reader is immediately engaged with the design when they pick up the book and see their own reflection.

In Figures 14 and 15, I was continuing on the sketching brainstorm path, allowing it to

take me in different directions, still trying to generate new ideas or possibilities for ideas. The

horizontal lines or squiggly lines in Figures 14 and 15 are representative of the idea of using

handwritten notes as a texture—representing the idea of "reflection notes". The coffee mug

sketch—shown on the top left "notebook" sketch with the "coffee stain," in Figure 15 and also

toward the center of the page—must have come from a memory I have from design school about

all of the students drinking coffee and energy drinks. You can see the title sort of reflecting in

the "coffee" in the mug.
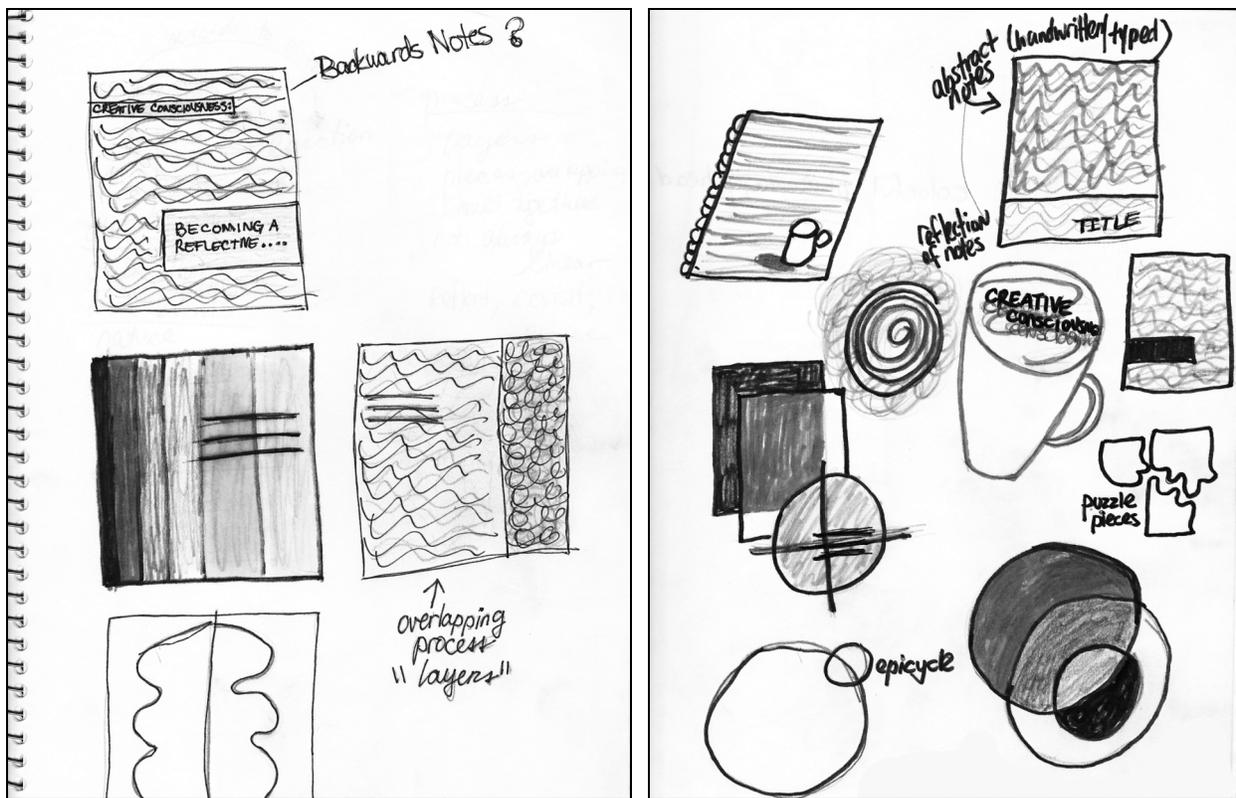
Figures 14 and 15: Continued visual brainstorming, Session 3

Figure 16 illustrates two new ideas—The idea of incorporating a head or a brain, or using

the title text *as* the brain; and an abstract look, using circles. For this cirlces idea, I envisioned in

my mind that it would be colorful, and that the circles would almost have movement to them.

After generating many rough sketches in Session 3, I began to pull together some common ideas

and organize them into overarching categories (see Figures 17 and 18): "Type Concepts,"

"Abstract Concepts," "Humor," and "Mirror Concept" in Session 4. Before critically analyzing

these ideas in an evaluation session, I wanted to take a step back to try and generate some new or

further developed ideas. I decided to try the SCAMPER (Michalko, 2006) technique that was

introduced to me in the CCT program. SCAMPER (Substitute, Combine, Adapt, Modify/

Magnify/Minify, Put to other uses, Eliminate, Rearrange) is a technique for creative idea

generation.
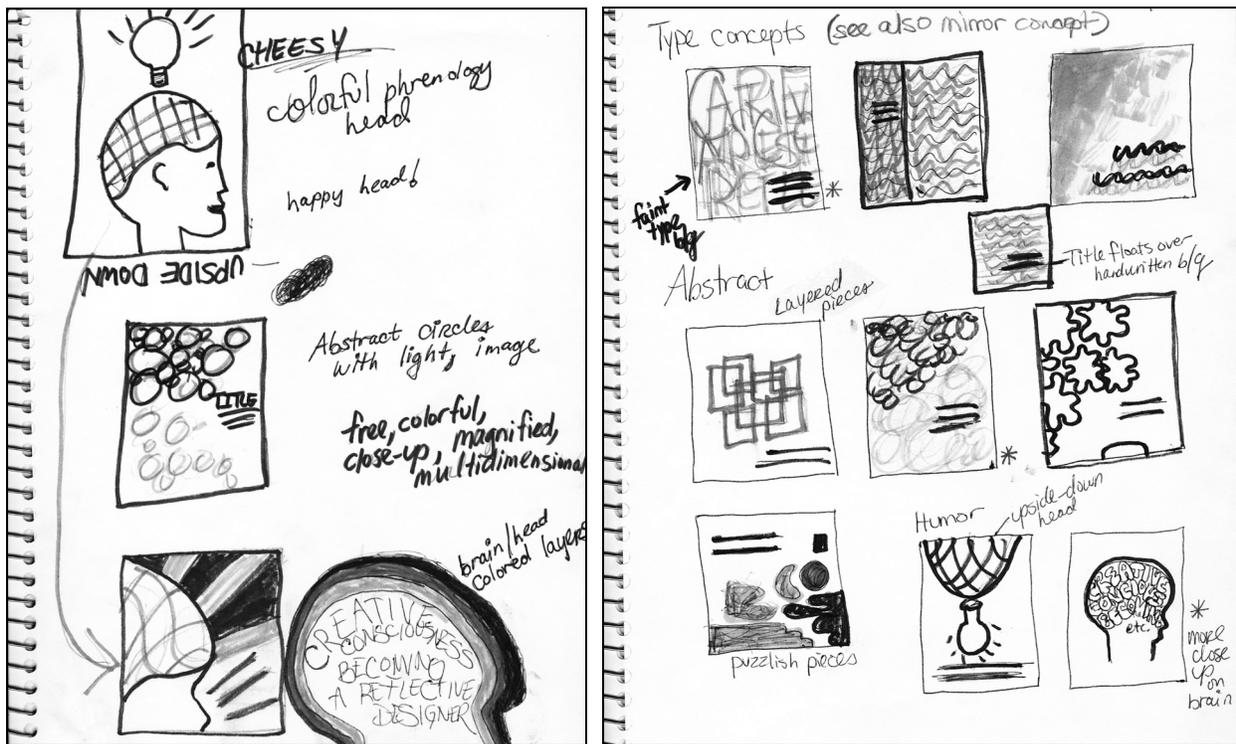
Figures 16 and 17: Developing concept thumbnails, Sessions 3 and 4
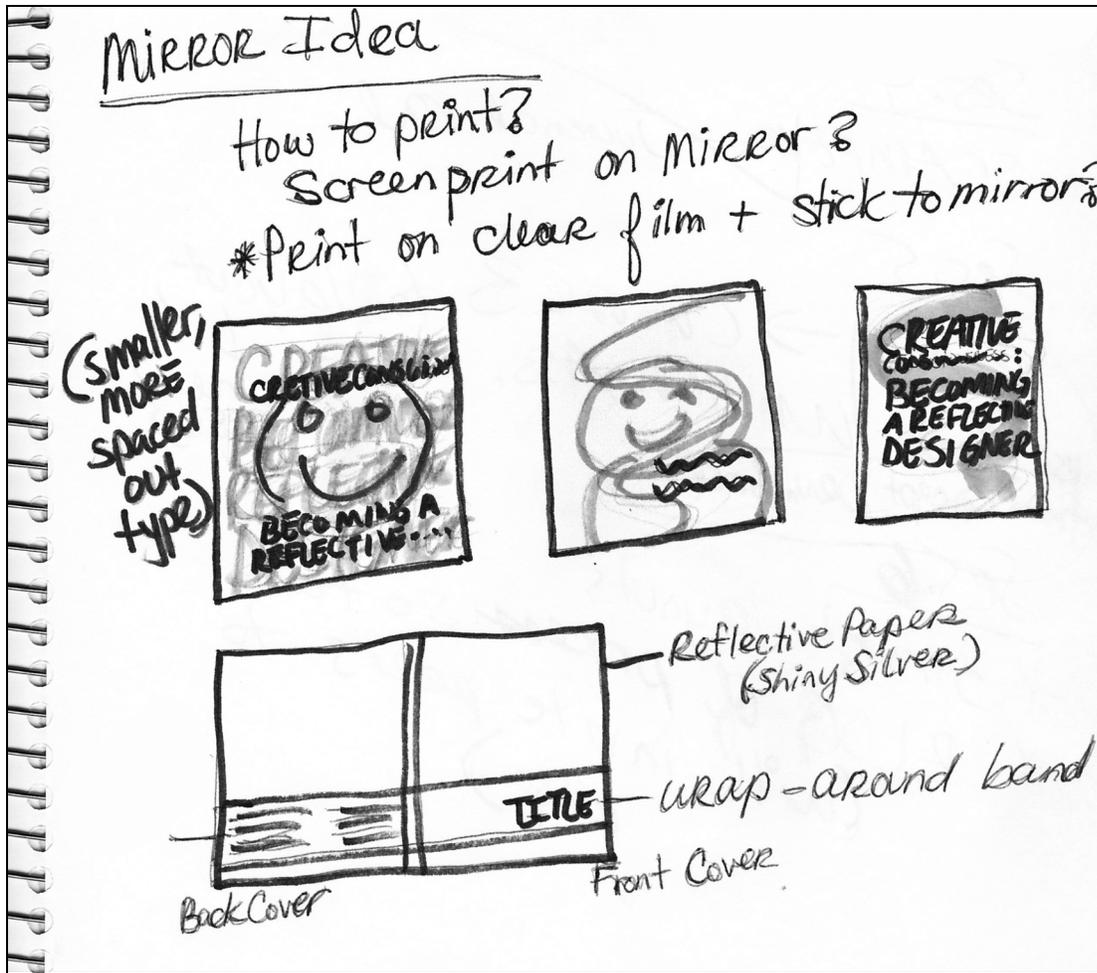
Figure 18: Developing concept thumbnails, Session 4

some new or further developed ideas. I decided to try the SCAMPER (Michalko, 2006) technique that was introduced to me in the CCT program. SCAMPER (Substitute, Combine, Adapt, Modify, Put to other uses, Eliminate, Rearrange) is a technique for creative idea generation.

Figures 19 and 20 illustrate how I used the technique to take the ideas I already had and look at them in different ways. In Figure 19, I was "Modifying" the mirror concept by trying it with a circle mirror (top left); adding a layer of transparent "notepaper" over the mirror (top right); and modifying the wrap-around band from Figure 18 by making it transparent paper.

Figure 20 shows "Magnifying" and "Adapting" of the brain idea—I made it a two-faced head, or made it into the face/vase image. In my post-session reflections this felt like a critical situation for me—the moment when I might normally just move forward in the process with the ideas I had, I made a conscious choice to hold back and try something new (SCAMPER). Though I did not go through *all* of the "letters" in SCAMPER and apply them to *all* of the design concept themes, the ones I tried did help me generate some unexpected concepts and modifications of earlier ideas. I will definitely use this tool again, and more thoroughly, in future creative projects. It helped me look at things from different perspectives, which is often hard to do when you are working alone on a project, to think more "laterally," and to take an extra step in creative thinking before jumping forward to mediocre solutions.
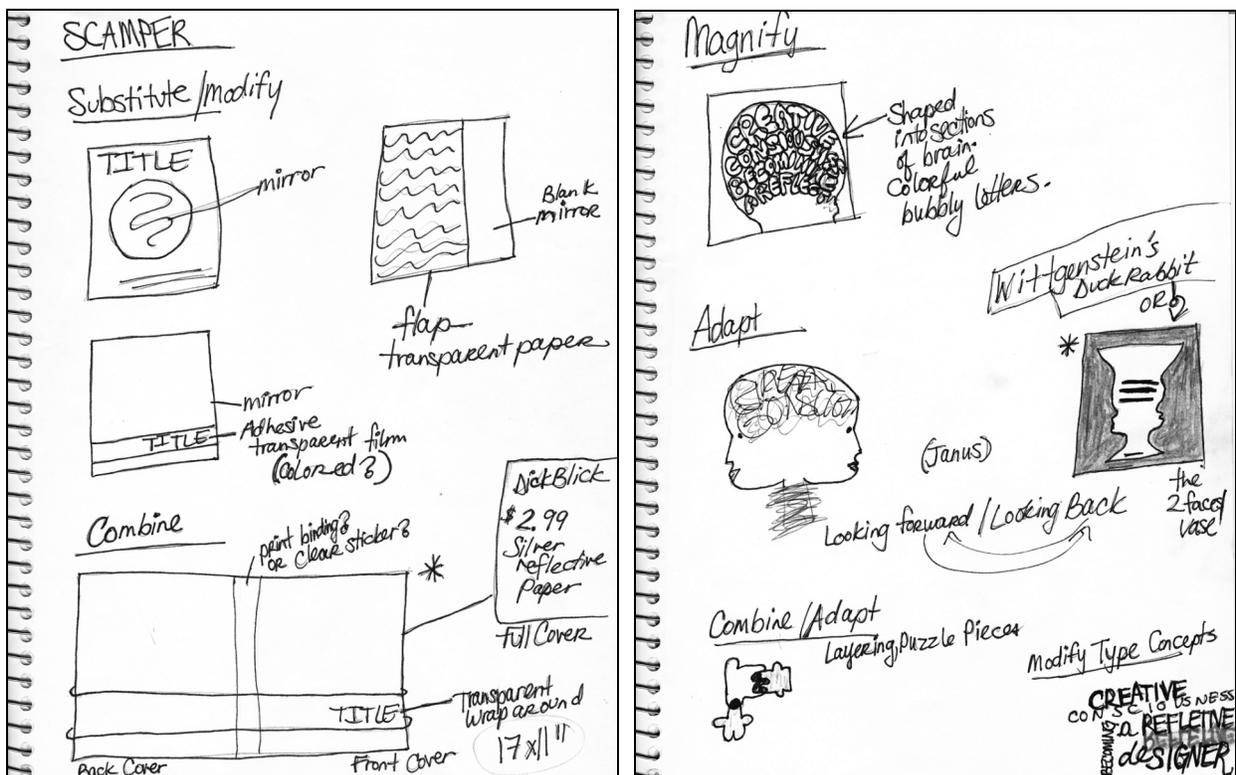
Figures 19 and 20: SCAMPER Exercise, Session 4
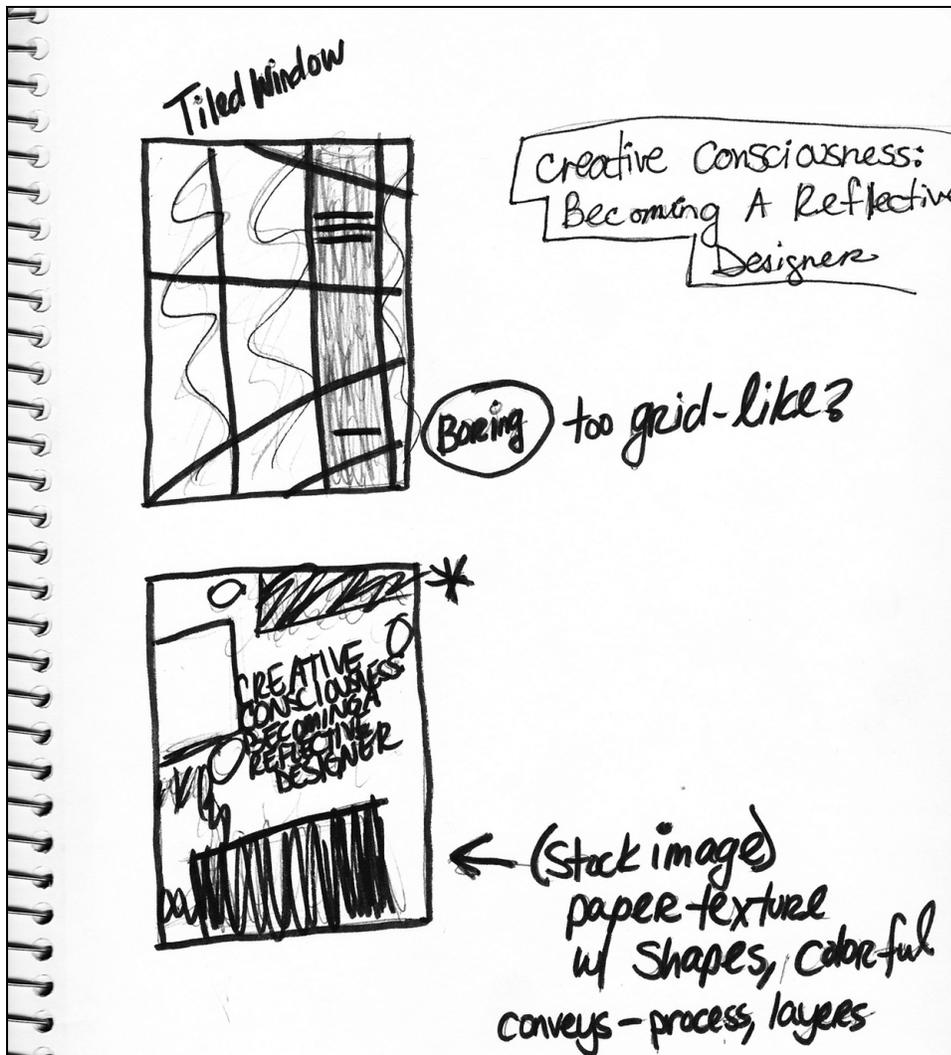
Figure 21: Extra ideas in Session 4

In my post-Session 4 reflections, I realized another pattern in my design practice—that I am often "parallel processing" idea generation with the more technical logistics of a project. For example, the mirror concept would depend heavily on the implementation and effectiveness of certain physical materials, so I found myself going back and forth from gathering more research online to modifying sketches. In general, I was beginning to think about tactile qualities of the different ideas at this point in the process. If this were a client project, I would have to take budget into consideration for papers and materials when developing concepts.

Sessions 5 & 6: Evaluation and Initial Concept Selections

I took a step back in Sessions 5 and 6 to take stock, revisit my goals, and evaluate the ideas. I do not usually do a formal evaluation of my rough sketches at this point. I usually just go with my intuition about which ideas I like best or I think will work best with the factors of the project, client, budget, and any technical restrictions. But in the spirit of exploration and intentional reflection in this synthesis, I wanted to try using a selection of evaluation questions from a book entitled *Managing the Design Process: Concept Development* (Stone, 2010). Stone (2010) suggests that beyond the typical, 'Do I like it?' or 'Does it work?' questions, there are more powerful questions to ask:

> Is it authentic? Is it on message? Is it innovative? Is it interesting, compelling, provocative? Does it have emotional impact? Does it invite interaction? How does it compare to the competitors? Is it different (or similar) enough? Is it an unexpected solution for us? Is that good or bad? Does it take a risk or play it safe? Is anything unsatisfactory? Why? (p. 94)

Selecting a few concepts from the sketches to further develop was difficult because I am used to having a client's input and/or a more defined set of restrictions or directions for implementation. In this case, I was my own client. Posing these questions and taking a little extra time to think about them helped me look at my own ideas more objectively and critically at this point in the process (though answering these kinds of questions can also be subjective). I did not document this evaluation—I hung the ideas from Figures 17-20 up on a wall and used the questions to have a discussion between the ideas and myself and to make some decisions about which ideas to move forward in developing further into digital layouts. (A documented session using this evaluation approach is shown in Appendix D, Session 10.) I chose four rough concepts, after asking myself questions such as: *Is it on message? Is it innovative? How does it compare to the competitors? Does it invite interaction?* Figures 22 and 23 present the four

selected rough concepts, which I sketched in color during Session 6 after evaluating the rough ideas in Session 5.

The first idea chosen was the mirror concept, which had developed into using "mirror board, a poster board weight reflective paper. The reflection is quite clear when close to the person holding it. I discovered the board on the Internet by doing some research, and found that it was sold in art supply stores. In reflecting on past design projects, it seems like it is often those early ideas that get tossed out because new ideas develop, but I felt that this idea really spoke positively to the evaluative questions. And while I originally thought that mirrors (and water) were a cliché image for reflection, I believed that the way in which I would be attempting to execute it was original and unexpected. It may not have been a practical idea if this book cover were going into mass production, because of paper and assembling costs, but I have much more creative freedom for this personal project since I am producing only one copy of the book cover.

The blue/green bubbles concept (#2 in Figure 19) was a stock photo that I was instantly attracted to when browsing www.IStockPhoto.com for inspiration because it resembled one of my earlier abstract sketches in Figure 16. The multidimensional "bubbles" and the bright light in the image spoke to the idea of exploration, discovery, realization, and looking closely. I found it to be a more friendly and "open" visual solution compared to a lot of the grid-like design books out there today, and also compared to the boring-looking, "serious" books on reflective practice.

I also really wanted to try a typographic solution (look #3 in Figure 23) because I envisioned the idea of layers of type speaking to the idea of a "flow" of written reflections, and good typographic solutions are something that graphic designers in particular really appreciate. I
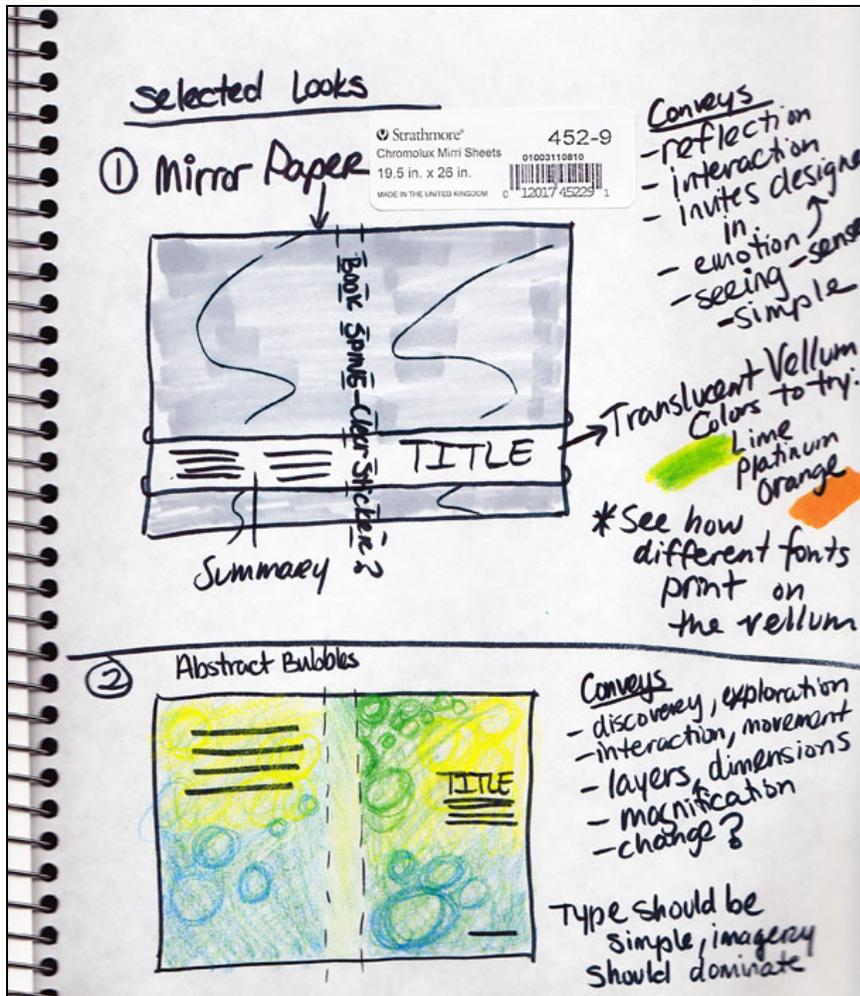
Figure 22: Color sketches of selected concepts 1 & 2, Session 6

had also been intending to experiment with a typographic project to add to my design portfolio, so there was a hidden personal motive behind this choice.

The brain concept was the last selection I made because I was not yet sure of how I would execute it, but I was curious about playing with it to find out how it might develop. It had an element of humor that I liked because, again, this was unexpected for books on reflective practice, but at the same time I was worried that the brain concept might be overused in "creative thinking" imagery.
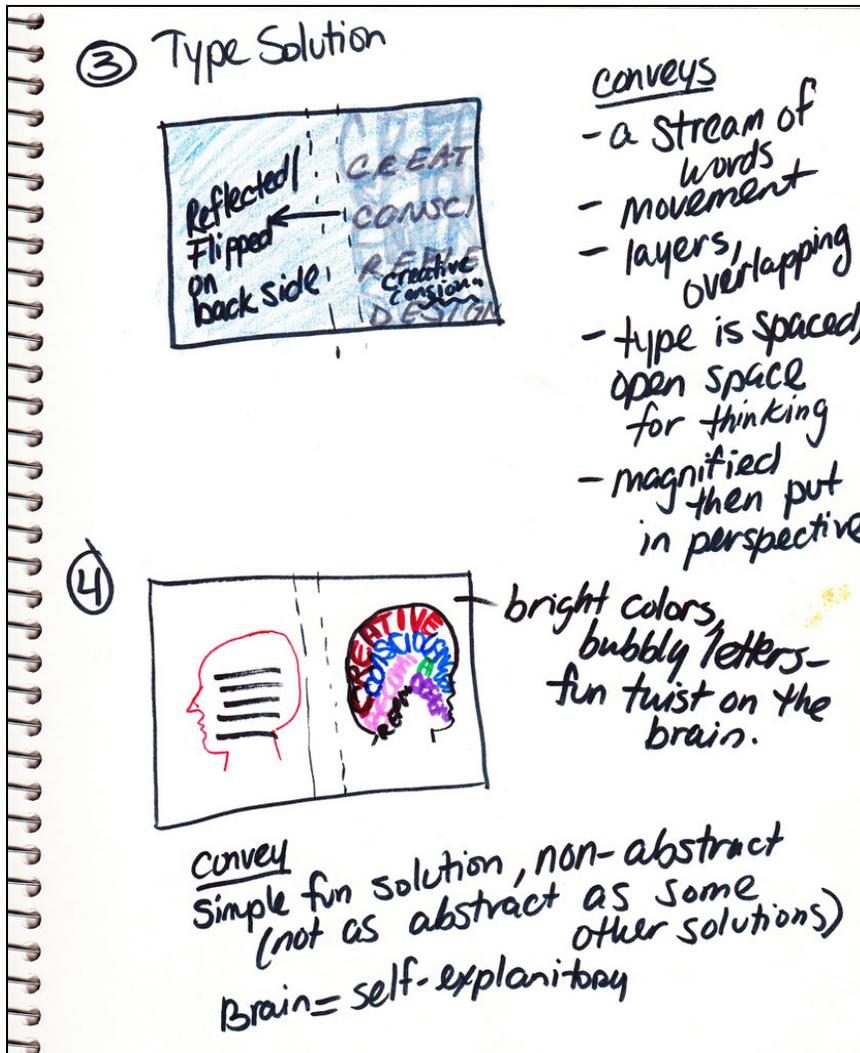
Figure 23: Color sketches of selected concepts 3 & 4, Session 6

Regarding the color choices for the different looks, when I thought about the title "Creative Consciousness: Becoming a Reflective Designer," it felt exciting. It felt either vibrantly colored, or light and "airy". The image I selected to use for the bubbles concept was already blue and green, I simply modified it in Photoshop so that it would print out slighty lighter and made a slightly different version of the image to use for the back cover. The colors in the image are vey harmonious in that they are next to each other on the color wheel (an analogous color scheme), so perhaps this contributes to why I found it very inviting and attractive.

Figures 24-26 show the materials I was experimenting with for the mirror concept. The "mirror board" is a shiny silver posterboard (much more silver than an actual mirror), and I wanted to try a colored transparent vellum paper, which I had also found in my research and requested samples of from the paper vendor (Reich Paper), for the wrap-around element. This wrap-around would be layered over the mirror paper, and would have the printed title and text on it (as you cannot print on the mirror board), and a couple of the bright colored samples they sent me (orange and cerulean) worked nicely with the silver mirror board—it was a nice contrast.
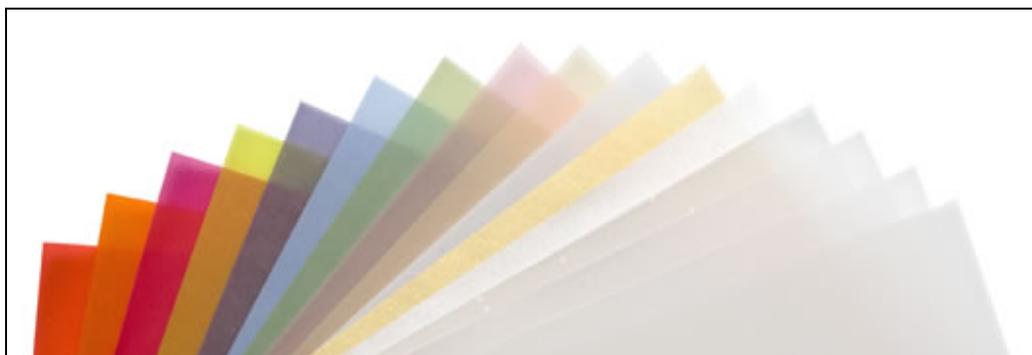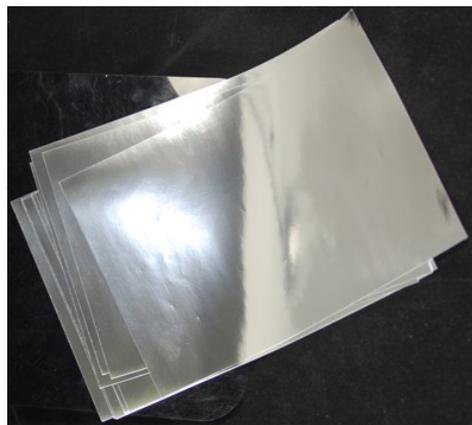
Figures 24-26: Exploration with mirror paper and transparent vellum papers, Session 6

I also became interested in the color meanings de Bono (1985) associates with his *Six Thinking Hats*, as I started skimming the book during the course of this project, and how they could relate to my project's concepts. Particularly I considered the use of the following colors in my concepts:

"The green hat indicates creativity and new ideas." (p. 13) for the cerulean green transparent vellum paper.

"The yellow hat is optimistic and covers hope and positive thinking." (p. 13) for the yellow abstract look.

"The red hat gives the emotional view." (p. 13) (see Figure 29 for use of red with the brain concept)

I thought back to discussions about color meanings in my undergraduate Color Theory class, and how color meanings can differ culturally as well as simply being individually subjective in perceptions. So de Bono's color assignments to his thinking hats could have been influenced by a number of different interpretations of color meanings, but it was interesting just to stop and think about the use of color in my concept development process and how my color choices could also be subjective.

Sessions 7-10: Digital Rough Drafts of the Concepts and Further Evaluation

These later sessions involved development of the concepts using digital design software. Figures 27-31 show these rough draft digital layouts created in Session 7. I am not yet dedicating a lot of time to experimenting with different typefaces at this point, a vital aspect of graphic design, but simply setting up the dimensions of the layout using computer software and playing around with variations of object/type placement. In this session I became reflective on what

professional intuition is—knowing intuitively whether or not something would work digitally, or knowing a different possible way to achieve it. I would normally spend about four sessions working on this first round of drafts before presenting them to a client. Often the client will like one element from one concept combined with an element from another concept, and I end up merging a selection of features together to present a refined design to them in the second round presentation.

Because I was my own client in this project it was important to me to seek some feedback from design peers and mentors via the blog. On short notice I was only able to solicit feedback from two designers, but it was helpful because even though I might not agree with them, it is beneficial to get outside perspectives when doing design projects entirely independently. The alternate perspectives might make me think of things I might not have considered.

Session 7 was a longer session than the others, about 4.5 hours, to lay out each visual concept digitally (in a "rough draft"). Figure 27 is simply a digital "mock-up" of what the mirror board solution would look like with the cerulean paper over it (the grey area representing the mirror board); Figure 28 shows the "bubbles" image solution; Figure 29, the brain illustration idea (using a Photoshop brush from a brush kit called "Phrenology brushes"); and Figure 31 is an additional look from my Session 4 sketches that I realized I was not completely through with. I realized that I thought it could actually be a good candidate for a design solution. This was also a stock image I had come across in my Internet exploration, and I just made some sizing adjustments for it to work with the book cover dimensions. The critical development for this look required working on the title's typography, which was developed later.

The most challenging concept to produce digitally proved to be the brain concept (Figure 29). Working with the type for the title and trying to get it to fit into the head shape in a way that resembles a "noodley" brain, but retains its legibility and readability, would require some time and effort. I became unsure that this concept would be practical to work on in a short time frame for this project and decided to put it on the back burner for the time being.
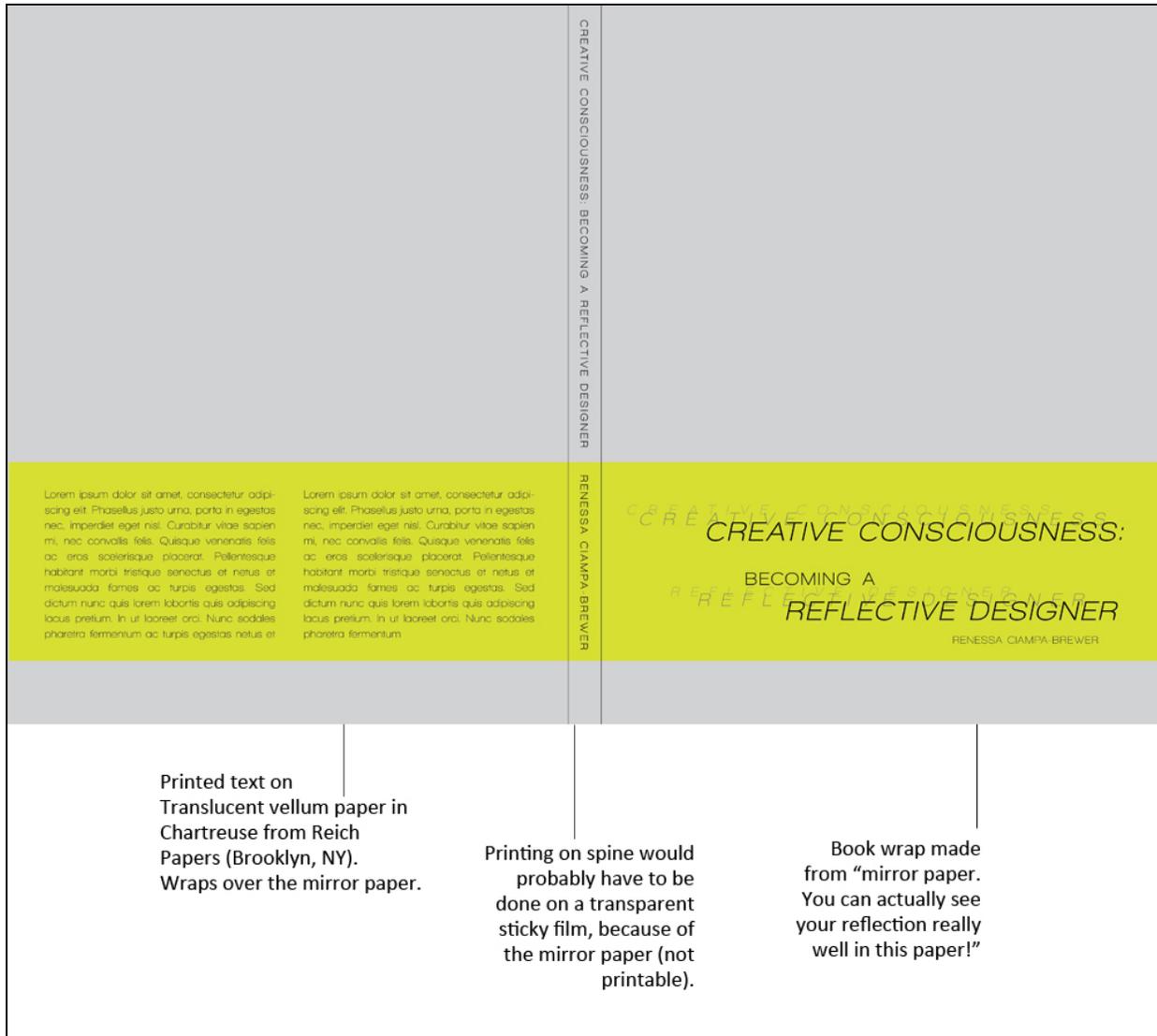
Figure 27: Rough digital layout for mirror concept, front and back cover, Session 7
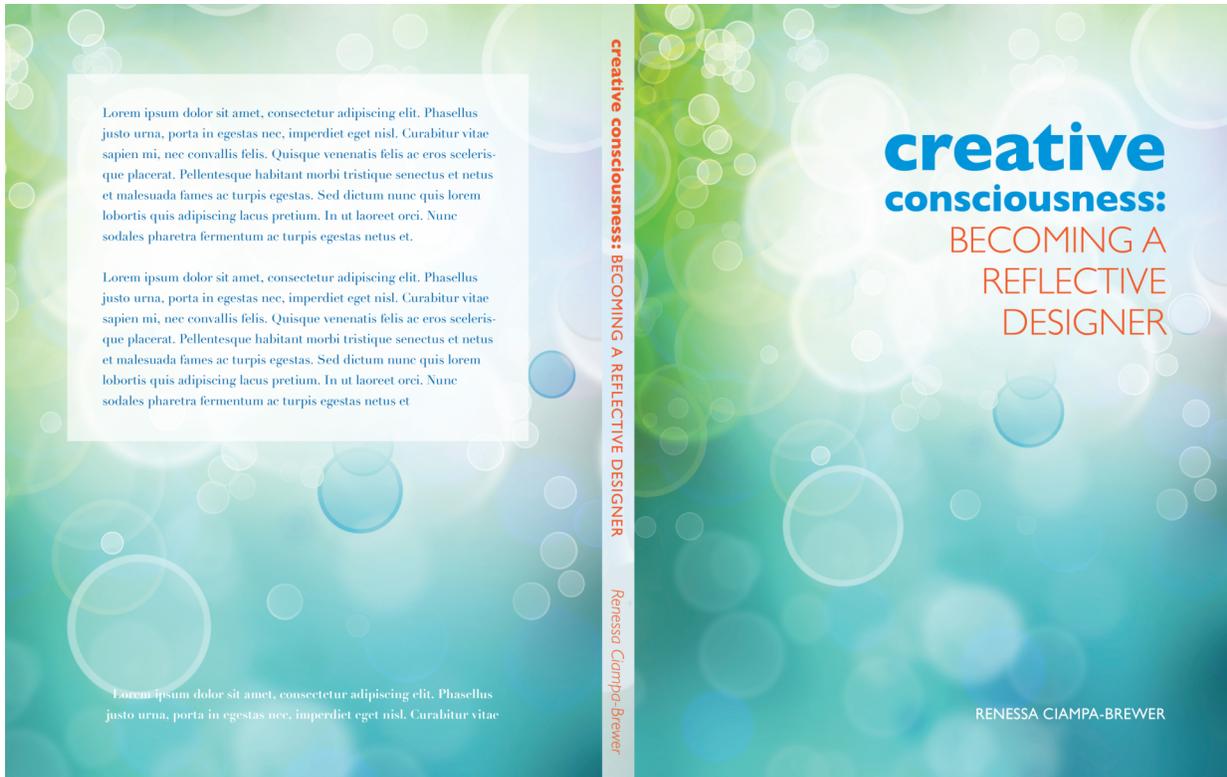
Figure 28: Rough digital layout for bubbles concept, front and back cover, Session 7
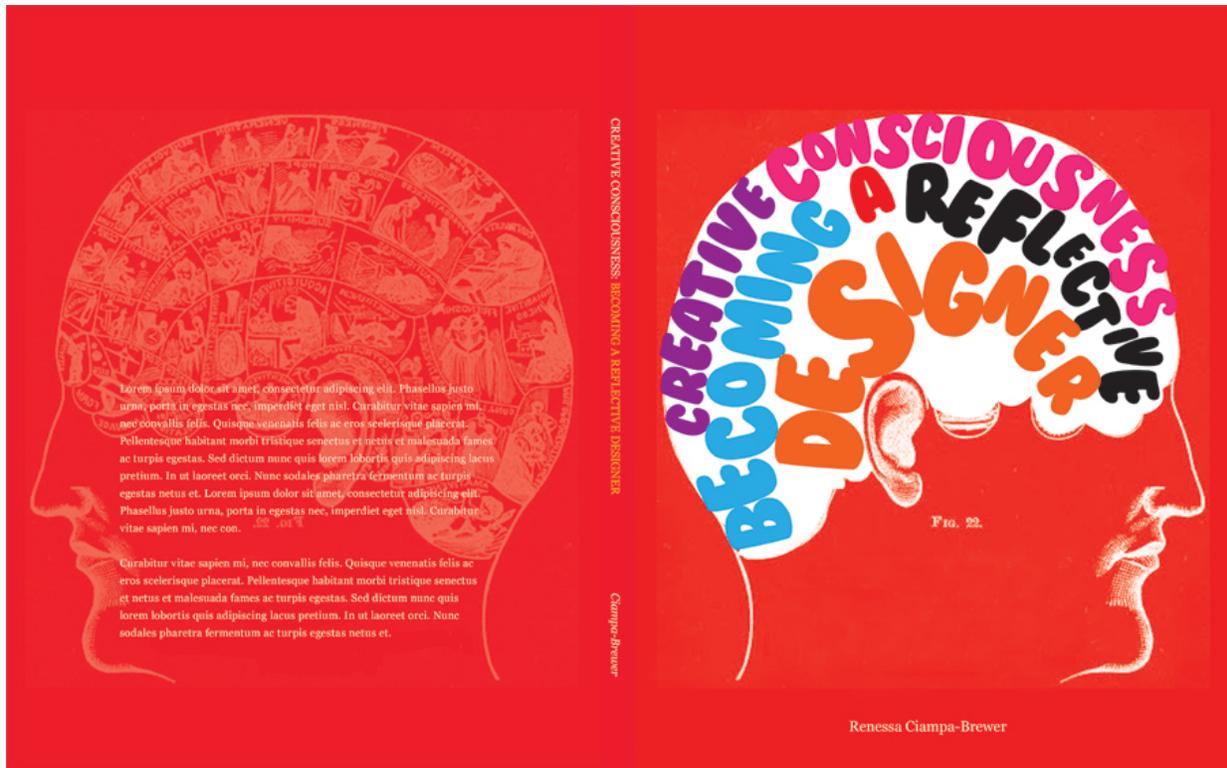
Figure 29: Rough digital layout for brain concept, front and back cover, Session 7
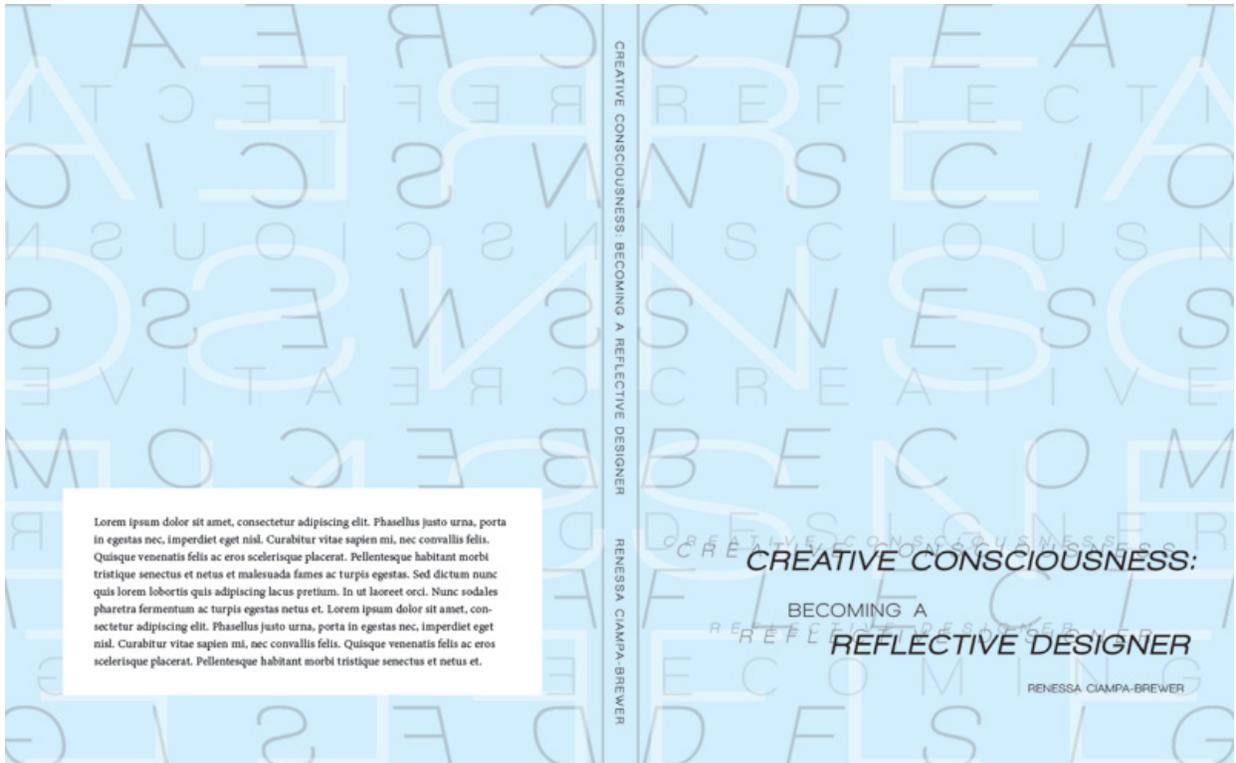
Figure 30: Rough digital layout of type concept, front and back cover, Session 7
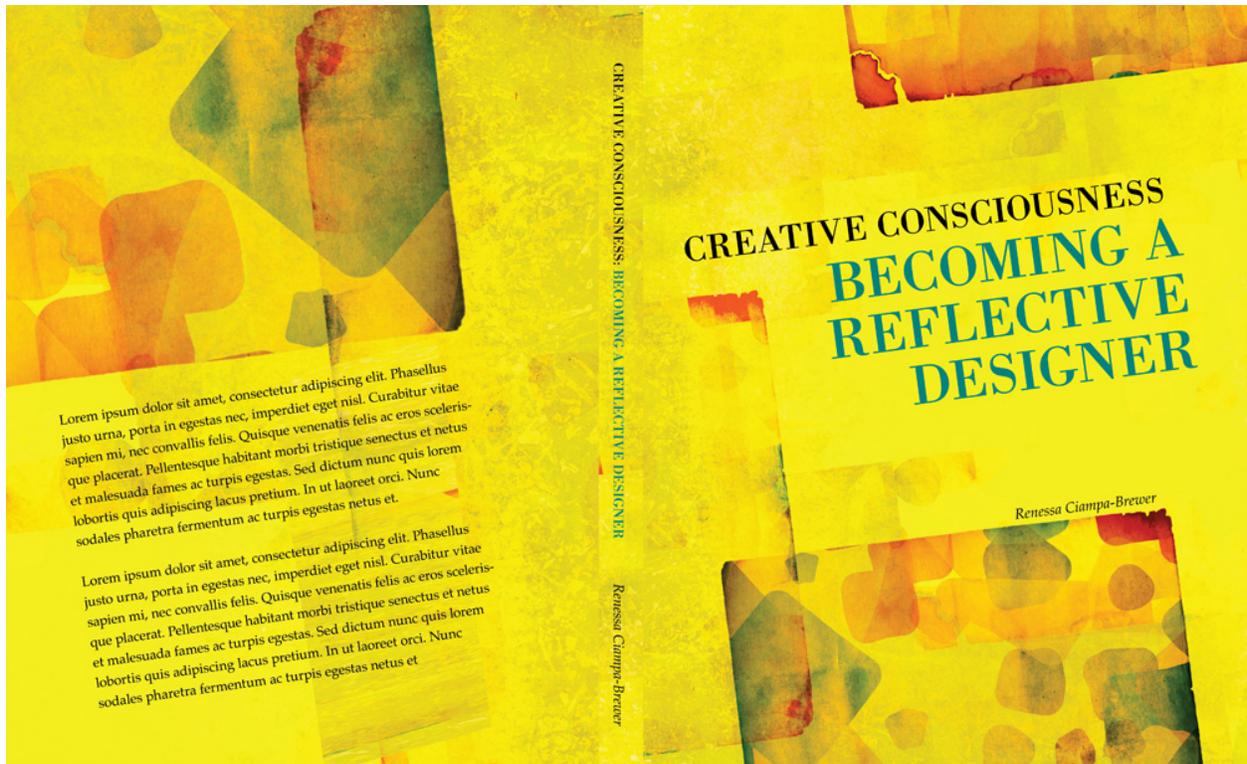
Figure 31: Rough digital layout of abstract shapes concept, front and back cover, Session 7

Figures 32-37 show excerpts from Sessions 8 through 10, in which I continued working on the design concepts digitally on the computer using Adobe Creative Suite 5 (Photoshop, Illustrator, and InDesign). Development of the concepts involved experimenting with various typefaces, type treatments, colors, layouts, and uses for the paper materials. Perhaps I was using the SCAMPER technique unintentionally here. A critical incident for me was in finding a different use for the transparent vellum paper than I had originally intended. (It was originally intended for printing the wrap-around paper for the mirror board look, but I also experimented with using it to portray layers). Figure 32 shows a developed digital mock-up of layers of type similar to the rough draft in Figure 30, but now the colored transparent paper was being used to create actual layers of paper and type. Figures 33 and 34 display the three layers of paper printed upon and used for this concept, with the title and author name removed from the cover.

Figure 32: Experiment with layered transparent papers, front covers in Orange and Cerulean

Figures 33 and 34: Three layers of paper with printed type used to create Figure 32

Figures 35-37 are selected versions of the concepts in digital development, showing how I was experimenting with different typefaces and treatments to the typography (color, size, placement). By this point I had solicited and received some feedback from design peers, via the blog. Getting this feedback helped me think of new ways to approach the typography for the title of the yellow abstract look in Figure 35—trying a letterpress or slightly worn look for the typeface, and making the title more integrated into the overall background texture. As one commenter said, "giving it a more tactile quality and making the design more cohesive." For the colors in the title, I picked up colors from the shapes (the teal and the red) and made them more saturated to make the title stronger.

Another visitor to the blog particularly like the bubbles look (Figure 37): I think [this concept] looks most resolved and has a wide appeal (a feel for the topic of "consciousness" or soft thoughtfulness to it. I like the type treatment and "reflective" nature of the composition."
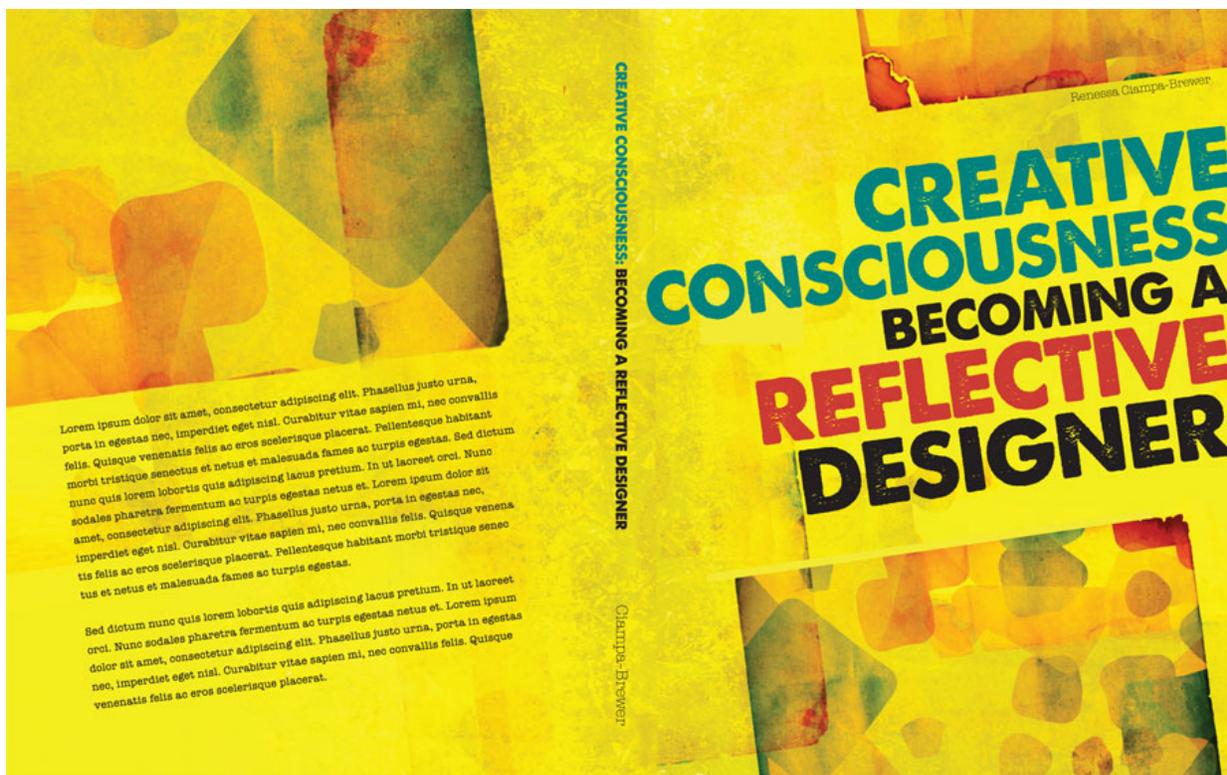
Figure 35: Development of typeface exploration for abstract shapes concept

In Figures 36 and 37, I was trying out new typefaces for the wrap-around vellum paper on the mirror board concept (the grey box representing the mirror board), using all lowercase letters for the title and a very "clean" approach to the style of type. I also opened up the spacing between the letters in the title—I wanted it to "breathe" more. In Figure 38, the bubbles concept, I had also tried out a lot of different typefaces and type treatments (lowercase/capitals/weights/ alignment) before arriving at this potential solution.

Figures 36 and 37: Development of typeface exploration for mirror board concept
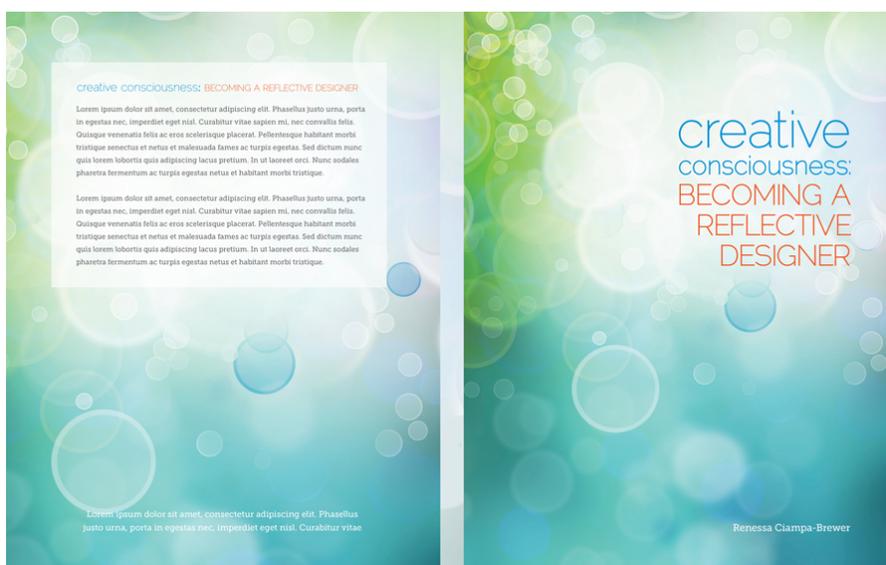
Figure 38: Development of typeface exploration for bubbles concept

In Session 10, the final documented session, I used the evaluative questions from Stone (2010) once again. The full responses can be seen in Appendix D. Repeating this process helped me don "The White Hat" or "The Black Hat" (de Bono, 1985)—the objective hat, and the careful and cautious hat, respectively. But in the end, I decided not to conclude this project by choosing one design concept to finish designing for the book cover. The purpose of this experiment was not, after all, to do so, but rather to practice being reflective throughout the design process, to observe my own approaches to developing concepts, and to try some new tools. After completion of this synthesis, I would like to continue working on developing the concepts more, continue uploading my process to the blog and soliciting feedback and discussion on the designs, and then choosing one or two concepts to print for my design portfolio.

Lessons Learned about the Concept Development Process

One of the first things I noticed through this act of being reflective on my process was the prevalence of using metaphors in the idea generation sessions. I noticed that from early on, I took descriptive words about my synthesis project or title, and translated them to metaphors, first linguistic and then visual (imagery). For example: the metaphor mirror for the word "reflection" became a mirror board for the book cover; the metaphor of "layers" eventually became layered type or layered transparent paper. This observation was particularly interesting to me because I wrote about designers' use of metaphors in my CCT Cognitive Psychology course research papers, in which I discussed Casakin's study of design students. Casakin (2007) affirmed that novices lacked the analytical skills of experts that allowed them to reflect in-depth on design situations, and therefore faced a challenge using metaphors as a primary analytical tool. "It can be said that more expertise is needed to use metaphors in a better way." (p.33). This is certainly not to

say that I am anywhere close to being an expert. But it was interesting to be reflective in this process and begin to notice how I use metaphors and intuitively make associations when brainstorming. However, I do not use metaphors in *all* of my brainstorming sessions or developing design concepts. For example, the brain concept was actually pretty literal and straightforward.

I realized that the *brainstorming before sketching before computer designing* approach is one I almost always use, though I will never restrict myself to an entirely linear process. Sometimes things just happen out of that order. Indeed, I have probably subconsciously followed that methodology because that is what I was taught to do in undergraduate school and in the design books I have read. Or maybe I am more of a verbal thinker than I realized before, and am drawn to thinking through problems verbally before visually. During the Cognitive Psychology course with Professor Smith, I developed a fascination with the relationship between language and thinking. In my final paper titled *The Cognition of Designers in Developing Design Concepts: The Roles of Experience, Heuristics, and Linguistics*, I discussed the work of Dong (2006). Dong's paper demonstrated that the production of knowledge relies on designers' linguistic behavior to construct a composite concept (p. 51).

> Language use does things: it accomplishes reflection, performs actions and enables designers to project possibilities, forms design concepts, and negotiates the value of design concepts. Thinking about language use in design as a tool means seeing language as a mechanism for performing design practice. (p. 36).

I have never before done written reflections during or after the design process, and I feel this was highly beneficial to my thinking through the design problem and to my goal of "getting more in touch" with my creative process. Also, the act of intentionally taking extra time—a couple of extra design sessions to think and brainstorm before beginning to think in more concrete visuals—felt very helpful in this experiment, and is absolutely a lesson I will carry forward in future practice.

I have struggled in the past as well as in this project with the voice of the critic. I try to consciously turn off the critic in my head while doing creative brainstorming, and am aware of when the voice tries to come back on. But I still want to be able to control it more. In *Writing with Power*, Peter Elbow (1981) suggests the approach of being creative first, critical second. I believe this applies to any creative venture. During the CCT program, I have come to realize that critical and creative thinking are like a yin yang relationship—they are often segregated as opposites, but really they are interconnected and can function in a whole system. In the design process, it is knowing when and how to use each, and eventually, as Elbow suggests, moving back and forth between them "so they enhance each other instead of fighting each other," (p. 10) that I am aiming toward. Perhaps this relates to reflection-in-action as a skill; or intuitive thinking, and the idea that maybe this skill of being able to intuitively know when and how to move back and forth from critical and creative thinking, can only be obtained through experience.

I also observed in this process that when I did begin sketching ideas, I almost did so with specific design layout dimensions in mind, because I often have those already established in client jobs (website page size, pamphlet size, advertisement size, etc.), but because I had less constraints this time, I tried really just sketching abstractly in the beginning. I eventually decided on 8.5 x 11" as a cover size, as I would actually be producing these cover concepts to fit on the 8.5 x 11" bound synthesis.

Another observed pattern in my practice was reflected upon in Session 9. I had set the brain concept aside after the rough draft posed a challenge in working with the type (Figure 26). In reflecting on this I realized that if I get the intuition that an idea might be too time consuming to produce digitally, I tend to put it on the back burner if time is an issue. But after setting this

idea aside for a couple of days, I came back to it wanting to try different approaches to the brain and the type. What I realized was that I have become so reliant on computer software that I had not even considered working with the letters for the title by hand. I also pursued some additional visual research on the Internet, and as a result I made a connection to an old design I did for another project, in which I had text flowing from people's mouths. I could adapt that to my design concept by having the text flow from an open head, for example. This was an old idea in my memory making a connection to a new problem, or a new idea building on an old idea.

The benefit of trying new "creativity tools" in this concept development process was another lesson I will take forward. I expressed back in Chapter 1 that I often felt like I was just "going through the motions." I realize now that this is how you get stuck in a rut. By shaking things up a bit, by trying new tools such as mind mapping, SCAMPER or the *Oblique Strategies* cards, I did feel more creative energy in my process. These are only a couple of tools out there today—there are many others, and I see them not as tools to rely on or to base my whole practice on, but to play and experiment with, perhaps when I feel stuck. There were many tools that were introduced in the CCT602 Creative Thinking course that I intend to revisit.

I made an interesting connection from SCAMPER to something I had read about in literature I was researching for a Cognitive Psychology paper. I realized that the strategies in the SCAMPER method bear a great resemblance to the observed heuristics employed by an experienced industrial designer in a study by Yilmaz & Seifert (2009):

Functional Heuristics
F1. Adjustability according to different users needs

F2. Applying an existing mechanism in a new way
F3. Changing how the user physically interacts with the system
F4. Using a common element for multiple functions
F5. Simplifying the already existing, standard solution
F6. Putting more than one function on one continuous surface
F7. Adding-on, taking-out, or folding away components when not in use
F8. Applying portability to existing standard solutions
Structural Heuristics
S1. Changing the configuration using the same design elements
S2. Merging a variety of components
S3. Changing the direction of the orientation
S4. Repeating the same form multiple times
S5. Hollowing out space within a solid
S6. Nesting one design element within another
S7. Changing the scale of elements
S8. Substituting one for another element
S9. Reversing the repeated forms for various functions
S10. Splitting a form into multiple, smaller elements
S11. Folding forms around a pivot point
S12. Flipping the direction of a form across an axis
S13. Cutting edges into forms

Table 3: Design heuristics identified by Yilmaz & Seifert (2009, p. 8)

Heuristics in the table such as "changing," "merging," "repeating," substituting," and so on, are so similar to the SCAMPER techniques. This connection also made me think that although I may have originally seen SCAMPER or any of these design heuristics as "creative thinking," they can actually be considered "critical thinking" as well (considering alternatives, challenging assumptions)—again, I can see the yin yang balance between the two in design.

Another approach I noticed in myself is that if I am feeling stuck, it is very helpful to walk away, or "de-center" (a term I picked up from Professor Nina Greenwald in the CCT Creative Thinking course). Some of my favorite ideas have come to me in the shower! I feel

better able to return to the design session with a new flow of ideas or a new perspective if I take a break. This is an intuitive thing, and something I am more aware of now.

Some final observations made through reflection on my process: I noticed that I tend to move back and forth from sketchbook, to resources (design books, websites) as needed when I am working on developing ideas. I feel that this works for me, but I have desired to improve my research strategies for a while now. I do not feel that my design education prepared me well in this regard. Perhaps that is another reason why I am now so interested in design thinking processes, methodologies and improving my approaches, why I was so attracted to research on the cognition of designers during my CCT studies. Finally, when I got into the hands-on design production phase, I realized that it is easy to get caught up in visual details and forget about my overall goals and the audience. I realized that it is important to re-visit the design goals throughout the design process, and to re-evaluate. This is a strategy that I was not very conscious of before, and one that I would like to become stronger in.

Lessons Learned about the Value and Ease of Reflective Practice Tools

Because this was not a controlled experiment where I varied one variable at a time while holding others constant to see its effect on my design process, I cannot tease out the cause and effect relations of reflective practice on my design effectiveness, success, or creativity. Instead, I included a variety of reflective practice tools at differing moments in a complex design process. This was because my goals were: (a) to learn something new about my approaches to the design process (and for this purpose, having a variety of tools to stimulate that reflection was better); and (b) to assess subjectively how "helpful" each tool "felt" to me (if something is hard or cumbersome to use, it might be difficult to incorporate into my practice). During this

experiment, I reflected in my journal entries on both my design process experience and on my experience using the reflection tools (see Appendix D for journal entries) and charted my self-assessment with the tools in the following charts.

Completed Self-Assessment Rubrics for Reflection Tools:

Tool implemented: Checklists (see Appendix E for completed checklists)

SESSION NUMBER:	1	2	3	4	5	6	7	8	9	10
Reflect on progress using "plus" (+) for Shows Improvement or "delta" (Δ) for Needs Work										
Ease of use	Δ	Δ	+						Δ	
Able to keep up with regular use	Δ	Δ	+						Δ	
Feel more in touch with design process (more aware of approaches to design process, decision making, better able to articulate process, better able to reframe design problem and make changes based of reflections)	Δ	+	+						Δ	

Table 4: Self-assessment rubric, Checklists

Tool implemented: Journal (see Appendix D for completed journal entries)

SESSION NUMBER:	1	2	3	4	5	6	7	8	9	10
Reflect on progress using "plus" (+) for Shows Improvement or "delta" (Δ) for Needs Work										
Ease of use	+	+	+	+	+	+	+	+	+	+
Able to keep up with regular use	+	+	+	+	+	+	+	+	Δ	Δ
Feel more in touch with design process (more aware of approaches to design process, decision making, better able to articulate process, better able to reframe design problem and make changes based of reflections)	+	+	+	+	+	+	+	+	Δ	+
Critical Incident Questions: Ease of use, ability to respond to questions and identify critical incidents based on these questions.	+	+	+	Δ				+		

Table 5: Self-assessment rubric, Journal

Tool implemented: Written Self-Assessments (see Appendix F for completed written self-assessments)

SESSION NUMBER:	1	2	3	4	5	6	7	8	9	10
Reflect on progress using "plus" (+) for Shows Improvement or "delta" (Δ) for Needs Work										
Ease of use					+					+
Effective mode of reflection for reflecting on critical incidents					+					+
Feel more in touch with design process (more aware of approaches to design process, decision making, better able to articulate process, better able to reframe design problem and make changes based of reflections)					+					+

Table 6: Self-assessment rubric, Written Self-Assessments

Tool implemented: Blog (see http://www.thereflectivedesigner.tumblr.com)

SESSION NUMBER:	1	2	3	4	5	6	7	8	9	10
Reflect on progress using "plus" (+) for Shows Improvement or "delta" (Δ) for Needs Work										
Ease of use						Δ	Δ	+		
Able to keep up with regular use						Δ	+	+		
Feel more in touch with design process (more aware of approaches to design process, decision making, better able to articulate process, better able to reframe design problem and make changes based of reflections)						Δ	+	+		

Table 7: Self-assessment rubric, Blog

I started out the experiment using the checklists before and after Sessions 1 and 2, and after Session 3 only. I found that a lot of the questions were irrelevant for me in this early phase of the process and skipped over them (particularly the Analysis of Design Activities and Transitions in the Design Context section). In general, I found the checklists to be very time consuming, even after I shortened them substantially from Reymen's, in the first two sessions. There was overall confusion in answering Reymen's questions, having to shift my mind between "design process" questions, to "design product" questions, to "design context" questions, and so on. Reymen's forms (see Appendix A) were intended to compliment the checklists, and since I excluded using those, perhaps I was missing out on the greatest benefits of her method. I did not want to spend more time reflecting than actually designing, which was a concern of my synthesis advisor, Professor Smith, so I tried to answer the questions quickly and concisely. It became easier for me to use the checklists in Session 3 because I approached them in this new way, answering the questions concisely with a gut reaction, and using them post-session only.

I eventually remembered that the comprehensiveness of Reymen's questions do encompass several aspects of the full design process, and that maybe these checklists are not the best, for me, to use specifically for the concept development phase of the process. I found the evaluation questions from Stone (2010) to be more focused on the design concept itself, and therefore more useful to me in this phase, but did not use those until later sessions.

What I did appreciate about the checklists is that I can look back at the same questions from the previous session and compare my latest session's answers to what my previous goals were. It is a very organized and systematic means of reflecting on the whole design process. It was useful for me to use the checklists before Session 9 because I had not worked on the design project for a few days before this session, and the checklist helped me get "reacquainted" with the project, where I was in the process, and what tasks I need to work on further.

I was very comfortable using the journal as a reflective practice tool from the beginning of this project—whether I was doing a free-write on the design session, or using guided critical incident questions to respond to. The act of writing reflectively immediately following a design session, even just a couple of paragraphs, was an effective way for me to recall what just occurred in my design process and to "be in touch" with my process. Through writing, it helped me realize some habitual approaches I have that I may have been unconscious of before (which I discuss in the "Lessons Learned in the Concept Development Process" section), aspects of my approaches that I want to improve (such as my approach to doing preliminary research for a project), and how I felt the use of new creativity tools (SCAMPER, etc.) helped me or not.

Maybe it feels more natural to me, to just write reflectively, pen to paper (or fingers to keyboard). Maybe it is because I have been re-introduced to journaling during the CCT program courses. Maybe it is the absence of extensive questions or blog technology that makes it easier for me to think. Or maybe I felt a reconnection with the journaling roots of my teenage years, and it felt like a natural compliment to the creative process. Whatever it is, I want to continue to journal for my creative life in general.

I was also very comfortable reflecting using the written self-assessments. I appreciated the important points of focus that Ellmers et al. (2009) suggested—describing the design

process, summarizing critique feed back, identifying critical incidents, making observations about the design experience, identifying new learning, and how the experience could impact on future practice (p. 10)—and found it easy to respond to this structure. This approach is different from simply free writing, and it really brought out critical realizations for me. I found it convenient to do these longer written reflections at the mid-point (reflecting on progress) and very end (reflecting on whole project/process) of this project. While I did seem to be reiterating a lot of what I reflected upon in my individual journal entries, I still found it helpful to take this time-out mid-process to reflect on the "big picture." Perhaps in the future I might use this tool at the end of a project only, and continue using my journal after each session.

Using the blog for the first time was time consuming, and uploading images to the blog can be time consuming in general. I had some technical difficulties at first, but then moved the blog to another hosting provider. By the third time using it, I became more comfortable and efficient in posting excerpts from my design process. As anticipated, I did feel that the act of refining my reflections to speak to my design peers more directly via the blog further enhanced my learning about my design process. I had to re-articulate my descriptions of each rough design concept-in-progress, and in doing that it made me think about my intentions for the concepts even more. The act of making excerpts from the process public and inviting/receiving feedback made me look at the design ideas in a new light—a perhaps more critical light, more focused on the finer design details. I was only able to recruit two designers to the blog due to short notice, so more time would be needed to build a larger online community in the future. As an alternative to the blog, there is a website called Dribble that I wished I had discovered earlier in this process. From http://dribbble.com/site/about:

> Dribbble is show and tell for creatives. Designers, developers and other creatives share *shots*—small screenshots of the designs and applications they are working on.

A design peer of mine, who commented on my concepts on the blog, is currently using Dribble. He is able to quickly share his work, receive comments, and build an online community.

In the future, I can see myself using select or combined elements from each tool. A much more narrowed selection of questions from the checklists, critical incident questions (which I find easy to answer), and the points of focus from Ellmers et al. (2009) written assessment task, could all be reflected upon in a journal. The blog was definitely more of a refined, summarized reflection for me. In the future I plan to use the blog at the end of a finished design project (to respect client privacy) with the goals of displaying packaged case studies to colleagues or potential clients, and inviting other designers in for dialogue. I cannot foresee myself having such an elaborate and structured practice of reflection in my day to day life and work, but I now know what I liked using, what worked for me and was beneficial to my reflecting and learning.

In doing this very self-conscious project, it was as if I became my hyperaware of my actions— I became perhaps more reflective-in-action. The act of deliberately reflecting-*on-*action seems to have flowed over into the rest of my mental processes, into the time I was not deliberately reflecting, not in a disruptive or "stop-and-think" kind of way, but in a sort of heightened awareness kind of way.

Late in this project, I discovered a book entitled *The Intuitive Practitioner: On the Value of Not Always Knowing What One is Doing* (Atkinson & Claxton, 2000). Michael Eraut also contributed a chapter to this book. I suppose I discovered it at an interesting time, after completing this structured reflective practice experiment. The irony of the book's title made me second-guess the purpose of my project for a moment. But what I found in scanning the book was that this concept of intuitive thinking was not in fact entirely contradictory to the models of reflective practice I was interested in, but rather spoke to Schön's theory of *reflection-in-*

action—this tacit knowing that is intuitive rather than deliberate (McMahon, 2000 in Atkinson &

Claxton, 2000). McMahon describes Claxton's definition of intuition as congruent with Schön's

theory of reflective practice: "These ways of knowing include expertise, implicit learning,

judgment, sensitivity, creativity and rumination." (McMahon, 2000, p. 138). As McMahon also

explains, it is Claxton's suggestion that certain conditions, situational and psychological, are

required for the development and expression of creative intuition:

> First, you must not be experiencing pressure and stress of any kind. Second, you need a
> personal disposition which enables you to tolerate uncertainty, to have confidence that
> answers to problems will emerge, to let questions and problems stew around in the
> unconscious mind rather than rush to solutions. (McMahon, 2000, p. 146)

In Chapter 2 of *The Intuitive Practitioner*, Claxton (2000) talks about the idea of balance

"between effort and playfulness," "between intuition and reason." (p. 44). Is intuition the

opposite of reason? I do not think it is. I think it is part of the yin yang relationship I began to

think about earlier in this chapter—this idea of striking a harmonious balance between critical

and creative thinking, openness to ambiguity and control of the wheel, science and art, left-brain

and right-brain thinking, conscious and unconscious, and deliberate reflection and intuition.

Henry Moore wrote that it is a mistake for [artists] to speak or write too often about their jobs,

that by trying to express their aims with logical precision, they can easily become theorists

"whose actual work is only a caged-in exhibition of concepts evolved in terms of logic and

words." (Ghiselin, 1952 as cited in Claxton, 2000). Claxton speaks of the position of the teacher

or mentor who might agree with Henry Moore, that too much explication of their practice might

lead to a loss of fluidity, and yet that a degree of conscious, strategic overseeing of their

classroom practice is essential (p. 45). This strongly resonates with the role of a designer. As I

mentioned earlier in this paper, the role of the designer is indeed part artistic and part strategic.

In closing, Claxton's point that professional development involves a "shifting, dynamic interplay

of different ways of knowing" speaks to what Elbow (1981) says about critical and creative thinking—Moving back and forth between them "so they enhance each other instead of fighting each other" (p. 10).

CHAPTER 4

MOVING FROM THE PRIVATE TO THE PUBLIC

"I had chosen to use my work as a reflection of my values." ~Sidney Poitier

Paul McIntosh (2010) discusses "reflective conversations" as conversations that may initially take place privately, with the self, but at some point are articulated with others (p. 47). He talks about the challenges of finding the right words to communicate thoughts, and how "Moving from the private to the public through this process can be enlightening, for it emerges out of unconscious to conscious forms of knowing." While I found that the act of writing reflectively also helped me in this moving from thoughts to words onto paper, helping me articulate my thoughts and bring them into consciousness, I would agree that speaking these words to other human beings and hearing their thoughts in return can take the "reflective conversation" to a whole new level of building a knowledge pool, as I have witnessed and experienced in CCT group dialogues.

I have now been through this brief experiment with reflective practice; I have begun to realize and think about my approaches to the process of developing design concepts; and I have identified some aspects of my process that I want to work on in the future. So now what? This final chapter aims to set some goals in moving forward, beyond this personal project to engaging with others in the areas of: building a community of creative professionals, seeking and fostering mentor relationships, bringing reflective practice into a team workplace and potential limitations of this effort, being a feminist and how that might affect my professional choices, and my thoughts on improving graphic design education. I conclude with a final reflection on this synthesis experience with reflective practice in the design concept development process and on

my transformation through the CCT program in general.

Building a Community

When I began the CCT program, I had been working as a designer for a couple of years, but in both my first job out of college and in my freelance work, I designed mostly in solitude. I kept in touch with a few of my design school classmates and a couple of instructors (one being CCT graduate Andrea Brenner-Shaevitz, whom I have always considered a mentor). But overall I had lost that creative support system and continuous peer and mentor feedback because a) I was not working closely with a collaborative creative team, and b) I was not actively reaching out and continuing to foster relationships with mentors. During the CCT program, I regained that sense of community and peer/instructor support in the classes, monthly events and dialogues. I began to realize the importance of trying to foster a community in my creative life, if I wanted to grow as a creative professional. I can only learn so much from myself, after all. Planning to have these reflective conversations with others became an increasingly important idea to me.

One way to seek support and expand learning is through mentors. Using a blog (or a tool like Dribble) is one way to get design project specific feedback from mentors and peers, and has the potential to be far-reaching via the Internet, but richer and more personal connections can be solicited through phone calls and face-to-face meetings. I began to lose touch with Andrea Brenner-Shaevitz when my schedule became more demanding as a graduate student and assistant to the CCT program, and I regret not fostering this relationship more deeply. Her experience as a designer, art director, and then design educator is a path I admire. I plan to initiate a reconnection with her after I graduate. Illustrator and designer Molly Zakrajsek (as cited in Zakrajsek, 2005) suggests some ways to approach mentors, respect their time, and learn

from them:

- Ask for their help, they won't come to you
- Set up meetings that work for their schedule
- Offer to meet for lunch once a month and pick up the tab
- Ask to shadow them in their workplace or even work for them for free
- Allow yourself to be teachable; accept criticism—it is healthy
- Mentors and mentorees both have to be thinking about the other person

Not only do I hope to foster mentor-mentoree relationships with creative professionals, but Professor Taylor also made me think about reflective practitioner mentors. Just because I may have a creative mentor does not mean that they are interested in reflective practice. I foresee that sustaining my own reflective practice will be challenging at times—having a mentor or a peer who strives to sustain his/her own reflective practice and lifelong learning would be a beneficial relationship for me to have.

Another way for me to build a support system and to reflect interpersonally could be through building a local community of creative professionals. I have searched the Internet for local interdisciplinary design groups, but they all seem to be design-field specific (graphic design group, architecture group, etc.). My CCT classmate Jeff Hamilton and I briefly discussed this idea of organizing a local group. He is an industrial designer, and his wife is an interior designer. I envision this kind of local group to be perhaps a monthly meet-up for designers of various disciplines, design educators and students, and other creative professionals, to convene and learn from each other. It would be a place for diversity, encouragement of group collaboration, creative play, and group reflection on our practices. It could function in a number of other ways, as a resource center, networking group, discussion group, workshops and conferences, or just a general time and place for the exchange of ideas and feedback. Members could take turns leading informational sessions. Dialogue sessions could also be implemented here, in addition to trying out other group reflection methods such as "think-pair-share" or

reflective writing, which Clifford (2002) advocates:

> Talking to oneself through a journal can limit the depth of reflection and alternative perspectives available. However, the use of the journal within a supportive group setting has been found to enhance the quality of the reflection found in the journals. (p. 110)

Whatever the format, I have experienced the power of such group dialogue sessions through CCT open house events and classes.

From Solo Design Work to Collaborative Design Work

In doing reflective practice, how would it work in a professional team atmosphere? I looked at Reymen's method, which is intended for both independent design work and team design work—but by experimenting with an abridged version of her checklists, I found that it would indeed be very time consuming to employ before and after every design session. In a busy design agency or corporate environment, this would be impractical.

I am committed to my own personal continued reflective practice and lifelong learning, on my own time—but how might I involve others with whom I work? In my own freelance graphic and web design business, I usually work independently, but occasionally subcontract work to web programmers. If my business continues to grow, it is possible I may eventually hire others. It is also possible I could be working for a company full-time within a creative team. In any event, I would imagine it easier to implement reflective practice in an intimate working environment. I often freelance as a graphic designer on-site at the headquarters of a large retail corporation where it is a fast-paced, results-driven environment. So I can see people being resistant to the idea of reflective practice in a large workplace. Staff meetings in the individual departments at this company are usually brief and to the point, with tasks being assigned to the staff designers from the art directors. I could imagine that even just a little more reflective

dialogue around the departments' approaches to getting things done and possible ways to improve would be very beneficial, but it is a matter of making the time to do such. These kinds of deeper-level dialogues and brainstorming sessions might occur among the higher-level staff (art directors and creative directors) behind closed doors, but the designers are rarely included in these conversations. This kind of "top-down" hierarchical system likely differs from a small design agency, for example.

If I were to be offered and accept a position at this company full-time in the near future, I would be interested in suggesting and demonstrating techniques such as: end of the week dialogue sessions or focused conversations somehow integrated into regular meetings (perhaps only twenty-minute long sessions); critical incident questionnaires followed by group discussion; or role-playing sessions in design meetings. I would love to see a little more of this kind of coming together of the minds here, inclusive of the "lower-level" staff.

Daudelin (1996) stated:

When reflection takes place in a small group, ideas are generated by the sharing of different perspectives…While one person is sharing his or her experience, the others are relating the information to their own challenges. (p. 42)

In a collaborative design environment, it would be important to me that each person gets to learn about his/her own practice as well as the team dynamics and project/process as a whole, through these types of group dialogue proposals. In light of these concerns, some additional literature I am interested in reading includes:

- *The reflective practice of design teams* (Valkenburg and Dorst, 1998)

- *Thinking in design teams - an analysis of team communication* (Stempfle and Badke-Schaub, 2002)

- *Managing Collaborative Design* (Sebastian, 2007)

- *Representing Reflective Practice in a Remote Design Collaboration Process* (Abdelmohsen and El-Khouly, 2009)

Lastly, it is also important to think about the client-designer relationship and the dialogue, or sometimes lack there-of, that happens around a given design project and how it can become more prosperous. The CCT synthesis paper of Brenner-Shaevitz (2005) addresses the fostering of client-designer communication and proposes the use of dialogue:

> While the design brief is an essential component to gather information, the vocal aspect of a dialogue would enable the client to articulate their beliefs and business goals. Articulating this information verbally first, will enable the answers on the design brief to be more precise. (p. 28-29)

Although I acted as my own client in this synthesis project, I have been reminded of the importance of improving this communication throughout the duration of a project and not only at its incipient stages. The reflective and evaluative questions I asked myself in this experiment could be extended to a client during a review meeting, to deepen the conversation and improve the outcome and effectiveness of the design solution.

Design through a Feminist Lens

I remember riding the train to high school, listening to the feminist punk-rock band Bikini Kill. I had no concept of what feminism meant, only that lead singer Kathleen Hanna's lyrics sparked an awareness in me of the injustices and inequalities that still exist in the world, and reinforced in me a disposition to question everything. In my Art History course at The New England Institute of Art, I chose to focus my final project on the feminist art movement, and wrote a paper on the photographer Cindy Sherman. But I did not yet call myself a feminist—I was always someone who wanted to be free of labels ("Labels are for soup cans!"). I also did not think I was worthy of that designation because I was not active in my cause. I like to say that my

Art History instructor "outed" me as a young feminist, and I have since been more outspoken about my feminist views, which undoubtedly overlap with my political ones. The feminist principles of equality, human rights regardless of gender, race, class, or sexuality, inclusion, diversity, and challenging stereotypes, have long been very important to my personal values, beliefs, and ways that I live my life.

During the CCT Program, I had the opportunity to take a course through the Graduate Consortium of Women's Studies led by M.I.T entitled *Gender, Race, and the Complexities of Science and Technology* (GRST), co-instructed by CCT's own Professor Peter Taylor and Professor Sally Haslanger of M.I.T. This course allowed me the freedom to pursue research in my developing interest in the connection between feminism and the practice of design, and the issues of marginalized and underrepresented populations in design fields and canonized design history texts. Now, with ease and certainty, I have opened lines of feminist inquiry in order to become increasingly active in feminist issues. I say I am a proud feminist unabashedly; and it is important for me to include in this synthesis thoughts on how a feminist perspective influences the decisions I make as a working graphic designer.

As commissioned commercial designers, we are often influenced by client demands. It is therefore important to me to reflect on my career choices, as a feminist, reflecting on questions such as: What role does feminism play in choosing who to work for or who to do design work for? What are the values of the company or client? What assumptions do I make as a designer concerning the consumer's sex, ethnicity or culture? In *Made in patriarchy: Theories of women and design—A reworking*, Buckley (1999) posits that user-sensitive designs have gained more legitimacy as architects and designers realize that the user of products is not a universal "type" man but is instead socially and culturally constituted by sex, race, class, age, sexual orientation,

and national identity (p. 111). Rothschild (1999) concurs that we need to rethink and propose the ways cities, communities, neighborhoods, and dwellings and spaces within them could be designed to meet people's diverse needs (p. 176). Sheila Levrant de Bretteville, director of the graduate program in graphic design at Yale and a major influence on the theory of feminist design, defines it as "graphic strategies that will enable us to listen to people who have not been heard from before. Feminism is about enabling those voices to be heard." (as cited in Svendsen, 2009).

As designers, feminist or not, what are our values and ethics? What is our responsibility to society? We can use reflective tools to think about the choices we make in our work, and to share these thoughts with others. This is a consideration I want to make in my future reflective practice.

An idea for another kind of design community support group, specifically for women and other minorities in design emerged from peer feedback in the GRST course (through my research in the course I also became aware of the issue of the underrepresentation of U.S. minority populations in design fields). To add to that, I have recently been motivated to do some independent pro bono or low-rate design work for other female business owners or entrepreneurs. Throughout this semester, this idea developed into a further goal of forming a coalition of female designers (interdisciplinary, and starting locally) to expand the services. My aim for this would be to help female designers gain exposure and build their portfolios while helping other women market their businesses. I have my first pro bono client lined up for the summer—a local artisan who will be selling her creations at the SoWa Open Market in Boston's South End. I will be creating a logo and business card design for her. This will be a creative "side project" for me. In the future, I would like this endeavor to grow into a coalition, as

mentioned, so that the work can be divided among a group of designers and we can tackle larger projects (websites, for example) for women who are starting up or trying to expand their own business. Other outlets I can use to pursue connections in development of this endeavor are the various national and international organizations for women in business and the local feminist group I have recently joined.

There is a war on women happening as this paper is being written. The U.S. House Republican's proposed 2011 budget would greatly slash the access of low-income women to contraception, family planning, and the Women Infant Children (WIC) program. In an effort to help counter actions such as these, I have become a board member of Pennies for Pause, an organization founded by my CCT classmate Gina Dillon Podolsky. The mission of Pennies for Pause is primarily in seeking effective methods on how to educate young adults on unplanned pregnancies and long acting reversal contraceptives. As a contributing member, I will take part in thinking of innovative ways to reach the targeted group. Creating promotional materials such as t-shirts, bags, stickers, and buttons, which I would design as a collectable series of attention-grabbing phrases and imagery is a possible strategy for effective communication. We were fortunate to have received the Delores Gallo Award fund to help make this initiative possible.

I have only just begun to think about how I can use my skills and passion for design to somehow help effect change in society. I look up to the activism of artists such as Sheila Levrant de Bretteville, Barbara Kruger, Adrian Piper, Rebeca Méndez, and Emily Pilloton, among others.

Design Education

Ellen Lupton—author, designer, and director of the Graphic Design MFA program at Maryland Institute College of Art—tells her students to "Think more, design less. They need to focus on ideas and concepts." (Heller, 1998, para. 5). One of the struggles in graphic design curriculum in this age of ever-expanding technology and global-business is finding time for and balancing the need for design theory and thinking as well as technical training. One suggestion comes from Heller (2005) for a five-year undergraduate program. My own thoughts on enhancing graphic design education have been developing throughout the CCT Program, as I began to research the topic in my CCT692 course (Processes of Research and Engagement).

One way a more rigorous curriculum could take effect is by increasing problem-based and work-based learning for project assignments. This could be achieved by creating partnerships with small businesses and non-profit organizations, for example, so that students can get more hands-on experience working with clients during their undergraduate experience. The problem with internships is that a curriculum can only allot so much time for them (often only one semester). In addition to time constraints, students do not complete much design work with clients in one semester long internship. To maximize the time within the curriculum, problem-based learning could be facilitated by a) turning the assigned projects into real client projects, when possible, versus hypothetical projects; and b) increasing group projects in and among school courses and majors, (interdisciplinary work among graphic design, web design, photography, marketing, and film departments, for example). By playing the role of facilitators, instructors can oversee group projects that require students to collaborate with students from other departments, exposing them to interdisciplinary experiences that emulate the real world of professional design.

In reflecting on my own design education, I would have also valued much more emphasis on research strategies for client projects, and on articulation of the thinking process, beyond the class presentations on our design end product. The emphasis on reflective writing on the design process and an admirable body of work on using structured reflective practice in graphic design (specifically) education and professions has come from my synthesis reader Grant Ellmers, PhD Candidate at The University of Wollongong. I am looking forward to continuing to follow and think about his research and writing. My own experience supports his basic thesis that structured critical reflection supports articulation and transfer of knowledge.

Final Reflection

In reflecting on my goals for this synthesis project—to explore the relationship of reflective practice to design; to experiment with various theories, models, and tools in reflecting on the concept development process; and to refresh an overall connection with my design process through being reflective—I feel that I have opened up a new door of awareness that I can never turn back from, but also that I still have much to learn about how I might improve my design process and how I might improve it. I would like to take a moment at the close of this paper to think about its title, *Creative Consciousness: Becoming a Reflective Designer*.

David Bohm describes creativity as the process of *making* and of *bringing into being* (McIntosh, 2010). I appreciate this definition because it focuses on the process or the act, versus the creative product. Moving into consciousness is also a process—becoming aware of ourselves and of the world around us, and uncovering what is in our unconscious. This process can take place through reflection.

Bartky (1975) believes that to become a feminist, a woman first has to go through a

major personal transformation and in the course of this will undergo behavioral changes which will lead her to make major changes in all aspects of her life. "This transformation in behaviour leads to a new and altered awareness of self and others, and is termed a 'social reality' by Bartky, who equates this social reality with the feminist idea of consciousness raising." (Hunt, 1998). The CCT Program was indubitably a major transformation for me. It made me stop, reflect, and "listen to my life" (Palmer, 2000, p. 4), and think about how I can really put myself into my work. As graphic designer Terry Marks (as cited in Fishel, 2005, p. 77) says, "Before you make any change, you have to stop or at least slow down."

> There is a threshold of fear with any change…But the moment you step over the threshold, you can see what you want to do. Making that step does not mean that you are done or that you have arrived, but you are finally started on the way to what you want to do. (Marks as cited in Fishel, 2005, p. 77)

The road does not end here with the CCT diploma. I have to make the time to continue fostering my reflective practice, lifelong learning, creativity, community building, and goals for activism. It is hard work, this business of wanting to grow and expand consciousness, both as a human and as a creative professional.

Artist and designer Rebeca Méndez offers three tips for designers' practice that resonate with my own ambitions:

1. Experiment—create work for yourself, independent of clients, responding to your own questions and curiosity.
2. Collaborate—work with or form a collective of your friends and peers, especially those in other disciplines (writers, architects, artists, musicians, dancers).
3. Have integrity—do your professional work without abandoning your personal convictions and values. (Willis, 2011)

In light of Méndez's third point, finding a way to *merge* my professional work with my convictions and values is the ultimate goal, and I acknowledge that it is an immense privilege to be able to enjoy your work in this crazy world. That brings me to another level of consciousness

has been touched upon in this chapter—that of sharing consciousness with others, through dialogue, community building, activism, and through visual art and design work.

Designers have a responsibility to be effective in their thinking and communication. Awareness and articulation of my design approaches and decisions has begun to surface by being reflective. Through this experiment, however, I have realized that I cannot become a reflective practitioner/designer, nor can I come to a real conclusion about the models and tools I tried out, in just a matter of a few short weeks. As McIntosh (2010) points out, it is one thing to utilize a method such as reflective practice, and another to develop cognitive process through which real reflection can actually happen. "To use such tools, you need to know how to reflect before you can get the best from them…" (p. 57). Being a reflective practitioner is not a matter of simply using a journal, checklists, or a blog—though perhaps these are mediums for recording one's consciousness. I believe that with practice, reflection will become a habit of mind with which I can continue to seek knowledge about myself and about the world around me.

Appendix A

FORMS and CHECKLISTS (Reymen, 2001)

FORM Properties&Factors: Description of a design situation: properties and factors							
Design task: design of a new coating for garden houses					Designer: Isabelle		Date: 17/01/2000
Sub-task: definition of alternative coatings					Start time session: 14:00h		End time session: 17:00h
Properties and factors	VALUE	SUBJECT	STADIUM	RATIONALE	SOURCES	REFERENCE	FIXATION
Dimensions	2.5m high, 1.8m wide, 1.8m long	Product being designed	Desired property	Functionality	Design-team leader	2D drawing	Negotiable
Kind of coating	Ingredient 'X'	Product being designed	Desired property	Fulfils law	Senior designer	Specification document	Unnegotiable
Current layout	2.5m high, 1.8m wide, 1.8m long	Product being designed	Current property	Desired	Design team	Drawing 2D	Negotiable
Max. duration	3 months	Design process	Desired property	Budget	Project manager	Project proposal	Negotiable
Budget	$30 000	Design process	Desired property	Given by manager	Project manager	Project proposal	Negotiable
Budget	$15 000 spent	Design process	Current property	/ (irrelevant to this property)	Design-team leader	None	/ (irrelevant to this property)
Support	CAD, method	Design process	Current property	Useful	Design-team leader	Manuals	Negotiable
Stakeholders	Project leader, garden shops	Design context	Current factor	Important	Design-team leader	None	Negotiable

An example of a filled out FORM Properties & Factors (Reymen, 2001, p. 80)

FORM Relations: Description of a design situation: relations				
Design task: design of a new coating for garden houses		Date: 27/01/2000		Designer: Isabelle
Subtask: definition of alternative coatings		Start time session: 14:00h		End time session: 17:00h
Relations	FROM	TO	KIND	RATIONALE
Produceability	Dimensions of production machines	Dimensions of garden house	Limits	The production machines limit the dimensions of the planks.
Capacity	Staff	Duration	Influences	With more support, the duration of the design process can be shorter.
Environmental relation	Environmental law	Kind of coating	Is determined by	The environmental law limits the use of certain ingredients for coatings.
Dimensional relation	Related task	Dimensions of garden house	Influences	The dimensions of the garden house are determined in a related task.

An example of a filled out FORM Relations (Reymen, 2001, p. 81)

CHECKLIST FOR INVENTORYING PROPERTIES AND FACTORS

Design task (properties)
- Product being designed
    - What is the desired state of the product being designed?
        - Which main problem must be solved?
        - Which representation of the product being designed is desired? (medium, level of detail)
        - What are desired properties of the product?
        - Which representations of the desired state of the product being designed have been made?
    - What is the current state of the product being designed?
        - What are properties of the product being designed at this moment?
        - What are the important problems to be solved at this moment?
        - Which representations of the current state of the product being designed have been made?
- Design process
    - What is the desired state of the design process?
        - What is the deadline of the design process?
        - What is the budget for the design process?
        - What is the capacity of the design team?
        - Which other properties of the design process are desired?
        - Which representations of the desired state of the design process have been made?
    - What is the current state of the design process?
        - Can the deadline of the design process be met?
        - Who are the members of the design team?
        - Which part of the budget has already been used?
        - How is the design process supported (machines, software, tools, secretary, room, methods, procedures, environment, etc.)?
        - What are problems in the design process at this moment?
        - Which representations of the current state of the design process have been made?

Context of the design task (factors)
- What is the current state of the design context?
    - Which related design tasks have been defined?
    - What are important factors in those related design tasks?
    - What are the current and the desired state of the overall design task?
    - What are the important stakeholders and their concerns?
    - What are important processes in the product lifecycle?
    - What are important factors in these processes?
    - What is the company strategy regarding product planning?
    - How does the companies vision influence the design task?
    - What are important competitors?
    - Which norms and laws are related to the design task?
    - What is state-of-the-art knowledge related to the design task?
    - Which representations of the current state of the design context have been made?
- What are possible trends in the design context?
    - What are possible changes in related design tasks?
    - What are possible changes in the processes of the product lifecycle?

An example of CHECKLIST Description Design Situation (Reymen, 2001, p. 82)

CHECKLIST FOR ANALYSING DESIGN SITUATIONS

Analysis of the state of the product being designed
− Is the list of desired properties about the product being designed complete?
− Is the list of desired properties about the product being designed consistent?
− What is the core problem to be solved? Is this the real problem to be solved? Do I know similar problems?
− Is the list of current properties about the product being designed complete?
− Is the list of current properties about the product being designed consistent?
− Which desired properties are met up to now?
− Are all factors taken into account in the design of the product being designed?
− Which representations of the product being designed might be missing?
− What are consequences of the current state of the product being designed for processes in the product lifecycle?
− What are alternative properties and values? Why?
− How do I feel about the current state of the product being designed? (Does the product being designed fits its purpose? To what degree is the design challenge met and are the design conflicts resolved? What are the chances on the market? Is the product being designed future oriented with respect to the future development of the market and the technology? What is its aesthetic value?)
− Which current properties can be improved? Why?
− Which concepts of the product being designed can be re-used?

Analysis of the state of the design process
− Is the list of desired properties about the design process complete?
− Is the list of desired properties about the design process consistent?
− Which desired properties are not met?
− Are all important factors taken into account in the design of the design process?
− Which representations of the design process might be missing?
− What are consequences of the current state of the design process (duration, budget, capacity, etc.) for other processes in the product lifecycle?
− What are alternative possibilities for the design process?
− How do I feel about the current state of the design process? (How did the management support me? How was the collaboration with the design team?)
− How can the current state of the design process be improved?
− Which concepts of the design process can be re-used?

Analysis of the state of the design context
− Is the list of relevant factors complete?
− Are other representations of the design context desirable?

Analysis of the complete design situation
− What is the challenge of the design task?
− Is the list of relations complete?
− Are all relations consistent?
− Are properties about the product being designed and properties about the design process mutually consistent?

An example of CHECKLIST Analysis Design Situation (Reymen, 2001, p. 83)

	Design Task Important design activities			Design Context Transitions
FORM Design Activities&Transitions: Description of design activities and transitions				
Design task: design of a new coating for garden houses		Designer: Isabelle		Date: 27/01/2000
Subtask: definition of alternative coatings		Start time session: 14:00h		End time session: 17:00h
	ACTIVITIES ABOUT THE PRODUCT BEING DESIGNED	ACTIVITIES ABOUT THE PRODUCT BEING DESIGNED	INTERACTIONS WITH THE DESIGN CONTEXT	TRANSITIONS RELATED TO THE DESIGN TASK
Past	Determine desired properties	Compose design team	Speak with director about product planning (rationale: to check rumours)	Competitor 'G' failed
	Analyse problem	Determine subtasks	Receive information about dimensions of the garden house from related design task	
			Ask information about dimensions of production machines	
Future	Analyse how to link low cost with good quality	Solve software problem	Talk with supplier ingredients	New law about use of coatings
	Define all ingredients coating	Check rumours about changes in planning design task	Analyse patents of competitors (rationale: to find which ingredients cannot be used without permission)	
	Estimate cost of new coating	Hire other expert on coatings?		

An example of a filled out FORM Design Activities & Transitions (Reymen, 2001, p. 85)

CHECKLIST FOR ANALYSING DESIGN ACTIVITIES AND TRANSITIONS IN THE DESIGN CONTEXT

Analysis of activities about the product being designed
- How did the desired state of the product evolve?
- How did the current state of the product evolve?
- How do I feel about the activities about the product being designed?
- What were problems in executing these activities?
- How can these activities be improved?

Analysis of activities about the design process
- How did the desired state of the design process evolve?
- How did the current state of the design process evolve?
- How do I feel about the activities about the design process?
- What were problems in executing these activities?
- How can these activities be improved?

Analysis of interactions with the design context
- How do I feel about the interactions with the design context?
- What were problems in executing these interactions?
- How can the interactions with the design context be improved?

Analysis of the complete design process
- How do I feel about the design process? (with respect to the sequence of design activities, efficiency, effectiveness, problems, co-ordination, etc.) Why?
- What is the cause of problems in the design process? Could these problems be solved in a different way? What can be learned from these problems for future processes?
- Which design activities did not result in a change towards the design goal? Why?
- Which mistakes were made in the design process? Had it been possible to anticipate these mistakes?
- Is enough progress made in the design process?
- Which design activities can be executed more efficiently? How?
- Which concepts of the design process can be re-used for a similar design task?
- What were critical situations?
- What can be learned from the evolution of the different states?
- Which design activities must be executed in future subtasks?

Analysis of transitions in the design context
- How did the design context evolve?
- How can transitions and future transitions in the design context better be taken into account?
- How can laws be influenced?

An example of CHECKLIST Analysis Design Activities & Transitions (Reymen, 2001, p. 86)

Appendix B

Creative Brief

Design Problem:

      The design problem is to create what would be the equivalent of a book cover design for this synthesis paper visually representing my exploration of reflective practice in design. I can use the abstract for an outline for inspiration and direction. Because I am writing the rest of this synthesis while I am designing a cover for it, a challenge might be posed. But because I am the author *and* designer I can modify the design as the paper comes to a conclusion based on what I have learned through my reflections.

Name of the client:

      Myself, as growing designer, scholar, aspiring design community builder, and aspiring future educator.

Tell me something about the client, what they do etc.:

      I am a graphic/web designer, currently running my own freelance business but perusing full-time employment and/or new clients. So this book cover project would be shown in my design portfolio. I also plan to continue research and practice post CCT graduation, and hope to propose some course ideas for undergraduate graphic design programs in the future. For this reason I would also want to show this book cover, with the synthesis paper, as a product of my graduate education, research, and new found knowledge. Lastly, I would like to promote my graduate writings on my website and blog. I am exploring my intersection between academia and professional design.

What is the voice and characteristics of the client and their business?

      I will consider the "business" for this project the creating of a book cover (as opposed to my actual design business, CiampaCreative LLC) on an exploration reflective practice in design. My voice here is that of a designer who is growing in her thinking as a result of CCT and a self-directed exploration of reflective practice in design. This voice is not one of claiming expertise; it is one of a passionate explorer and designer who wants to speak to others about being more

reflective in our professional design processes and fostering the lines of communication between design professionals.

What are the client's goals? What does the client want to accomplish?

I intend to produce this book (book cover design + synthesis paper contents) initially as: a) a design portfolio piece, and b) a paper to share on my blog and with future potential employers or students. In terms of what I want to accomplish in a cover design, I obviously want to appeal to other designers mainly, design educators, design researchers, and students, but I also want it to be clear and simple enough to speak to non-creatives and future CCT students who might look to it for some kind of inspiration on a similar topic. I want to convey the essence of my synthesis project, a visual representation of my experience with reflective practice and my goal to continue to be reflective (this might relate more to the later question on "Message" in this creative brief), and be inspiring to want to read something that might seem to outsiders like a boring academic topic. I am also not looking at this so much from a marketing perspective as much as I am a personal design piece- it is a balance of the two really.

Competition – what other products exist similar to the product you are working with?

I have not found any books specifically on reflective practice in design, especially in the concept development process, but the literature (papers/articles) on reflective practice in design is discussed in Chapter 2 of my synthesis. There are many books on reflective practice in general and reflective practice in other fields (nursing, education). I discovered this book late in my research for this paper: *Reflective Practices in Arts Education* by Burnard & Hennessey (2008), but did not get a chance to look at it. It's hard to identify my "competition" because I am not trying to sell anything per se, but if I asked myself what I have to offer that others may not, it is my position as a CCT student and showing how this has influenced me as a designer. My book is not "preaching" a specific design method (as many of the published design books are), but rather is offering my exploration of reflective practice as a designer still young to the profession.

There are many design books on how to improve the overall design process, and they are more general covering the overall process rather than focusing on the concept development process. These are just a few of the many and recent graphic design books on the market:

Managing the Design Process, Stone (2010); *Hot Wiring your Creative Process*, Cloninger (2007); *inspiration=ideas: A Creativity Sourcebook for Graphic Designers*, Vrontikis (2002); *Creativity for Graphic Designers*, Oldach (1995); *How to Grow as a Graphic Designer*, Fishel (2005). There are many, many more, and in different fields of design. As a classmate said to me, a lot of these books are self-promotional, published by design "rockstars."

In addition to books on reflective practice and on design, I have a few books that show selections from a designers' processes (images, not written reflections): *Sketchbooks: The Hidden Art of Designers, Illustrators, and Creatives*, Brereton (2009); Sketchbook: *Conceptual Drawings from the World's Most Influential Designers*, O'Donnell (2009); *Design Diaries: Creative Process in Graphic Design*, Roberts & Wright (2010); *Drawing from Life: the Journal as Art*, New (2005).

Audience – What type of people use the product that you have chosen? What are the characteristics of your audience?

My audience includes other designers, design researchers, and design educators and students; specific age range: 20 to 50 (but not limited to). These people have a passion for and appreciation for design aesthetically as well as for thinking about the design choices made—they more than likely will not just look at the surface of a design but will analyze it more deeply if it holds their interest. I think creatives in general appreciate a "story", and designers like a visual story. These people are curious; they love to be inspired; they speak a visual language, or are learning to speak/developing a visual language. They want to see clarity and purpose in a design, while also being led to think and question it.

Some reference websites:

http://designarchives.aiga.org/#/home

http://www.aiga.org/content.cfm/designer-of-2015

Design Journeys: You Are Here: http://www.aiga.org/content.cfm/exhibit-design-journeys

AIGA Atlanta Color Blind: http://voice.aiga.org/content.cfm/aiga-atlanta-color-blind

http://micadesign.org/2010/11/2010-graphic-design-thinking/

http://issuu.com/elupton/docs/graphic-design-thinking

http://www.fairchildbooks.com/book.cms?bookId=288

http://www.okaygreat.com/

The Young Designers Guide: http://www.youngdesignersguide.com/

http://www.designworklife.com/

The Organization of Black Designers: http://www.obd.org/

http://www.designsojourn.com/

http://designobserver.com/

AIA Women in Architecture and Design: http://aiawiand.ning.com/

Harvard Graduate School of Design—Women in Design:

http://www.gsd.harvard.edu/people/students/student_forum/forms/WID.pdf

Message – What is the main idea that you want to communicate to the viewer? What message do you want the viewer to walk away with?

I want to spark interest in reflection in design to those who aren't aware of the significance of it by giving them "a peek" inside my exploration. Again I am coming from a non-expert position on the subject, so I want to convey that I am speaking to readers as a design peer, as a colleague, as a curious and passionate explorer just as they are.

What type of imagery could you use to get the concept across to the viewer that is not typical to what is normally thought about for this product?

Typical imagery for the concept of reflection (and for literature I have seen on reflection includes: water/reflection in water, mirrors, abstract swirls. For consciousness, common imagery includes rays of colored light, the brain, and people in meditation.

Appendix C

The Author's Sample Reflection Checklists for the Reflective Practice Experiment

CHECKLIST FOR INVENTORYING PROPERTIES AND FACTORS
Design task (properties)
Product being designed
– What is the desired state of the product being designed?
– What is the current state of the product being designed?
Design process
– What is the desired state of the design process?
– What is the current state of the design process?

CHECKLIST FOR ANALYSING DESIGN SITUATIONS
Analysis of the state of the product being designed
– What is the core problem to be solved? Is this the real problem to be solved?
– Are all factors taken into account in the design of the product being designed?
– How do I feel about the current state of the product being designed? (Does the product being designed fits its purpose? To what degree is the design challenge met and are the design conflicts resolved?
Analysis of the state of the design process
– Are all important factors taken into account in the design of the design process?
– How do I feel about the current state of the design process?
– How can the current state of the design process be improved?
Analysis of the complete design situation
– What is the challenge of the design task?

CHECKLIST FOR ANALYSING DESIGN ACTIVITIES AND TRANSITIONS IN THE DESIGN CONTEXT
Analysis of activities about the product being designed
– How did the desired state of the product evolve?
– How did the current state of the product evolve?
– How do I feel about the activities about the product being designed?
– What were problems in executing these activities? How can these activities be improved?
Analysis of activities about the design process
– How did the desired state of the design process evolve?
– How did the current state of the design process evolve?
– How do I feel about the activities about the design process?
– What were problems in executing these activities? How can these activities be improved?
Analysis of interactions with the design context
– How do I feel about the interactions with the design context?
– What were problems in executing these interactions?
– How can the interactions with the design context be improved?
Analysis of the complete design process
– How do I feel about the design process? (with respect to the sequence of design activities, efficiency, effectiveness, problems, co-ordination, etc.) Why?
– What is the cause of problems in the design process? What can be learned from these problems for future processes?
– Is enough progress made in the design process?
– Which design activities can be executed more efficiently? How?
– Which concepts of the design process can be re-used for a similar design task?
Analysis of transitions in the design context
– How did the design context evolve?
– How can transitions and future transitions in the design context better be taken into account?

Adaptation of Basic CHECKLIST Description Design Situation combined with CHECKLIST Analysis Design Situation and CHECKLIST Analysis Design Activities & Transitions (Reymen, 2001)

Appendix D

Completed Journal Reflections from Book Cover Design Project/Reflective Practice Experiment

March 18, 2011 Free write:

I just completed a creative brief (Appendix B), a form I complete in preparation for a design project based on a questionnaire and informational interviews with a client and initial research and ideas. In it I began to explore the voice I am coming from in this design project, my audience, my goals, and the message I am trying to convey. It took me about an hour to complete, and surprisingly was quite challenging! I have never before reflected on a personal design project in this way, where I am my own "client". But immediately after completing the brief I could already feel the benefit of thinking things through and deliberately articulating in this way before jumping in, which is precisely why designers have their clients provide this information.

One specific challenge I encountered was that I am only half way through my synthesis project, so I haven't yet realized an overall conclusion. I haven't even begun to embark on the experiment. So articulating a goal for a visual representation will entail a different kind of a process than I am used to (in client cases I am usually designing for a "product" or service that is pretty much ready to go). But I see this challenge as an exciting, intense interweaving of reflecting, designing, reflecting, learning, designing…

March 24, 2011: Session 1

Critical Incidents:

Did anything unexpected or unique occur in this design session (or whole process)?

I was pulling other elements of myself (musician, etc.) into my brainstorming.

How did it come about?

It came to mind from thinking about the "self" in self-reflection (though reflecting on the design process is not self-reflection per se).

What were critical situations?

Using the *Oblique Strategies* (Eno & Schmidt, 1975) was a memorable moment in this

session. It made me realize an insecurity I do have about being too critical too soon. I will use Oblique Strategies again, or create my own set, when I need some creative stimulation. Also, I was aware of asking myself questions during the brainstorming—using questions in a brainstorming list, as opposed to just words, seemed to help me generate more ideas.

Do I notice any patterns in my design approaches?

The brainstorming then sketching approach is one I always use…I also try to consciously turn off the critic in my head while brainstorming, and am aware when it tries to come back on, though I still want to be able to quiet it more for this initial creative phase. I also noticed that I almost started sketching with design layout dimensions in mind, because I often have those already in professional jobs (web page size, pamphlet size, advertisement size, etc.), but because I have less creative constraints this time, I tried really just sketching abstractly at this point.

Reflection Tool Reflection: Using the reflection checklist tool, I had to revisit Reymen's dissertation to clarify what she means by "state of *product* being designed" versus "state of design *process*", design *context, situation, etc…*Overall I feel confused in answering all of these questions, having to shift my mind between process to product to context, and so on Reymen's forms were intended to compliment the checklists, and since I excluded using those I may be missing out on the greatest benefits of her method. I found that this deliberate reflection using the checklist questions alone, even though I shortened them from Reymen's, is very time consuming. I didn't want to spend more time completing them than actually designing, which was a concern of my synthesis advisor Carol Smith, so I tried to answer the questions as quickly and concisely as possible. In this first pre-design reflection today, I found that a lot of the questions were irrelevant at this early point and skipped those.

March 26, 2011: Session 2

Design Reflection: Today I kept myself from jumping ahead in the process to more sketching, and did more brainstorming around descriptive words and phrases for what I am trying to convey in my synthesis and in my book cover. I found myself repeating some of the terms I generated in the first design session but tried to get through that hump and generate a broader pool of ideas. I followed that with a mind mapping exercise, which helped me by taking

the overarching themes from my brainstorming list of words, and making connections between and among them. From here I feel confident in moving forward in the process to doing some more rough sketching next session.

One thing I do feel needs more work is the understanding of my target audience. I feel that I assumed that because I was a designer and my audience is designers, that I could shortchange my target audience research for this project. But through reflecting in the checklists, I realize that I need to make sure I am reaching those who might not be formally educated designers for instance, or that the visual representation I create is not too complex that it doesn't leave room for the viewer to be involved. I also realized today that I should double-check to make sure my timeline is comprehensive.

Critical Incidents:

Did anything unexpected or unique occur in this design session?

The phrases "reflection-in-action" and "reflection-on-action" surfaced in my brainstorming list, which was unexpected for me because I did not anticipate specific theories from the literature to manifest in my creative brainstorming.

How did it come about?

Maybe it surfaced by being connected to the words "consciousness" and "reflection" which were the two first words in my brainstorming list.

What were critical situations? (Reymen, 2001)

One was consciously keeping an open mind in the process—I feel that that helped me generate some new words and ideas. Another was after I felt the brainstorming was sufficient, finding the common themes and organizing them into three columns and then taking that further into a mind map—this was entirely done on a whim, intuitively. This process seemed to be a good way of opening up and then closing in, and it might even be beneficial for me to repeat this process again in the next session to see what more I can come up with before moving forward to sketches.

Do I notice any patterns in my design approaches?

I think I was able to break a certain pattern today by refraining from jumping forward too soon to sketching, and by holding back to verbalize developing ideas more. While I don't ever follow a strict, linear design methodology, I have found it very helpful at times to put my thoughts into words before images, but sometimes it happens the other way around if I am feeling inspired visually. The ideas come when and how they come sometimes, and that makes reflecting on processes all the more interesting.

Reflection Tool Reflection: One of the things that I like about the checklists is that I can look back at the same questions from the previous session and compare my current answers to what my previous goals were. It is a very organized means of reflecting. What I find overwhelming about them is that it challenging to constantly differentiate between "product" versus "process" versus "context", as Reymen's questions jump around from these sections. I often find myself asking myself "Didn't I just answer this question?". I plan to narrow these questions down even further by combining some.

March 29, 2011: Session 3

Design Reflection: I had a couple of visual thoughts in the front of my mind at the beginning of today's session, so I sketched those out really quickly, not judging or editing. I felt I needed to get more inspiration before going any further though. I looked to the many websites I have bookmarked on my web browser, and to the books I have on design process showing sketches accompanied by finished products from various designers. The books got me thinking about layers; the many overlapping layers of a design process, and the idea of showing layers in my book cover design. It also got me thinking more about my audience of fellow designers and how I might reach them emotionally. I think the words inspiration and process are emotionally tied to all designers (unless they don't care about those things!). Thinking about this led me to do more brainstorming, which may or may not have fueled my sketching, but I felt it was necessary. Some of the themes that kept resurfacing for me in sketching were layers, close-ups/zooming in close, and a certain airy simplicity.

Critical Incidents:
Did anything unexpected or unique occur in this design session?

I did realize today that I was becoming more conscious of my reflection-in-action during the design process.

How did it come about?

Perhaps this is due to the fact that this synthesis project involves revealing myself to a lot of people who will be seeing it and as a result I am more hyperaware.

What were critical situations? (Reymen, 2001)

1) Thinking about the emotional drive of designers, of my audience, was critical. 2) Bringing in an element of playfulness to an otherwise seemingly serious topic. 3) Taking a break to refuel my inspirational materials, or "decenter"-ing from the project entirely for an hour, eight hours, a day…

Do I notice any patterns in my design approaches?

I am noticing that I do often follow that intuition to pause if I need to do more research or get more inspiration. I don't force myself to do something that's not flowing. I find that when I do take that break to re-fuel, when I return to the design session, ideas start flowing more.

Reflection Tool Reflection: Today I decided to use the reflection checklists after my session only, as opposed to before and after. The reason for this was I felt it would be more productive to simply review my checklist from the end of the previous session to refresh my memory in preparation for this session. This was sufficient preparation for me for my small scope project. This is not how Reymen intended her method to be used, but since I am creating my own methods, I tried this approach out and am happy with it. I also think that I was struggling a bit with the checklists because I am realizing that the comprehensiveness of them encompasses the entire design process, so even though I tried to narrow down the questions to eliminate the more technical ones, they are still not specifically geared toward the more conceptual phase of the creative process.

I am finding that by reflecting *on* my process, I am becoming more aware *during* my process of the intuitive actions I make, and I am becoming more aware that maybe, just maybe, this is "reflection-in-action" in action.

April 1, 2011: Session 4

Design Reflection: To begin this session, since I decided not to do the checklist before it, I reviewed brainstorming notes and sketches from Session 3. I selected what I thought to be the best ideas, and then refined them into new sketches, adding modifications and multiple versions. I then used the SCAMPER (Michalko, 2006) technique (Substitute, Combine, Adapt, Modify, Put to other uses, Eliminate, Rearrange) to further brainstorm design concepts in sketch form. This was the first time I have used SCAMPER for this purpose, and I found it to be fun and helpful in generating some modified and even new ideas. I did not go through the entire SCAMPER list, so I could have spent more time on this, but I'm satisfied for today.

I presented my developing concepts to my husband, who I often go to for feedback when I am working in solitude on a freelance project, since I do not have colleagues here at my home studio like I do when I am working on location somewhere. That he is he is not a visual artist does not matter—I am not looking for design layout criticism per se, but rather feedback on my ideas and how I am communicating them, and he is very creative. By presenting my initial ideas to him, I am able to see his reaction, how they affect him, what questions my sketches raise for him. Best of all, he helps me build new ideas from the old ones. Though he is not a member of my target audience, it is very helpful to get other perspectives because it might shed light on something I was not seeing or considering before. After I create 3 or 4 of the concepts using design software, I will upload them to the blog and invite feedback from my design peers as design book consumers.

Critical Incidents:

Did anything unexpected or unique occur in this design session?

The unexpected ideas, or building on the old ideas, occurred while using the SCAMPER technique.

How did it come about?

Normally, I would move forward with about 3 concepts from my sketches, if excited about a few of them, and begin to work on rough drafts on the computer to then show the client. But I am now realizing that by pushing it just a little bit further (this could be by using SCAMPER or any number of creative thinking techniques), I have generated additional

interesting ideas to work from.

What were critical situations? (Reymen, 2001)

      1. Starting to think about tactile qualities and specifications of the design—Paper choices; thinking about adding non-flat surface features; including the back cover. 2. Moving back and forth from research on the web for how I would execute the mirror idea or the mirror-paper idea, looking at prices, referencing things on the web that my ideas made my husband and I think of (Janus, Wittgenstein's Duck Rabbit).

Do I notice any patterns in my design approaches?

      I notice that I tend to move back and forth from referencing something (information about my client, audience, on the web or in a book), to going back to my notepad, as needed. I also notice that although for this project I didn't begin to think about paper sizes and costs until today, often for professional jobs I am already thinking about and researching these factors early on because of budgeting. I sort of "parallel process" concept development with the more technical logistics.

April 2, 2011: Session 5

      Today I took a step back from designing to take stock of and evaluate the initial ideas I have generated. I do not usually do a formal evaluation of my rough sketches at this point. I usually just go with my intuition about which ideas I like best or I think will work best with the factors of the project, client, budget, and any technical restrictions (website needs, etc.). I then I move from sketchbook to computer to create rough digital drafts of those few looks. I think experience and knowledge come into play here because I am able to gauge what ideas will most likely transfer from rough sketch to digital image to execution successfully, though sometimes I am wrong and have to make adjustments, learning as I go. In the spirit of exploration and intentional reflection in this synthesis, I used a selection of evaluation questions from a book by Stone (2010) entitled *Managing the Design Process: Concept Development*. "Beyond the typical, 'Do I like it?' or 'Does it work?' are some open-ended more powerful questions to ask:"

      Is it authentic? Is it on message? Is it innovative? Is it interesting, compelling,

      provocative? Does it have emotional impact? Does it invite interaction? How does it

compare to the competitors? Is it different (or similar) enough? Is it an unexpected solution for us? Is that good or bad? Does it take a risk or play it safe? Is anything unsatisfactory? Why? (p. 94)

In reviewing my rough sketches from Sessions 3 and 4, I kept these evaluative questions in mind and found that they helped me be more critical and objective of my work. This is of course a subjective view in itself. I may use some of these questions for requesting feedback from my design peers on the blog. Choosing concepts from my sketches to further develop was difficult—and not because I thought they were all great, I certainly do not, but because I am used to having a client's input and/or a more defined set of restrictions or directions for implementation (i.e. a website designed for a specific budget, a real estate property listing sheet layout that must accommodate a certain number of images with a specific amount of text, or a design for an email blast for a company where I work with a marketing team and have to get their approval). And although I have developed skills in persuasively "selling" a design concept to a client, in the end it is ultimately their decision on which they like best. In this case, I am my own client, so it is a bit of a challenge in deciding so subjectively! This is where I hope the blog will be helpful—by inviting feedback from design peers.

Reflection Tool Reflection: I concluded this session with my first written assessment (see Appendix D). I felt that this was a good point in the process (prior to moving onto the computer to create digital design layouts) to do a longer reflection in the written self-assessment, to reflect deeply on the process of developing ideas. I intended to write about 600 words, but ended up writing about 900. Next time, I will not place any limits on myself, I will just write reflectively for as long as I feel the need to (and/or have the time to)! I found Ellmers et al.'s suggested points to focus on to be very beneficial in my learning from the design process, and an easy format to follow.

Session 6: April 4, 2011

Design Reflection: In keeping the evaluation questions in mind from *Managing the Design Process: Concept Development* (Stone, 2010), I initially selected 4 main concepts to refine further (see images below). This is about as many as I present to a client for the first

presentation, though often I present 3 main concepts with 2 or 3 slight variations of each (color, type, or layout variation, etc.).

What was especially interesting to me in choosing these concepts was that the first one I chose was the mirror idea, which was the first idea I had in my brainstorming. In reflecting on past design projects, it seems like it is often those early ideas that get tossed out because new ideas develop, but I felt that this idea really spoke positively to the evaluative questions (such as: Is it on message? Does it invite interaction? How does it compare to the competitors?). And while I originally thought that the mirror was a cliché image for reflection, I believed that the way in which I would be executing it was original, unexpected, and interactive. This idea is one that developed through the concept development process and continued to speak to the goals of the project (…)

Session 7: April 5, 2011

Design Reflection: This was a longer session than the others, about 4.5 hours, to layout each visual concept digitally. The most challenging concept to produce digitally proved to be Look #4, the brain concept. Working with the type for the title and trying to get it to fit into the head shape in a way that resembles a "noodley" brain but retains its legibility and readability.

At some point I decided that I was not completely done with one of the earlier rough sketches I did, and realized that I thought it was actually a really good candidate for a design solution (the yellow, worn paper, abstract shapes look). I wanted it out and include it on the blog, so I added it to the group of digital layouts. This one was really simple to design because I had found the image as a stock image and just played with it a bit. I was mostly playing with type here.

Reflection Tool Reflection: Using the blog for the first time was definitely time consuming. I had it set up prior to beginning this project, but today I had to upload the images from my sketchbook and modify the blog settings to my liking. It was not until today that I realized that this particular blog hosting service does not allow for blog visitors to post comments on my work, which defeats the purpose entirely for me! So I decided to ask visitors to email me feedback until I have time to move the blog over to a different host. I think that once I find one that is more user friendly, blogging could easily become a more ritualistic mode of reflection for me, and a great way to solicit dialogue around design with peers.

As anticipated, the act of refining my verbal reflections to speak to my design peers more directly in the blog (speaking more concisely about design decisions) does feel as though it further enhances my own learning from my design process. The act of making excerpts from the process public and inviting feedback also made me look at the design ideas in a new light—a perhaps more critical light, more focused on the finer design details, which is something I do not usually do at this point…

Session 8: April 5, 2011

Continuing to work on digital design layouts…

Blog (merge reflections for the blog sessions, and developing digital layouts- introducing typeface exploration, challenges faced), getting feedback.

Session 9: April 9, 2011

Today I did a checklist reflection before the session to reacquaint myself with the process (since it had been a few days between sessions). This was very helpful to…Working more on comps, merging elements from different looks together- finding different uses for the transparent paper than I originally intended, so adding another look that overrides the original flat type look, giving it more dimension using the layers of paper.

Critical Situations:

Did anything unexpected or unique occur in this design session (or whole process)? Finding different uses for the transparent paper than I originally intended. Also, I was researching online, looking for other treatments of using a brain/head image with type. I found a very nice illustration and instantly must have made a connection to a past design I did in which I had letters, a stream of letters, flowing out of people's mouths and coming together to form one stream of words…This past idea could be combined with the idea I saw online in the illustration, with the top of the head open. As an alternative to having the book title inside of the brain, I could have the top of a head cracked open and have the letters come out to form the title above the head. I combined an old concept with a new one.

How did it come about?

There is an element of surprise in the process that is unexplainable, not deliberate—something that happens perhaps intuitively…

What were critical situations? (Reymen, 2001)

Thinking of other uses for a material I had originally allotted to another concept; but at the same time, I noticed that at a point, when I am really getting into the details of a design idea, I often begin to forget all of the goals for the message of the design, the target audience, etc., and get lost or obsessive in the minute visual details. This is not a good thing at this point in the process. So I think another critical situation was realizing that I was doing this and pulling myself away with the intention of evaluating the concept, not the minute visual layout details, in the next session.

Do I notice any patterns in my design approaches?

I think that I was considering trashing the "brain" concept because I knew it would be more time consuming than others and I didn't have a lot of time…which is something I would also do if I was working on a fast deadline project for a client. If I know I have more time to dedicate, I will spend the time working on a concept that I am curious about or have confidence in.

Session 10: April 11, 2011

Evaluation Questions from book, Finalizing roughs for printing finish design comps (4) and get ready for printers (after measuring synthesis book).

Using the evaluative questions again from *Managing the Design Process: Concept Development* (Stone, 2010):

Is it authentic?

Mirror concept: It is authentic in its originality—though at first I thought the mirror idea was cliché—because I think the use of mirror paper or a realistic reflection as a book cover is an original design/use. It is also authentic in its sincerity—I think the simple design, with the focus being on the reader's reflection and the type being simple, says that it is sincere about wanting to speak to and include a wide audience of designers.

Bubble concept & Worn paper/shapes concept: Being that these are both using stock images (as they appear now), there is always the chance that someone else is using them. As these are still only in rough phase (if I were presenting to a client, the understanding that these looks are initial concepts that would be much further refined would be clarified), there could be time for development of the artwork into something more originally created from the stock imagery or taken even further.

Typography/layered vellum paper concept: This style is authentic to me because it *feels* like it is part of my personal aesthetic. I have also really been trying to get back into typography lately. So this style is authentic in that it is true to the artist. I have also not seen any books using this layered paper approach or the transparent vellum (probably because it would be very expensive!!!).

Is it on message?

Mirror concept: In my mind, the concept and the material invites the viewer in, and the message of consciousness is intended to be conveyed in the act of seeing the reflection. This of course needs to be tested out though.

Bubble concept: The bubble look is friendly, inviting, not forced, and suggests exploration, change, and consciousness. The question is, does it speak to a diverse audience of designers? Does it intrigue the viewer to make a personal connection to the idea of reflection in design?

Worn paper/shapes concept: The worn paper/shapes look is not evolved in its intention with color and type, or overall message.

Typography/layered vellum paper concept: I think some more thought needs to be done around whether or not it reflects the ideas of "reflection" and "creative consciousness" enough. It does speak to the intended concept of "layers" and "process."

Is it innovative?

The use of materials in the mirror paper concept and the layered vellum paper concept is innovative for a book cover design, but this is because printing gets expensive and book runs can be large in quantity, so interesting papers are rare. The more artistic, "coffee table" books often

incorporate higher quality papers and printing because they are meant to have aesthetic value and probably have a higher retail price in return.

Does it invite interaction (not in the technological sense, as these are going to be print book covers)?

> Mirror concept: Yes
>
> Typography/layered vellum paper concept: Yes
>
> Bubble concept: There is some movement suggested in the imagery through the depth and the layers of bubbles. Another element of interaction could be if I used embossing in printing, creating a tactile interaction (but keeping the question in mind of what is the significance/need for that in respect to the concept?)
>
> Worn paper/shapes concept: The abstract shapes, the texture, and diagonal layout do create some element of interaction, though I am not sure that the type treatment itself is interacting with the design as a whole yet.

Is it an unexpected solution for us? Is that good or bad?

> For the mirror concept, if this book was really going to be on bookstore shelves, the unexpectedness of a shiny reflective book could have one of two affects on people: the unexpectedness of this as a book might cause them to overlook it; the unexpectedness, the shiny object that stands out among the other book covers with big titles, could be intriguing and draw them in. The worn paper/shapes concept is slightly trendy in its style, but I think it speaks to the times without being overly trendy.

Does it take a risk or play it safe?

> I think the brain concept, at least in the way I have it looking now, it might be on the safe side. Same for the worn paper concept.

Appendix E

Completed Reflection Checklists (Adapted from Reymen, 2001)

Session 1: March 24, 2011

Pre-Session 1

ADAPTED CHECKLIST DESCRIPTION DESIGN SITUATION

Design task (properties)

Product being designed

What is the desired state of the product being designed?

For today's session, I would like to have a productive creative exploration session, generate

some vocabulary around ideas, and initial rough sketches.

What is the current state of the product being designed?

Pre-conception. The specs don't necessarily need to be 8.5x11" as the synthesis paper size

will be; it could be any book cover size.

Design process

What is the desired state of the design process?

By April 2nd, I aim to have three rough design concepts.

What is the current state of the design process?

I have been looking for visual inspiration (but haven't found much inspiration yet), and am

just starting the initial creative exploration/brainstorming process today.

ADAPTED CHECKLIST ANALYSIS DESIGN SITUATION

Analysis of the state of the product being designed

What is the core problem to be solved?

Design a concept for a cover representation of my synthesis project on reflective practice in

design process.

Is this the real problem to be solved?

The problem quite possibly will be reframed and/or made more specific as the project

progresses.

Are all factors taken into account in the design of the product being designed?

Research on target audience could be more strategic, though I am looking at this as more of a personal design project than trying to sell anything. But I do want to appeal to other designers and educators. Also, should I be thinking about how the concept would carry over into the inside pages of the book if I did in fact produce it as a portfolio piece? Perhaps I do not need to think about that at this point though. It can follow the cover design later.

How do I feel about the current state of the product being designed? (Does the product being designed fits its purpose? To what degree is the design challenge met and are the design conflicts resolved?)

I honestly have no idea what form my ideas will take yet, and it's a little unsettling but in a good, creative-drive kind of way. I'm going into the project with a totally clean slate, when usually for client based projects there are ideas that the clients bring that merge with mine.

Analysis of the state of the design process

Are all important factors taken into account in the design of the design process?

I am trying to focus on concept development specifically for this short project, so I am not including reflections on pre-design research/strategy, or production and execution.

How do I feel about the current state of the design process?

I feel confident that my approach described above is a good one. I do think I could stand to do a little more research though, which sometime interweaves with the rest of the design process anyway.

How can the current state of the design process be improved?

After initial brainstorming session today based on preparation/research to date, I can reflect and then go do more research based on my feelings, realizations, and needs from the session's ideas.

Analysis of the complete design situation

What is the challenge of the design task?

Developing concepts that are a) a self-expression *in addition to* b) appealing to my audience. Item "a" is not usually a factor in my professional work! So it's an exciting challenge.

ADAPTED CHECKLIST ANALYSIS DESIGN ACTIVITIES AND TRANSITIONS IN THE DESIGN CONTEXT

Analysis of activities about the product being designed

How did the desired state of the product evolve? N/A

How did the current state of the product evolve? N/A

How do I feel about the activities about the product being designed?

Haven't begun concept activities yet, but research activities feel okay, like I said I want to do more after today's session.

What were problems in executing these activities? How can these activities be improved?

N/A

Analysis of activities about the design process

How did the desired state of the design process evolve? N/A

How did the current state of the design process evolve? N/A

I have done research on "competition" materials and have been open to visual inspiration.

How do I feel about the activities about the design process? N/A

What were problems in executing these activities? How can these activities be improved?

Analysis of interactions with the design context N/A

How do I feel about the interactions with the design context?

What were problems in executing these interactions?

How can the interactions with the design context be improved?

Analysis of the complete design process

How do I feel about the design process? (with respect to the sequence of design activities, efficiency, effectiveness, problems, co-ordination, etc.) Why?

As mentioned I feel like there are some holes left from the initial research phase, but I think that's because this is a personal design project and I did not approach it in the same way I would have a client's product…

What is the cause of problems in the design process? Could these problems be solved in a different way? What can be learned from these problems for future processes?

We learn in design education not to begin concepting until research is completed, but I usually find that even after I do initial research based on what I know or can predict about the design problem/process, I end up doing additional research during the process because the problem often morphs…

Is enough progress made in the design process?

Not yet, I will see how I feel after today's session…

Post-Session 1

CHECKLIST FOR INVENTORYING PROPERTIES AND FACTORS

Design task (properties)

Product being designed

What is the desired state of the product being designed?

To continue developing verbal concepts into more rough and then more developed sketches.

What is the current state of the product being designed?

Ideas, sketches.

Design process

What is the desired state of the design process?

By April 2nd, I aim to have two rough design concepts. For Monday, I plan to continue research, brainstorming, and sketching.

What is the current state of the design process?

I have done some initial brainstorming and sketching around personality of the design and themes.

CHECKLIST FOR ANALYSING DESIGN SITUATIONS

Analysis of the state of the product being designed

What is the core problem to be solved?

Is this the real problem to be solved?

Good question- is the problem about the thesis goal, or should the concept be more personal?

Are all factors taken into account in the design of the product being designed?

Research on target audience could be more strategic, though I am looking at this as more of a personal design project than trying to sell anything. But I do want to appeal to other designers and educators to read what I have written. I think I should spend some time looking at design trends, as I haven't kept up on that in the last year as much…not that I would be following trends, but it's always good to know what's out there already so as to set myself apart.

How do I feel about the current state of the product being designed? (Does the product being designed fits its purpose? To what degree is the design challenge met and are the design

conflicts resolved?)

I feel confident in the state of the process- I think I generated some good descriptive vocabulary today. The design conflict seems to be that the ideas I have thus far are abstract, as is the idea of reflection, so more research and brainstorming is warranted at this point before the next session.

Analysis of the state of the design process

Are all important factors taken into account in the design of the design process?

I could make the timeline more detailed in iCal.

How do I feel about the current state of the design process?

I feel confident that my approach so far is a good one. I want to continue to gather inspiration and research while continuing to concept to build upon ideas.

How can the current state of the design process be improved?

Since I have now decided to continue research *while* concept developing (a non-linear approach), I should schedule accordingly. See iCal.

Analysis of the complete design situation

What is the challenge of the design task?

Developing concepts that are a) a self-expression *in addition to* b) appealing to my audience, *and* c) solving the design problem/communicating the "big idea." Reminder- K.I.S.S.

CHECKLIST FOR ANALYSING DESIGN ACTIVITIES AND TRANSITIONS IN THE DESIGN CONTEXT

Analysis of activities about the product being designed

How did the desired state of the product evolve?

I achieved the initial goal of brainstorming and got some good vocabulary, but want to take it further in the next session.

How did the current state of the product evolve?

I did a literal brainstorm first, as I usually do, then preliminary sketches with those themes in mind. The sketches are ranging from more literal interpretations of the themes around reflection, examining, opening up, to slightly more abstract ideas around unraveling or interweaving.

How do I feel about the activities about the product being designed?

(Activities today- brainstorming, sketching) These are the usual activities I use in this phase-
what are others I can try out/add to in the next session to be more lateral?

What were problems in executing these activities? How can these activities be improved?

I usually have more inspirational ideas to draw from in sketching but didn't as much for this personal project. To improve this I can do some more research for inspiration.

Analysis of activities about the design process

How did the desired state of the design process evolve?

Evolved toward the goal for the next session of building upon these initial ideas.

How did the current state of the design process evolve?

Evolved in some good verbalization of themes, descriptions that I can seek inspiration on and continue to brainstorm/sketch around next session.

How do I feel about the activities about the design process?

Good for now…

What were problems in executing these activities? How can these activities be improved?

Analysis of interactions with the design context

How do I feel about the interactions with the design context?

What were problems in executing these interactions?

How can the interactions with the design context be improved?

Analysis of the complete design process

How do I feel about the design process? (with respect to the sequence of design activities, efficiency, effectiveness, problems, co-ordination, etc.) Why?

What is the cause of problems in the design process? Could these problems be solved in a different way? What can be learned from these problems for future processes?

Which design activities did not result in a change towards the design goal? Why?

Which mistakes were made in the design process? Had it been possible to anticipate these mistakes?

Is enough progress made in the design process?

Yes except for research (and inspiration). I thought I had sufficient research but now I'm discovering that it would be helpful to have more because this is such an open project that I need some more things at my fingertips.

Which design activities can be executed more efficiently? How?

Faster brainstorming. Also try the noun-adjective association.

Which concepts of the design process can be re-used for a similar design task?

Analysis of transitions in the design context

How did the design context evolve?

How can transitions and future transitions in the design context better be taken into account?

Session 2: March 26, 2011

Pre-Session 2

CHECKLIST FOR INVENTORYING PROPERTIES AND FACTORS

Design task (properties)

Product being designed

What is the desired state of the product being designed?

For today I would like to brainstorm again and generate more interesting vocabulary around concepts and more sketches.

What is the current state of the product being designed?

Preliminary, still very immature sketches.

Design process

What is the desired state of the design process?

To be further along in research and sketches. I will also revisit the creative brief after the next 2 sessions to flesh it out more.

What is the current state of the design process?

Still early, initial brainstorming.

CHECKLIST FOR ANALYSING DESIGN SITUATIONS

Analysis of the state of the product being designed

What is the core problem to be solved? Is this the real problem to be solved?

The problem might be a combination of conveying my personal experience with reflection in with conveying why reflection would be significant to designers.

Are all factors taken into account in the design of the product being designed?

More consideration of target audience is warranted…

How do I feel about the current state of the product being designed? (Does the product being designed fits its purpose? To what degree is the design challenge met and are the design conflicts resolved?)

I feel good about the vocabulary I brainstormed yesterday, but want to take it deeper, more explicit and more off-the-wall ideas (do "off-the-wall" brainstorm)

Analysis of the state of the design process

Are all important factors taken into account in the design of the design process?

Still need to schedule the additional research session into my timeline- do that today.

How do I feel about the current state of the design process?

Fine- timeline looks good.

How can the current state of the design process be improved?

Schedule the extra research session.

Analysis of the complete design situation

What is the challenge of the design task?

CHECKLIST FOR ANALYSING DESIGN ACTIVITIES AND TRANSITIONS IN THE DESIGN CONTEXT

Analysis of activities about the product being designed

How did the desired state of the product evolve?

Made progress toward rough initial concept ideas.

How did the current state of the product evolve?

Through initial brainstorming around descriptive words/phrases/questions, translated to brainstorm sketches.

How do I feel about the activities about the product being designed?

Good, I do want to try and incorporate some new concept development/brainstorming techniques I've never used before (some creative thinking exercises perhaps)

What were problems in executing these activities? How can these activities be improved?

Analysis of activities about the design process

How did the desired state of the design process evolve?

I got some interesting words down on paper toward building concepts.

How did the current state of the design process evolve?

Did my usual free-flow brainstorm session…

How do I feel about the activities about the design process?

What were problems in executing these activities? How can these activities be improved?

Sometimes I find myself pausing to think during what should be a free-flow brainstorm.

Perhaps I could try preparing some questions to propel this next brainstorming session.

Analysis of interactions with the design context

How do I feel about the interactions with the design context?

I haven't yet written a conclusion to chapter 2. This might be really helpful to do at this point.

What were problems in executing these interactions?

How can the interactions with the design context be improved?

It would be really helpful to have a rough synthesis abstract at-hand. Or simply rough conclusion of chapter 2.

Analysis of the complete design process

How do I feel about the design process? (with respect to the sequence of design activities, efficiency, effectiveness, problems, co-ordination, etc.) Why?

I feel good about the activities, but need to revisit target audience research.

What is the cause of problems in the design process? What can be learned from these problems for future processes?

Strategy for researching target audience- should better utilize design connections and websites since this is a primarily design audience geared project (new to me).

Is enough progress made in the design process? Yes except for above.

Which design activities can be executed more efficiently? How?

Which concepts of the design process can be re-used for a similar design task?

Analysis of transitions in the design context

How did the design context evolve?

How can transitions and future transitions in the design context better be taken into account?

Post-Session 2

ADAPTED CHECKLIST DESCRIPTION DESIGN SITUATION

Design task (properties)

Product being designed

What is the desired state of the product being designed?

Pull out themes from initial brainstorming sessions and sketch concepts in next session.

What is the current state of the product being designed?

Still in (verbal) conception. Initial rough sketches from session 1 have not evolved yet.

Design process

What is the desired state of the design process?

I want to move forward to more explorative sketching in the next session.

What is the current state of the design process?

More supplemental research has been done on the web to get a better feel of my audience of designers and I've done more brainstorming around descriptive phrases of my synthesis' characteristics. More inspirational research has also been done. Contact has been initiated to solicit feedback from a couple of designers.

ADAPTED CHECKLIST ANALYSIS DESIGN SITUATIONS

Analysis of the state of the product being designed

What is the core problem to be solved? Is this the real problem to be solved?

At this point, the problem is translating my brainstorming list into rough visual representations. The real problem will be further developing 2 or 3 concepts representing the complexity of these themes.

Are all factors taken into account in the design of the product being designed?

I haven't thought yet about the book cover size/materials, but this will come after concepts become more clear.

How do I feel about the current state of the product being designed? (Does the product being designed fits its purpose? To what degree is the design challenge met and are the design conflicts resolved?)

Thus far I feel good about the state of the product- I don't think the "conflicts," which I would consider to be the varying themes of my topic coming together, are resolved yet, but it

is getting more fleshed out through brainstorming and developing ideas.

Analysis of the state of the design process

Are all important factors taken into account in the design of the design process?

I will add to the beginning of the next session time for description of audience(s) with regard to feminist section questions.

How do I feel about the current state of the design process?

I feel a little behind but I am trying new things in my process so that is good and is helping generate more ideas.

How can the current state of the design process be improved?

Analysis of the complete design situation

What is the challenge of the design task?

The fact that it is a personal design project under a tight deadline is a new challenge for me!

ADAPTED CHECKLIST ANALYSIS DESIGN ACTIVITIES AND TRANSITIONS IN THE DESIGN CONTEXT

Analysis of activities about the product being designed

How did the desired state of the product evolve?

The goal from last session of generating more vocabulary toward the product was fulfilled pretty well.

How did the current state of the product evolve?

I now have more accessible words to describing ideas, evolved from looser brainstorming.

How do I feel about the activities about the product being designed?

I am trying to experiment with new idea generation approaches while still trying to follow a realistic design methodology.

What were problems in executing these activities? How can these activities be improved?

Trying anything new the first time is always a bit clumsy. I don't want to get carried away with that part of the process while I am also trying out reflection tools though.

Analysis of activities about the design process

How did the desired state of the design process evolve?

Before jumping forward into sketching I continued to think and verbalize.

How did the current state of the design process evolve?

By reflecting on last session's notes and sketches, I was able to refresh myself then begin a fresh new brainstorming/mindmapping session around my updated project title.

How do I feel about the activities about the design process?

I feel organized so far in the activities around the process.

What were problems in executing these activities? How can these activities be improved?

Analysis of interactions with the design context

How do I feel about the interactions with the design context?

I feel good about this being my own piece of literary work as well as my own piece of design work. As far as interactions with researching my design audience, this is harder than it might seem because of the breadth of shades of designers.

What were problems in executing these interactions?

I plan to step outside of strictly internet research on my audience and invite other designers into give feedback to the 2-3 concepts.

How can the interactions with the design context be improved?

Through the interactions with inviting feedback from peers, I believe (contact initiated), and by having a meeting with on Tuesday to discuss my synthesis project overall.

Analysis of the complete design process

How do I feel about the design process? (with respect to the sequence of design activities, efficiency, effectiveness, problems, co-ordination, etc.) Why?

It's an interesting shift from usually being in communication with someone else (a client or programmer or art director for instance), to only having to worry about what I want to try out! My one minor insecurity at this point would be having mock-ups ready to present on May 2nd (the synthesis presentations).

What is the cause of problems in the design process? What can be learned from these problems for future processes?

Any set backs I have had could be attributed to time management issues with my other course work.

Is enough progress made in the design process?

I still feel confident that although I am a bit behind schedule (because I am only accountable to myself this time!) I can continue to update my timeline and catch up with progress in the next few days.

Which design activities can be executed more efficiently? How?

Which concepts of the design process can be re-used for a similar design task?

The use of the iCal timeline as opposed to an Excel timeline seems to be working well for my process management.

Analysis of transitions in the design context

How did the design context evolve?

My project title has evolved and it has fueled my visual thoughts a bit more.

How can transitions and future transitions in the design context better be taken into account?

Session 3: March 29, 2011

Post-Session 3 only

ADAPTED CHECKLIST DESCRIPTION DESIGN SITUATION

Design task (properties)

Product being designed

What is the desired state of the product being designed?

For the next session, SCAMPERED sketches from today's sketches.

What is the current state of the product being designed?

Sketches developed—clearer ideas becoming symbolic in imagery. A decent range of conceptual themes from type-focused to abstract imagery to more literal (notes/handwriting imagery, brain), but not yet limiting myself to these ideas.

Design process

What is the desired state of the design process?

I'd like to spend 1 more session on developing more ideas by hand, then evaluate.

What is the current state of the design process?

Ideation is moving along at a steady pace (not rushing).

ADAPTED CHECKLIST ANALYSIS DESIGN SITUATIONS

Analysis of the state of the product being designed

What is the core problem to be solved? Is this the real problem to be solved?

Creating an accessible design for all designers to be invited into dialogue about reflection.

Are all factors taken into account in the design of the product being designed? Dimensions? If this became a book I could make it any size, but I could imagine that the final size is the size of the synthesis (8.5 x 11").

How do I feel about the current state of the product being designed? (Does the product being designed fits its purpose? To what degree is the design challenge met and are the design conflicts resolved?)

I'm feeling good about the beginning of a range of concepts. I do not think I combined all of the verbal concepts I came up with into any one sketch concept, but that's not my goal anymore. I want to keep it simple as to be accessible by a wide audience of designers. If I make it too "academic" OR abstract (reflection epicycles, etc.) I may be excluding some.

Analysis of the state of the design process

Are all important factors taken into account in the design of the design process?

I haven't worked out the target dates for a) sending layouts to my design peers and b) printing comps for presentation. (Do after this reflection session)

How do I feel about the current state of the design process?

Confident in the progression of concepts.

How can the current state of the design process be improved?

Analysis of the complete design situation

What is the challenge of the design task?

Balancing a personal design piece with an audience in mind.

ADAPTED CHECKLIST ANALYSIS DESIGN ACTIVITIES AND TRANSITIONS IN THE DESIGN CONTEXT

Analysis of activities about the product being designed

How did the desired state of the product evolve?

Evolved from verbal representations to sketches moving toward more developed roughs.

How did the current state of the product evolve?

I looked toward more inspiration today to get me going, which definitely helped me generate a variety of sketches.

How do I feel about the activities about the product being designed?

Since I am not yet in a technical phase of the process, I feel good.

What were problems in executing these activities? How can these activities be improved?

Not yet having any difficulties.

Analysis of activities about the design process

How did the desired state of the design process evolve?

Evolving toward a meaningful variety of concepts.

How did the current state of the design process evolve?

From abstract brainstorming, to keeping all factors of the problem in mind, to seeking more inspiration, to developing more meaningful visual representations today.

How do I feel about the activities about the design process?

Whenever I feel the need for additional visual references I stop what I am doing and seek resources and inspiration- this does not interrupt anything because it is necessary at that point- it is a natural occurrence. This is another intuitive aspect of my design process.

What were problems in executing these activities? How can these activities be improved?

Analysis of interactions with the design context

How do I feel about the interactions with the design context?

The design context hasn't changed much since last session when I incorporated the updated title of the synthesis.

What were problems in executing these interactions?

I think I had to make sure I understood what I meant by incorporating "consciousness" into my title and concept.

How can the interactions with the design context be improved?

I will be reviewing my synthesis material to date on Monday before meeting with my advisor on Tuesday, so this might shed some new light on the context of my project.

Analysis of the complete design process

How do I feel about the design process? (with respect to the sequence of design activities, efficiency, effectiveness, problems, co-ordination, etc.) Why?

So far I feel good- reflecting on my past approaches, I don't usually run into problems with efficiency or coordination until it gets much more technical, mostly when I am coordinating other parties in the project.

What is the cause of problems in the design process? What can be learned from these

problems for future processes?

Again, none here yet, but in thinking about past projects, maybe choosing a design concept that is too complex technically for the timeframe in which it needs to be done in. that is definitely a factor for this synthesis.

Is enough progress made in the design process?

Now, yes.

Which design activities can be executed more efficiently? How?

Which concepts of the design process can be re-used for a similar design task?

Keeping visual resources at-hand is very helpful and convenient.

Analysis of transitions in the design context

How did the design context evolve?

How can transitions and future transitions in the design context better be taken into account?

Often changes in situations are unforeseen and you just have to adjust as you go. But trying to plan in the future in a design timeline is crucial.

Session 9: April 9, 2011

Pre-Session 9

ADAPTED CHECKLIST DESCRIPTION DESIGN SITUATION

Design task (properties)

Product being designed

What is the desired state of the product being designed?

At this point I think I should wrap up the comprehensives as they are and print them out on Wednesday. Then I can do an evaluation based on those comp prints and choose 1 to work on for the final design.

What is the current state of the product being designed?

Still in rough draft digital form, exploring color, type treatments, layout, etc.

Design process

What is the desired state of the design process?

After these last 2 sessions (this one and the next), I want to have 4 looks ready to print. While I work on revising my synthesis over the next week-and-a-half, I can also evaluate the

design Comps, do another SCAMPER session (by April 20th), and select one design to move forward with producing so that I have final one printed by April 29th (Friday before presentations)

What is the current state of the design process?

In this session, I will finish working on the 4-5 rough comps to have them ready to print on Wednesday.

ADAPTED CHECKLIST ANALYSIS DESIGN SITUATIONS

Analysis of the state of the product being designed

What is the core problem to be solved? Is this the real problem to be solved?

Evaluating and narrowing down designs. The real problem is re-evaluating *based on my goals to see which design(s) are most effective*.

Are all factors taken into account in the design of the product being designed?

I need to get a copy of a synthesis from the office that is about 100 pages to make correct measurements and dimensions in an InDesign document. Also, more font exploration needs to be done in general.

How do I feel about the current state of the product being designed? (Does the product being designed fits its purpose? To what degree is the design challenge met and are the design conflicts resolved?

For Look #4 specifically (the brain), I think this one could be brainstormed on a bit more to come up with a more innovative concept, but then I don't know if I will choose this one because of the time constraints and the challenge of the illustration and typography. I will take another stab at it in this session and go from there.—perhaps hand rendering the type will be easier in this case. For Look #1, font exploration and testing out the paper at the printer needs; for Look #2, font exploration (the image is good); for Look #3, can I make it look more layered and give it more movement? For the extra look, I am pretty happy with this solution as a rough draft as it is, as an option.

Analysis of the state of the design process

Are all important factors taken into account in the design of the design process?

Deadlines have been worked into my iCal timeline.

How do I feel about the current state of the design process?

It is crunch time so I have to really stick to the schedule now. But I feel good about the initial design comps.

How can the current state of the design process be improved?

I can move things forward tonight by doing more font exploration.

Analysis of the complete design situation

What is the challenge of the design task?

ADAPTED CHECKLIST ANALYSIS DESIGN ACTIVITIES AND TRANSITIONS IN THE DESIGN CONTEXT

Analysis of activities about the product being designed

How did the desired state of the product evolve?

I could have continued on with exploring concepts, but I moved forward to evaluating my ideas and started laying them out.

How did the current state of the product evolve?

I have only received feedback from one peer on the blog thus far, but it was interesting and parts of his feedback were very insightful and I have already modified based on elements of it.

How do I feel about the activities about the product being designed?

Font exploration needs to be more strategic at this point and less leisurely as I have been approaching it.

What were problems in executing these activities? How can these activities be improved?

(see above answer)

How did the desired state of the design process evolve (or not)?

I have not done another SCAMPER session as I wanted to, to try and move the concepts in possible new directions, but I can do this in the next session.

How did the current state of the design process evolve?

The process has evolved in the creation of digital layouts of all of the rough concepts.

How do I feel about the activities about the design process?

I sometimes feel sidetracked by the act of doing the reflections, but then I wonder if I would have come up with these concepts if I had not been so reflective, I wonder what the comparison would have been if I just did my process as usual, without the very intentional reflections and testing out of some new techniques. But in regards to the design process

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itself, I feel good about progress, except for type explorations specifically.

What were problems in executing these activities? How can these activities be improved?

It's really just a matter of taking the time to search, but also deciding which ones I want to spend money on for this project. In general it is making me look at my font collection and realizing I want to do a "spring cleaning" and shop for some new additions.

Analysis of interactions with the design context

How do I feel about the interactions with the design context?

Because I am my own client for this project it has actually been a bit challenging trying to "choose" concepts, but I think by bringing in some peers/mentors for feedback, they might actually some to serve as my "client"

What were problems in executing these interactions?

The blog was a bit time consuming to set up, and since Tumblr does not allow visitor comments (something I realized too late), I have been uploading their comments myself.

How can the interactions with the design context be improved?

I will try out different blog hosts and move it over to a new one that is more user-friendly.

Analysis of the complete design process

How do I feel about the design process? (with respect to the sequence of design activities, efficiency, effectiveness, problems, co-ordination, etc.) Why?

I think that if this was a professional job, or even a personal project, I would have had more time to spend on trying out different versions of each concept (playing with color, type, layout, etc.)

What is the cause of problems in the design process? What can be learned from these problems for future processes?

For the brain look, working with the type posed a problem for me, but maybe this was because a) the concept wasn't very well thought out, and b) this style might be better of being hand-rendered.

Is enough progress made in the design process?

An evaluation and possible SCAMPER/Oblique Strategies/other technique for further exploring conceptually is warranted in session 10.

Which design activities can be executed more efficiently? How?

I think the only answer here is time- time is tight now because of external factors. It might be

in my best interest at this point to either a) just take what I have and call it a day until the presentation, and continue to solicit feedback from the blog—maybe I do not *need* to resolve this project with a final, complete design, since my goal was to focus on the concept development process anyhow… or b) choose 2-3 and just work on those in next session to print.

Which concepts of the design process can be re-used for a similar design task?

The issue of font exploration—in future, setting aside an entire session just for this would be a good idea, instead of getting ahead on the layout and then trying to search for fonts…just a thought.

Analysis of transitions in the design context

How did the design context evolve?

I am glad I am experimenting with the blog as a part of my project, because I do need some feedback.

How can transitions and future transitions in the design context better be taken into account?

Trying to solicit more feedback on the blog on the design roughs. This will not only provide me with some needed feedback, but it could also become a more significant part of my synthesis paper (as opposed to just a small tool I am trying out).

Appendix F

Completed Written Self-Assessments (Adapted from Ellmers et al., 2009)

>The reflective assessment tasks are structured in four key sections, describing the design process, summarizing critique feed back, identifying critical incidents, and making observations about the design experience. The final reflective assessment task incorporates the same key sections, although omitting feedback (as no further feedback takes place once artifact submitted), but adding two new sections, identifying new learning, and how the experience could impact on future practice. The tasks guide the student to capture, in a formalized manner, their design experience and thinking during these key discrete stages. (Ellmers et al., 2009, p. 10)

Midpoint Written Assessment: April 2, 2011, Session 5

Reflecting on this design process, I think about the overall steps I took and how some of them overlap. I first defined my design problem—a cover design for my synthesis on exploring reflective practice in the design process, the significance of it, the goal of growing as a lifelong-learning designer, communicating this message toward getting my design peers interested and hopefully involved—a problem I am still defining as my synthesis project progresses. In using the creative brief, which I have clients complete, to prepare for my project, I realized that while it was definitely helpful in beginning to strategize my project, but it also made me realize that I might want to revise the questions I ask in the brief. I was given this brief template by an undergraduate instructor and have not changed it since. It is important to me that I am asking the best questions I can in the future. I did not do a lot of research on my target audience (designers) at first for this project, as I usually would do more of in a professional job using interviews, web research, and data. To compensate for that, I have been doing more research on the web in between design sessions, gathering inspiration simultaneously. I have also invited a couple of design peers to give me feedback on three design looks, using the blog.

The next step I took was brainstorming lists of adjectives, verbs, and nouns, anything that came to mind for me based on my goals. The early sketches that emerged from this brainstorming were pretty vague, quick streams of emotion thrown on paper. I am beginning to notice that the use of metaphors comes into play for me early in the process. I had not consciously noticed that before now, before being deliberately reflective. After the first brainstorming session I was able to gauge what further research I felt needed to be explored. This is part intuitive (not feeling inspired by the initial sketches, realizing the subject or audience

is not understood well enough), and partly due to the reflection checklist questions. While sometimes tedious, these questions really stimulated my critical thinking about all aspects of the design project. After the second session on brainstorming, after doing more research and inspiration gathering, I generated more words and phrases, some of them becoming visual ideas. When I felt satisfied and excited about the vocabulary (again, intuitive), I created a mind map to organize this flow of thoughts and start to see some connections. By making connections I started to see how different representational ideas around my synthesis could possibly come together in a cohesive design. In the next design session, I sketched more comprehensive concept ideas, taking the size of the paper into account. It is important to note that at this point in the process, ideas are still very fluid. Concepts and design layouts, in my own experience, continue to morph up until their deadline. Reymen's questions about design context are relevant here—client's needs often change as the project progresses and other factors that might affect the production of a design project sometimes happen unexpectedly. In reflecting on this, I can see how as designers there are often multiple things we are thinking about at once—client requests, our own creative and strategic ideas, budgets, timelines, design medium (printing, web development, building materials and restrictions), etc. etc., and that doesn't even include the many subtasks that are happening within the act of designing itself. These are factors that you get used to juggling, but being more aware of this now, maybe I can figure out ways to alleviate stress in the future.

At this point, before moving forward to rough design layouts on the computer, it was critical for me to take a step back and evaluate and revisit my goals. I also tried out some new tools in my creative process—Oblique Strategies, and SCAMPER. Throwing new techniques into the process is something I needed to try, and I can see now that I was in a bit of a rut before. Time was always an excuse for me, but now that I know these kinds of activities do not take longer than I would be spending trying to come up with ideas anyhow, I will use more of them! I have books such as von Oech's *A Whack on the Side of the Head* and *A Kick in the Seat of the Pants*, de Bono's *Lateral Thinking* and *Six Thinking Hats*, and Cloninger's *Hot Wiring the Creative Process* sitting on my bookshelf, and there are so many more books and techniques out there to experiment with.

Another important element of my process was de-centering—walking away to let things marinate. Perhaps this is not considered a critical incident, but rather the negative of that, the

opposite of process, the time spent in between sessions when the ideas are making connections to other nodes in the brain. But in order for them to ruminate, the earlier phases of preparation would seem to be crucial, otherwise what is there to think about? (See rumination- intuitive practitioner book.)

I have not yet solicited feedback via the blog, so I will reflect on that in the next written self-assessment.

Final Written Assessment: April 11, 2011, Session 10

Overall, ten sessions is probably about four more than I have spent in the past doing the idea development and rough design comps, for a client project. It has been a rewarding experience, spending more time thinking, brainstorming, and writing words prior to even sketching. It was a bit challenging for me at first to have this dialogue with myself, in brainstorming words and phrases. This is probably because I am used to having a detailed dialogue with a client or group of clients, before I start brainstorming. I am not used to developing a concept like this for my own personal work, and the lack of requests from someone who is paying me was both refreshing creatively and scary at the same time! This might also be why I struggled with understanding my would-be audience of all designers—I am used to having additional guidance on a target audience from the client's experience with them. The client(s) give me information to start with and sometimes they even supply me with data on their audience. But this time I had to set out entirely on my own, and struggled at first because I assumed that I knew more than I actually did about designers in general. While I did not compile any statistics or market research, I did a good amount of web research on widely visited design websites, blogs, and looked to many different kinds of design books. One thing I wish I had done is conduct a survey of designers, using some marketing research questions and also using some design visuals to survey them on aesthetic trends and such.

In the brainstorming process, I think my language about my design goals was all over the place. Creating a mind map as part of my idea development process was very helpful in organizing the different facets of concepts, and which concepts related to each other to potentially develop into one visual concept. I wanted to try a creativity tool called Oblique Strategies. I only used one Oblique Strategy, but I can see how using them more, as needed, would be a great way to look at things from different perspectives and think of unexpected ideas.

The early sketches were very simple, cliché, some abstract, some overly obvious, unoriginal, but this phase is meant to be almost mindless to warm up. I honestly think that my ideas develop when I have done this warming up and then walk away from it until the next session, during that time that I am not actively trying to think about it. Around the point I probably would have normally moved onto the computer to begin creating digital mock-ups (which usually change during the process of creating them digitally), I thought it would be a good point to try SCAMPER. SCAMPER was especially powerful in helping me look at things from different angles.

It is interesting to think about how sometimes ideas are more literal and other times more visual, and even if you sit down to deliberately do a brainstorming session using words, if you have a visual in your mind, you just have to get it down on paper, and vice versa. I got really stuck on the idea of a mirror early on, but that changed and developed into an unexpected solution using mirror paper, something I discovered somewhere in my research.

Another approach I tried in this process, to help me evaluate the rough concepts, was the questions provided in Stone (2010). I think it was especially helpful in doing a mid-point (and end-point) evaluation for this solo design project because it helped me be more objective, and posed questions that related to the design concepts specifically (versus Reymen's questions which were more expansive and technical for the process). I came away from doing the evaluation with more questions than answers, but this was great because it got me thinking about these things more. What would obviously help additionally is having a larger/more diverse test group to get feedback from on the blog.

A phase in the process that I want to reflect on, a sort of wall I hit around this point, was sort of walking away from the brain concept. Did I think it was cliché? Or was I just being lazy about working on it more, or to come up with new ideas from the initial concept? I think that I got a feeling that for an initial rough concept, I didn't want to spend a lot of time on it. At this point, so I decided to leave it alone. After I had set it aside for a little while and was looking at other similar images using the brain on the Internet, I thought of a new use/treatment for the brain concept (having the words flow from the top of the head instead of crammed inside of the head). I do think that if I had spent a little more time brainstorming on different uses for it in the earlier sessions, I could have developed better/other ideas for the concept earlier.

Getting some initial feedback from a design peer and a design mentor via the blog was

helpful, and interesting. It was helpful because even though I might not agree with them, it is important to get outside perspectives when doing design projects entirely independently—the alternate perspectives might make you think of things you wouldn't have, and it did for me. Peer feedback nudged me in exploring type in a way I was hesitant to try. It was interesting because my peer and my mentor both had very different ideas and concepts that they favored, and both got me to look at things from different perspectives. In response to my comment on the blog about needing to work on typography for the yellow abstract concept, design peer R.S. felt that a slightly "worn" font or letterpress font would unify the design. I had been considering use of a "grungy" worn type of font but was hesitant to play on a trendy look. However after R.S.'s comment I searched and found an appropriate typeface that was not too "Grungy" trendy but yet looked work as the background of the design did. R.S. also liked the brain concept, but wondered if it could be more "conceptual" (such as playing with the left-brain/right-brain).

Design mentor G.W. commented on the bubbles concept and felt that it was the most "resolved" of the different looks, had the most appeal and a "reflective" nature. She also thought that the type treatment could be bolder and more engaging for the yellow abstract concept (which I had not yet worked on for the rough layout posted on the blog at this point).

Later in the process, in the second to last session, I tried a different usage for the vellum paper than I had originally got the paper for. The concept that came out of this was a combination of one of the early, layered typography concepts, and an added feature using the transparent paper to actually create physical layers of type. I cannot remember how or when this idea came to mind…it was one of those things that just sort of "popped" into my head, as if it was an idea that was developing in my mind on its own, from experience and prior knowledge of the material, design tools, and intuition of how the idea might look.

Using guided questions for brainstorming was a new approach for me, and one that I could be more strategic about in future projects (which questions to use). I also aim to do some research and exploration (or take a course?) on doing preliminary research for design projects to improve my approaches. In using the new creativity tools in the future, such as SCAMPER, I would try to use them more thoroughly, time permitting, and see what the "full benefit" looks like.

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