

From Forests to Formulas: Contextual Examination of Composers' Sources, Materials, and Practices Involving Creative Insight

by

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Abstract

This thesis reports the findings of an exploratory, mixed-methods study of the information phenomena associated with musical composition. It employs a semi-structured interview and a survey among participants of the current musical composition community, the majority of which resided in the greater Toronto area. The guiding question is “What are the information activities and resources of composers as they strive to compose new music?” During research, the concept of creative insight, emerged as a necessary supplement to previous inquiries into composers' inspiration. The findings explore the varied sources of creative insight utilized by composers; differing uses of creative insight, Creative Insight Storage Units (CISUs), composers' record keeping devices; creative insight in embodied form; and the varying information needs of composers at different stages in their profession. The report closes with the introduction of a new model of creative information phenomena in musical composition, and questions for future research.

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Chapter 1

Introduction

1.1 – Chapter Overview

This chapter introduces the thesis, which is a mixed-method research project that examines the information behaviours and activities of composers in the context of creative insight. The chapter includes background information on creative insight/inspiration and the history of western musical composition. Finally, the chapter will cover the study's objectives and research questions and provide a brief survey of the remaining chapters of the thesis.

1.2 – Background

The music that rings in concert halls and through transit tunnels was once sketched out, thoughtfully or hurriedly, on staff paper. From movie soundtracks, to office birthday parties, the music you hear around you was created by composers. Broadly, the act of composition is that of planning a piece of music through the creation of a score. Within scores, composers use a method of notation comprised of staves and note heads that originates from the western classical music tradition. Composers also use original methods of notating sounds specific to their compositions. Composition using notation in the classical music tradition spans back in time to plainchants in European medieval churches and has continued throughout the common eras of musical composition: Medieval, Renaissance, Baroque, Classical, Romantic, Modern/20th Century, and current. Throughout these eras, the role of the composers has shifted from monk, to court composer, to tortured artist, to scientist and many more. Over the last 50-100 years, many different aesthetic movements (spectralism, minimalism, serialism, etc...) each with their own canon and jargon (Ross, 2007) have expanded and changed traditional musical composition,

thereby contributing to today's musical landscape, wherein it is difficult to define who is and who isn't a composer.

1.2.1 – Present-Day Musical Composition

I think we all share this kind of incredible struggle, especially at the beginning of each creative process. It's particularly difficult today because there's no longer a common practice. It's not like in Mozart's time where the composer was able to have an idea and just immediately knew how to go about it because there was a convention about how to do it. And he could work within that convention and carve his own individuality within that. We don't really have that now. Everything is up for grabs. - Jesse, interview participant.

Due to changes in conventions, be they shifts in roles, aesthetic trends and so forth, music composition as a practice today does not easily fall into common categories. Despite this disparity, collective practices can be found among the composition community. These include some of the following: the expectation that written instructions are to be followed exactly (including improvisation), an interest in breaking conventions, a focus on sound itself and its qualities, and an interest in composing interdisciplinary works. Many current composers feel that there is much latitude offered in the current musical composition landscape. This freedom provides a stimulating setting which offers much excitement and sanctions individual ideas. Each composer has a different reason as to why they appreciate the myriad opportunities within the current musical composition domain. For some, it is the start of the breakdown of academic or intellectual boundaries that separate the different types and genres of music making, and for others, it is the opportunity to integrate ever-expanding sophisticated technology into their compositional practices. Composers are highly diverse and highly differentiated people and there will always be exceptions to the rule, and this background information in no way wishes to exclude, invalidate, or define current compositional practices.

1.2.1.1 – Personal connection to composition

Prior to beginning my masters in Library and Information Science, I completed my undergraduate degree in music performance: voice studies, and had studied formal music history, theory, and musicianship training. At the same time, I began to socialize with an artist collective of composers and form close relationships with composers at my university. It is largely due to my conversations with these peers in the first year of my graduate degree that I pursued this research. In explaining the new models of information behaviours and activities I was learning, they began to create links to their own composition process, which I explored in a preliminary research paper for a required course. From there, the conversations continued, and further connections were made that helped these peers explain their own process in a way they had never been able to before. My existing rapport and peripheral knowledge of composers and compositional processes helped facilitate access to the community of study. Similar to Siracky (2013), I used Lofland & Lofland's (2006) recommendation to "start where you are" (p. 9) for beginners in qualitative research, explaining that it is a strength when one's interests in life and current biography coincide with disciplinary concerns (p. 9). This thesis has allowed me to merge my previous area of study and peer group with my growing interest in information sciences, finding both deeper meaning and anticipatory excitement in the process.

1.2.2 – Inspiration

It all seemed so simple not so long ago: composers (white, male, European) were directly in touch with their muses...and were at the same time the obedient servants of the destiny of the material. Under the twin guidance of these absolute forces, but somehow also fired up by moments of inspired subjectivity, the music poured out effortlessly onto the page... (Clarke & Doffman, 2017, p. 1)

Historically, the term used to describe extra musical factors that influence or provide information to a composer has been called *inspiration*. However, nowadays, its use to describe

creative information in the act of composing is viewed as problematic by some. Boden (2004) explains why inspiration carries negative connotations in the artistic community. In her description of two main themes of human perception of creativity she says that the ‘inspirational’ view sees creativity as essentially mysterious, superhuman; even divine (Boden, 2004, p. 14). This view of creativity is inaccessible to those who do not experience insight in this way, and places those who have the ability to create on a pedestal. Boden’s commentary on the other social view of creativity, ‘romanticism’, which, although less extreme of a view than ‘inspirational’, sees those who can create as having been gifted a special set of skills. This is not to say that composers who act through spiritual or mystical influence do not exist or are not valid composers, it only means to say that the term ‘inspiration’ doesn’t cover as wide of a spectrum of composers and a new term is necessary. In this light, *creative insight* will be used herein to describe what ‘inspiration’ connotes as it is more inclusive to a variety of customs practiced in the act of composing. Dr. Peter Webster, a leading musical education scholar, and the author of the model of creative thinking process in music (1990, 2002) offered up the term *creative insight* (clarified in section 1.5) in professional communications to act as a substitute to inspiration. It has since evolved in this research from acting as a placeholder for the term inspiration to encompassing a wide variety of processes and things which supplement composers’ own skillset. In examining these varying sources of creative insight, the continual production of original musical works within a twisted web of identity and practices caught my interest. How do these composers, after so many centuries, continually find phenomena among their varied worlds that compel them to compose?

1.3 – Statement of the Problem

This thesis examines the information behaviours of composers in the context of their search for creative insight. Composition occurs when information and artistic craft collide. This project offers a unique opportunity to explore the ways in which composers experience, document, and use creative information. This is an original area of information research, which traditionally focuses on the more tangible aspects of creative professional's information behaviours, such as accessing library resources to write-up academic research. This thesis' focus on the more subjective aspects of information behaviours and activities of composers offers an exploratory look at the role of creative information in composers' creative processes with an emphasis on the role of embodied information and everyday experiences within these processes.

1.4 – Research Objectives

The study was guided by the following question: How do current composers source, store, and utilize creative insight in the context of their compositional process. Specifically, I sought to explore:

- i. The sources of creative insight for composers
- ii. The practice of recording creative insight
- iii. An individual's relationships with their personal collection of creative insight
- iv. The representations of information behaviours in the aforementioned processes

These four questions were addressed using a mixed method study including the following: a survey, semi structured interviews, and interview notes, all of which will be explained in depth in Chapter 3 - Methods. Using these varied methods provided valuable and abundant records of data in the form of notes taken during interviews, images of composers' record keeping, interview transcripts, and survey results. I was able to organize thematic points from this data

that support and contribute to the small body of information studies research focusing on the phenomena of composers' creative information. In particular, this study's research uncovered a variety of previously unexplored contextual information behaviours and activities that have been developed at an individual level to navigate creative problem solving and compositional barriers.

1.5 – Clarification of Terms

Numerous terms used throughout this study have originated in disciplines other than information science. This section will clarify these terms associated with this study. Composers will be defined, as well as three subcategories of composers that are used in this thesis (student, emerging, and professional composers). Furthermore, three seemingly similar terms will be distinctly defined: insight, creative insight, creative problem solving, and creative information.

Composer: An individual who creates original musical works in a variety of formats and with a variety of tools - “One who composes¹, one who creates by mental or artistic labor².”

Student: A composer (see above) who is engaging in formal instruction in composition either at an institution (diploma, undergraduate, or graduate) or through private lessons with a professional composer.

Emerging / early career: Composers (see above) who have completed their formal training, or have not engaged in formal training, but who are in the process of launching their professions. This is a contested term but for the purposes of this study it defines those who have begun their profession (post-study or not) but have not yet established themselves within the composition community. It is often up to the individual to define themselves as such.

Professional: A composer (see above) who derives primary or secondary employment through composition. An established member of the social world.

Creative Insight: A thing or a process with a direct or indirect line of information that is traceable within a musical composition or other work. Possesses a duality of uses as both a supplement to, and or a catalyst for a composers' skills.

¹ Composer (def.) Merriam-Webster Dictionary. <https://www.merriam-webster.com/dictionary/composer>

² Composes, 2a (def.) Merriam-Webster Dictionary <https://www.merriam-webster.com/dictionary/composes>

Creative problem solving: Using creative insight as a tool with which to reach an answer. The process of searching out creative insight, or using one's own artistic skills to arrive at a solution.

Creative information: Information that is used to solve creative problems, and that which makes up creative insight, stored mentally, digitally or physically (Berg, 2001).

1.6 – Outline of Thesis

A review of the relevant literature will follow this current introductory chapter (Chapter 2). Presented next is an outline of the study's methodological research design (Chapter 3). Chapters 4 through 6 present the project's findings, examining the varied sources and uses of creative insight (Chapter 4), the materials used and the recordkeeping practices of composers (Chapter 5), and three specific examples of composers, examining the role of information behaviours and activities in student, emerging, and professional composers (Chapter 6). The thesis will conclude with Chapter 7, a reflection on this study's methods and findings, the introduction of a new model of creative information behaviours and activities in the context of composition, and the questions that remain upon the completion of the study as well as implications for the field of information science.

1.7 – Chapter Summary

This chapter has described the thesis project as a mixed-methods study that explores the practice of contemporary composers' search for creative insight. It provides a background of the current compositional landscape, and a historical reasoning against the use of the term 'inspiration' in the context of this study, and has stated the study's objectives and guiding research questions. Finally, it has clarified terms associated with this study, and has outlined the chapters that follow this introduction.

Chapter 2

Literature Review

2.1 – Chapter Overview

This chapter summarizes themes found in a survey of relevant literature to this topic. It first provides an overview of information research studies that are not music-based but share commonalities with information phenomena in musical composition. Following is a discussion on the relevancy of the work of information theorist Anders Hektor, including a review of common information science concepts such as information encountering, information studies on notetaking practices, and research into embodied information. Further elaboration is then provided on specific information research on contemporary music and the term creativity. Finally, musical composition creativity research in multidisciplinary studies will be examined, paying particular attention to education studies. Methodological literature is absent from this chapter, as it is discussed in detail in Chapter 3—Methods.

2.2 – Information Studies Outside of Musical Composition

Often, information phenomena do not present themselves clearly until contextually examined within another discipline. Before diving into the scarcity of the research surrounding musical composition, models of information phenomena were examined and reviewed to determine their use in the context of this study (Bates, 2002; Dervin, 1999; Erdelez, 1999; Hektor, 2001; Kari & Savolainen, 2003; Krikelas, 1983; Kuhlthau, 2004; McKenzie, 2003). Erdelez's (1999) information encountering (reviewed in section 2.2.2), and Hektor's (2001) everyday information behaviours model were selected as to provide a descriptive vocabulary for composers' information experiences. The other models are also used but in more specificity with

particular concepts, some of which were integrated into a new model of creative information seeking in composition, whereas the aforementioned two models and theories are used frequently throughout the analysis of thematic points.

2.2.1 – Anders Hektor

Hektor's model of everyday information behaviours and activities (2001) is specifically selected as a foundational concept for this research. The variety of information behaviours and activities that Hektor examines and defines, help encompass the tools and actions utilized by composers in their individual creative process. Many of these activities are applicable to the composer's practice of encountering, recording, and utilizing creative insight in which one's interaction with information takes many forms. Hektor's separation of the information activities of *search and retrieve*, *browsing* and *monitoring* were particularly useful in defining the intention of composers' information seeking behaviours. *Unfolding*, *dressing*, *exchanging*, and *instructing* were also examined for their implications within the note taking and archival behaviours of composers.

2.2.2 – (Serendipitous) Information Encountering

Information research on information encountering and the archival practices and record keeping of said information are plentiful. Composers' record keeping is examined in the context of assorted approaches to recording everyday life, serendipitous moments, and traditional archival systems. Elderez's description of the different kinds of information encountering (1999) aligns with composers' different levels of engagement with information. Elderez's reference to *super-encounterers* coincides with the practice of composers environmental scanning and use of information they discover. Serendipitous encountering and serendipity-focused research (Foster & Ford, 2003) are concepts directly explored, because I found it curious that composers rarely

recognize moments of serendipitous information encountering. Within this realm of awareness, Krikelas' nonlinear model of information seeking behavior (1983) which tacitly acknowledges the role of the senses in gathering information, is applicable to the data gathered here.

2.2.3 – Note Taking and Documentation

Contrary to what Foster & Ford argue, LeClerc's (2010) findings from the study of another group of creative professionals, regard creative insight encountered digitally and archived to be of almost no use to that particular professional's creative process. This study made me aware of creative professional's digital archival systems Hartel's (2007, 2010) study of the information collection of hobbyist gourmet cooks. This led me to consider the physical personal libraries or collection of resources, reference material, or sentimental keepsakes that composers might maintain. Siracky's (2013) study of the content, materials, practice, and structure of spiritual journals provided context for the varied manner in which students record personal information, and the unique and individualized behaviour that can exist in this deeply personal activity. In particular, Siracky's focus on the content of spiritual journals provided context for that which exists in composers' sketch books. Finally, McKenzie & Davies (2012) review of the variety of systems for keeping track of everyday life information reignited my curiosity to know more about the research participants' notetaking materials and the variety of specialized and administrative content that would be present.

2.2.3 – Embodied Information

My own experience as a musician, but not a composer, has sensitized me to the central importance of the body in music. Through my own knowledge of the role in which the corporeal being plays in not only music performance, but also creation, I searched for an existing information concept to illustrate this. Lloyd & Olsson have provided that concept, in their

intriguing framework for *embodied information* or, recognizing the individual body's situatedness within an information environment (Lloyd & Olsson, 2017). This concept of bodily awareness beyond artifacts is paramount to the learned skills that composers possess. While the majority of my research was inductive, the embodied nature of musical composition was used deductively. It provided a lens with which to view composers' formal and informal education in composition and how their learning was embodied as well as cognitive (Cox, 2018). Cox's (2013) study examining the embodied information practices in personal photography suggests that composers' compositional activities, whether directly using creative insight or not, involve using one's bodily knowledge, intuitions about the act of composing, and embodied skills in interpreting creative insight. Cox's examination of embodied, informal learning with implications towards libraries (2018) directly encompasses this original research's own implications within library and information sciences.

2.3 – Information Research in the Arts

Information sciences has no shortage of research on the more tangible and quantifiable aspects of musical composition and creativity. Within these studies, Hunter (2006) provides an overview of information seeking behaviours of electroacoustic composers relating primarily to software, spatial, and constantly evolving information practices. Although Hunter focuses on quantifiable information seeking, his focus on the barriers experienced by composers provides context for discussing disruptions within the creative process. Byrd and Crawford (2002) provide further arguments about barriers to creative insight in their analysis of problems surrounding music information retrieval outside of academic institutions. In contrast, Christensen et al. (2001) assess the performance of reference services in academic music libraries and what implications this has for composers seeking creative insight, which although well researched, do not provide

large implications within this study, as it was not a focus of this study to examine the reference service use of composers. In searching for studies explicitly involving musicians, Kostagiolos et al.'s (2017) study of Greek musicians and the role personality plays in the information seeking behaviours of musicians such as in score retrieval, lesson planning, and instrument purchases arose. Although focused on the more practical and technical information needs of composers, this particular study solidified previous the previous studies' conclusions. Winget (2006) provides an overview of information activities surrounding the annotation of musical scores and notation literacy. Although this thesis does not cover the final product of many composers' compositional activities, namely, the score, it does look at the notation within what I call composers' creative information storage units (CISU) that often contain annotation and blueprints for scores. Lavranos et al (2016) provides an excellent literature overview of information seeking for musical creativity, but no original research study was completed within this systematic literature review, which, I must admit was disappointing. Hartel, Cox, and Griffin (2016) have more recently contributed to information activity research in the context of musicians. Within their overview of embodied information in the context of serious leisure pursuits, they survey embodied information in musicians and the corporeal function of tactical engagement in the arts. Although not specifically focused on composers, this work provides evidence to further arguments made in this paper for composers' own embodied information practices. Marcia Bates' (2001) work is similarly not connected to composers' specific behaviours, but reviews visual artists' information seeking activities. Bates' (2001) seven characteristics of artistic information seeking supported primary theories of composers' own behaviours and were used in the design of the interview guide. Despite this breadth of work, the

sourcing, record keeping, and use of creative insight by composers remains to be studied in this thesis.

2.3.1 – Creativity in Information Studies:

Bawden and Robinson (2015) provide “six features of information that can be used to support creativity” (p.275). Upon reflection, these features provide the framework in this study for the discussion on creative information:

- Inclusion of peripheral and speculative (even incorrect) material
- Provision of interdisciplinary information
- Representations of information to bring out analogies, patterns, exceptions, and so on
- Emphasis on browsing facilities
- Encouragement of informal channels
- Information geared to individual preferences and requirements

These potential steps finely encompass many composers’ use of information for creative purposes. Finally, Kari & Hartel (2007) propose a framework for understanding information phenomena in ‘pleasurable’ and ‘profound’ contexts such as musical composition. Their model deviates from traditional models for understanding information behaviors or activities in that it examines “particular kinds of information and information behaviour as embedded in miscellaneous contexts” (p. 1141). This alternative model proposes examining a particular context of information phenomena instead of focusing on information processes. Since this study examines original information phenomena, this contextual framework is of great value in its endorsement of various creative information behaviours and activities within composition.

Although a large breadth of information studies was reviewed, no one study or concept provided a single complete framework of information phenomena in musical composition. In the sections

that follow, gaps in composers' information behaviours and activities are examined through multidisciplinary lenses, with a special focus on education studies.

2.4 – Music Composition Creativity in Multidisciplinary Studies

Due to the small field of research connecting creative insight and information sciences, further interdisciplinary research was examined. From a business studies perspective, Sadler-Smith (2015) explains in great detail Wallas' foundational four stages of the creative process: *preparation, incubation, illumination, verification* (1926, p. 10) and subsequently proposed a fifth stage, *intimation*, that would occur following *incubation*. Intimation acts as a stage of “fringe-consciousness in which the composer is aware of an association train of thoughts but has not yet reached the *illumination* stage” (Sadler-Smith, 2015, p. 346). This additional stage to the creative process provides ground for the proposed argument of creative insight information farming (Bates, 2002) that directly precedes a creative information need being fulfilled. Finally, from a social science perspective, Mumford & Whetzel (1996) provide a clear and concise definition of insight related to creativity which is used here to support the use of the term creative insight, as opposed to inspiration.

2.4.1 – Education and Creativity Studies

Music composition and creative insight have been researched thoroughly within an educational context. P.R Webster (1990; 2002) provides a model for creative thinking process in music (Webster P. R., 2002, p. 27) which is used throughout this paper. By providing such detailed descriptions of each stage of the creative thinking process in musical composition, concrete links were formed to information frameworks with similar qualities. Webster focuses his model on three main sections of the creative process; (1) product intention, (2) thinking

process, (3) creative product (2002, p. 27). Although Webster lists five product intentions and a corresponding five creative products, this thesis will be only focusing on the intention to “compose”, and the creative product, “composed music scores/recordings” (p.27). In moving between the product intention and result, the musician moves between two distinct ways of thinking, *divergent* and *convergent*, and two distinct enabling factors, *enabling skills* and *enabling conditions* (p. 28). This thesis will be using both the aforementioned enabling factors and thinking processes, as well as the cyclical processes of *time away*, *preparation*, *working through* and *verification* (p. 27) as points of connection for information phenomena as it is in these moments where information activities occur.

Andrews (2004) reviews music composition studies in a Canadian context and provides a theoretical framework linking: “(1) the "person", (2) the compositional "process", (3) the "pre-requisite" training, emotions and context, and (4) the musical "piece" itself” (p. 1). He offers insight into essentially two types of composers – working and inspirational. Andrews’ study was of great interest, however, it only reviewed existing literature and no further study was done. Finally, Davidson (1990) is instrumental in providing examples of creative workspaces and technical tools used to enable and enhance musical creativity in the context of education. All studies surveyed contextualized creativity research and aided in determining evaluation criteria for excerpts use in this thesis.

2.5 – Chapter summary

This chapter has provided an overview of the literature surrounding thematic points explored within this research. It has examined literature within information studies, with a special focus on the work of Anders Hektor and the concept of embodied information. Following this, it has examined musical composition within multidisciplinary studies, focusing on those in

education. Throughout the review it examined the gaps that exist in research surrounding where and how composers source their creative insight, of which this thesis hopes to bridge.

Chapter 3

Methods

3.1 – Chapter overview

This chapter explains the thesis’ mixed-methods research design, beginning with rationale for the chosen method, followed by a detailed explanation of the specific elements of the study’s design, implementation, and analysis. Finally, it informs the study’s process of compilation.

3.2 – Exploratory Research and Methods of Research

This research paper, in its nascent attempt to forge connections between the creative behaviours and activities of composers and information behaviours is, by nature, exploratory. “Exploratory research” is research undertaken when one has “little or no scientific knowledge about the group, process, activity or situation they want to examine but nonetheless have reason to believe it contains elements worth discovering” (Stebbins, 2001, p. 6). By design, the mixed methods research approach, using a survey instrument, semi-structured interviews (Spradley, 2016), and visual research, was chosen to emphasize the strengths of both areas of study – musical composition and information sciences – and to integrate the two methods to obtain a more comprehensive view of the data collected, an approach sanctioned by Creswell and Guetterman (2019).

3.3 – The Community of Study

Current composers (section 1.2.1 & 1.5), particularly those who reside in a large Canadian city, were the community researched in this study. All composers researched were either educated in an academic institution or learned traditional western theory and harmony

technics. This creates inerrant limitations in the findings of this study as no composers who were not educated using the aforementioned techniques were interviewed. All composers interviewed create scores of their pieces and are at varying levels of experience. My own connection to this community (section 1.2.1.1) provided me with contacts, factual background knowledge and facilitated participation.

3.3.1 – Ethical Considerations

As this research study includes face to face and peripheral contact with human subjects, prior to beginning my survey and interview, I received approval to do so from the University of Toronto’s Office of Research Ethics. Throughout the course of the study my data collection and processing complied with the University of Toronto’s ethics requirements. I obtained informed consent from the composers. I interviewed (Appendix A), and took care to maintain the privacy and confidentiality of all collected data, aided by the immediate assignment of aliases to each Participant and the storing of all data in secure digital and hard copy. Care was made to remove all identifying data from quotations used in the final reports. Prior to taking the online survey, participants formally agreed to an abbreviated statement of informed consent (Appendix E) wherein it was impossible to take the survey without having agreed to the statement. All participants were above the age of 18 and to the knowledge of the researcher, none were a part of a vulnerable population.

3.3.2 – Funding

Compensation for interview participants’ was provided in the form of a ten dollar gift card for a café. I would like to gratefully acknowledge the Faculty of Information Alumni Association Student Research Grant for providing funding for this compensation.

3.4 – Timeline of Research Implementation

Date	Activity
May-Aug, 2019	Conducting literature review and drafting research instruments
Sept-Oct, 2019	Conducting pilot interviews and tests of the survey instrument
Mid-Oct, 2019	Launch survey, begin interview recruitment, and edit interview guide
Oct 17 th - Dec 31 st 2019	Conduct interviews, continue recruitment for both survey and interviews, and begin transcription and analysis for interviews.
Jan 2020	Complete analysis of interview and survey data.
Jan-Mar 2020	Writing

3.5 – The Survey – Research Design and Implementation

The survey instrument was formulated using Mason & Robinson’s survey on the information-related behaviour of emerging artists (2011) as a guiding template. Extensive literature review was employed to create the survey and, as such, it represents a valid and accurate method for gathering quantitative and qualitative data within the field of creative professionals. The survey as a research instrument was chosen because of the ease with which participants can complete it as well as its availability in electronic format to facilitate delivery to a wide range of participants. Once I had formulated a draft version of the survey, I employed three of my peers in the composition community to test it for comprehensibility. Modifications were then made and another round of tests were done. The survey contains questions that address the following topics:

- Demographic information (Q1, 2, 3)
- Education and experience (Q4, 5, 6)
- Sources of creative insight (Q7, 8 ,9, 10, 12)

- Manner of recording creative insight (Q13)
- Information encountering (Q11)
- Use of embodied information (Q14)
- Anecdote about creative insight (Q15)

For a full list of survey questions, see Appendix F. The survey was open from October 17th to December 31st. Emails were only provided by participants if they wanted to receive a copy of the final thesis or if they chose to participate in an interview. These email addresses were immediately randomized so as to not link the survey response with the participant.

3.5.1 – Sampling and Participant Description

Survey participants were sourced through non-probabilistic purposive elicitations of convenience sampling (O'Dwyer & Bernauer, J. A., 2014). Reaching out to educational institutions and other composer organizations ensured that participants complied with basic criteria but that their participation would remain anonymous. Forty-five participants completed the survey. The figures below show survey participants' demographic and educational information. All demographic survey data are available in Appendix G. All surveys were completely submitted anonymously.

Question:	Responses:	
Where are you located?	Canada	34 / 85%
	United States of America	3 / 8%
	Europe	2 / 5%
	“Other” (entered manually) Middle East	1 / 3%
	18-25	17 / 38%

What is your age?	26-35	9 / 20%
	36-50	11 / 24%
	51+	7 / 16%
	Prefer not to say	1 / 2%
Gender	Male	30 / 67%
	Female	11 / 24%
	Gender non-conforming	3 / 7%
	Prefer not to say	1 / 2%
Formal education in composition	Bachelor's degree	11 / 24%
	Master's degree	16 / 36%
	Doctorate	9 / 20%
	Informal education / private lessons	5 / 11%
	Self-taught	1 / 2%
	"Other"	3 / 6%
Years of composition experience	1-5	12 / 27%
	5-10	8 / 18%
	10-15	8 / 18%
	15-20	2 / 4%
	20+	15 / 33%

Table 1: Demographic survey data

There was no direct contact between the researcher and survey participants to maintain anonymity, although some survey participants reached out to the researcher to clarify terms and voice comments. As it may be viewed as identifying information, a full list of institutions

contacted for survey participation will not be given; however, the majority of Canadian universities and colleges with composition programs were contacted (an effort was made to extend the survey to all provinces and territories), as well as were several established Canadian composer organizations. Elicitations only occurred over email and were not posted to any composer social media forums or groups.

3.6 – The Interview - Research Design and Implementation

In order to delve further into individual details of information phenomena surrounding composers' creative insight, semi-structured interviews (Spradley, 2016) were conducted with a small sample of participants. These interviews followed an interview guide; that is, "a written list of questions and topics that need to be covered in a particular order" (Bernard, 2006, p. 212). This guide was informed first by a research study I had previously conducted on a similar subject³ and, secondly, by themes that emerged following the roll-out of the survey instrument. Following Spradley's recommended approach, questions varied from broad, general inquiries about participants' history of composition and overview of a recent compositional process to more focused discussions on the sources of creative insight, use of time away, and social interactions. Probes were used when new lines of inquiry were discovered and additional questions were often added. For the final interview guide see Appendix C. It should be noted that due to the semi-structured nature of the interview, there was fluidity in the order of question-asking and insertion of further questions as required for elaboration.

³Titled *Inspiration Overload: Information Seeking Behaviours of Classical Composers*, this research paper examined the information seeking behaviours of three composers in the GTA (Greater Toronto Area). Extracting themes of *browsing* and *gathering*, *sense making*, and *dressing*, this research study acted as a catalyst for further research. Completed for INF1323, taught by Professor Jenna Hartel.

3.6.1 – Sampling and Participant description

Participants were recruited by non-probabilistic purposive sampling (Berg 2001; Oliver 2012). Using my connections to the community of study, I reached out to composers through direct request for an interview, which yielded several interviews. In order to surpass the scope of my knowledge, I reached out to my academic advisor who is a member of the community and, through those referrals, I secured further interviews. Finally, in addition to completing the survey, participants were invited to leave their contact details if they were interested in participating in the interview process – many of whom were then contacted for an interview.

Table 2 illustrates recruiting techniques and their results.

Recruiting Technique	Interview
Direct request	3
Referral	3
Survey	4

Table 2: Interview recruitment methods

Interviews occurred in meeting rooms at a large Canadian University, participants' offices, and a variety of local cafes. During each interview, additional questions, important themes, and general points were noted about the content covered in the interview. This led to field notes that were "a brief written record of events and impressions contained in key words and phrases" (Emerson, Fretz, & Shaw, 2011, p. 29). In addition to recording each interview, these notes were taken to provide supplementary data. Interview notes were merged with the corresponding interview transcript and coded together. Table 3 provides a short introduction to each interview participant:

Name ⁴	Brief Bio
Chris	Chris is a graduate student in composition at a Canadian university.
Avon	Avon began composing later in life with no formal training.
Jordan	Jordan is a professional composer with a formal music composition education.
Jesse	Jesse is a professor of music composition at a Canadian university.
Glenn	Glenn is an emerging multi-disciplinary composer with a graduate degree in composition from a Canadian university
Alec	Alec is a professional composer and music professor with no formal training in music composition.
Jules	Jules is a professional composer with an established background as a performer and no formal composition education.
Les	Les is a Doctoral student in music composition at a Canadian university.
Barry	Barry is a professional composer with a doctorate in composition from a Canadian university.
Flynn	Flynn is an undergraduate student in composition at a Canadian University
Chester	Chester is pursuing his graduate degree in composition and acted as a peer Participant. He did not complete an interview but provided examples, clarity, and insight through the process.

Table 3: Table introducing interview participants

The composers are categorized by the aforementioned terms - student, emerging, and professional (see section 1.5 for definitions). Three composers are female, one is gender non-conforming/gender fluid, and six are male. As it stands, the field of composition is

⁴ Pseudonyms, chosen by the researcher, have been used to preserve anonymity of participants.

overwhelmingly dominated by men; thus, an effort was made to examine equal proportions of all genders.

3.7 – Photographs

Following the initial interview, it was recognized that it would be of high value to view images of the interview participants' composition notes. As such, a follow-up elicitation for photos was sent, and nine of the ten participants returned images, creating a visual data set of 18 photographs. See section 5.2, table 7 for images.

3.8 – Analysis

Following each interview, audio recordings were transcribed on a computer. As each interview was transcribed, identifying information was redacted to preserve the anonymity of the participant, and a pseudonym was assigned. The transcriptions were then coded, and then sorted to demonstrate reoccurring themes (Bryman & Burgess, 2002). All documents were uploaded to a computer drive and stored in a folder corresponding to the participant. The real names of each participant were used for these folders, whereas on the documents themselves, pseudonyms were used. Hard copies of notes and transcripts were printed during the coding process and stored in a lockable filing cabinet. Throughout the series of interviews, a list of emerging themes was maintained to review. This review of collected data initiated the process of analysis; noteworthy ideas and impressions were integrated further as data collection continued.

3.8.1 – Coding and Themes

After completing interview recording transcriptions, I employed Emerson, Fretz & Shaw's method of *open coding* (2011, p. 171). Using both the interview transcripts and long

answers pulled from the surveys, this thorough approach involves reading “line by line to identify and formulate any and all ideas, themes, or issues they suggest, no matter how varied and disparate” (p. 172) along with writing “code memos” (p. 185) in order to record and elaborate upon initial ideas as they occur.

Following open coding, I identified a series of emerging, central themes. I created a list of these themes and went back through the interview and survey transcripts, and categorized excerpts based on their relationship to these themes. Transcripts were laid out and excerpts were colour-coded based on their relationship to information studies theories and models. Finally, these themes and excerpts were broken down into analytic points and excerpts from the interview transcripts, and survey long answers were categorized by theme and point. All data were analyzed manually as this method is appropriate for a small-scale study. Although this thesis attempts to cover as many of the themes that emerge during the coding and writing process, several new themes are revealed that are not covered in this current project due to time and space limitations. These are addressed in the Conclusion – Further Questions (Section 7.5).

3.8.2 – Thematic narratives

As discussed above, the process of coding themes naturally evolved into the categorization of excerpts related to analytic points within each theme. Although there are many methods for producing a document relating to such a study, I chose to follow Emerson, Fretz & Shaw’s (2011) “thematic narrative” (p. 202) format which uses excerpt commentary units to place transcript excerpts at the centre of each thematic point. In using this method, two of the three chapters are made up of themes, divided into analytic points that include descriptive excerpts from the interview transcripts and/or survey participants.

3.9 – Chapter Summary

This chapter has provided a step-by-step explanation of research methodologies employed in the data collection stage of this study, examined the ethics of this study, has explained data collection techniques in detail, and has demonstrated techniques used in the analysis of data. Following this section are three chapters of major findings, two of which are written using a “thematic narrative” (Emerson, Fretz, & Shaw, 2011) approach and one of which contains three specific examples of the compositional process, one for each category of composer.

Chapter 4

Sourcing Creative Insight

4.1 – Chapter Overview

This chapter, the first of three to report findings, introduces creative insight in the context of musical composition. It provides an overview of what roles creative insight play in the compositional process and examines the role seemingly mundane everyday-life experiences play in providing creative insight to composers. Then, it examines the specific categories of content used as creative insight paying particular attention to the way in which composers source and use this insight in their compositions and highlighting connections to concepts within information research. Finally, it examines minor exceptions to use of creative insight in composition.

4.2 – What is Creative Insight?

Engrained in the creation of art is the idea of an extra musical factor presenting itself as *inspiration*. Throughout the research, this factor became known instead, as *creative insight*. Drawing from the literature and my original research experience, *creative insight* is defined in this paper as any direct or indirect influence on musical composition that aids in the facilitation of an original creative idea or a response in the composer's own practical skillset. These moments of insight into a composers' compositional process emerge from diverse avenues within the life of a composer. Although certain moments of creative insight were derived from deliberate search, it was common that composers' recollection of their encounter occurred within the routines of their everyday life. The following table represents survey participant's sources of creative insight.

(Q8) - Most frequent general sources of creative insight cited by composers	Participants
Natural spaces	32 / 71% ⁵
Visual art	26 / 58%
Literature	23 / 51%
Music: listening, reading, playing	23 / 51%
Personal collection / space	18 / 40%
Physical objects	15 / 33%
Philosophy	14 / 31%
Mathematical concepts	12 / 27%
Social Spaces	11 / 24%
Libraries	9 / 20%
Spirituality / Spiritual spaces	7 / 16%

Table 4: Frequent areas from which creative insight is sourced

The above table represents the categories most chosen when asked to show where the majority of creative insight was derived. Participants did not limit themselves to one source for creative insight, nor did they find creative insight in stereotypically artistic spaces. Flynn, an undergraduate student in composition keeps his eyes constantly open for creative insight. When necessary, he actively searches for insight, or will take a walk in the local park, illustrating the diverse activities of composers. He explained it to me concisely that “It’s all there I just have to pay attention to it. I think that half of my job as a musician a lot of the time is to just be actively experiencing things.” The sources of Flynn’s creative insight are rarely apparent to him, it

⁵ Decimal percentages have been rounded to exclude decimal places. This applies to all following response calculations.

simply is all contained within his life experiences and the line of influence or ideas is difficult to trace. However, these sources are still given significance upon reflection of spaces which elicit creative insight for Flynn. He talks fondly about his walks in nature and his “little calming waterfall” that he goes to when he needs to come up with musical ideas. Through what Hektor refers to as *monitoring* (2001) of everyday experiences, composers like Flynn are encountering sources of creative insight that are found to be interesting. “As that happens...monitoring becomes an unfolding activity” (Hektor, 2001, p. 163) in which the composer is undergoing somewhat of an adventure through engaging in “continually directed attention to an information system...” (p.84), or their identified source of creative insight.

Interestingly, life experiences that elicit creative insight only gain significance upon later consideration of where ideas originated. An important and repeated element of noticing creative insight, is that a notable quantity of sources are rarely identified until the composition is complete, and composers often keep this source to themselves. Although the dramatic highs and lows of life provide creative insight for some, many more composers are likely to translate experiences encountered during their everyday life into their compositional process.

Creative insight is a consistent part of composers’ compositional process and is found in an extremely diverse array of spaces and formats, yet direct sources are rarely identified until after the composition is complete. Composers rarely give significance to specific sources and instead rely upon their everyday experiences to inform their composition. Not only does this begin to illustrate the varied formats in which composers encounter creative insight, but it also indicates that composers combine information from different aspects within their life, and shows that often there is no distinction between perceived mundane every day information, and that which becomes creative insight.

4.2.1 – Natural Space Awareness

Natural spaces are sources of creative insight. More than any other source, survey participants found most creative insight in natural spaces. One Participant, a graduate student in musical composition provided this example.

“Walking down the canal, I was struck by the motion of the ducks through green plant life. It made me think of sounds that are too quiet to hear. Imaginary sounds.”

There are a couple of points that can be examined here. Both this participant and many others found themselves solving many creative problems by taking a walk and clearing their head. Historically, natural sounds have seeped their way into composition and composers have found great use of natural soundscapes. Specifically, Schubert and his water themes. Even within large central Canadian cities, composers search out specific natural spaces that elicit calmness and openness. Here, the creative insight that is collected connects to embodied information. The atmosphere providing creative insight is “a multi-sensory experience; it also had a strong emotional content... [and the] temperature, air quality...” (Cox, 2018, p. 1084) all impact how the composer collects creative insight in the form of embodied information.

4.2.2 – Visual Creative Insight

Striking visual art captures composers’ interest. Flynn, an interview participant, spoke to me about a recent piece he wrote based on a visual experience.

For a while I would frequently go to [the art gallery], just trying to be like, what's going to inspire me? I was really looking forward to, and I spent a tremendous amount of effort to go and see a certain artist and when I did, I loved it but I didn't get a whole lot out of it. And then I had more time to kill later in the month and someone said to go see this [other artist] and she turned out to be one of the most influential artists on my work ever.

Here, not only did Flynn fail to gain any creative insight from an expected source, but on a whim he encountered visual art which has continued to influence his own creations. In this case, Flynn encountered visual art which was unfulfilling and so he sought additional sources to satisfy himself in ways in which the original resource could not. It is important to note that Flynn then describes the visual art being influential over his work in an overarching sense, continually providing additional creative insight.

In Hektor's (2001) book examining everyday information behaviours and activities, he identifies that "in Searching, Browsing, and Monitoring activities, serendipitous findings must be said to be relevant in some respect" (2001, p. 89). This thesis' examination of creative insight in the context of musical composition looks both at direct searches that elicit creative insight, but also those similar to Flynn's example of serendipitously encountering a source for creative insight. Creative information that is found during a potentially serendipitous encounter has been deemed relevant for collection either consciously or unconsciously. These sources of creative insight that are seen to be "stumbled upon", are not only collected and stored by the composer, but are actively and often continually used for the purpose of composition.

4.2.3 – Textual Creative Insight

Literature provides a catalyst for composition. Jesse describes using a mood elicited through interacting with material he loves, such as poetry. As we were discussing this, Jesse explained his use of textual sources.

I do derive kind of secondary inspiration or insight from [textual] sources. So, poetry is a big one for me. Again, usually if I get inspired by a particular poem, I don't necessarily try to set this poem to music, it's more just like it triggers something in me. It's some kind of mood in me, you know, and it's more that mood that informs the composition process rather than the specific poem.

This practice allows Jesse to elicit a mood in which he feels most comfortable composing, and tailor his experience based on the poetry within his collection, making his compositions tangentially connected to creative insight in a distinctive way. This method of eliciting creative insight goes beyond simply using the literature at face value, but involves using literature that carries personal value to mould creative insight in a way that it also carries personal meaning. In this way, it resembles an *unfolding* (Hektor, 2001) of the textual content, as much as composers also employ *searching*, *browsing*, and *monitoring* (2001).

4.2.4 – Creative Insight Derived from Sound

Sounds are instrumental sources of creative insight. Either those occurring in the everyday life of a composer, or produced by devices, sounds outside of traditional music provide creative insight. While providing an anecdote about the last time they encountered creative insight, one survey participant explained how they were making field recordings, and searching for a specific sound:

One day I was driving through a parking garage and had left the radio on. The concrete of the garage made the radio just play static, but I realized that the quality of the static would change depending on where I was in the parking garage and sometimes in a very musical way. It fascinated me so I started playing around with it, seeing what setting on the radio, what station what volume would make what sound. Then, I turned on a portable recorder I had and drove in circles around the garage. I got a few weird looks but it was worth it. – P3 (M, 18-25, Undergraduate)

During the interviews I conducted, the majority of participants reported composing after encountering particularly interesting sounds, or using a specific sound as creative insight. The frequency that this occurs at suggests that this practice has significant value and reveals much about the relational elements of composing using every day, and electronic sounds.

Historically, the advent of sound recording and *musique concrète*⁶ allowed composers to think differently about the ways in which every day sounds could be manipulated. P3 is among those participants that use manipulated sound, often collected through field recordings, as either parts of their composition, or these sounds create their composition. Sounds are not limited to the industrial clangs of Pierre Schaeffer's *Étude aux chemins de fer* (1948), nor are all composers who create music made of sounds creating *musique concrete*. Often composers mimic every day sounds they encounter in their everyday life, using instrumental techniques, although increasingly, many composers are adding a digital aspect to their compositions where they can manipulate recordings and different libraries of sound. Even sounds as ubiquitous as transit doors closing, planes overhead, or dogs barking might provide creative insight for composition.

Throughout the process of recording these sounds, the participants who did derive creative insight from sound implicate unique information seeking behaviour and information needs, as information related to the aesthetic sound qualities of a piece of music is a particularly vague and complicated category of information need (Hunter, 2006). Participants often have extremely specific sound needs, such as the very specific static mentioned in the excerpt above. Participants are often responsible for much of their own education in this area and find that through conversing with colleagues, browsing appropriate sections of libraries, and browsing social media forums familiarize themselves with specific technological needs and vocabulary associated with techniques associated with electronic sound use (Hunter, 2006).

⁶ An experimental technique of musical composition using recorded sounds as raw material. The technique was developed about 1948 by the French composer Pierre Schaeffer and his associates at the Studio d'Essai ("Experimental Studio") of the French radio system. The fundamental principle of *musique concrète* lies in the composer begins with a set of "concrete" sounds and arranges them into a piece of music. This concept means that the composer is not limited by traditional musical instrumentation and theory. Encyclopedia Britannica, Definition Musique Concrète. <https://www.britannica.com/art/musique-concrete>

4.2.4.1 – Music

In addition to the practices above, music created by other composers provides foundational creative insight. It comes as no surprise that sound organized with intention to be music is accessed by composers as creative insight. Les, an interview participant pursuing his doctorate of music explained it as such:

[To write a recent piece of music], I did a lot of listening to other types of loosely metered pieces to help me grasp what exactly I could do in my own work. Um and I found a lot of ideas on how to write stuff that's not lined up completely but that the composer still has a lot of control over.

The practice of listening to other composers' works is usually the first step in understanding how to write for an unfamiliar ensemble. Participants also listen to ensembles to gather a palate of sounds, colours, or moods. Participants' interactions with other composers' music provided useful information on how to formulate their ideas, surmount knowledge barriers, and expand awareness of lesser-known genres, instruments, or concepts. Above, Les describes his active search to "sample and select" (Bates, 2002) pertinent information that could help him with an unknown technique in his composition. This demonstrates a more active approach to seeking out creative insight to solve compositional problems.

4.2.5 – Physical Object Creative Insight

Material objects capture the creative intuition of composers. When discussing a recent composition, Jordan, an interview participant explained:

On the way back [from a trip] we stopped at the science center and I saw this giant crystal which is fractal in nature which was already demonstrating something I was interested in...and it's like I looked at this thing and was like, that's it [the piece].

Here, Jordan describes different way of sourcing creative insight. Similar to Flynn's serendipitous encounter, and Les' intentional searching, Jordan had a compositional problem and

was actively searching for something fractal in nature to support and complement his existing sketches and compositional ideas. In encountering this giant, strikingly beautiful crystal that also exhibited the fractal nature he was looking for, Jordan found his creative insight. Jordan (and others) use the form, texture, mathematical characteristics, and history of physical objects as creative insight wherein a direct line of influence lies between the object and the composition. Historically the symbolism and narrative that exists in programmatic music (Abraham, 1969; Adams, 2018; Lipperman, 1953; Song, 2019,) lends itself well to having a direct line of influence from a piece of creative insight. Jordan's use of a science center and subsequent encounter with creative insight introduces *information grounds* (Fisher, et al., 2005) in a unique way. Jordan's initial visit to the science centre was to learn about science, but during the visit he came across unrelated but pertinent information that he applied directly to his composition.

4.2.6 – Spiritual Insight

Spiritual practices, including ceremonies using plant-based medicines, elicit solutions for composers. A few of my participants were comfortable sharing stories about their use of such controlled substances for creative purposes. A survey participant explained:

During an ayahuasca ceremony I experienced what I perceived to be the bare essence of existence: self-organizing chaos (hard to put into words). There was an accompanying sound, sort of a buzz, like all instruments at all frequencies. Afterwards, I sought to recreate the experience with music and wrote a short orchestral work using sound mass techniques. – P4 (M, 36-50, Canada)

Despite spiritual practices rarely being used by my participants for purposes of creative insight, P4's practices carry significant value. The information phenomena surrounding the event of ayahuasca brings to light the spirituality that connects participants to their own musical compositions. In this thesis participants agree that creative insight applies to much more than

composition through divine intervention. However, P4 (and others) still link their composing quite distinctly to spiritual practices.

This survey participant's spirituality defines how they perceive "reality itself, too, potentially in a manner that is fundamentally different from the materialistic picture of the world (Kari, 2007, p. 958). The element of gaining creative insight through spirituality allows participants to experience their world with curiosity and exuberance. It is interesting that P4's experience was that of a sound rather than a visual experience, since the latter is a more common experience. His professional training as a composer could have facilitated access to the sound and its translation into a musical work. This suggests that unconventional and spiritual practices, when done in a way that respects the traditions of the practices, are fruitful resources of creative insight for composers.

4.2.7 – Mathematical Formulas and Concepts

Along with more traditional sources of creative insight, (visual art, music, nature) composers find creative insight in mathematical formulas and concepts. Below, a survey participant describes an instance in which he used a standard calculation to solve a compositional problem:

I was struggling to write an original musical idea to represent the idea of fear, so I studied the structure implied by the length of the stanzas of the poem from which I drew inspiration, mathematically converted that structure into a pitch collection, and fit that into the rest of my material. – P5 (M, 18-25, Informal ed.)

Here, not only has this survey participant used literature as a source of creative insight but, having encountered a compositional problem for which he required additional help, employed a mathematical calculation based on that textual source and created additional musical material.

This survey participant (and others) use mathematical concepts and calculations as a tool to transfer concepts from outside of music and integrate them within compositions

It is important to note that within composition, mathematical concepts and formulas are also used as a fundamental aspect of the piece such as in many of the works of Stockhausen (Parsons, 2019). Although no participants utilized mathematical concepts in this manner, through our conversations, many brought up instances of peers' use as the basis of their pieces about physics, mathematics, or the fundamental structures of the universe.

4.2.8 – Computer Programs

Along with using deliberate mathematical formulas, composers often use random generators, and computer programs that allow them to encounter, and subsequently modify and personalize musical material. Unlike the example of P5, above, in which he uses arithmetic to generate pitch patterns that satisfied his need for creative insight, composers' use of computer programs is much more arbitrary. Computer programs allow composers to encounter and adapt creative insight much more randomly. In the following excerpt, Jordan discusses his practice of encountering random musical material:

I started writing little programs so to speak, to work random elements. Sometimes I put my own material in and randomize them, but mostly it's just going online and looking for a sound randomizer. I do it to surprise myself which is important. Those computer programs just spit something out and I don't know. Is it a random musical idea or is it just a random sound?

This practice permits Jordan to add his own music to programs in order to tailor them more specifically to his own aesthetic, and also engage in interaction with outside aural material in a way that provides creative insight. This type of creative insight goes beyond serendipitously encountered information, and involves creatively interacting with a search engine in a way that

expects a serendipitous encounter. In this way, it resembles serendipity-focused research (Foster & Ford, 2003), as much as it resembles information seeking, as Jordan entered into an environment of discovery specifically with the intention of stumbling across a piece of creative insight. As examined in section 4.2.4, technology has allowed composers to evolve the manner in which they encounter creative insight. These modern strategies of integrating a technological touch to creating musical ideas is fascinating as is the self-taught nature of many composers' navigation of these tools.

4.2.9 – Philosophy

Composers also use philosophical ideas and concepts to sculpt their musical composition. In the following excerpt, a survey participant discusses the conceptualization of a recent piece, aided by a philosophical concept:

I was walking home from work (a 40-minute journey on foot) and listening to a philosophy podcast. A tangential thought made me recall a philosophical concept from Nagarjuna (who was not the subject of the podcast) which made me think of a possible musical-structural idea I might use in a piece I'm planning for next year.
– P6 (M, 36-50, Doctorate)

Here, the survey participant's philosophical ideas have become intertwined within the musical structures of a composition, making his composition a place where his skills as a composers and outside philosophical concepts intersect and are recorded in a unique way. It is important to note that composers can also use personal philosophical beliefs to silo information and act as guidelines for sourcing creative insight, as when faith might keep a composer from considering sources they deem to be in conflict with their beliefs, but is a known source of creative insight for others. In this way, it resembles information rejection (Case & Given, 2016) in that composers use philosophical concepts to limit their intake and structure musical ideas.

4.2.10 – Improvisation

In addition to creative insight arising from outside sources, a large portion of composers utilize solo or collaborative improvisation to generate creative insight. Improvisation can be described as “mindless noodling”, for some it is intentional searching, and for others it occurs when stimulated by a particular environment. Previously, we have examined participants who use other people’s music as creative insight, but here we will look at an example of a survey participant’s self-generated musical content as creative insight:

Free form improvisation, there is something great about playing an instrument for hours and not having anything written down afterwards, just the feeling or mood that was expressed. Also repetition, if something seems like it has potential, playing over, and over, and over again, to see where it takes you. – P3 (M, 18-25, Undergraduate)

From this excerpt one can see the difference between P3’s direct sourcing of static sound in section 4.2.4, and his use of playing an instrument to elicit a mood, which bears striking resemblance to Jesse’s treatment of literature. Instead of seeking outward creative insight, P3 integrates his own musical skill to free restrictions and introduce an element of play.

Furthermore, participants who improvised in a group engaged in a tactical experience of “time-evolving patterns of inter-musician movement coordination” (Walton, Richardson, Langland-Hassan, Chemero, & Washburn, 2015, p. 1). In both the act of collaborative improvisation, participants reported giving and taking moments of creative insight between themselves in an act that resembles information *exchanging* (Hektor, 2001, p. 84). Within the act of solo improvisation, P3 describes his repetition of ideas that strike him with promise. This suggests broadening the defining qualities of Hektor’s *exchanging* (2001) to include physical acts of giving and receiving messages from your own physical output, or a composer giving musical material to their instrument and it being received back aurally by themselves.

4.3 – Notable Exceptions

Although the use of creative insight was a widespread reality, there were minor exceptions.

Two survey participants expressed their reliance on learned musical skills and not on other factors guiding their compositional process:

[W]hile it is certainly legitimate to sometimes be inspired by extra-musical things and experiences (a walk in nature, a work of literature, a mathematical equation), I am far more likely to treat compositional problems as musical problems and draw on my training and experience of the craft of composition to come up with musical solutions. For example, if the ending of a composition isn't working for some reason, it's not helpful for me to read a book of poems; rather, I can use my musical craft/skills to figure out what's going on (harmonic rhythms, melodic construction, etc.) and come up with a solution to the problem. – P7 (M, 36-50, Doctorate)

This participant accepted the notion of creative insight influencing composition, but found no personal use in it. In the excerpt above, the survey participant describes the use of his own musical skillset to solve compositional problems. In contrast to the above examples of walking along canals and imagining multi-faceted composition concepts, he is informed by his own enabling skills and not by “reading a book of poems”. This is not to say that his compositions will contain less creative ideas than those previously mentioned, but it is worthwhile to note that while those above expressed an appreciation of the process in which they were engaged, this survey participant focused more on creating a product with which he was pleased, and less on creating a lush process in which to create.

In further contrast, another survey participant rejected the idea of creative insight entirely, but this seemed to be due to a potential misunderstanding of the research objective and intentions behind the survey:

“I have been composing for about 45 years, and I've been a professor of composition for 30 years, and in my experience, and in my studies of the working process of famous composers throughout history, the creative process involves keeping a strict

routine, ideally daily, such as starting to compose at 8AM, stopping at 11 AM, and then doing whatever else you have to do that day....the key to creative work, again in my experience, is to schedule time for creative work every day.- P8 (M, 50+, Doctorate)

Similar to P7 above, this survey participant chooses to reject any notion that outward creative insight could be helpful to his composition, but also goes on to explain that the optimal process does not include creative insight. In their article reviewing Sternberg and Davidson's *The Nature of Insight*, Michael and Whetzel (1996), argue, "Insight may not always be required for creative thought. Instead, it may prove particularly important only under conditions when the problem can be constructed in different ways and relevant information and pertinent concepts are already available but not readily accessed or especially well organized" (Mumford & Whetzel, 1996, p. 106). P7 and P8's approach to composition as a "regular job" sees composer's learned skills and artistic intuition play the sole roles in their creation process.

P7 and P8 demonstrate that although a great variety of creative insight is used and acknowledged by the majority of composers, it is not necessary for *all* composers. Some, especially those later in their career are often able to compose without explicit creative insight due to their education in composition techniques, and own artistic intuition. However, as my research has shown, the majority prefer to have some source of insight to reference throughout their process.

4.4 – Chapter Summary

This chapter has provided an overview of the sources of creative insight is in the context of composition as well as examining the role everyday experiences play in providing creative insight, and how rarely those sources are identified. It reviewed the specific categories of content

used as creative insight paying particular attention to the way in which composers source and use this insight in their compositions and highlighting connections concepts within information research. Finally, it examined minor, but notable exceptions to use of creative insight in composition.

Chapter 5

Materials

5.1 – Chapter Overview

This chapter examines the materials involved in the record keeping of creative insight. It first looks at the material properties of what I have coined, composers' *creative insight storage units (CISU)* and explores the variety of contents found within. It then examines the use and reuse of such CISUs and the manner in which a CISU becomes a reference book (Bates, 1986). Following this, it explores the personal library collections of composers and their uses throughout composing. Finally it examines those who maintain a conceptual catalogue of creative insight and never record it, whether digitally or physically until they begin to write a piece of music.

5.2 - Recording Insight

The majority of composers record their creative insight in physical or digital *creative insight storage units (CISU)*. These record keeping devices are spaces where composers record creative insight, conceptualize pieces, and begin to sketch their scores. Most often composers choose their CISU based on convenience of access or to the type of creative expression the CISU permits. Glenn, who keeps multiple CISUs, discussed their reasoning for convenience:

I use the notes app on my iPhone like all the time, especially because it's cloud based and so I can do it on my phone and the same information is accessible on any other like my laptop or whatever, the same goes for my other note apps, they're all cloud-accessible.... [A]nd then also on some of the stuff emails, I'll email myself links.

Glenn's CISUs are almost entirely digital, a format chosen mostly for ease-of use. Not only does the "cloud-based" nature of Glenn's CISUs allow them to record creative insight as they

experience it, and integration of notetaking software within other devices such as smart phones, creates a multi-functional, portable device for recording creative insight. Glenn's expressed desire not to be confined to recording creative insight in a specific format makes sense when looking at the varied formats of digital content available to be used as creative insight. Although some composers use their digital CISUs to conceptualize their pieces in the same manner as physical CISUs, many use them as logs (McKenzie & Davies, 2012) of creative insight they encounter in their day-to-day life. However, this differs from physical CISUs as the format of the creative insight they are recording can also be digital (voice recordings, pictures, links) and would not be able to be recorded in a physical CISU in the same manner. These digital CISUs serve as both a record of past creative insight and a tool for planning and predicting future creative insight needs (McKenzie & Davies, 2012).

Jordan also values his CISUs for their physical properties, but for reasons that differed from those outlined above by Glenn. In the following excerpt, he describes the evolution his CISUs have taken:

I didn't start with one, I used scraps of paper and I'd throw them in a basket and then I'd keep misplacing them, and someone mentioned maybe putting them all in one place, so the idea of the sketchbook occurred to me...but I couldn't find what I was looking for so I figured out what I wanted in the book, went to a store and had them make up about 50 large sketchbooks with nice, blank paper...so I could be able to get them to my students too.

Jordan's description illustrates several intriguing aspects about CISUs. First, when he describes his chosen CISU he illustrates the importance of retaining records of creative insight for later use, confirming composing's lengthy lifespan. In addition, when he found that existing sketchbook formats inadequate, he created a *custom* CISU; this shows the great lengths composers will go to support their creative process. Jordan's rationale for choosing his CISU is

the material properties, specifically large, blank pages without lines which allow for optimal freedom of expression and varied systems of describing creative insight. Jordan also favors corresponding second pages with staff paper (paper lined with blank musical staves on which note heads are organized) where he can translate his ideas into musical notation. CISUs are compact aspects of a composer's personal library in which they *exchange* or *dress* (Hektor, 2001) musical ideas in order to reach a conclusion. By using larger sketchbooks with blank pages, composers are freed from traditional constraints at the inception of their pieces, and can record creative insight without worrying how it will translate into musical ideas. Jordan's evolution from scrap paper to creating his own CISU also demonstrates the need to amalgamate records of creative insight for potential reuse (covered in depth in section 5.4). The images below display images from Jordan's (left) and Glenn's (right) CISUs:



Figure 1: Jordan's CISU

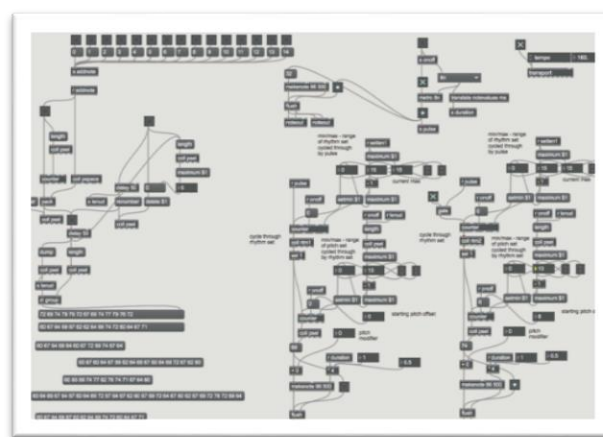



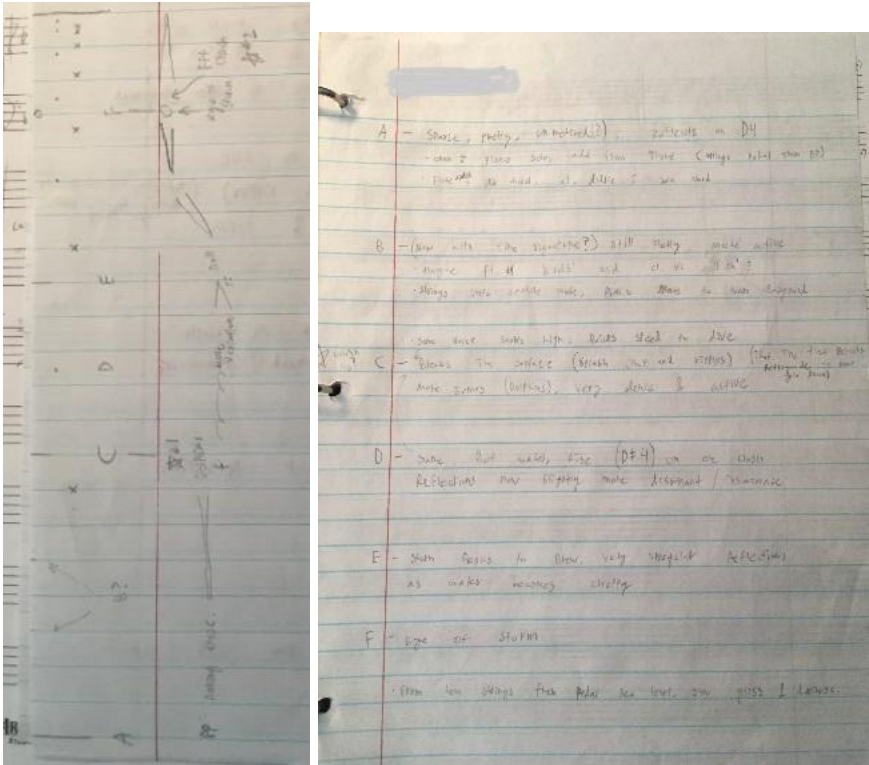
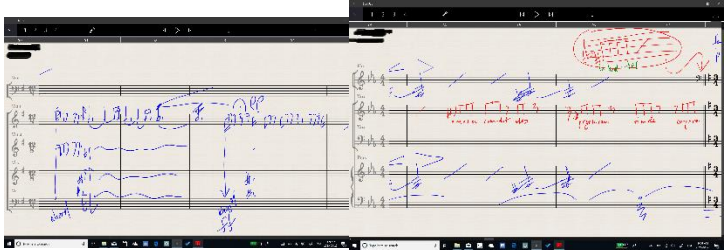
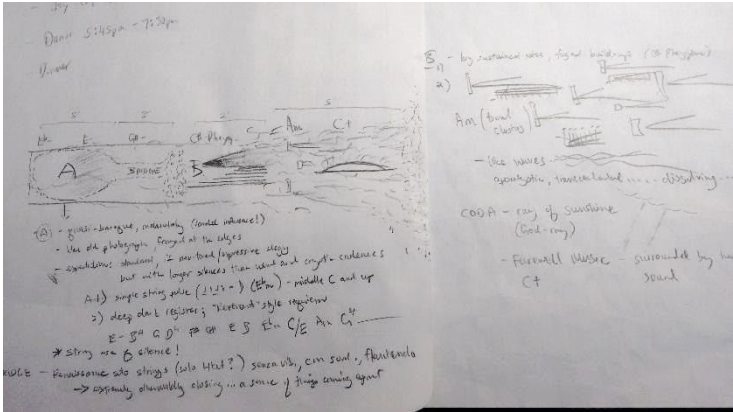
Figure 2: Glenn's CISU

While Glenn and Jordan each had different preferences for the material properties of their CISU, they both engaged in noting moments of creative insight in their sketches. Kerman, one of the leading musicologists of the 20th century, qualifies such sketches as meeting two criteria, “(1) it [the sketch] has survived, and (2) it was in the composer's mind superseded” (Kerman,

1989, p. 174). While Glenn’s sketches appear in diverse digital formats on their varied electronic devices, and Jordan’s on large, physical sketchbooks, both are creating original artifacts of their sources of creative insight which then serve as the raw material for larger piece of music.

The table below illustrates a sample of interview participant’s CISUs, the contents of which will be examined in the following sections.

Participant name	Photo(s)	Description
Chris		<p>In this photo, Chris has staged all of her CISUs so they would fit in the photo. They are: note books, small pieces of staff paper, software, and scrap paper.</p>

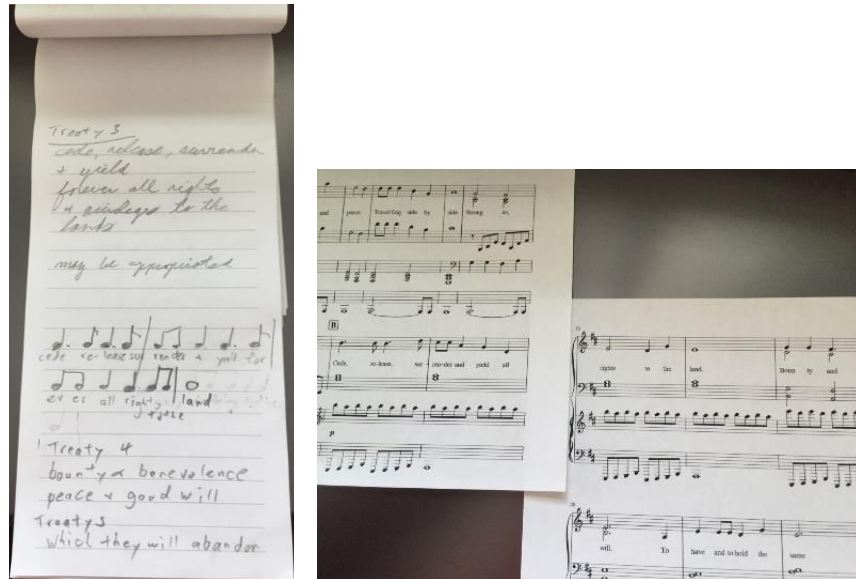
<p>Les</p>	 <p>The right photo contains the following text:</p> <ul style="list-style-type: none"> A - Sparse, pretty, on pitched (?) - pitched on D4 B - New with the structure? still pretty much a line C - Focus on surface (space and time) [the two are related] D - same but with the (D+4) on an edge E - same focus in flow, very regular repetition F - Edge of storm 	<p>Les provided two photos, one using chords, melodies, and shapes to outline a piece, and another in which he outlines the piece in descriptive text. Les enjoys using lined loose-leaf paper so he can easily change the order of ideas, and use regular binders to carry his works.</p>
<p>Jesse</p>		<p>Jesse provided screenshots of preliminary sketches within his digital CISU.</p>
<p>Barry</p>	 <p>The right side of the photo contains the following text:</p> <ul style="list-style-type: none"> by resistance, signal building (to program) Am (band class) the waves - asymptotic, unaccelerated ... dispersing COA - ray of sunshine (band-ray) ferocious music surrounded by sound 	<p>Barry provided a photo of his physical CISU. The photo contains a section which he has sketched out using shapes, text, and musical ideas.</p>

Jordan



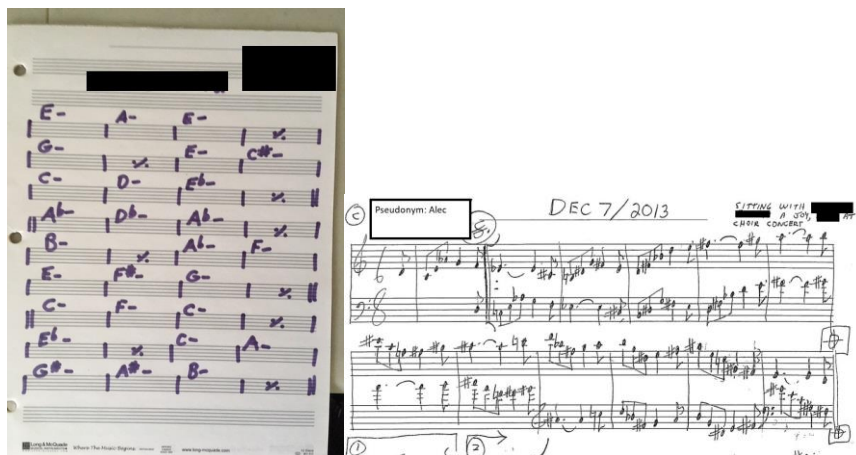
Jordan provided a sketch for a piece in which he has written textual instructions, melodic lines, and technique markings.

Avon



Avon provided a preliminary sketch on her portable CISU, and the corresponding section of her final piece of music.

Alec



Alec provided a photo of a chord chart for a piece, and an excerpt from a volume of canons he uses as a reference book when seeking creative insight.

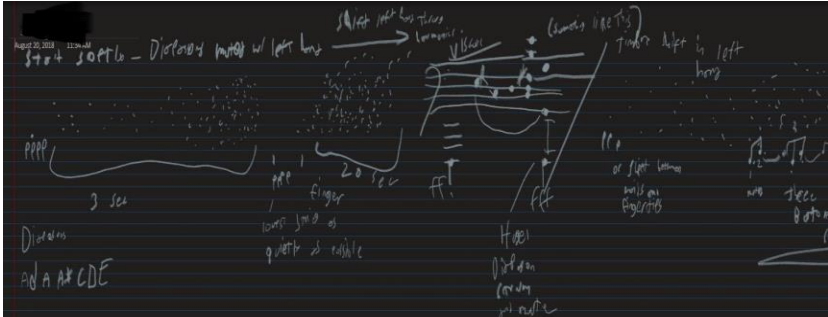
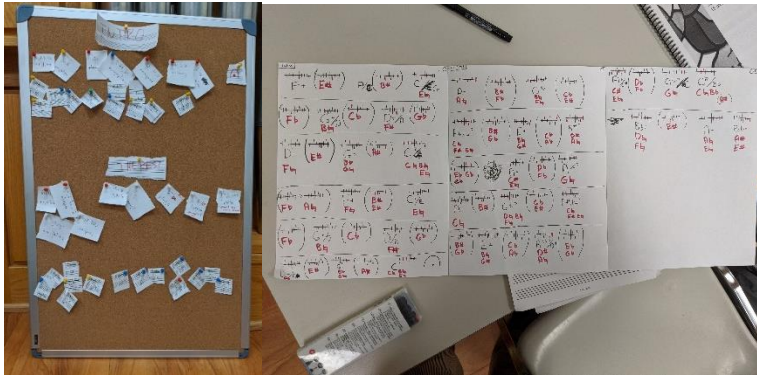
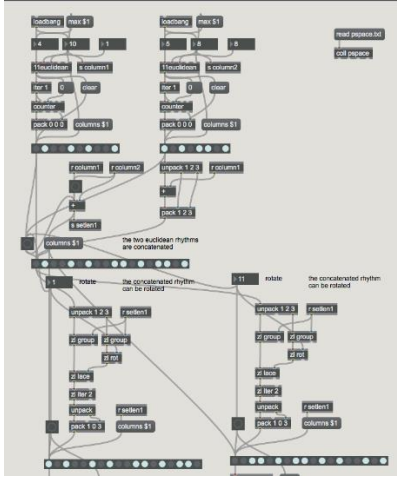
<p>Chester</p>		<p>Chester provided a screenshot of his cloud-based digital note-taking software.</p>																																																								
<p>Flynn</p>		<p>Flynn provided a photo of his process board where he takes fragments and re-arranges them, as well as the piece later in the process.</p>																																																								
<p>Glenn</p>	<table border="1" data-bbox="509 1024 1146 1289"> <thead> <tr> <th>Most Pref</th> <th>Angle</th> <th>Interval not used</th> <th>Parallel</th> <th>Ab-2-Bb</th> <th>Ab-6-F</th> <th>Ab-6-F</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td>2</td> <td>68 70;</td> <td>Unison</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>6</td> <td>68 77;</td> <td>Unison</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>7</td> <td>68 79;</td> <td>Unison</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>m2</td> <td>60 71;</td> <td>M2</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>2</td> <td>71 73;</td> <td>m3</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>6</td> <td>71 80;</td> <td>m3</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>7</td> <td>71 82;</td> <td>m3</td> </tr> </tbody> </table> 	Most Pref	Angle	Interval not used	Parallel	Ab-2-Bb	Ab-6-F	Ab-6-F					2	68 70;	Unison					6	68 77;	Unison					7	68 79;	Unison					m2	60 71;	M2					2	71 73;	m3					6	71 80;	m3					7	71 82;	m3	<p>Glenn provided screenshots of what they call “pre-compositional material”. The first is a screenshot of a visual tracking system for pitch options during the compositional process.</p> <p>The second screenshot represents an entire piece mapped out to make intervallic decisions in a piece.</p>
Most Pref	Angle	Interval not used	Parallel	Ab-2-Bb	Ab-6-F	Ab-6-F																																																				
				2	68 70;	Unison																																																				
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				6	71 80;	m3																																																				
				7	71 82;	m3																																																				

Table 5: Photos of interview participant CISUs

5.3 – “This section should be soft”

Along with choosing a CISU for its material properties, composers often use visual language to capture more complex or nuanced insights. In conversation, a peer Participant, Chester displayed a page from his CISU that features standard notation, text, and other graphics to represent the conceptualization of an entire piece:

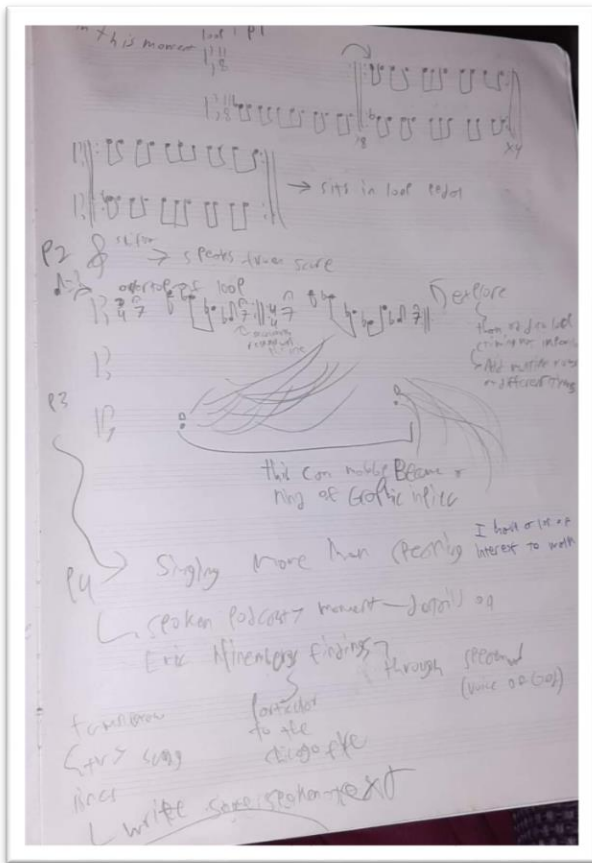


Figure 3: Example of content in a peer's CISU

There are several aspects from this excerpt that are of interest. First, in Fig 3, the content that represents an entire piece of music is varied. The ability to record insight using a combination of formal notation, shapes, and text is preferred, and contributes to a freeing experience while recording insight, often stirring one's imagination. Chester's description of his textual vocabulary ranged from explicit directions; “now the strings do this...” to using adjectives such as “fuzzy, soft, sharp” to describe the desired mood or texture of a section.

Besides formal notation, Chester's sketch in Fig. 3's diverse content illustrates the manner in which creative insight is recorded. Along with the discussed textual information, CISUs can contain *pictorial metaphors* (Hartel & Savolainen, 2016) which could be shapes, artistic renditions, or drawings of different images. Often these pictorial metaphors are used to indicate form, mood, texture or gestures – parts of composition for which there are no standard

notation systems. Using images and symbols are particularly helpful for electronic music composers as they often use differing notation methods than traditional systems. The varied contents of CISUs illustrates that the manner in which creative insight is recorded involves a desire to enjoy the process of conceptualizing a composition, as much as it involves creating a finished product.

5.3.1 – “Sure, they can look, but I don’t think they’ll understand”

Composers have little regard for the privacy of the contents of their CISUs. Despite containing original musical ideas and personal information, composers are often indifferent about another set of eyes looking over their CISUs because they often think no one will understand what was going on. Les, for example, had his CISU stolen last summer but regarded it as a simple inconvenience, and not a tragic loss of ideas, or a sentimental object:

I had a little black moleskin book in my backpack that got stolen over the summer. I don't think I lost any ideas that were like really that good. But there were a bunch of them, so who knows what was lost.

Similarly, Chester has no reservations about others looking into his sketch books, and when I asked him why he explained:

I think that I don’t really mind because honestly I don’t think anyone will understand what’s happening. Like all the things I write there are for me, and you can’t really get what the piece is about if you aren’t me...It’s also fun to see how other people put ideas down, when you look at other people’s books, but I get a bit embarrassed by how messy mine is sometimes.

Chester also reported a practice shared by others, which is that of skipping some pages where he felt embarrassed about his artistic skills, or messiness when showing his CISU to others. As seen above in section 5.3, composers often use formal notation devices, and their informal vocabulary of shapes and pictorial metaphors to record creative insight. It is these informal notation devices

that composers most often express embarrassment over other people seeing, but only due to their perceived lack of artistic skill in drawing them.

These ways of allowing openness of one's creative insight begin to demonstrate the relationship one has with one's CISU. Although they act as a repository for one's personal thoughts and original creative ideas, participants would rarely refuse when asked to show their CISU, but would express confusion as to why someone wanted to see it. Above, Chester expressed that his lack of trepidation was due to other people not being able to understand the way in which he records creative insight or conceptualizes pieces. Most composers, when asked for pictures of their CISU, would send a sketch but also send the finished piece to show the final compositional product. Composers utilize their CISUs to conceptualize pieces using many source of creative insight, but a focus is placed on what these sketches become, rather than the contents of the CISUs themselves. Despite there not being privacy measures in place, composers' CISUs are a part of their daily life, and they exist as more than a record or log of creative insight but as a space in which composers continually adapt and evolve original creative thought before beginning to compose.

Siracky (2013) examines the difference between traditionally celebratory aspects of personal information collections (Yakel, 2004; Hartel 2010) and those of spiritual journal collections. Similarly to spiritual journal collections, CISUs may be contained within a personal library, (section 5.5) but would not be prominently displayed within a home or office. Despite composers' openness to share the contents of their CISUs, they vary from other personal information collections such as recipe collections that are placed prominently on display to add aesthetic value to a space (Hartel J. , 2010), composers and rarely display their CISUs in a noticeable place within their home.

5.4 – Use of CISUs

Another element of CISUs, is their use being dependant on whether the composer was writing a piece or not. All of the composers I interviewed reported using a physical or digital CISU to record creative insight, conceptualize compositions, and work through musical problems *before* beginning to notate their composition. The photograph below displaying Chris's movement between CISUs and illustrates an occasion in which a composer has multiple CISUs distinctly for one composition:

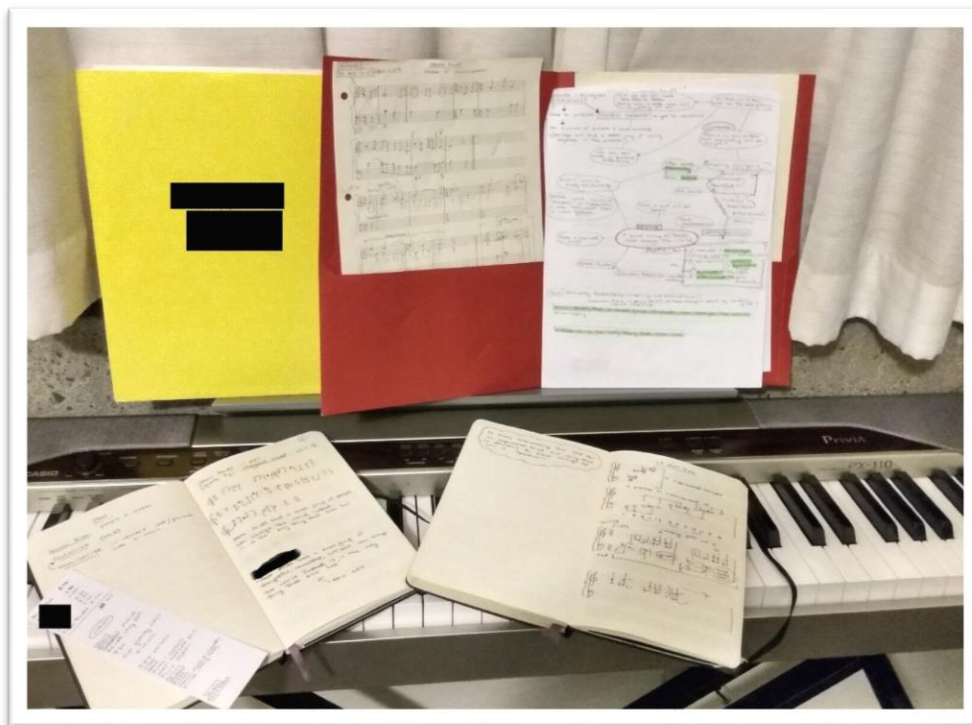


Figure 4: Chris' CISUs

When Chris described her process to me, she explained:

...I'll brainstorm on paper, on staff paper, I do have a little notebook that's got staff paper and its pretty, and I usually all my brainstorming starts in that book. And then once I get enough information, I move out on to scrap paper all over the place with musical ideas on them. I keep them all in their own little duotang so each piece has its own folder, and then I eventually move into the notation software.

Although not all composers were in the habit of organizing their creative ideas in the same manner as Chris, using CISUs to log (McKenzie & Davies, 2012) creative insight encountered in their day-to-day activities or specially sought out, only when actively working towards a piece of music, was common. As previously explored, composers use their CISUs to conceptualize pieces, draw out structures, and brainstorm, which bears striking resemblance to Hartel's (2007) description of a chef planning a meal: "Menus, steering documents and lists are handy to carry along during the next stage of provisioning to ensure that all ingredients are purchased," (p.167). Composers interact in this same way with compositional material when planning the creation of a piece of music.

From the moment composers decide to create a piece, their CISU is in use collecting creative insight and framing it to externalize a cognitive product. This implicates unique information phenomena, primarily Hektor's (2001) *Dressing* and *unfolding* or, "taking part of a content by reading, watching, or listening (p. 84), which takes place in the re-working of creative insight into musical ideas within their CISU. Based on these definitions, the act of interacting with creative insight recorded in CISUs and subsequently synthesizing those ideas into a musical piece results in unique forms of information exchange.

5.4.1 – "That idea was crap!"

Content in CISUs that was not used for a composition is often deemed inferior and not reused for a different piece. Several composers expressed outright disdain at the thought of recycling content that never made it into their previous pieces. Flynn and Les' excerpts below examine why composers rarely reuse their creative insight:

I'd say 90% of the things that I wrote down here, I've never done anything like that [reusing as creative insight]. I'll go back and look and be like, this idea I had previously was crap!

Les expressed a similar sentiment:

[E]very once in a while I would go back and look through and sort of play through some of the ideas and see. And mostly it's like, oh, okay, I see why I didn't do anything to that.

Although not all composers were so harsh with their unused content, the majority deemed it to be of no use to the participant based on either their changing aesthetic sensitivity, evolving technical skills, or that the content is, indeed bad. Based on my interviews and surveys, composers report a reuse rate of approximately 10-15%⁷ on previous creative insights. Flynn expressed that when he was newer to composition he would review his previous ideas, but as he has become more experienced and has expanded his craft, Flynn, and other composers rarely find use in previous ideas. Reusing sources, specifically from digital CISUs is reported at an even lower rate.

Because of the convenience with which composers can collect creative insight on electronic devices, and because they may be “greedy since they might not encounter that information again” (LeClerc, 2010, p. 5), composers, like other creative professionals, accumulate large quantities of creative insight that are rarely reviewed for further development of ideas (2010, p.5).

5.4.2 – “Its fun to go back!”

Despite many composers refusing to review and reuse previous unused content, there are a group of composers who utilize their CISUs as a *reference book* (Bates, 1986) and reuse their

⁷ General reuse rate offered up in multiple interviews.

own content. The following two excerpts demonstrate the ways in which older content in CISUs can provide answers during creative problem solving:

I looked back at some of my earlier work and came across some older ideas which I felt were worth reworking and developing, and that was all I needed in order to complete the work. – P9 (M, 51+, Masters)

Similarly, as we saw previously, part of Chris’s composition process involves making many fragments of musical ideas and then linking them together. In this process, many ideas are discarded from the piece, but kept in her CISU:

Sometimes if I’m looking for ideas or if I remember a particular idea that I didn’t use for one piece, I go back and I’m like, yeah, I could use that. Cause that would be perfect for this idea. So sometimes I do go back.

These ways of reusing content demonstrate the benefit of re-reading through CISUs, something many composers reject as an idea entirely. Although there is a low reuse rate for creative ideas previously entered in a CISU, most participants mention at least one instance in which they had gone back and, if they encountered a creative idea that had not been used in a piece before, it provided them with an answer to a problem in their current piece.

Composers use their own content as reference books and when they do return, and engage in the act of *unfolding* (Hektor, 2001) their own content. Marcia Bates defines *reference books* as “books that are substantially or entirely composed of files” (1986, p. 44). CISUs are reference books as they are comprised of original sets of “two or more records⁸ ordered by a rule or principle...” (p. 40-41). As a composer creates a digital or physical collection of their sketches in a CISU, this becomes a reference book. Often the records in composer’s CISUs are ordered in relation to a specific piece, but can also be ordered chronologically until either the physical

⁸ “A unitary or internally related body of information; an information ‘individual’” (p. 41).

CISU is full of material, or the software used for the digital CISU changes, although, either way, these records created for a specific piece remain internally related to each other. Furthering the connection between CISUs and reference books, each record of creative insight “stands alone” or can be rearranged without harming its meaning or use (Bates, 1986, p.47) until it is integrated into a piece outside of the CISU. As previously explored, most composers only record creative insight when they are actively composing a piece of music. These sections within their CISU become a record, and each moment of creative insight recorded, different fields, or distinct segments of information (Bates, 1986). Finally, as seen in the image of Avon’s CISU below, composers often order their records of creative insight by working title of the piece, colour-coded tags, or simply the date:

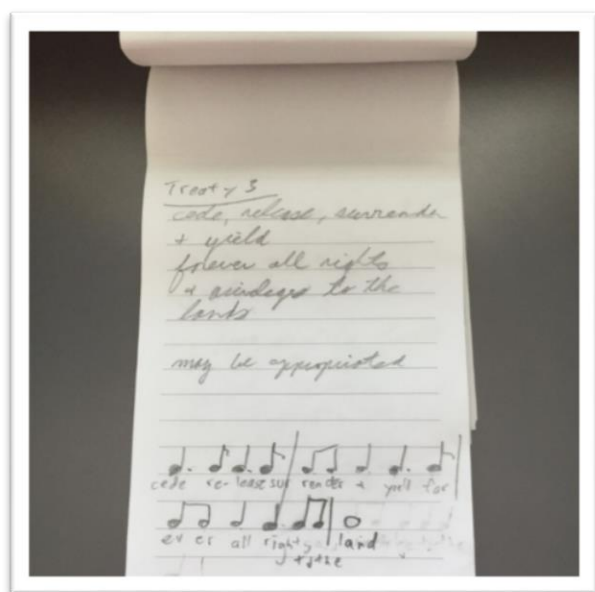


Figure 5: One of Avon's CISUs

In the photo to the left, we can see the title of the piece written on the top left hand of the CISU. Most composers found that using a title, or working title of their piece as access fields for locating records was the most functional. Although, from our previous examination of Chris’s record keeping behaviour in section 5.4, and from her admittance of reusing creative insight in the form of a reference book in this

section, it can be argued that those who return to their CISUs for additional creative insight are more likely to keep more well-organized records.

The contents of CISUs as described in the previous sections often go beyond simply recording useful information, and involves creatively adapting creative information in a way that

has specific meaning to the composer. It is a form of original creative information production and when it is returned to and built upon, it exemplifies a communication that occurs with information prepared in the past. When composers engage with past content in CISUs they *unfold* and sometimes *dress* (Hektor, 2001) the information to elicit further creative insight, or bring a past piece of creative insight into a current piece of music.

5.5 – Personal Library Collections

As stated above, CISUs can act as *reference books*, but composers also maintain personal libraries of material that elicit creative insight, although are rare; more frequent are technical reference libraries that make up a composer’s workspace. In addition to her previously examined meticulously organized CISUs, Chris has created a highly specific personal reference library full of a variety of reference materials:

I've got model cardboard violin and viola necks, with all the pitch positions written on them, to help me when writing for strings (particularly useful for double stops). I also sometimes make myself a 'cheat sheet' for particular instruments, with the ranges, registers, and anything unique I want to keep track off...When formatting orchestral music and making parts, I've got a serious collection of handouts, one of which is the MOLA (Major Orchestra Librarians Association) guidelines, to consult. I also often skim through Orchestration books...for relevant information when composing.

There are several aspects of this excerpt which are of interest. First, Chris has extremely varied sources of information in her personal library, including original compilations and other kinds of ephemera. She has created her own reference material based on what she felt was lacking from the formal educational material in the form of her “cheat sheets”. Like many other composers, all of the material in Chris’s personal library collection is there to help her with the technical aspects of composition, and none to elicit creative insight.

For some composers, Chris included, their personal library collections are permanent fixtures in their homes and workspaces and for others, collections are abandoned due to low use rates. These collections are often stored alongside CISUs that are full of material, as most participants maintain an unofficial archive of their previous physical CISUs. Chris (and others) uses her personal library to help build her creative workspace. Composers found being in a space that facilitates creative ideas to be quite important⁹. The information behaviour in creative workspaces varies greatly as in these spaces there is a “complexity of tasks, the need for sense-making (Dervin, 1999), and affective and cognitive experiences throughout information searching, seeking and other information activities encompassed by information behaviour” (Meyer & Fourie, 2017, p. 1). Paying closer attention to the practical, educational, and psychological needs of composers in their workspaces has great implication for the development of such creative workspaces within public and academic libraries (Meyer & Fourie, 2017).

Composers also use their personal library collections to provide answers to creative problems. The photograph below illustrates a small portion of Alec’s self-created personal reference library:

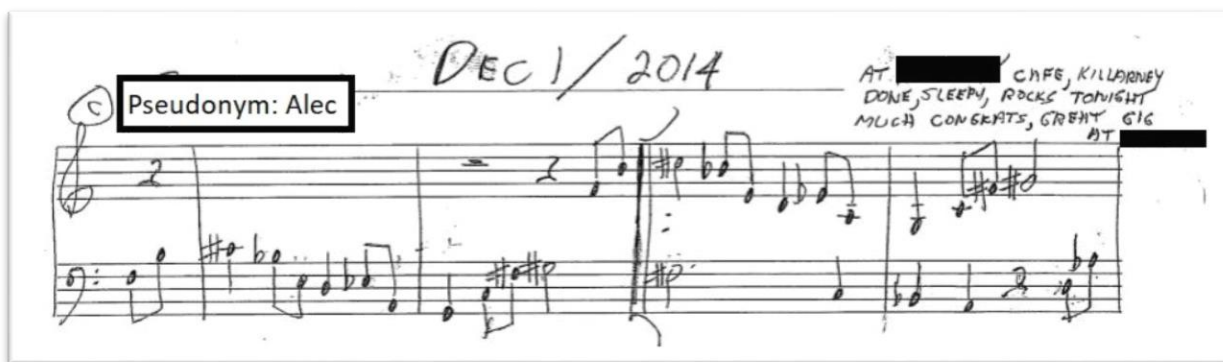


Figure 6: An excerpt from a volume of Alec's canons

⁹ Q9 on the survey. Results available in Appendix G.

In the excerpt above, you can see Alec's meticulous dating of his music, and description on the right hand side of where he was writing, and what his day was like. Below, Alec explains why and how he created his own reference library:

So over the years I've written about 800-900 canons, mostly 12-tone¹⁰, that I look at sometimes. I sat down over a couple years and would write one every day or so in a little café down the road and then now I have all these pieces that I go back to and find things in them.

Despite how it may seem, Alec's collection is not a CISU, but is a personal reference library. CISUs contain sketches that record creative insight, but instead, Alec uses his fully formed pieces as access points for creative insight, similar to composers' uses of personal poetry collections and personal art works. Here, Alec explains that he has created his own personal reference library by writing a large amount of pieces using similar constraints, and referring to these pieces when in need of creative insight. As examined in section 5.4.2, some composers use their old creative insight as material in a new piece. Here, Alec instead created his own reference library of limitations and melodic material for piece which he then uses within his current compositions. He described it as "playing a game", where he would take specific forms, melodic, and rhythmic material from one of his canons and apply it to a new composition, wherein he would either follow those rules or break them in order to solve creative problems. Composers like Alec use documents in their own collections as decision making devices, both in regards to instrumentation aesthetic decision.

¹⁰ A principle in composition would then arise a melodic line from the particular order given to a collection of the 12 tones, an order that would be different for each composition. The basic order for any one composition came to be known as its basic set, its 12-tone row, or its 12-tone series, all of which terms are synonymous... The basic set is not a theme, for it has no specific shape, rhythm, or loudness. It is a backbone, a musical idea that permeates the composition in which it is used. Encyclopedia Britannica, *12-Tone Music*, <https://www.britannica.com/art/12-tone-music>

The establishment of personal collection is a unique aspect of a composer' serious leisure pursuits that occurs sporadically or with great purpose throughout their career. As the composer focuses on their everyday life experiences, they also focus on “gathering and tending (the) materials ...that enable the acquisition of ...knowledge (Hartel J. K., 2007, p. 176). Because of their amount of experience, often a student or emerging composer will have a much more developed personal library collection than a professional, as there are still gaps in their knowledge at that stage in their career.

5.6 – Exceptions

Although the value of CISUs and personal library collections prevailed as a theme, there were some exceptions in composers who maintained all information about their pieces mentally. Although in the minority, three survey participants reported that they “hold them mentally until needed - so a mental sketch book” – P10.

Interestingly, Hartel's (2007) work quantifying Personal Culinary Libraries (PCL) identified that cooks who has a small personal culinary library of helpful information “...are not document-oriented, and gain knowledge and inspiration through other means. (These sorts would probably resist the idea that they have a "PCL.")” (p. 198). Composers in this situation could be mirroring the activities of cooks with small PCLs or, perhaps they are simply using their learned skills and artistic intuition to compose, and existing in the ‘maintenance’ area of their “serious leisure career arc” (Stebbins, 2001a, p. 10). After all, not all cooks or composers are enchanted with documents and their digital counterparts. Throughout my interviews, it seemed that the majority of composers maintain some manner of personal library collection, but unfortunately

since this was not the focus of this particular study, additional research is necessary to examine this claim.

5.7 – Chapter Summary

This chapter has examined the different material properties, contents, and uses of CISUs within the process of recording creative insight. It has explored the manner in which composers use their CISUs, and provided opposing sides in the argument of if older content in CISUs should be reused, looking particularly at how CISUs can become reference books (Bates, 1986). Following this, it briefly examined composers who do not use CISUs. This chapter illustrated that CISUs are valued highly during the present, and although are deemed to generally depreciate in value as time moves forward, are maintained as a sentimental artifact.

Chapter 6

Practice

6.1 – Chapter Overview

This chapter presents the compositional process along an experiential continuum. It features case studies of a student, an emerging, and a professional composer¹¹. In each case, I survey their practice¹² and extract themes of information phenomena. I continue to use Anders Hektor's everyday information activities (2001) and Webster's model of creative thinking in music (2002) as frameworks for analysis, and augment these tools with related concepts.

6.2 – Compositional Processes and Problems

Three interview participants were chosen because of their epitomizing tendencies within their respective age and stage in the career arc of a composer. Each gives us a view of the unique information needs of a student, emerging, and professional composer. Hektor reminds us that “information needs [and problems] are not readily available for research as they are processes that are not available for observation” (2001, p. 72). By examining these three distinct processes, we are able to extract composers' information needs in the context of concepts relating to creative insight as explored in the previous two chapters. Each compositional process is examined in the context of fulfilling information needs relating to a project, or a composition in which both “reference and market information” (Hektor, 2001, p. 153) is used to provide bridges in cognitive and emotional gaps, and orient problem issues.

¹¹ See section 1.5 for definitions.

¹² Identifying factors (type of object/instrument/names/school) have been changed to more generic nouns.

6.3 – Student Composer: Flynn

Here enters Flynn, an undergraduate at a central Canadian university currently in his last year of a double major of composition and music performance. Along with instrument lessons, he has weekly composition lessons and participates in an artist collective made up primarily of other composer/musicians. My conversation with Flynn occurred with me sitting on my couch, coffee in hand, and with him sitting at his kitchen table, speaking over video chat. As I led Flynn through the interview guide, we often stopped to dig deeper into a moment or a question. When we reached the overview of Flynn’s most recent compositional experience his eyes lit up and he told me about a recent piece he had created that was almost entirely electronic save for a “swift kick” at the beginning. In this section, we examine an overview of a piece Flynn recently composed paying close attention to social interactions, information seeking behaviours, and creative problem-solving surrounding Flynn’s compositional process.

6.3.1 – Social interactions

Flynn’s experiences with social interactions providing creative insight vary greatly and arose as a theme within his compositional process during our conversation. He became interested in writing musical compositions after “playing for groups that do a lot of new music or performing their own music”. He found that being exposed to current musical compositions made him curious as to if he could also create such music. Many of the groups he participated in involved improvising and collaborative music making, which has seeped into Flynn’s own style of composition. His pieces often leave some decisions up to the performer which “means I really have to know the performer. I need to know what they are going to be comfortable with...” and sometimes that leads to the performer making decisions that Flynn doesn’t agree with.

The conceptual birth of a new piece of music often takes Flynn by surprise during social interactions. Recently, he engaged in a composition that stemmed entirely from a joke that one of his peers made as they began to prepare for a concert. Although made off-hand, the comment, “wouldn’t it be really funny if during the show we’re doing, somebody just kicked the [object] and that was a piece?” sent Flynn down a technological rabbit-hole in which he sought out specific resources to implement that very idea, and leading to a novel composition.

Despite the concept for this work emerging from a social interaction, Flynn purposely limits most socialization around a piece of music to preserve his artistic vision:

I’m a young composer, and so it makes sense for me to seek some amount of input from those that are more accomplished than me.... I think a lot of the time I’m hesitant to ask or accept input from people because I don’t want them to skew what I’m trying to say. I only ask for input from people where I’m confident that they understand what I’m trying to say and are trying to better that, rather than trying to convert it into something that they would do instead.

There are a few points of interest to examine here. Firstly, at his own admission, Flynn is aware of his student composer status, which naturally increases his potential information needs, yet he remains extremely selective when seeking advice. Here, he shows his unwillingness to talk about work in-progress with other composers, or ask for advice outside of his studio professor and select peers. This is because he is aware some people may consciously or unconsciously change the intention of his pieces. In doing so, Flynn purposefully limits his *exchanging* as well as any social *unfolding* (Hektor, 2001) to preserve his artistic integrity. In this way, Flynn is consciously blocking himself from experiencing *information overload*. Bawden & Robinson (2009) describe it as a state when “an individual’s efficacy in their work is hampered by the amount of relevant information available to them...The feeling of overload is usually associated with a loss of control over the situation.” (pp. 182-183). By being intentional with his social interactions

surrounding the creative aspects of his compositional process, Flynn is decluttering his process and maintaining his authenticity as an artist.

6.3.2 – “Making jam”

Flynn mashes sources of information together to fulfill his information needs. When no one source is enough, he seeks out multiple sources of information that, when mashed together solve his problem. In conversation, Flynn explained to me that this piece, about kicking the object, took about four weeks to finish, during which he sought out information on how to make his electronic set up “do the things [he] wants it to do”. In fact, Flynn explained that most of the time he spent on the piece was researching social media forums, and talking to his professor to get “bits and pieces of what I need and mashing them together until I get something that works.”

Contrary to Hunter’s (2006) study on the information needs of electroacoustic composers in which he found that they did not find use out of “message boards, wikis, and blogs” (p. 10), Flynn continually browsed social media, and online forums for technical information. Although, because of the date when this study was completed it is possible that current surveys of electroacoustic composers and Flynn’s information behaviours would align more with Hunter’s findings. Flynn’s use of picking and choosing information from a variety of sources and “mashing them together until [he] has something that helps”, employs Marcia Bates’ (1989) model of *berry picking*, in which documents and thoughts accumulate along the way. Flynn’s “query itself (as well as the search terms used) is continually shifting, in part or whole...Furthermore, at each stage, with each different conception of the query, the user [Flynn] may identify useful information and references...the query is satisfied not by a single final retrieved set, but by a series of selections of individual references and bits of information at each stage of the ever-modifying search” (Bates, 1989, p. 410). By continually accessing multiple

online resources, pulling relevant information from them, and mashing them together to create a solution, Flynn has engaged in the wonderful activity of making information jam¹³.

6.3.3 – Problem-Solving

When it impasses in his compositional process, Flynn occasionally uses mind-altering substances to solve problems of creative insight. For him, this method of creative problem solving is a reliable way to move past compositional barriers. He explained that from time to time, he elicits creative insight using psychedelic drugs, primarily psilocybin (colloquially known as magic mushrooms), as Flynn finds that “usually in the days following, a lot of clarity comes out.” He describes his use of psychedelics as a “tool” used to overcome writer’s block, and to solve other problems he has with compositions. Flynn was not alone in his use of mind-altering substances; another survey participant cautioned that the scope of my queries were limited by the absence of drugs – both mundane and exotic. “You are missing some important “elephant in the room” items: substances! (i.e., coffee, alcohol, cannabis, psychedelics)”. In his use of substances to solve compositional problems, Flynn intentionally alters his state of mind, not only because he enjoys the experience, but also because he knows that in the days following, he will be in a heightened state to encounter creative insight, and process creative thought. Flynn’s experience highlights a gap in information research which implicates further studies (section 7.5).

6.4 – Emerging Composer: Avon

Next enters Avon, a self-identified emerging composer who began her foray into composition later in her life. Before beginning to compose, she had grown up with formal piano

¹³ Not an established information science concept, but an original idea (inspired by Bates’ *berry picking*) that captures the imagination of the author.

lessons, but no other musical training and was working an office job. Avon began to focus her attention on music after being laid off and attended weekend workshops in playing her instrument. Out of curiosity, she attended a workshop on composition and through that began to compose which, she says, “has proved itself quite a good fit”. Avon and I met in a public library just as they opened their doors in the morning. After exchanging pleasantries and going through administrative details, we began the interview. She described the stringent timeline in creating a new piece of music, and the wonderful moments of illumination she encountered throughout the process. For this particular project, Avon’s offspring recorded interviews with community members, and Avon set a selection of stories from those interviews to music. For the case at hand, the oral history took a while to complete and Avon was anxious to get her hands on the text. In this section, we will examine a composition Avon recently finished, paying close attention to sources of creative insight, practical information searching and social interactions surrounding the process.

6.4.1 – Decision-Making

Avon used the text from her offspring’s interview as creative insight for structuring the composition. In this instance, Avon was hoping to set the words of a storyteller to music as closely as possible, and so she needed the narrative. The interview with the storyteller took place just two weeks before Avon’s deadline for the project, and in the days leading up to the interview she was filled with anticipation. She knew and loved the story that the storyteller was going to tell because she’d “heard him tell it before...but it wasn’t recorded, I just had it in my head.” Because Avon knew the story already, she could draft an outline of the piece, but wanted the exact words, meter, tone, and inflections of the storyteller to shape and infuse the music. Here, Avon is *dressing* (Hektor, 2001) information given to her by the storyteller. The act of

dressing is that of “unpacking information to make public and share with others...” (Hektor, 2001, p. 87) which Avon accomplishes by using the storyteller’s words verbatim. In short, Avon employs *word painting*¹⁴ to illustrate the story and to *dress* her original, and personally meaningful composition.

6.4.2 – Social Interactions

During her description of a different compositional process, Avon was forthright with the practical difficulties and educational hurdles that she encounters and the way in which she searches for information. Similar to Flynn’s conversations with his professors and peers regarding technical issues, Avon almost exclusively uses social interactions to source practical information:

So the ensemble gave me specific instrumentation requirements. I need to know what’s particular to this choir, like what’s interesting about their ranges or what are the restrictions? Sometimes I’ll have to ask string players, where are the crossings, what’s hard to play? What’s easy to play with? Fits under the fingers, what key works best? So all those things I’m starting to acquire.

As we can see above, Avon often asks other members of her social world for guidance through these issues. She intentionally searches for information in her social world by interacting with people she knows to have more experience or knowledge than her. In contrast to Flynn, Avon rarely searches for information online, and instead relies almost exclusively on specific, directed inquiries to trusted members of her social world to bridge the gaps between her lack of formal education in composition, and technical aspects of the piece she is trying to write.

¹⁴ The use of musical gesture(s) in a work with an actual or implied text to reflect, often pictorially, the literal or figurative meaning of a word or phrase (Carter, 2001)

6.4.3 – “So far it’s been easy!”

Some composers feel that the benefit of formal training is that it provides the skills to compose, and through that, creative insight is not a necessity. Use of creative insight may vary by composer, but in some cases it is not necessary to have formal training to compose. Despite her lack of formal study, Avon found that she often knew exactly what to do when faced with the actual task of composing. Looking back to the piece examined in section 6.4.1, Avon explained her process of writing once she finally received the recording of the interview. “I was off and running, pretty much just spent a couple of days writing it and then it was done.’ Avon’s process of writing has generally been very fast, a trait she attributes to being “charged up” about the pieces she writes. Although Avon does not possess formal knowledge of composition, and as we’ve seen above, that can sometimes hinder her process of composition, she maintains that composition has been easy for her. Composers often talked about how when they were composing something they really cared about, the process was much quicker and easier, than when they were composing something for a commission they took for its commercial value. This is most likely due to the higher level of interest at the start of the search for creative insight, and the maintenance of that interest in the project until its completion.

6.5 – Professional Composer: Barry

Finally, here appears Barry, a professional composer with a masters and doctorate of composition from a central Canadian university. My first interaction with Barry was chasing him down through my campus library. He was lost and walking in the absolute opposite direction from where we were meant to meet, so he went for a walk. After our initial, breathless (on my part) introduction, I began to see wandering emerge as a theme not only in his life, but in Barry’s compositional process. Sitting in a meeting room on campus, he guided me through an overview

of a large-scale work he had recently completed. In this section, we will examine a musical work Barry has recently completed, paying close attention to sources of creative insight, environmental scanning, and the role hobbies play in his compositional process.

6.5.1 – Taking Time

Barry's process is marked by periods of productivity and rest. There are long stretches in his process where he "just thinks about a piece in the back of [his] mind while doing other stuff", and devotes no directed energy towards composing. This "time away" lasts until about the "three week mark" when Barry begins the actual composing of his piece. Barry, and many other composers, finds that taking time away from the inception of his piece and the actual writing process is extremely useful in allowing oneself to acknowledge moments of creative insight. In Webster's (2002) model of creative thinking processes in music, he shows *time away* (incubation was used in earlier versions) as a central component of thinking processes. "Creativity demands to be left alone" (Webster P. R., 2002, p. 15), and as such, Barry's long process of conceptualizing his pieces by engaging in seemingly unrelated tasks allows him to expedite composition later in his process.

6.5.2 – "The perfect day"

Being in spaces that elicit creative insight is paramount to Barry. He describes the perfect day in his compositional process as one where he sits outside with paper and pen and just relaxes:

Like my favorite kind of day is to sit outside in the summer with pencil and paper and just not think too hard and kind of let my mind do a bit of instinct work and I'll just start to write. I'll sit with it for a while and if I'm still excited by it after a couple of days, then I'll know it's probably an idea that I want to explore.

Being in such an environment that facilitates creative insight is important to Barry. Although, by his own admission, he could just write a piece in “this room without any inspiration and be relatively happy with it”, he much prefers to take his long and winding path of unconscious and conscious thought about a piece before, he writes the actual music in “about three weeks”.

Barry’s *environmental scanning* (Erdelez, 1999) on his perfect day engages with the environment, consciously and unconsciously, drawing every relevant piece of information out. Information *monitoring* and *browsing* encompass Barry not being aware of the relevance of what he encounters, but still placing himself in spaces which are known to elicit creative insight. Monitoring is also a “satisficing activity” (Hektor, 2001, p. 170) which Barry demonstrates through his happiness in simply the act of monitoring his surroundings. Barry’s “perfect day” shows the importance of composers’ identifying spaces in which they feel most comfortable, allowing elicitation of creative insight to occur.

6.5.3 – Hobbies

Hobbies provide catalysts for creative insight within composition. In Barry’s case, his hobby preceded and acted as a catalyst for his interest in composition:

“It [composition] came out of creative writing, believe it or not, because I was doing a lot of fiction writing when I was a kid. It was one of my favorite things to do. And for some reason I had it in my head that it would be really cool if I could write some music to a pretend motion picture based on a pretend book that I was trying to write.”

The first question each participant was asked was “Can you give an overview of how you began composing?” Barry’s answer surprised me as it was through the serious leisure pursuit of creative writing. Through this hobby, Barry began to imagine himself as a screenwriter, and then realized that, for his imaginary plan of winning an award to come to fruition, his movie needed a score, and so he began to compose. Barry continues to engage in the serious leisure pursuit

(Stebbins, 2001a) of a making and tinkering hobby of creative writing. His experience suggests that having a dynamic leisure life helps one succeed at their craft. Flynn, our student composer from above, also found hobbies important. Along with playing in contemporary music groups, another motivating factor for beginning to compose was his painting hobby. Flynn painted frequently but found that “ideas couldn’t translate well from my head to the canvas since I’m not that good at painting, but I knew I was better at composing,” so Flynn began to use his compositions as a “sound canvas” with which to illustrate his ideas. Composers, like Barry and Flynn, who engage in hobbies, allow themselves to expand the manner in which they create, and have life adventures that allow them to further their understanding of the world.

6.6 – Overarching themes

Flynn, Avon, and Barry all had varying levels of information needs. This section will aim to compare each of the previously examined categories to their place on the hobby career arc¹⁵, “a path of experience [and knowledge acquisition] that may last years, decades, or a lifetime” (Stebbins, 2001a, p. 10). This approach is built upon by on Hartel’s use of “three temporal arcs” in the hobby of gourmet cooking (Hartel, 2010a).

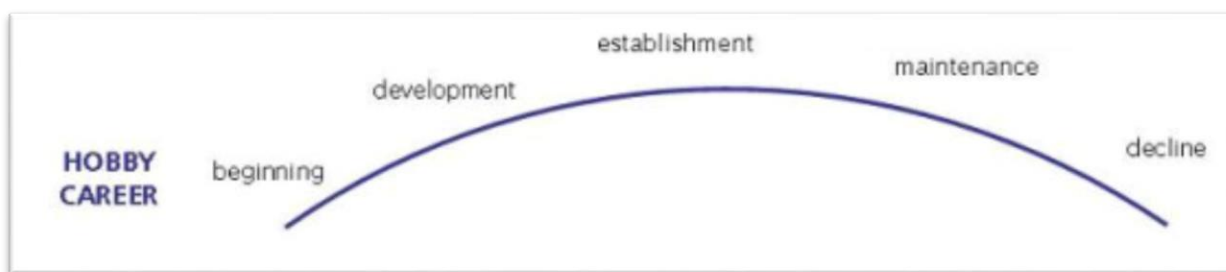


Figure 7: Hobby Career (Stebbins, 2001); as expressed in an original diagram by Hartel (2010a).

¹⁵ Figure used as per permissions on Robert Stebbins’ website: “These diagrams may be reproduced without permission, but please acknowledge their source.”

Student composers, like Flynn, often undertake varied information searching as they are engaging in frequent knowledge acquisition and learning (Hartel J. , 2010a). Their information seeking is often a “focused effort...called subjects, and are topical in nature and also temporal because they are pursued for a duration” (Hartel, 2010a, n.p). Student composers have one or two main teachers during these endeavours and are likely to only trust those individuals’ insight when asking for creative problem-solving help. Students like Flynn are most likely in the beginning or development stage of their career and are still focusing their efforts to expand their knowledge and skills.

Emerging composers also participate in frequent subject learning, but their place on the hobby career path (fig. 7) is much more difficult to place. Because of the varied education and definition of an emerging composer, the information phenomena surrounding their search for insight is more complicated. Emerging composers are more likely to engage in active searches (Bates, 2002) since they often look to fulfill specific needs, instead of overarching subject categories.

The more seasoned professional composers like Barry often limit their information-seeking to technical aspects of their writing. Barry’s method of *monitoring* (Hektor, 2001) during a perfect day, or letting ideas marinate for weeks at a time is popular among professional composers. As they become more skilled in the craft of composition, composers rest in the maintenance stage of their hobby career path. Just as Hartel found with gourmet cooks, professional composers will coast and sometimes turn their attention to teaching and informal consulting (2010a). These more mature composers rely upon their established skills and knowledge in composition. Only when faced with an unfamiliar ensemble, instrument, or software, do professional composers engage in more broad information activities.

6.7 – Chapter Summary

This chapter analyzed information needs through detailed case studies of the compositional process of Flynn, Avon, and Barry-- a student, emerging, and professional composer, respectively. In examining the compositional process of specific participants, *problem situations* emerged which further allowed us to identify specific *information needs* of composers. This in depth analysis allowed us to unearth specific activities of composers on which further research is needed. In particular, *time away*, substance use, and social interactions as information resources. Each participant had varying levels of *information needs* which corresponded with Stebbins' (2001) serious leisure career arc.

Chapter 7

Conclusion

7.1 – Chapter Overview

This chapter begins with a summary of the thesis' findings, using the initial questions raised in the introductory chapters, and offers a short methodological review. Following this is a discussion, it introduces a new model of information phenomena in the context of composers' search for creative insight. This chapter concludes by highlighting areas and questions for further research.

7.2 – Summary of Findings

The original research explored in this thesis examines the information activities of composers in the context of creative insight. It engages a discussion about the term itself, the materials used, and the practices of composers when recording and utilizing creative insight. Through these discussions, the thesis has addressed the original research questions (section 1.4) and goals of the study:

i) The sources of creative insight for composers

The data generated from this research reveals a deep connection to nature and natural creative insight, and makes the case for composers collecting information from information grounds (Fisher, et al., 2005). Through composers' constant state of *monitoring* (Hektor, 2001) and awareness (Bates, 2002), life experiences emerge as paramount sources of sensory insight and information for composers. Because of advances in today's technological world, composers are more frequently using computer programs and other digital avenues as tools in their decision making process, and for sources of creative insight.

ii) The practice of recording creative insight:

The record keeping practices of composers are examined through an analysis of interview participants' physical and digital *creative insight storage units* (CISUs). Both CISUs are found to contain creative insight in the form of *sketches* or "pre-compositional material". Physical CISUs are found to generally contain more well-formulated creative information whereas digital CISUs contain spur-of-the-moment creative information due to their convenience of access. Along with favouring CISU for composers' individual preferences of material properties, composers choose their CISU based on convenience (digital and cloud-based, small notebooks), or freedom of expression (digital note taking software or physical artist's sketchbooks).

iii) An individual's relationships with their personal collection of creative insight:

Composers do not generally return to their CISUs to use creative insight that did not make it into a previous piece, but may classify their physical CISUs as *reference books* (Bates, 1986). Accordingly, composers rarely guard their CISUs as personal artifacts or assign sentimental value to them, yet many integrate them into their own personal library collections of reference materials. These personal collections contain many kinds of material that are referenced particularly to solve technical/practical problems while composing.

iv) The representations of information behaviours in the aforementioned processes

Finally, this thesis looked at three compositional processes; a student, emerging, and professional composer (Flynn, Avon, and Barry). Specifically, each composer's compositional processes were examined for information behaviours and activities. The analysis uncovered themes of intentional information seeking and creative problem solving,

berry picking (Bates, 1989), *dressing, unfolding*, and *exchanging* (Hektor, 2001), taking time away from a piece, and embodied information. These findings confirm creative insight acting as a catalyst and/or supplement to a composer's embodied information.

7.3 – Methodological Reflections

In using a multi-method research design with an initial survey followed by semi-structured interviews, this thesis was able to present a collection of data that provides a view of creative insight generated by the composition community. As stated earlier in this thesis, my involvement on the periphery of the composition community in Canada, and my previous formal musical education was an asset in both recruiting participants for this thesis and allowing me to examine issues from both a personal and a multi-disciplinary perspective. Further, my formal training in music benefited me during interviews, as it allowed me to quickly establish and maintain a rapport with participants from a similar background, and understand disciplinary specific concepts. My position on the periphery and not *directly within* the composition community was both an asset and a detriment. Whereas I was not concerned about my status within the composition community being affected by my research, I was unaware of some political and historical factors that were familiar to the community's insiders.

The interview process, interview notes, and survey research elicited useful data. In hindsight, one of the early questions about the overview of participants' compositional process provided the most compelling data. This question allowed the composer to share their intimate, individual compositional world and allowed incisive access into their process. These deep exchanges about the creative process raised many more questions than I was able to address.

Specifically, in future research on this subject, I would refine interview questions to include more detailed examination of the *flow* state (Csikszentmihalyi & Abuhamdeh, 1990) original creative thought, and social interactions. I would also request interview participants bring at least one, if not all, of their CISUs to the interview and make the format, use, and content of CISUs a more prominent focus of the study. The survey also proved to be useful as I could draw out quantifiable data, but also code themes represented in long answer questions. The anonymous nature of the survey allowed composers who may not have been interested, or able to be involved in the interview process to participate in this study. The survey also yielded important exceptions to the creative processes of composers. In further research I would schedule follow up contact with my original participants to compare scenarios of creative insight, as I often found myself wishing that I had asked questions that were only elicited through probing during specific interviews. Finally, although I had an incredible advisory team of composers who helped me word questions in the best way possible, there was some inherent biases toward composers who utilized creative insight which would necessitate rectification in future studies. In fact, future research into this minority population that eschews creative insight, would be interesting.

7.4 – Discussion

The following section introduces a model of information phenomena in the context of composers' search for creative insight.

7.4.1 – Introduction of a Model

Information phenomena in composers' sourcing, recording, and use of creative insight in their daily life exists within contextual circumstances. While it is impossible to fully articulate

every circumstance in which composers encounter creative insight, and subsequently store it for use, it is possible to select the most frequent and central steps taken in a composers' search to meet their creative information needs. Throughout the previous chapters of findings, several themes have emerged as connections between information studies and musical creativity. In the following sections, I introduce an integrated model of information phenomena that reflects points within a composers' process in which they engage in information activities. There is a great diversity in the information phenomena implicated in composers' search, recording, and use of creative insight and each composers' process varies greatly and it is almost impossible to summarize the myriad of process represented by today's composers. Similarly, due to the small sample size of this study, and the inherent biases attached to composers educated using western musical theory and harmony, representation of all possible processes is not possible. However, I would like to include this model in progress as a starting point for further research into the subject. This model is an exploration of pathways taken by composers to meet information needs and concerns all forms of information activities, including "seeking, gathering, communicating, giving" (Hektor, 2001, p. 81), and encountering (Erdelez, 1999) .

In the creation of the model, I have drawn upon theories and concepts that have been discussed throughout the last three chapters of findings, but particularly those examined in the previous chapter, and data collected from survey and interview participants. Most terms represented in this model originate from information studies, with some from educational research into musical creativity education being integrated where necessary.

The behaviour of the individual composer is here modeled as the path between *information need* and *information need fulfilled*. Here, the focus is less on the tools used to fulfill this needs, but instead which path the composer takes. This model proposes that a composer

must utilise either traditional information activities as outlined in Anders Hektor’s (2001) model of information activities in everyday life, or *embodied information* to start the process of fulfilling their information need. The need itself can be “immediate or deferred, perceived or unconscious to the individual” (Hektor, 2001, p. 92), but this model hopes to describe the composer, their behaviour, and the involved processes, in the context of their significance within information phenomena. This model presents a bare-bones representation of the circumstances involved in a composer fulfilling their creative information needs, as there are a multitude of other factors involved, which are included within *enabling conditions* (Webster, 2002).

In the following section, the model (fig. 8) is introduced, and the relationship between musical composition and information phenomena is explained. Following this, limitations and implications of this model are discussed.

Model of information phenomena in the context of composers’ search for creative insight

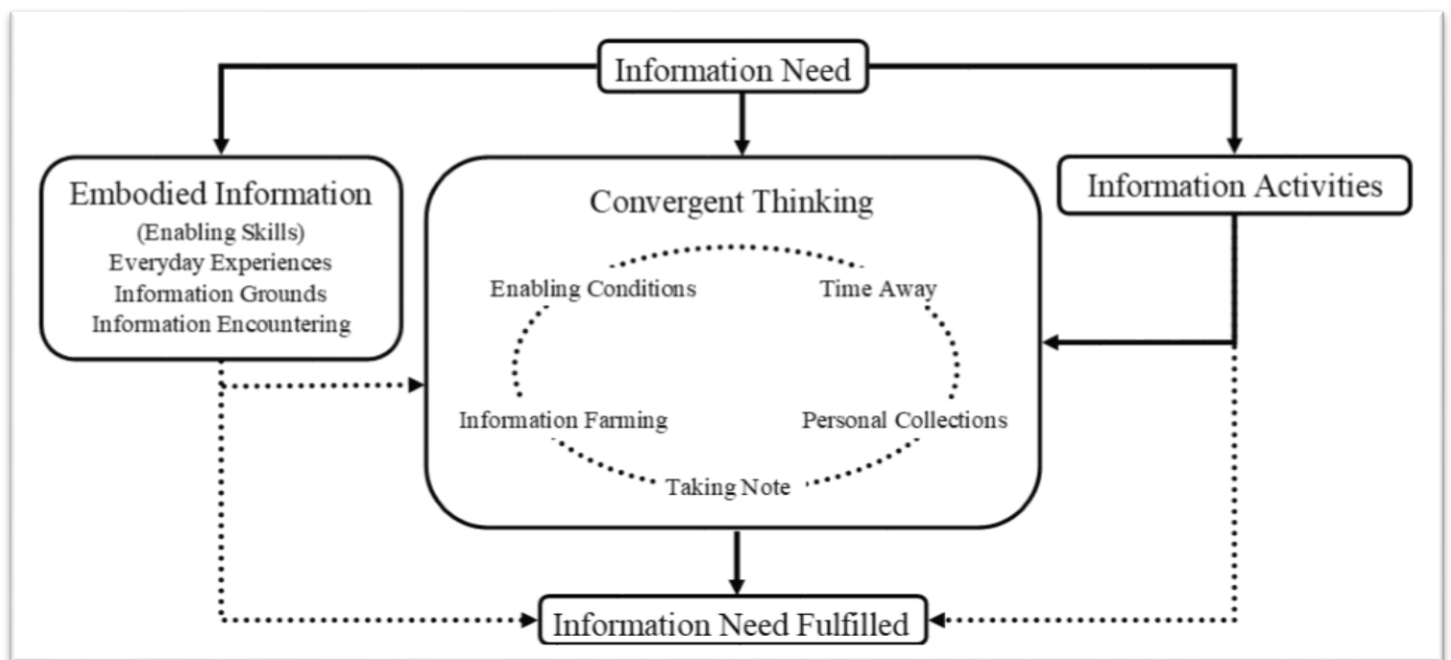


Figure 8: Model of information phenomena in the context of composers' search for creative insight (Rowlandson-O'Hara, 2020)

This model demonstrates the path of information within composers' search for creative insight in a way that is understood on a multi-disciplinary level. The model is comprised of three general sections of which the individual traverses to fulfill their information need: information activities; embodied information; convergent thinking. Within these three sections, the individual has options as to which sub-categories they use as tools to fulfill their information need. The composer may begin with either their embodied information, convergent thinking, or using one of Hektor's (2001) outlined information activities. Through analysis in the previous chapters, we have seen that composers who utilize traditional information activities must then further engage in convergent thinking to further fulfill an information need, although a link between information activities and information need fulfilled has been tentatively made to account for exceptions. Following this, composers can use any of the outlined paths to fulfill their information need. Terms within the model are cited and defined in the following section (7.4.2.1). The model is intended to cover categories of manifestations of information phenomena used in different compositional processes. By using the meta-perspective, or *invisible substrate* information science (Bates, 1999), this model combines theories of creativity and the compositional process to facilitate mutual understanding and integrate these ideas into standard definitions of information concepts. Below, we examine each term and its connection to the three general sections in which individuals engage in information phenomena.

7.4.2.1 – Legend and Clarification of Terms:

This section will clarify symbols and terms utilized in the above model (Fig 8).

.....➡ : A potential path of information behaviours and activities in the context of composition.

————➡ : A required path. The composer will either utilize their embodied information, search, or convergent thinking to fulfill their information need.

Information need: An information need in the context of composition is categorized in the following three ways: a technical/practical / or educational barrier, need for creative insight. The latter need is the most difficult to categorize and quantify. Nevertheless, it is an integral portion of many composer's processes. Within information sciences, Savolainen (2017) reviewed the historical definitions and arrived at two distinct definitions of 'information need': (1) a primary trigger or driver of information seeking. (2) a secondary factor whose nature is determined by fundamental triggers and drivers such as the requirements of problem solving or task performance (p.7)." Both these definitions fit into the different ways composers approach their compositional needs.

Embodied Information (Lloyd & Olsson, 2017): The inherent corporeal relationship/connection between embodiment of knowing and information (p.1). A composer's "enabling skills" (Webster, 2002).

Information encountering (Elderez, 1999): Incidental information acquisition involving: the information user, the environment where the information encountering occurred, the characteristics of information encountered, and the characteristics of the information need that the information encountering addresses (p.25-26).

Information grounds (Fisher & Naumer, 2006): A temporal setting where people gather for a primary purpose other than information sharing. They are attended by different social types, and social interaction is a primary activity so that informal and formal information flow is a by-product. The information obtained from these settings benefit the people who collect it in many different ways (p.99).

Everyday experiences: Experiences that occur in the context of daily habits. Ex: washing the dishes, walking the dog in the park, watching the news...etc.

Convergent thinking: Convergent thinking is a more linear and analytical way of thinking. At this stage in the information need, information in the form of creative insight is being "rejected, manipulated, celebrated, and fine-tuned" (Webster, 2002, p.28). Within his model, he interplays convergent and divergent thought. The action of divergent thought in this model is fulfilled by "browsing", embodied information", and enabling conditions. These terms all provide a part of the "opening periods of creative thought...where the creator is exploring the many possibilities of music expression, always cataloguing, [and sifting] (Webster, 2002, p.28).

Personal collections: A series of materials kept by composers in their creative workspace (Savolainen, 2009) used as either reference books (Bates, 1986), material that elicits creative insight, or kept for sentimental value. Includes composers' creative information storage units (CISUs).

Time away (Webster, 2002): Conscious or unconscious reflective thought that occurs in the context of the "incubation" (Wallas, 1926) stage of creative thinking processes in musical composition (p.29).

Enabling conditions (Webster, 1990, 2002): This term was taken from Webster's 1990 explanation of his preliminary model of creative thinking process in music composition. Enabling conditions are categorized as extra-musical variables that vary from person to

person and mingle delicately with musical skills. Webster (2002) categorizes them in two sections: Personal (subconscious imagery, motivation, personality), and Social/Cultural (context, task, peer influence, past influence).

Taking note: As examined in section 5.2-5.4, composers often record creative insight in order to fulfill information needs and make decisions later.

Information Farming (Bates, 2002): Information that is consciously or unconsciously encountered and subsequently collected while in a state of general awareness in information environments. Information is collected, recorded, and subsequently “tended to” (Bates, 2002) either physically or mentally.

Information Activities: “Any activities that involve mediated or unmediated communication of information. They differ from life-activities by having an emphasis and direction towards information rather than a physical activities....although a relation between information-activities and life-activities through the problem domain”(Hektor, 2001, p. 69-70). These problems, or “isolated events” can be defined and acted upon, such as an information need.

7.4.2.2 – Limitations

Several limitations were acknowledged in the creation of this model. Firstly, the setting, or environment in which the composer is performing these activities is not shown, despite creative workspaces and natural settings being examined in the previous chapters as having a large level of impact on the composers’ interactions with creative insight. *Information grounds* and *information encountering* were included to help mitigate the lack of discussion on the environment in which composers sourced creative insight and *enabling conditions* was included in the hopes to include creative workspaces. Secondly, despite the name of the model including the term creative insight, this model hopes to include the exceptions to composers’ use of creative insight addressed within section 4.3, and section 5.6, through the inclusion of *embodied information*. I am certain that further limitations will be identified upon reflection and use of this model and I welcome additions and modifications of this model in the future.

7.4.2.3 – Implications

The formation of this and other multi-disciplinary models that cover creativity specific to the creation of content have implications to the fields of education, demystify the process of composition, and create a connection between two historically uninvolved areas of research, information studies and musical composition. From an education perspective creating a model of basic information phenomena demonstrates a foundation of understanding on how to work with a diverse group of student composers. This model can also be used as a piece of creative insight itself to aid in the creative problem solving of a composer as they look for sources of creative insight. From an information science perspective, this model hopes to broaden the understanding of information activities within creative contexts, and legitimize less quantifiable information phenomena. This model adds to the small area of research concerning information farming, embodied information, and creative information behaviours. It can also provide insight and context to music librarians and other information science professionals when interacting with composers and working with them to fulfill information needs. Specifically, within the field of librarianship, information professionals can use this to diversify their knowledge of the information activities of potential patrons. Throughout disciplinary boundaries, the primary goal of this model is to visually demonstrate the paths through information phenomena that are implicated by composers' sourcing and use of creative insight.

7.5 – Further Questions

The small scale of this study, the original nature of its exploratory questions, and the size limitations of this document, limit it in some respects. This study examined creative insight in the context of current composers in a small population. Further research could involve exploring creative insight in other compositional contexts, beyond European or western composition

tradition, or comparative studies across different traditions and genres in order to distill instances of information phenomena that are unique to the creative aspects of musical creation.

There are some specific practices uncovered in this study that also invite further exploration. Specifically, composers' use of controlled substances in elicitation of creative insight. Information studies have not yet conducted exploratory research on psychedelics as information resources. Kari and Hartel have examined the higher pursuits or the pleasurable and profound in the context of information science (2007) which could address similar concepts of meditative states that elicit information gathering but there is further research to be done. There is potential for valuable multidisciplinary studies into the information activities surrounding illicit drug use, and whether information activities and behaviours change under the influence of such substances.

As discussed above during the methodological reflections (section 7.3), there is potential for a large scale analysis of only composers' CISUs. While I did receive select photos of participants' CISUs, I did not read through them, and conduct detailed analysis of their contents, page-by-page. Doing so would be a fascinating study that could highlight exactly how a composer translated their creative insight sketches into a musical work. Finally, on a more personal note, the process of researching this thesis has deeply influenced me professionally and personally. I was continually impressed with the enthusiasm my participants brought to this research and how excited they were to be taking part in something that could help them explain their process. The process of composing is one often done in isolation, and each composer was intrigued to see what others did, and how their own process compared. My respect and admiration for the composer community has grown, and my interest in exploring the links between information phenomena and compositional process has only just begun.

7.6 – Chapter Summary

This chapter has provided a summary of the thesis' findings, and has considered the effectiveness of quantitative surveys as a research method. It has also offered reflections on broader themes revealed in these findings, and proposed a model of creative information phenomena in the context of composers searching for creative insight. It has examined broad and specific practices unearthed in the research that implicate further studies, and concluded with a personal reflection about my unending curiosity for this topic.

References

- Abraham, G. (1969). Verbal Inspiration in Dvořák's Instrumental Music. *Studia Musicologica Academiae Scientiarum Hungaricae*, 27-34.
- Adams, S. E. (2018). Aristotle's Cough: Rhetoricity, Refrain, and Rhythm in Minimalist Music. *Rhetoric Society Quarterly*, 48(5), 499-515.
- Andrews, B. W. (2004). How Composers Compose: In Search of the Questions. *Research and Issues in Music Education*, 2(1).
- Bates, M. J. (1986). What is a reference book? A theoetical and empirical analysis.
- Bates, M. J. (1989). The design of browsing and berrypicking techniques for the online search interface. *Online Review*, 13(5), 407-424.
- Bates, M. J. (1999). The invisible substrate of information science. *Journal of the American Society for Information Science*, 50(12), 1043-1050.
- Bates, M. J. (2001). Information need and seeking of scholars and artists in relation to multimedia materials.
- Bates, M. J. (2002). Toward an integrated model of information seeking and searching. *The New Review of Information Behaviour Research*, 3(1), 1-15.
- Bawden, D., & Robinson, L. (2009). The dark side of information: overload, anxiety and other paradoxes and pathologies. *Journal of Information Science*, 35(2), 180-191.
- Bawden, D., & Robinson, L. (2015). Information Management and Policy. In *Introduction to Information Science* (pp. 251-277). London: Facet Publishing.
- Berg, B. L. (2001). *Qualitative research methods for the social sciences* (4th ed.). Needham Hights, MA: Allyn and Bacon.
- Bernard, H. R. (2006). *Research methods in anthropology: Qualitative and quantitative approaches*. Lanham, MD: AltaMira Press.
- Boden, M. A. (2004). *The Creative Mind: Myths and Mechanisms*. New York, NY: Routledge.
- Bryman, A., & Burgess, R. G. (2002). Developments in qualitative data analysis: an introduction. In *Analyzing qualitative data* (p. 15031). Routledge.
- Byrd, D., & Crawford, T. (2002). Problems of music information retrieval in the real world. *Information processing & management*, 38(2), 249-272.
- Carter, T. (n.d.). *Word Painting*. Retrieved from Grove Music Online: <https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000030568>.

- Case, D. O., & Given, L. M. (2016). *Looking for information: A survey of research on information seeking, needs, and behavior*. Bingley: Emerald.
- Christensen, B., Du Mont, M., & Green, A. (2001). Taking Note: Assessing the Performance of Reference Service in Academic Music Libraries: A Progress Report. *Notes*, 58(1), 39-54.
- Clarke, E. F., & Doffman, M. (2017). *Distributed Creativity: Collaboration and improvisation in contemporary music*. Oxford University Press.
- Cox, A. M. (2013). Information in social practice: a practice approach to understanding information activities in personal photography. *Journal of Information Science*, 39(1), 61-72.
- Cox, A. M. (2018). Space and embodiment in informal learning. *Higher Education*, 75(6), 1077-1090.
- Creswell, J., & Guetterman, T. (2019). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. Pearson.
- Csikszentmihalyi, M., & Abuhamdeh, S. N. (1990). Flow.
- Davidson, L. (1990). Tools and environments for musical creativity. *Music Educators Journal*, 76(9), 47-51.
- Dervin, B. (1999). Chaos, order, and sense-making: a proposed theory for information design. *Information design*, 35-57.
- Emerson, R. M., Fretz, R. I., & Shaw, L. L. (2011). *Writing ethnographic fieldnotes* (2nd ed.). Chicago: University of Chicago.
- Erdelez, S. (1999). Information encountering: It's more than just bumping into information. *Bulletin of the American Society for Information Science and Technology*, 25(3), 26-29.
- Fisher, K. E., & Naumer, C. M. (2006). Information grounds: Theoretical basis and empirical findings on information flow in social settings. In *New directions in human information behavior* (pp. 93-111). Dordrecht: Springer.
- Fisher, K. E., McKechnie, L., Dobrowolsky, T., Marcoux, B., Naumer, C., & Burrell, C. A. (2005). Information grounds and everyday life. *Proceedings of the American Society for Information Science and Technology*, 42(1).
- Foster, A., & Ford, N. (2003). Serendipity and information seeking: an empirical study. *Journal of Documentation*, 59(3), 321.
- Hartel, J. (2010). Managing documents at home for serious leisure: a case study from the hobby of gourmet cooking. *Journal of Documentation*, 60(6), 847-874.
- Hartel, J. (2010a). Time as a framework for information science: Insights from the hobby of gourmet cooking. *Information Research*, 15(4), 15-4.

- Hartel, J. K. (2007). *Information activities, resources, and spaces in the hobby of gourmet cooking (Doctoral dissertation)*. Retrieved from Retrieved from ProQuest Dissertations and Theses: Full Text. Doc ID: 304876976
- Hartel, J., & Savolainen, R. (2016). Pictorial metaphors for information. *Journal of Documentation*.
- Hartel, J., Cox, A., & Griffen, B. (2016). Information activity in serious leisure. *Information Research*, 21(4).
- Hektor, A. (2001). *What's the Use?: Internet and information behavior in everyday life*. Anders Hektor.
- Hunter, B. (2006). A New Breed of Musicians: the Information-Seeking Needs and Behaviors of Composers of Electroacoustic Music. *Music Reference Services Quarterly*, 10(1), 1-15. doi:10.1300/J116v10n01_01
- Kari, J. (2007). A review of the spiritual in information studies. *Journal of Documentation*, 63(6), 935-962.
- Kari, J., & Hartel, J. (2007). Information and higher things in life: Addressing the pleasurable and the profound in information science. *Journal of the American Society for Information Science and Technology*, 58(8), 1131-1147.
- Kari, J., & Savolainen, R. (2003). Towards a contextual model of information seeking on the Web. *The New Review of Information Behaviour Research*, 4(1), 155-175.
- Kerman, J. (1989). Sketch Studies. *19th-Century Music*, 6(2), 174–180.
- Kostagiolas, P., Lavranos, C., Martzoukou, K., & Papadatos, J. (2017). The role of personality in musicians' information seeking for creativity. *Information Research: An International Electronic Journal*, 22(2). Retrieved from <http://informationr.net/ir/22-2/paper756.html>
- Krikelas, J. (1983). Information-seeking behaviour: Patterns and concepts. *Drexel library quarterly*, 19(2), 5-20.
- Kulthau, C. C. (2004). *Seeking meaning: A process approach to library and information services*. Westport, CT: Libraries Unlimited.
- Lavranos, C., Kostagiolas, P., Korfiatis, N., & Papadatos, J. (2016). Information seeking for musical creativity, a systematic literature review. *Journal of the Association for Information Science and Technology*, 67, 2105-2117. doi:10.1002/asi23534
- LeClerc, A. (2010). Seeking Serendipity: The inspiration hunt of a creative professional. *Faculty of Information Quarterly*, 2(2), 1-8.
- Lloyd, A., & Olsson, M. (2017). Being in place: Embodied information practices. *Information Research: an international electronic journal*, 22(1). Retrieved from <http://InformationR.net/ir/22-1/colis/colis1601.html>

- Lofland, J., & Lofland, L. H. (2006). Starting where you are. In J. Lofland, L. H. Lofland, & 4th (Ed.), *Analyzing social settings: A Guide to qualitative observation and analysis* (pp. 9-14). Belmont, CA: Wadsworth.
- Mason, H., & Robinson, L. (2011). The information-related behaviour of emerging artists and designers. *Journal of Documentation*, 67(1), 159-180. doi:10.1108/00220411111105498
- McKenzie, P. (200319-40). A model of information practices in accounts of everyday-life information seeking. *Journal of Documentation*, 59(1). doi:10.1108/00220410310457993
- McKenzie, P. J., & Davies, E. (2012). Genre systems and "keeping track" in everyday life. *Archival Science*, 12(4), 437-460. doi:10.1007/s10502-012-9174-5
- Meyer, A., & Fourie, I. (2017). Thematic analysis of the value of Kuhlthau's work for the investigation of information behaviour in creative workspaces in academic libraries. *Information Research*, 22(1), 1-18.
- Mumford, M. D., & Whetzel, D. L. (1996). Insight, Creativity, and Cognition; On Sternberg and Davidson's The Nature of Insight. *Creativity Research Journal*, 9(1), 103-107.
- O'Dwyer, L. M., & Bernauer, J. A. (2014). Choosing research participants and making generalizations: sampling and external validity. In *Quantitative research for the qualitative researcher* (pp. 75-97). Thousand Oaks, CA: SAGE Publications.
- Oliver, P. (2012). Purposive sampling. In V. Jupp, *The SAGE Dictionary of Research Methods*. SAGE Publications.
- Parsons, I. (2019). Mathematics and Magic: Theis and Athiest Identification with the Spiritual Music of Karheinz Stockhausen. *Tempo*, 73(288), 59-69.
- Ross, A. (2007). *The rest is noise*. Macmillan.
- Sadler-Smith, E. (2015). Wallas' Four-Stage Model of the Creative Process: More than Meets the Eye? *Creativity Research Journal*, 27(4), 342-352. doi:10.1080/10400419.2015.1087277
- Savolainen. (2009). Small world and information grounds as contexts of information seeking and sharing. *Library and Information Science Research*, 31(1), 38-45.
- Savolainen, R. (2017). Information need as trigger and driver of information seeking: A conceptual analysis. *Aslib Journal of Information Management*, 69(1), 2-21.
- Siracky, H. (2013). Spiritual journal keeping: An ethnographic study of content, materials, practice, and structure . (*Graduate thesis*).
- Song, S. (n.d.). Pictorial and Literary Evocations in the Programmatic Music of Liszt and Debussy. Doctoral Dissertation, University of Kansas.
- Spradley, J. P. (2016). *The ethnographic interview*. Long Grove, IL: Waveland Press.
- Stebbins, R. (2001). *Exploratory research in the social sciences*. Thousand Oaks, CA: Sage.

- Stebbins, R. (2001a). *New directions in the theory and research of serious leisure*. New York: Edwin Mellen Press.
- Wallas, G. (1926). *The Art of Thought*. London, UK: Jonathan Cape.
- Walton, A., Richardson, M., Languard-Hassan, P., Chemero, A., & Washburn, A. (2015). Musical improvisation: Multi-scaled spatiotemporal patterns of coordination. *CogSci*.
- Webster, P. (1990). Creativity as Creative Thinking. *Music Educators Journal*, 22-28.
doi:10.2307/3401073
- Webster, P. R. (2002). Chapter 2: Creative Thinking in Music - Advancing a Model. In T. Sullivan, & L. Willingham, *Creativity and Music Education* (pp. 16-34). Hushion House.
- Winget, M. (2006). Annotation of Musical Scores: Interaction and Use Behaviours of Performing Musicians, PhD. *The University of North Carolina at Chapel Hill, Chapel Hill, NC*. Retrieved from <https://plato.stanford.edu/cgi-bin/encyclopedia/archinfo.cgi?en>
- Yakel, E. (2004). (2004). Seeking information, seeking connections, seeking meaning: Genealogists and family historians. *Information Research*, 10(1).

Appendices

Appendix A

Informed Consent Form - Interview (2 Pages)

Sam Rowlandson-O'Hara

The University of Toronto

Faculty of Information

“The information seeking behaviours and activities of composers in the context of creative insight”

The following information has been provided to help you decide whether you give consent for your participation in the study. The purpose of this mixed methods study is to examine the conscious and unconscious ways in which classical composers seek and store information in the context of their musical creativity. By examining these behaviours from the meta-perspective of information sciences, the researcher should be able to determine a general model or method that can act as an educational resource for emerging composers as well as an aid in the legitimization of serendipitous environmental information encountering within the field of information studies. Eight interview participants have been selected to form an ideal sample of 2 professors, 2 emerging composers, 2 current graduate students, and 2 professionals to be interviewed. You have been selected due to the researcher and advisory committee's decision that you fit the ideal specifications of an interview participant due to your experience, process, and original thought within this unique social world.

Your participation is voluntary and you are free to decide to withdraw your consent at any time without affecting your relationship with this department, the instructor, or the University. If you choose to withdraw from this study, any data collected up until that point will be destroyed and will not be included in the final research presented. You are free to refuse to answer any questions but remain in the study.

Please email sam.rowlandsonohara@mail.utoronto.ca to process your withdrawal, or if you have any questions or concerns about this study. If you wish to remain anonymous, you may email the researcher's direct supervisor, Dr. Jenna Hartel at jenna.hartel@utoronto.ca or the Office of Research Ethics at ethics.review@utoronto.ca or 416-946-3273, if you have questions about your rights as participants. : The research study you are participating in may be reviewed for quality assurance to make sure that the required laws and guidelines are followed. If chosen, (a) representative(s) of the Human Research Ethics Program (HREP) may access study-related data and/or consent materials as part of the review. All information accessed by the HREP will be upheld to the same level of confidentiality that has been stated by the research team.

Any personal or identifying information that has been obtained in the process of this study will remain confidential and will be disclosed only with your participation or as required by law.

All interviews will be audio recorded. You are free to listen to the interview within one month of the recording and edit it to your choosing. After one month the audio will be deleted. Any identifying information will be removed from the survey transcripts and if you are quoted in the final paper, a pseudonym will be used. Do not hesitate to ask questions about the study before or after giving your consent. I would be happy to share the findings with you after the research is completed! All interviews will take place at the Faculty of information, in participant's studio/office, or another appropriate venue and will take no more than 1 hour. You are signing this informed consent form with full knowledge of the nature and purpose of the procedures. A copy of this form will be given to you to keep.

Participants Name: _____

Participants Signature /Date: _____

Thank you again for your participation in this interview!

Sam

Sam Rowlandson-O'Hara, MI (LIS) Candidate,
Faculty of Information, University of Toronto.

Appendix B

Interview participation recruitment email:

Hello ____

I am a master's student at the University of Toronto and I am conducting research into the information seeking behaviours of composers in the context of their search for creative insight.

I'm writing to see if you would be interested in participating in a 30-45min interview surrounding your sources and search tactics for creative insight / creative problem solving?

There will a small compensation in the form of a \$10 coffee/tea gift card for our participation in the interview and I will be sharing my results in the form of a final research paper in which all personal details will be removed.

If you have any questions about the interview process, or your eligibility to participate, please email me at sam.rowlandsonohara@mail.utoronto.ca

Thank you for your time and I look forward to hearing from you!

All the best,

Sam

Sam Rowlandson-O'Hara, BMus

MI 2020, University of Toronto

Appendix C

Interview guide

Participant Name _____

Date of Interview _____

Research Question:

What are the information seeking behaviours and activities of classical contemporary composers from the inception to final draft of a piece of music?

Part 1: Introduction and Technical Explanation Interviewer will themselves to participant, explain that the interview would be semi-structured, would last approximately 30 minutes, and that the interviewer would be recording and taking notes during the process.

Part 2: Beginning of Recording and Consent Statement

The interviewer will turn on the audio recorder and read the following consent statement to the participant: "I am a graduate student under the direction of Professor Jenna Hartel in the Faculty of Information, University of Toronto. For my master's thesis, I am conducting a research study to better understand Information-Seeking Behaviours of classical composers. I have recruited subjects to participate in a "semi-structured interview" which will take approximately 30 minutes. Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. During the research process, your responses will be audio recorded. The audio recording will be transcribed within one month and then destroyed. Your name and all identifying information will be removed from the transcript, which will be kept indefinitely and used for the purposes of this thesis. The results of the research may be published, but your name will not be used. If you have any questions concerning this research study, you may email myself at samrowlandsonohara@mail.utoronto.ca or Professor Hartel at jenna.hartel@utoronto.ca."

The participant will be given the statement of informed consent to sign.

Part 3: Overview of Interview Context Question (Grand Tour)

1. Tell me about how you began composing.
2. Tell me about the creation time line of a recent piece of music / and any information seeking you do.

Episode/ Event/ Topic/ Exemplar Question

1. Tell me about your most recent moment of creative insight / problem solving
 - a. Where did it take place?
 - b. What form did it take?

- i. Visual (picture, video, environmental)
 - ii. Audio (musical, natural, urban)
 - iii. Sensory (touch, smell, taste)
 - iv. Experience (walking, bumping, temperature)
3. Do you maintain a physical or digital information storage area for ideas?
 - a. Have you ever returned to it to find something you put there earlier?
 - b. Do you often feel as though your brain “just knows what to do?” when it comes to creative insight
 - c. Would you ever describe the creative input/insight/problem solving that you do as “inspiration?”
4. How much of a role does serendipity play in your hunt for creative insight?
5. Is it important to take time away from your pieces?
6. What kind of social interactions (if any) do you have around the piece of music?

Part 4: Closing Interviewer will thank the participant for their time, and will turn off the audio recording, and close the interview.

Appendix D

Informed Consent –Survey

The purpose of this study is to gain a deeper understanding of the information seeking behaviours of composers in the context of problem solving/creative insight during their process, and to demystify the creative process of composers.

***Please note that the intention of this survey is to obtain the opinions and habits of composers and if none of these questions apply to your process that is equally valid to if all or some apply. Please take a moment at the end of this survey to provide any feedback, negative or positive. ***

Your name will not be taken as a part of this survey; any personal information given will be stored in a password-protected file and you will not be associated with the research findings in any way. This survey has been approved by the University of Toronto Ethics Protocol.

Below is a link to the full statement of informed consent.

- <https://drive.google.com/file/d/1pKmo-v1d8YVMWIVolf-Cac1-hmWfQYwd/view?usp=sharing>

If you would like more information about the researcher and study, a link is provided below.

- <https://drive.google.com/file/d/1AZWK5RNprjC1wnzkGGtjq1tviIS6diLt/view?usp=sharing>

By participating in this survey, you are giving your consent for the data you enter in this form to be used in the research study.

Appendix E

Survey participation recruitment email

Hello!

I hope this email find you well.

I'm emailing because I am conducting research into the information sources for creative insight/creative problem solving of composers. I am seeking composers who would be willing to participate in a preliminary, short 5-10min online survey - approved by Human Ethics Protocols at the University of Toronto

I'm wondering if you could send the attached email and survey (link to survey) below around to all the composer students and teachers at the [name of institution], or direct me to a more appropriate person to email about this request? I am unable to email composers directly as a stipulation of the anonymous nature of this survey.

Please let me know if you have any questions and thank you so much for your time!

Sam

Sam Rowlandson O'Hara,

MI (LIS) 2020, Faculty of Information,

University of Toronto. (Email to be sent out below)

Hello!

My name is Sam Rowlandson-O'Hara and I am a master's student at the University of Toronto in the Faculty of Information. I am conducting research into the information sources for creative insight and creative problem solving of composers. As a part of this study, I am seeking composers who would be willing to participate in a short 5-10min online survey - approved by Human Ethics Protocols at the University of Toronto.

This survey will ask you about your typical sources for creative insight/creative problem solving when composing, and the role in which serendipity plays into your process. There is no compensation for this survey and it will be completely anonymous, however if you are interested in the results, please indicate as such on the survey and I will send you a copy of the final research paper.

To participate, you must be above the age of 18, be a working composer (secondary or primary income source), a student composer in a graduate composition program, teach composition at any level, or be an emerging composer who has had a piece of theirs performed in the past 5 years. You need not define yourself as a classical composer.

If you have any questions about your eligibility please email me at sam.rowlandsonohara@mail.utoronto.ca

To participate, please follow the link below or linked above.

<https://forms.gle/g2qeoo2i4fKFRaK9>

Thank you so much for your participation!

Cheers,

Sam

Sam Rowlandson-O'Hara, BMus

MI 2020, University of Toronto

Appendix F

Q1: Age

Q2: Gender

Q3: Where are you based?

Q4: Formal education in composition

Q5: Formal education in music

Q6: Years of composition experience

Q7: Known sources of creative insight (long answer)

Q8: Please check the most frequent categories in which you find help with creative problem solving (multiple choice)

Q9: How important is it for you to be in a space that facilitated creative ideas?

Q10: Which of the following physical spaces has facilitated the most creative problem solving?

Q11: How often do you encounter answers to creative problems when you aren't actively searching for them?

Q12: Do you gain creative insight through other senses than sight and hearing? (Multiple choice)

Q13: Do you have a sketch book where you store creative ideas? (Drawings, shapes, chords/melodies, etc...)

Q14: Do you feel like you just 'know what to do' and do not seek out creative insight?

Q15: Please share an anecdote about the last time you stumbled across creative insight/ an answer to a composition problem you were having (long answer)

Appendix G

Additional survey data

Q1: Age

Age:	Responses:
18-25	17 / 38%
26-35	9 / 20%
36-50	11 / 24%
51+	7 / 16%
Prefer not to say	1 / 2%

Q2: Gender

Gender	Responses:
Woman	11 / 24%
Man	30 / 67%
Gender non-conforming	3 / 7%
Prefer not to say	1 / 2%

Q3: Where are you based?

Location	Responses:
Canada	34 / 85%
United States of America	3 / 8%
Europe	2 / 5%
“Other “ – Middle East (entered answer)	1 / 3%

Q4: Formal education in composition

Levels of education	Responses:
Bachelor’s degree	9 / 20%
Master’s degree	15 / 33%
Doctorate	9 / 20%
Informal education / private lessons	4 / 9%
Self-taught	5 / 11%
Other: (entered answers)	
“University courses”	1 / 2%
“working on bachelor’s degree”	1 / 2%
“pursuing bachelor’s degree”	1 / 2%

Q5: Formal education in music

Levels of education	Responses:
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Bachelor's degree	11 / 24%
Master's degree	16 / 36%
Doctorate	9 / 20%
Informal education / private lessons	5 / 11%
Self-taught	1 / 2%
Other: (entered answers)	
<ul style="list-style-type: none"> • Pursuing my bachelors in music composition/ Have already obtained a diploma in Piano Performance • Working on Bachelor's degree • BA music major 	<p>1 / 2%</p> <p>1 / 2%</p> <p>1 / 2%</p>

Q6: Years of composition experience

Years	Responses:
1-5	12 / 27%
5-10	8 / 18%
10-15	8 / 18%
15-20	2 / 4%
20+	15 / 33%

Q7: Known sources of creative insight (long answer)¹⁶

Interactions with other people, media consumption, memories
Music, Art, Film, Nature, Cities, Urban Design, Social infrastructure, lakes
Concrete sound; memory; travel
an image, a sound, an emotion, an object, other languages
mostly poetry, occasionally philosophy or visual art
This is, IMO, a dumb question. "Creative inspiration" is the result of finding regular times in which to compose, and any place where you can use your computer. I have composed in the waiting room of doctor's offices, on a bus (in both cases wearing headphones), but normally I compose in my office, because it has a piano. So, I guess a piano is a source of creative inspiration.
Language (text) for vocal and choral works; a specific environment (especially when different from my home environment, e.g. when attending an artistic residency or staying at the [residency]); inspiration from other music compositions
Having a deadline has worked for me. Often I'll resort to technical solutions or sometimes I don't where ideas come from. Improvisation is a big help.
Instruments themselves
intentional forgetting of things that have previously been learned; seeking out new experiences and/or ways to be influenced by ideas or things that are not related to my project

¹⁶ Some answers have been edited to exclude identifying information and to correct spelling.

deadlines
Thinking in a non-constricting space
Sound walking
Creative problem solving comes from a daily discipline of writing music every day and keeping that creative muscle "in shape" so that when "inspiration" isn't present, one's "craft" can take over to create the mental space to facilitate this creative problem solving you mention. I find many creative people not mentally disciplined enough to be able to focus their creative energy, hence leaving them to "wait for inspiration" rather than getting down to the creative task at hand.
Sounds, field recording, political ideas, poems, other artwork, words, nature, noises
Consuming and analyzing media like books, music, film and artwork, or in general thinking of something I find clever or beautiful
Reading, research into scientific and natural processes
Taking walks outside
If this means inspiration, then it can come from anywhere - a soundscape / landscape, a conversation, experiencing art in any form. If I want to get ideas flowing immediately I write stream of consciousness, usually words on paper or typed, but also sometimes music on paper or improvising.
Other music pieces. Experimenting art physically (visual and sound in galleries). Mathematical processes and equations. Nature.
Can include: an extra-musical idea (ex: study of botany), musical experiences (ex: an excerpt of a piece heard in concert) or a theoretical concept, from music, cognition, philosophy or otherwise. Can be pretty much anything.
Hands on sound-experimentation, algorithmic data generation, score analysis, musical discussions with peers, music lectures/seminars
Wandering and feeling the melodies that exist in a walk
Literature, language, other music, political concepts, etc.
For me, the process is a bit strange. It's almost like if the idea is there before me, and other medium (or music itself) helps me grasp the nature of this idea. Because I am very visual (but abstract) person (most of my sketches are drawings of the morphologies of the sounds), paintings help me do such a thing. But I have noticed more and more that I do get inspired/get triggered by analogies with Life. Thinking the music as a small life has opened a lot of creative thoughts lately.
This is confusing because you haven't framed this as a question. What information do you want here that is not found in the checklist below? Do you want a list of sources that I might be aware of, but not that I necessarily employ myself?
Every kind of interaction can spark an idea.
Poetry, walking, improvisation
Having to do something or go somewhere. Most ideas come when it is inconvenient. Consequently, I'm usually late for everything.
Nature, emotions, language (ex. dictionary definitions and multi meanings of words), experiences, and the Climate and Ecological Crisis
visual art, reading, other people's music
Patterns, visual art, world music, elements of nature, when two unrelated ideas cross paths...

Really depends on the moment, could be a book, an image, something I see while taking a walk, sometimes a conversation, also quite often a place, or the instruments the piece should be for.
Depends on the project
Mental health struggles.
A desire to communicate my unique perspective through music
Not sure about this question, a bit unclear, a bit woo. I would say that this sort of thing can and does happen with anything or anyone, and that it happens more or less constantly. In a way the question is too specific to answer specifically: it is not a matter of searching/finding/having one thing or interaction which 'sparks an idea', it is a matter of having ideas about everything all of the time and having to find ways to focus in, decide what is most salient at a given moment, decide what will be worked on and what won't. The problem is never not having enough, but always having too much.
Solitary thinking, psychedelic drug trips, being in nature, performance art/visual art
Walking/being outside
The past and the consciences.
Live performances of other works; day-dreaming/pre-sleep mind state
New locations or pictures of places. Anything with a sense of atmosphere
Being sleep deprived and when I start hallucinating :)
Visiting new places, experiencing nature, birds, trees etc.
Objects that create sound. I like using non-musical object and searching for new and unique sounds they can create. Also free form improvisation, there is something great about knowing playing an instrument for hours and not having anything written down afterwards, just the feeling or mood that was expressed. Also repetition, if something seems like it has potential, playing over, and over, and over again, to see where it takes you.
Human psyche/any kind of visual/Other composers

Q8: Please check the most frequent categories in which you find help with creative problem solving (multiple choice)

Categories of creative insight sources	Responses
Natural spaces	32 / 71%
Visual art	26 / 58%
Literature	23 / %1%
Music: listening, reading, playing	23 / 51%
Personal collection / space	18 / 40%
Physical objects	15 / 33%
Philosophy	14 / 31%
Mathematical concepts	12 / 27%
Social Spaces	11 / 24%
Libraries	9 / 20%
Spirituality / Spiritual spaces	7 / 16%
Other: (entered answers)	

<ul style="list-style-type: none"> • The idea of choreography between elements (music and theatre or music and art etc.) 	1 / 2%
<ul style="list-style-type: none"> • Sound (not just music!) 	1 / 2%
<ul style="list-style-type: none"> • Science of cognition, psychology, phenomenology, music analysis 	1 / 2%
<ul style="list-style-type: none"> • Metaphors 	1 / 2%
<ul style="list-style-type: none"> • While I appreciate the investigation you are undertaking here, the way this question is framed assumes that composers seek "inspiration" or creative solutions outside of music itself. The problem with this is that it has the potential to reduce musical composition to an externally-inspired art, rather than focusing on the hard work of learning the technical tools of the craft itself. The only music in this list above is "listening, reading, playing," but in fact engagement with musical materials themselves -- not just being "inspired" by playing/listening -- can (and does!) lead to musical solutions. For many composers, musical "problems" are solved using the craft of composition itself: developing motivic material and harmony, grappling with form, editing drafts, and "getting our hands dirty" with our musical tools. 	1 / 2%
<ul style="list-style-type: none"> • drugs (cannabis and psychedelics) 	1 / 2%
<ul style="list-style-type: none"> • Business models, economic theory 	1 / 2%
<ul style="list-style-type: none"> • laying in a warm bed; going to sleep 	1 / 2%
<ul style="list-style-type: none"> • Perception, cunning. 	1 / 2%
<ul style="list-style-type: none"> • Exercising 	1 / 2%

Q9: How important is it for you to be in a space that facilitated creative ideas?

Level of importance	Responses:
1 – not important at all	3 / 11%
2 – rarely important	6 / 13%
3 – somewhat important	8 / 18%
4 – often important	14 // 31%
5 – extremely important	12 / 27%

Q10: Which of the following physical spaces has facilitated the most creative problem solving?

Physical space	Responses:
Natural spaces - parks, bodies of water	16 / 36%
Shared spaces - Studios, shared offices	1 / 2%
Private - Home studio, office	20 / 44%
Spiritual - meditation, prayer, spiritual spaces	0 / 0%
Libraries - reference libraries, score libraries, reading	0 / 0%
Social - post-concert socializing, time with peers / friends /	3 / 7%
Other: (entered answers) <ul style="list-style-type: none"> • Travel (i.e. unfamiliar sonic environments)” • Any space • I don't know I think usually it is a process that takes place in more spaces • I'm going to choose two equally: Private and natural spaces. • slightly before falling a sleep, doesn't matter where, airplanes are great 	1 / 2% 1 / 2% 1 / 2% 1 / 2% 1 / 2%

Q11: How often do you encounter answers to creative problems when you aren't actively searching for them?

Rate	Responses:
Often	17 / 38%
Somewhat often	11 / 49%
Rarely	4 / 9%
Almost never	1 / 2%
Never	0 / 0%
I don't know	1 / 2%

Q12: Do you gain creative insight through other senses than sight and hearing? (Multiple choice)

Sensory interactions	Responses:
Yes	24 / 53%
No	2 / 4%
Maybe	12 / 27%
I am inspired by concepts - mathematical, philosophical, spiritual etc...	23 / 51%
Other: (entered answers)	

• Submarines	1 / 2%
• Analogy of touch when talking about sounds can be very informative	1 / 2%
• Yes, particularly touch / haptics. Also philosophical, spiritual concepts - these things go hand-in-hand. Affect	1 / 2%
• It's all there I just give attention	1 / 2%

Q13: Do you have a sketch book where you store creative ideas? (Drawings, shapes, chords/melodies, etc...)

Sketch books	Responses:
Yes	26 / 58%
No	9 / 20%
Other: (entered answers)	
• I've written many 12 tone canons	1 / 2%
• Sort of	1 / 2%
• I keep it in my head	1 / 2%
• I hold them mentally until needed – so a mental sketch book	1 / 2%
• I always carry scraps of paper in my date book	1 / 2%
• Yes, but it is not consistent	1 / 2%
• More than one, mostly text notes, at a stage where structuring might happen then structure is sometimes drawn out as shapes.	1 / 2%
• All scrap paper, recycled immediately after use	1 / 2%
• I often sketch ideas, but I never really store them.	1 / 2%
• Not specifically a sketch book -- usually my phone	1 / 2%

Q14: Do you feel like you just 'know what to do' and do not seek out creative insight?

Question	Responses:
Yes	12 / 27%
No	9 / 20%
Sometimes	24 / 53%

Q15: Please share an anecdote about the last time you stumbled across creative insight/ an answer to a composition problem you were having (long answer)¹⁷

I was thinking about a girl that I had feelings for.
I was watching videos about [an old neighborhood] and thinking about the idealism of urban planning in the 60s and how it failed.
I actually seldom 'stumble' on creative inspiration but the closest equivalent is perhaps listening to sound materials and discovering unexpected connections amongst disparate bits.
When I was visiting the Magdalen Islands, off the coast of PEI, I heard [a phrase] which refers to the sun sparkling on the water. This inspired a seven movement composition for [specific instruments]
I was walking home from work (a 40-minute journey on foot) and listening to a philosophy podcast. a tangential though made me recall a philosophical concept from Nagarjuna (who was not the subject of the podcast) which made me think of a possibly musical-structural idea I might use in a piece I'm planning for next year. In other words, a series of tangents led to a musical idea forming.
Argh! You clearly are of the opinion that artists "stumble" across creative inspiration. While I'm sure this is possible, look at the work routines of famous composers; for every composer whose work routine I have read about, the creative work is scheduled in their day. If you are trying to finish by a deadline, which is always the case for me, I have to work on my composition on a regular basis, and this is how the creative process works.
I looked back at some of my earlier work and came across some older ideas which I felt were worth reworking and developing, and that was all I needed in order to complete the work.
In my guitar concerto [title] I restricted myself to the 12 bar blues form, only I gave myself permission to add to the 12, not subtract. Such restrictive games are important to my creative process.
I saw a picture of a two-masted pirate ship.
Difficult to explain...was trying to compose a piece for an instrumental ensemble which for some reason wasn't inspiring me, until it occurred to me that I could treat all the instruments as absolute equals and introduce a spatial element to the composition - in this way I was able to simplify things - so the composition is just the passage of a melody through space, rather than an exploitation of the capabilities/limitations of the instruments/performers, which is the approach that I planned to take initially. I can't, unfortunately, track the source of the idea that led to this solution.
I needed a dog nail clicking sound and rather than have the percussionist do it I thought about making the singer's fingers the paws of the dog and bought still guitar finger picks and had the singer create the sound as part of their character and movement.
At my job. doing autonomous tasks and thinking of different creative ideas
Read Eva-Maria Houben's book "Musical Practice as a Way of Life"
Often ideas come to me while taking long walks
When I had trouble I would go back to parts of the piece I had already written and pull out the motifs and play with them to make something new, either with a new texture or manipulating a melody. I like finding patterns in music/art/literature/etc. so creating more patterns in my own

¹⁷ Some answers have been edited to exclude identifying information and to correct spelling.

work (which does not necessarily have to be a motif, it could be a more abstract idea to base a pattern on) is very helpful for me
I wasn't sure how to fully depict the type of improvisation in a nature based piece. I ended up looking up the line graphs of different natural occurrences to find the shapes used in the final version of the score.
I was just wandering aimlessly outside, looking into how to create a piece, when it just clicked. Something about being outdoors works wonders.
Usually I work up to the point where I'm stuck, go for a jog and a solution presents itself.
Problem was how to articulate together and present overtime a material that presents itself every new time with a slight change. Creative insight that solved was to use a mathematical procedure where distances between the old and new life of the musical phrase gets shortened by a fixed value.
While composing a piece, I was being extremely self-critical and aware of how the piece's aesthetic might be perceived by other musicians. This led to automatic self-censorship. I could only compose satisfactory results again when I completely let go of any value judgement for the sketching process, and only judging the results once the sketching was done, so as to iterate as much as possible to give me a chance to find the right solution for any given problem in the piece.
I was struggling with the final edits of a score I was writing during my graduate studies. I was not feeling confident with my compositional decisions, and the piece wasn't sitting with me like I wanted it to. I reached out to a colleague in the composition department to review my score and to have an informal lesson with her. She quickly pointed out spots in my score that she felt didn't fit with what I was trying to do, which happened to be the places I was feeling most uneasy about. She was very direct in asking me why I included those materials, and I realized that much of the material I didn't like was added as musical filler-- I had added them because I was insecure that what I had written was enough musical content (or meeting the demand of "sufficient musical forces"), and to appease the multitude of tastes of my instructors. She gave me the respect to explore my musical intention in that piece, and gave me the permission to trust my aesthetics-- to be more extreme in my style. Not only did she not attempt to insert her tastes or opinions in my music, she encouraged me to rip out the non-consensual manipulation of others in my work. The act of deletion was the most creatively satisfying moment of composition in that work, and enhanced the ideas I had been working with.
Going out into the forest and speaking my way through it. I went for a walk and sang the musical problem I had, and tried to get my way through it with reason and just through luck. Perhaps it was a combination of both, but I think it was just allowing the music to right itself in my head by being active about it.
I was struggling to write an original musical idea to represent the idea of fear, so I studied the structure implied by the length of the stanzas of the poem from which I drew inspiration, mathematically converted that structure into a pitch collection, and fit that into the rest of my material.
I am right now stumbling on an idea that I do really care about deeply, but doesn't seem to have its place in the composition right now. It has in a very structural sense, but listening to this idea compared to what I have written I see that it really doesn't fit. I have decided to try anyway. The solutions that I have tried for now : create a very smooth transformation from initial ideas to this new idea (interpolations) ; create a "gap" for this idea, so it becomes a

necessity (subtraction) ; sneak in fragments of this idea before (addition) ; and some mix of the three somehow. I have still to find a convincing solution. But taking time away from the score, freely thinking, taking a walk, is for me a good way to find solutions.
I am not able to recall a specific example at this time. Again, however, the framing of this question makes assumptions about how problems are solved. In my experience, while it is certainly legitimate to sometimes be inspired by extra-musical things and experiences (a walk in nature, a work of literature, a mathematical equation), I am FAR more likely to treat compositional problems as MUSICAL problems and draw on my training and experience of the craft of composition to come up with MUSICAL solutions. For example, if the ending of a composition isn't working for some reason, it's not helpful for me to read a book of poems; rather, I can use my musical craft/skills to figure out what's going on (harmonic rhythms, melodic construction, etc.) and come up with a solution to the problem.
I was in class listening to my professor when I suddenly started daydreaming about my final project for the class. I thought of a solution to a minor barrier I had and started drawing it out. The more I drew, the more clear things became.
Over dinner with some friends, the topic lead to me coming up with an interesting conceptual idea, which just happened to be compatible with a similar idea I'd had at brunch with a different group of friends a few weeks earlier, and like nuclear fusion, two ideas combining created something new and a ton of creative energy.
During an ayahuasca ceremony I experienced what I perceived to be the bare essence of existence: self-organizing chaos (hard to put into words). There was an accompanying sound, sort of a buzz, like all instruments at all frequencies. Afterwards, I sought to recreate the experience with music and wrote a short orchestral work using sound mass techniques.
When looking to write a fanfare that will open for a Latin ensemble, I used the word [word] and its 3 meanings [3 definitions] to generate the texture (pointillist) and character.
Saw art by Bharti Kher at art gallery which helped me sort out what I was doing.
The last compositional project I worked on was a piece for guitar orchestra (acoustic and electric guitars), and somehow I brought together elements from "psychedelic" guitar music, with some much more structured sounds-- in particular the patterns used by bell ringers. To this end, I got in touch with a group of bell ringers who meet weekly to practice and perform in a local bell tower, and learned some of the basics of bell change (ringing) patterns, and got permission to record them (which I also used in the piece).
I don't know one specific moment, but quite often when I am explaining the problem to someone (preferably not composer) I find a few solutions
I put a project aside to work on something else.... then forgot about it! I solved the problem and finished the piece in 48 hours after the director of the orchestra phoned me about my overdue score...
I couldn't figure out how to make my piece sound more interesting. We were studying modes in one of my classes which sparked the idea to use many different modes in my piece. It ended up being the perfect answer and the piece became super fun and colourful.
I often struggle due to inexperience and a lack of knowledge when it comes to how to reproduce the sounds in my mind. Listening to the works of other composers is what I find most helpful to get past this issue
What regularly happens is that I will be working on something which I think is the work, struggling with it to reach its potential, and then I find some other aspect small in the background, which turns out to be the real point of the thing. So I will throw out all of the

other material which I thought was the main focus of the work, and start over with the new idea—which is entirely new despite having emerged from the work on the previous idea—as the central part of the work. After this things tend to move smoothly. This has happened on nearly every musical work I have done, and yet somehow it is always surprising when it happens; it never occurs the way I might expect.

Trying to create stasis in a solo work without using silence or drone, I accidentally froze the delay which created this unending imperfect authentic cadence-ish gesture that worked really well at feeling unmoving while being a persistent ostinato.

These kinds of answers just pop up whenever I am walking outside and (unconsciously) brainstorming about the creative issues I have. For example, I walked through [a park] and was just relaxing and suddenly I knew the solution to finish the piece I was stuck with for a month already.

I had to make sure an ensemble consists of the same timbre will still sound as individuals, so I've split it into three quartets each placed on a different spot on the hall, while the three groups never play the same time.

Not recent, but two instances come to mind: for one piece, I had a sort of "vision" for the piece that appeared unprompted (I believe I was drifting off to sleep at the time). This vision was of the general instrumentation, stage design, and broad concept for a semi-theatrical piece. For another piece, I entirely worked from numeric relations (i.e. 5 sections each with specific durations) and found inspiration just from those constraints. In general, creative insight for my work falls into one of those two categories.

I was trying to build an atmosphere within a piano solo I'd been working on, but I had been stuck for weeks at one point. Upon trying something new at the piano it suddenly worked and I got a very clear mental image of the location I was trying to emulate. From that point on the rest of the movement wrote itself.

I am usually able to reach back into personal memories and find ideas through those, and play them on the piano/sing them to ensure that they suit what I'm envisioning.

I was having difficulty with a key line in the chorus of a song. I wrote out many, many lines and then one day, the right one popped into my head.

I needed to make field recordings and use them for a piece made electronically, but finding a good source sound was difficult. Then one day I was driving through a parking garage and had left the radio on. The concrete of the garage made the radio just play static, but I realized that the quality of the static would change depending on where I was in the parking garage and sometimes in a very musical way. It fascinated me so I started playing around with it, seeing what setting on the radio, what station what volume would make what sound. Then, I turned on a portable recorder I had and drove in circles around the garage. I got a few weird looks but it was worth it. This is what I think gets me the most creative inspiration, when I have a chance to play with something strange that I don't really understand and can search and find all its quirks and nuances, it can be an object, an instrument, a specific technique, a game anything.

I had been working on an object piece for three performers for quite a while and there was still something lacking in the composition, even after the many iterations that the piece had gone through. In the last version I found an answer that I could work with. It was via just writing and trying out material that I found sounds and formal shapes that it would work. Not surprisingly, those that I had anticipated to fail were actually the ones that turned out to be my main source material.