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'Pouring everything that you are': Musician experiences of optimal performances

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‘POURING EVERYTHING THAT YOU ARE’: MUSICIAN EXPERIENCES OF
OPTIMAL PERFORMANCES

A Master’s Thesis presented to the Faculty of the
Graduate Program in Exercise and Sport Sciences
Ithaca College

In partial fulfillment of the requirements for the degree
Master of Science

by

Jessica Ford

October 2015

Ithaca College
School of Health Sciences and Human Performance
Ithaca, New York

CERTIFICATE OF APPROVAL

MASTER OF SCIENCE THESIS

This is to certify that the Thesis of

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Submitted in partial fulfillment of the requirements for the degree of Master of Science in
the School of Health Sciences and Human Performance at Ithaca College has been
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The musicians, who gave up their time to be interviewed.

DEDICATION

This project is dedicated to my family, the sport psychology research team at CUA, and all those who have positively impacted both my athletic and music career.

Thank you to my mother who is always my biggest supporter in whatever endeavor I choose. Thanks for teaching me to be an independent thinker and to always find a way to “figure it out”.

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ABSTRACT

Flow is an elusive state of consciousness associated with enjoyment and total absorption in a task (Csikszentmihalyi, 1990; Sinnamon, Moran, & O'Connell, 2012). When in a state of flow, actions are effortless and intrinsically motivated. Because being in flow – or “the zone” – is associated with an optimal performance state, flow has been studied extensively in athletics (Jackson & Marsh, 1996). It is argued that flow is also important in artistic activities like music performance due to the focused and goal oriented attention needed for peak performance (Csikszentmihalyi, Abuhamdeh, & Nakamura, 2005; Perry, 1999; Sawyer, 1992). Yet, when compared to athletics, the flow experience has been rarely studied within the domain of music (Sinnamon et al., 2012).

Empirical research examining flow in music suggests a need for in-depth interviews to better understand the essence of the flow experience. Semi-structured phenomenological interviews with musicians were conducted to illuminate aspects of flow presented during an optimal performance experience and to identify antecedents of flow. The data was compared to Csikszentmihalyi's flow theory constructs (concentration, a balance of challenge and skill, a merging of actions and awareness, transformation of time, unambiguous feedback, autotelic experience, loss of self-consciousness, sense of control, and clear goals) to determine if and how the constructs were similar, and if new constructs emerged within a music population.

A purposive random sample of undergraduate musicians at a private college in upstate NY were recruited during their respective core classes (music theory, career orientation, and sight-singing) to participate. Participants were given a confidential background questionnaire, and those interested in being interviewed returned

the questionnaire to the researcher and scheduled an interview (N = 72). Musicians who consented to participate were asked to describe an optimal performance experience. Interviews ranging 20 to 90 minutes were transcribed verbatim and coded into respective themes, and they continued until theoretical saturation was reached after 15 interviews. The final thematic structure demonstrated that *environmental context*, *emotional connectedness*, and *interpersonal relationships* exemplified the flow experience. All constructs of flow theory, with the exception of “clear goals”, were deductively discovered.

Some of these themes were sub-characterized by elements such as knowing and liking the music you are performing, seeking meaning in the music, not being too technical, fully immersing yourself into a character or concept, understanding the setting in which you are to perform, being focused, receiving positive feedback from the audience, and surrounding yourself with those who support and motivate you, to name a few.

Now that the optimal flow experience is better understood within a music population, researchers can develop interventions and strategies that target the specific performance needs of the music population as a means of promoting or enhancing flow. Most importantly, the ways in which a musician experiences the essence of flow within the performance is a crucial component to understanding flow theory within a music setting.

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Chapter 1

PROPOSAL INTRODUCTION

Flow is an optimal state of consciousness characterized by creativity, happiness, and full immersion in a task (Csikszentmihalyi, 1990). The concept of flow is a humanistic byproduct of a Csikszentmihalyi's search for a better quality of life (Csikszentmihalyi, 1990). Csikszentmihalyi sought to discover what makes an experience gratifying, in an effort to isolate aspects of our consciousness that allow for enjoyment. In his phenomenological research concerning what constitutes enjoyment, various aspects of the "optimal experience" – which he coined "flow" – emerged (Csikszentmihalyi, 1990, p. 49).

When a person is in a state of flow, actions are seemingly automatic. The person is doing a task for his or her own sake, is in control of his or her actions, has full concentration, and is not self-conscious or critical of the outcome (Csikszentmihalyi, 1990). The experience of being in flow is associated with positivity and performance enhancement (Jackson & Eklund, 2002). Csikszentmihalyi (1993) determined that flow could be experienced in just about any activity in a similar way, regardless of socioeconomic status, gender, age, or ethnicity (Csikszentmihalyi, 1993; Wrigley & Emmerson, 2011). The state is transient (Nielsen & Cleal, 2010) and often occurs moment to moment.

Csikszentmihalyi developed a theory of flow (Csikszentmihalyi, 1990; Jackson & Csikszentmihalyi, 1999) as a means of measuring the dimensions of the flow experience in a given task. The flow theory consists of nine distinct constructs; transformation of time, balance of challenge and skill, merging of actions and awareness, concentration, unambiguous feedback, autotelic experience, loss of self-consciousness, sense of control, and clear goals.

Flow is experienced when at least one of the aforementioned characteristics is exhibited during a task (Csikszentmihalyi, 1990; Kirchner, 2011).

Central to the flow theory is the challenge-skill balance construct. According to Jackson, Eklund, and Martin (2010), flow happens when a person moves beyond an “average” experience to one that is above average. An above average experiences constitutes full “investment of psychic energy into a task” (Jackson et al., 2010, p. 7); one feels as though his capacities are being fully utilized (Nielsen & Cleal, 2010). This intrinsically motivated investment of energy is a prerequisite to flow. However, performing a task that is too challenging yields anxiety, and performing a task that is too easy yields boredom (Jackson et al., 2010). When a task has no challenge and requires no skill, a state of apathy occurs (Jackson et al., 2010). Therefore, a task that perfectly balances a level of challenge with the skills necessary to meet that challenge breeds the perfect environment for flow to occur.

Given the implications for enhanced performance, flow has been examined in a variety of domains, possibly the most within the field of athletics (e.g., Jackson, 1992; Jackson & Marsh, 1996; Jackson, Martin, & Eklund, 2008; Martin & Jackson, 2008; Partington, Partington, & Olivier, 2009; Sinnamon, Moran, & O’Connell, 2012; Stavrou, Jackson, Zervas, & Karterliotis, 2007). This is not surprising, given that the most empirically reliable and valid componential measures of flow (Jackson, 1992, 1995, 1996; Jackson & Eklund, 2002, 2004; Jackson & Marsh, 1996; Marsh & Jackson, 1999) were developed in sport settings, initially with elite figure skaters. In qualitative interviews, figure skaters exhibited all constructs of Csikszentmihalyi’s flow theory as it related to their optimal performance experiences. For example, many noted that time

passed by quickly (*time transformation*), they were in control of their performance (*control*), and that their actions seemed automatic (*merging of actions and awareness*). Results also confirmed that the state of flow can yield positive sport performances as well as a positive experience overall (Jackson, 1992). The quantitative measures developed from this initial research with figure skaters (e.g., the Flow State Scale and Dispositional Flow Scale) “are the most frequently used in research and practice, particularly in the sports context” (Moneta, 2012, p. 40).

Methods of quantifying flow have been relatively inconsistent. Early methodological flaws in Csikszentmihalyi’s Flow Questionnaire (i.e., unable to measure flow intensity and the level of skill involved in the task) and Experience Sampling Method (i.e., interrupting daily activities to record impeded flow from occurring) were overcome by empirically valid measures of state and trait flow. Jackson and Marsh (1996) developed the Flow State Scale (FSS) and Dispositional Flow Scale (DFS) which were eventually revised to their now current versions; FSS-2 and DFS-2 (Jackson & Eklund, 2002). The Flow State Scale was designed to measure flow immediately following a particular event. The Dispositional Flow Scale was designed to measure the “general tendency to experience flow characteristics” (Jackson et al., 2010, p. 12). Both 36-item measures were created to parallel each other as a means of comparing a person’s state and dispositional flow in response to a particular activity (Jackson et al., 2010). Despite the psychometrically sound properties of the DFS-2 and FSS-2, these measures also possess limitations. The measures tend to “impose” flow on those given the measure (Moneta, 2012, p. 43), do not distinguish between factors (antecedents) and experience (indicators) that may cause flow to occur (Moneta, 2012), and fail to assess the

concentration aspect of flow appropriately (Moneta, 2012). It has been argued that the “gold measurement standard” for flow “has yet to be achieved” (Moneta, 2012, pp. 23-24).

Despite the extensive research on flow and performance in athletics, flow is also important in artistic activities, such as music performance, due to the focused and goal oriented attention inherent in such tasks, which is believed to contribute to high levels of performance (Csikszentmihalyi, Abuhamdeh, & Nakamura, 2005; Perry, 1999; Sawyer, 1992). Lowis (2002) and Sinnamon et al. (2012) noted that the scarcity of research on the flow experience in musicians as compared to athletes is “surprising”, given that peak performance experiences are exhibited in music activities quite frequently.

Fritz and Avsec (2007) conducted an empirical study comparing flow and subjective well-being in music students. The authors found the *loss of self-consciousness* dimension of flow and the *time transformation* dimension of flow to be much weaker than the other nine dimensions of flow theory as they related to well-being. It was implicitly argued that since time is often highly controlled in a music setting (for example, you perform a song for a consistent and specific period of time), a “transformation” of time passing may not occur. Additionally, a person’s appearance is not always associated with performance enhancement in music (for example, how you look is not always correlated with your ability to act, dance, or sing.). Although not specified in the study, perhaps this is why the *loss of self-consciousness* dimension of flow was not as evident in relation to subjective well-being in music. This finding suggests that perhaps flow is experienced in different ways in this specific population and questions whether the nine

constructs of flow theory are universal in other performance domains, such as music performance.

After assessing whether the DFS-2 was a reliable measure to study flow in musicians, Sinnamon et al. (2012) determined that future research on explaining the experiences of flow in music should include “in-depth interviews” to supplement empirical data on flow. Because flow is ephemeral and occurs within the human consciousness, it is difficult to capture the correlates of flow by pen and paper alone. Additionally, collecting data during the actual experience using ESM may interrupt a flow state or prevent it from occurring altogether. Bloom and Skutnick-Henley (2005) echoed that sentiment. After surveying classical musicians on their flow experiences, they suggested expanding their methodology in future research “to include interviews with musicians and music educators” (p. 28) as a means of validating the flow factors they found. For example, Bloom and Skutnick-Henley (2005) found two aspects of flow emerge that seemed to be unique to musicians; *emotional involvement in a performance* and *sense of connection with others*. Using interviews to gather detailed descriptions of what it felt like to be “in the zone” during a performance is appropriate for future research in flow among musicians. From this implication it is apparent that understanding the essence of flow in musicians could be better understood qualitatively; perhaps flow states are represented differently in this population.

Phenomenological research seeks to understand the “essence” of a lived experience within a particular phenomenon and how these experiences are subjectively perceived (Lester, 1999), often through the use of in-depth interviews. Because the need

to better understand the lived experience of flow amongst musicians is apparent, a phenomenological approach seems most appropriate for its analysis.

Understanding how flow occurs in a music setting can help musicians, music educators, performance consultants, and others, facilitate an environment that fosters a flow experience and therefore improves performance. In recent years, researchers studying flow in a sport and/or exercise setting have developed interventions with aims of enhancing flow for improved performance. Some of these interventions include Mindful Sport Performance Enhancement (MSPE; Kaufman, Glass, & Arnkoff, 2009), sport-specific imagery (Straub, 1996), goal setting (Karageorghis & Terry, 2001), positive self-talk (Karageorghis & Terry, 2001), and hypnosis (Pates, Cummings, & Maynard, 2002). When the flow experience is better understood within a music population, perhaps related interventions and strategies can be developed that target the specific performance needs of the music population. Most importantly, the ways in which a musician experiences the essence of flow within the performance is a crucial component to understanding flow theory within a music setting. Do the nine constructs of the flow theory remain true in a music performance setting? Are some constructs more apparent than others? In what ways are the emergent constructs similar or different?

Statement of Purpose

The purpose of this study was to use phenomenological, in-depth interviews with musicians to illuminate aspects of flow that are apparent during an optimal performance experience. These in-depth interviews fulfill the need for a better understanding of the flow experience amongst musicians and identify antecedents of flow. Lastly, the data was

compared to Csikszentmihalyi's flow theory to determine if the constructs remain consistent within a music population, or if new constructs emerge.

Research Questions

Are the nine constructs of the flow theory found in music performance? How do musicians articulate their flow experiences? What are the antecedents to the flow experience?

Hypotheses

1. Constructs of the flow theory will remain fairly consistent within a music population, with the exception of the loss of self-consciousness dimension and the time transformation dimension.
2. The challenge-skill balance construct of flow will be most evident in the musicians' responses.
3. Other aspects pertinent to flow in a music performance may occur, such as emotional involvement or a sense of connection with others.

Assumptions of the Study

1. All participants are musicians or vocalists at a private university.
2. All participants have experienced flow in a performance before.
3. All participants are able to describe an "optimal performance experience" in detail.
4. All participants understand the definition of flow as it pertains to their specific performance experiences.

Definition of Terms

Flow- an optimal state of consciousness characterized by effortless absorption, where one is so focused on a task that nothing else seems to matter (Csikszentmihalyi, 1990; Bloom & Skutnick-Henley, 2005).

Phenomenological Approach- a qualitative, inductive research process of thoroughly examining the rich, lived experiences and perceptions of specific phenomena.

Phenomenological research uses extensive detail – often from interviews – to challenge “normative assumptions” about a particular concept or premise (Lester, 1999, p. 1).

Constructs of Flow-

Time transformation- concerns the passage of time. When in a state of flow, time seems to stand still or pass by quickly, depending on the type of performance (Fritz & Avsec, 2007).

Total concentration- a feeling of great focus on a task (Tenenbaum, Fogarty, & Jackson, 1999)

Balance of challenge and skill- the extent to which an individual possesses the ability to perform the task (Kirchner, 2011). As the name suggests, it is the perfect “balance” of a challenge and the skills needed to meet the challenge that fosters a flow experience.

Merging of action and awareness- deals with “oneness”; a complete absorption within the activity (Fritz & Avsec, 2007).

Unambiguous feedback- involves an awareness that an individual is succeeding at the task they are performing (Jackson & Marsh, 1996).

Autotelic experience- occurs when an individual does a task simply for the sake of

doing it. The intrinsic nature of the task often leads to a state of flow (Jackson & Marsh, 1996).

Loss of self-consciousness- involves the remittance of concern with the self, which leads to an innate and confident performance (Jackson & Marsh, 1996). An individual is not abandoning all actions involved with the self but is focusing on relevant cues necessary for performance (Jackson & Marsh, 1996).

Sense of control-characterized by a lack of intentional control. An individual merely senses that he or she is in command of the situation; the control is not forced (Kirschner, 2011).

Clear goals- the goals of the task are meticulously defined, which gives the individual a clear sense of what he needs to do to perform successfully (Jackson & Marsh, 1996).

Delimitations

1. Only musicians and vocalists will be sampled from a private university.
2. Only optimal performance experiences will be discussed in the interview.
3. Flow theory will be used as the basis for which the results of will be compared.

Limitations

1. The population may be too homogenous to be generalized (age, instrument type, overall experience).
2. Interview responses run the risk of being fabricated or not fully accurate as a result of recall bias.
3. There is a potential risk of interviewer bias (i.e., asking leading questions).

Chapter 2

PROPOSAL: REVIEW OF LITERATURE

The literature review is divided into four sections. The first section provides a brief overview of the development of flow, flow theory, and the Flow Model and its inherent benefits to performance. The second section concerns methodologies and limitations of flow measurement in given phenomena. The third section delineates common threads in flow research, such as targeting “flow prone” characteristics and better conceptualizing its subjectivity. The fourth section describes how flow is heavily researched and applied to sport performance, and establishes a need for continued qualitative research of flow in music performance settings.

Models of Optimal Human Experiencing

The humanistic perspective of psychology emerged in the late fifties (Clay, 2002) when psychologists sought to understand the interaction of human experiences (i.e., thoughts, feelings) and the observable pathological and positive behaviors associated with such experiences (Privette, 1983; Rogers, 1977). By treating the “whole person”, instead of just the behavior, one could better diagnose, treat, and understand patients.

Central to humanistic psychology is a focus on the positive qualities of individuals. Abraham Maslow (1962), one of the founders of humanism, studied the content of profound experiences with the intent of capturing what the “finest specimens” of humans were like (Lowis, 2002, p. 351). Today, three terms that describe optimal human functioning emerge frequently in humanistic literature; “peak experience”, “peak performance”, and perhaps more recently, “flow”. Flow is unique in that it encapsulates

aspects of both peak experiences and peak performances. Humanistic researchers call these three terms “models of optimal human experiencing” (Privette, 1983, p. 1361).

Peak Experience

Maslow determined that profound experiences are often described as moments of amazement and satisfaction, and that such moments can be triggered by creativity, acumen, and aesthetics (1962; Lowis, 2002). Such experiences involve a loss of self-consciousness, coupled with an altered sense of time (Rich, 2013). Maslow (1962) believed that these experiences were independent of magic, mysticism and/or religion, and were instead naturally occurring in all human beings. In 1971, he coined these profound moments as “peak experiences” which he classified as the “climax of self-actualization” (Maslow, 1971, p. 48). Self-actualization, according to Maslow, occurs when a person reaches his or her full potential in life (Otway & Carnelley, 2013). When a person “actualizes” his potential as a human being, he is happiest and most fulfilled (Otway & Carnelley, 2013). Peak experiences contribute to this happiness, and thus allow a person to progress toward an optimal human experience (Maslow, 1971).

Peak Performance

When a person exceedingly performs beyond his typical behavior, he is experiencing a peak performance (Privette, 1983). Peak performances can be once-in-a-lifetime or may occur often. Understanding peak performance better illuminates the capacity of human potential and allows researchers to examine qualities or circumstances that are similar in peak experiences as a means to “significantly tap human power” (Privette, 1983, p. 1362).

Flow

Mihaly Csikszentmihalyi defined *flow* as an optimal state of consciousness characterized by total absorption in a task, where one is so focused that “nothing else seems to matter” (Csikszentmihalyi, 1990, p. 4). Performing a task out of pure enjoyment often leads to full encapsulation in that task. Csikszentmihalyi (1990) posited that the happiest moments in our lives are the ones that amass from hard work. Despite the fact that relaxation and leisure are enjoyable, our optimal experiences occur during times when we are stretched to our physical and mental limits and ultimately prevail. In these times of optimal experience, we are in total control of our actions, and feel “exhilarated” after completing the action (Csikszentmihalyi, 1990, p. 3). A person may not feel totally pleasant while performing a particular action; for example, leg muscles may ache during the last few miles of a marathon race. However, these moments of overcoming pain or persevering through hardship often represent instances of personal greatness. When humans achieve their own personal greatness through optimal experiences, they gain feelings of mastery (Csikszentmihalyi, 1990). This mastery often gives humans a sense of purpose, builds self-efficacy (Bandura, 1977), and ultimately, provides a foundation for true, fulfilled happiness.

In the 1980s, research on flow was assimilated by psychology “primarily within the humanistic tradition of Maslow and Rogers” (McAdams, 1990; Nakamura & Csikszentmihalyi, 2009, p. 90) and eventually became the cornerstone of positive psychology; a field introduced by Martin Seligman at the beginning of the 21st century which emphasized the enhancement of human strengths (Seligman & Csikszentmihalyi, 2000). By 2011, flow was one of the most popularly studied topics in positive psychology

(Rich, 2013). Flow has characteristics of both “peak experience” and “peak performance”. Not only is the activity enjoyable for its own sake (i.e., a peak experience), but being in a state of flow is associated with performance enhancement (Jackson & Eklund, 2002, i.e., peak performance). Collectively, peak performance, peak experience, and flow are comparable in relation to amount of enjoyment and the type of performance employed (Obada, 2013). However, peak performances – although optimal – do not always involve happiness or gratification. Flow contains aspects of enjoyment in a task as well as a higher level of performance; albeit not always characterized by level of intensity (Obada, 2013). However, when an individual is in flow, they are performing at full capacity (cf. de Charms, 1968; Deci, 1975; Nakamura & Csikszentmihalyi, 2009; White, 1959). Because flow encapsulates aspects of both peak performance and peak experience, the scope of this review of literature will persist with a focus on the optimal experiences associated primarily with flow.

Developing a Theory of Optimal Experience

In the early-1970s, Csikszentmihalyi and his research team at University of Chicago surveyed expert performers in an attempt to better understand the dispositions that encapsulate optimal performance experiences that lead to happiness. These expert performers commented on optimal experiences during activities in which they truly loved doing; it could be painting a picture or playing in a basketball game (Csikszentmihalyi, 1990). From these accounts, Csikszentmihalyi compiled their responses to develop a “theory of optimal experience” related to the psychological concept of flow (Csikszentmihalyi, 1990, p. 4), which he coined flow theory.

One of the first studies Csikszentmihalyi conducted in further development of flow theory was his Ph.D. dissertation concerning intrinsically motivated painters. Intrinsically motivated activity, oftentimes coined as an autotelic experience (*auto*= self, *telos*= goal; Nakamura & Csikszentmihalyi, 2009), is an activity that is rewarding in itself. Getzels and Csikszentmihalyi (1976) studied the creative process in painters, and found that painters who were enjoying the product they were creating ignored any signs of pain, tiredness, and hunger and persisted fervently until the painting was complete (Nakamura & Csikszentmihalyi, 2002). It was only while the artists were engrossed in the actual painting experience that they exhibited signs of an autotelic experience (Getzels & Csikszentmihalyi, 1976). It was the concept of the “autotelic experience” that prompted an outpouring of research on the phenomenology of intrinsically motivating activities (Nakamura & Csikszentmihalyi, 2002). Csikszentmihalyi (1975, 2000) interviewed rock climbers, chess players, dancers, and surgeons. When studying aspects of work (e.g., surgeons arguably extrinsically motivated by money) – and aspects of play (e.g., recreational chess players) – both the work and play experiences yielded similar results when it came to the describing an autotelic experience; participants truly enjoyed the experience for its own sake and felt as though their skills were not “underutilized” or “overmatched” (i.e., balance of challenge and skills; Nakamura & Csikszentmihalyi, 2002, p. 90). This challenge-skill balance became a defining characteristic in process of defining what would eventually become a flow experience and flow theory.

A compilation of qualitative and quantitative data on elite performers allowed Csikszentmihalyi to develop additional dimensions that occur during performance, all of which related to the development of his flow theory. The nine dimensions of the theory

that emerged are listed as follows: balance of challenge and skill, merging of actions and awareness, clear goals, unambiguous feedback, concentration on the task at hand, sense of control, loss of self-consciousness, transformation of time, and an autotelic experience (Jackson and Marsh, 1996).

These dimensions have been validated (Jackson & Marsh, 1996) as empirically sound and reliable aspects of the flow experience. Jackson and Marsh (1996) developed the Flow State Scale (FSS) and Dispositional Flow Scale (DFS); currently revised to a more internally consistent FSS-2 and DFS-2 (Jackson & Eklund, 2002). The Flow State Scale measures flow following a specific event and the Dispositional Flow Scale assesses the “general tendency” of flow to happen during a given activity (Jackson et al., 2010, p. 12). Both of these 36-item measures were designed to parallel each other as a means of comparing a person’s state and dispositional flow in response to a particular activity (Jackson et al., 2010). Further discussion of these empirical measures will be later addressed.

Flow theory is not devoid of criticism. Some argue that this “theory” is not, in fact, a theory at all. Marr (2001) denotes that flow theory does not describe the subject matter or experience appropriately because it does not account for the physiological correlates often associated with happiness and total absorption in a task (Marr, 2001). Without an amalgamation of “behavioral, cognitive, and neuro-physiological events... a satisfactory flow theory does not exist” (Marr, 2001, “In the Zone”, para. 5). Wright, Wright, Sadlo, & Stew (2014) noted that flow theory may need adjustment, and argued that there is more than one type of optimal experience which involves a combination of “metamotivational states” (p. 188) outside of the flow theory constructs. Despite this criticism, many

researchers (e.g., Bernier, Thienot, Codron, & Fournier, 2009; Jackson 1992, 1996; Sugiyama & Inomata 2005; Young, 2000) continue to use Csikszentmihalyi's constructs of flow theory as a framework to better understand the optimal experience of flow.

Flow Theory Constructs Defined

Three of the constructs of flow theory (challenge-skill balance, clear goals, and unambiguous feedback) are conditions through which flow ensues (Nakamura & Csikszentmihalyi, 2002; Swann, Crust, Keegan, Piggott, & Hemmings, 2015), and the remaining six constructs (sense of control, loss of self-consciousness, merging of actions and awareness, concentration on the task at hand, time transformation, autotelic experience) seek to describe what is happening *during* the flow experience (Nakamura & Csikszentmihalyi, 2002; Swann et al., 2015).

Time transformation concerns the passage of time beyond one's physical awareness (Carter, River, & Sachs, 2013). When in a state of flow, time seems to stand still or pass by quickly, depending on the type of performance (Fritz & Avsec, 2007). A *balance of challenge and skill* is the extent to which an individual perceivably possesses the ability to perform the task. A task that is too demanding can lead to anxiety, and a task that is too simple can lead to boredom (Kirchner, 2011). Thus, it is the perfect "balance" of challenge and skill that fosters a flow experience. *Merging of action and awareness* deals with "oneness"; an individual does not think of himself outside of his actions, instead, he is fully emerged in them and perceives the actions as effortless (Carter, River, & Sachs, 2013; Fritz & Avsec, 2007). *Unambiguous feedback* involves an awareness that an individual is succeeding at the task they are performing (Jackson & Marsh, 1996). Received unforced feedback from external sources leads to a positive

experience, provides necessary performance corrections, and sometimes promotes the development of new skills and/or techniques (Carter, River, & Sachs, 2013). An *autotelic experience* occurs when an individual does a task simply for the enjoyment of doing it. The intrinsic nature of the task often leads to a state of flow (Jackson & Marsh, 1996). *Loss of self-consciousness* involves the remittance of concern with the self, which leads to an innate and confident performance (Jackson & Marsh, 1996). An individual is not abandoning all actions involved with the self; instead, he is only focusing on relevant cues necessary for performance (Jackson & Marsh, 1996). *Sense of control* is characterized by a lack of intentional control. An individual merely senses that he is effortlessly in command of the situation; the control is not forced (Kirschner, 2011). With *clear goals*, the goals of the task are meticulously defined, which gives the individual a clear sense of what he needs to do to perform successfully (Jackson & Marsh, 1996).

The Flow Model: A Balance of Challenge and Skill

Out of the nine aforementioned flow constructs, *challenge-skill balance* is the condition argued to most accurately capture flow (Fritz & Avsec, 2007) and it is cited as the most documented construct (Fullagar, Knight, & Sovern, 2013). Flow theory asserts that the relationship between perceived challenges and a person's level of skill best determines the likelihood that flow will occur (Csikszentmihalyi, 1997; Shernoff, Knauth, & Makris, 2003). The balance between challenge and skill is considered by Nakamura and Csikszentmihalyi (2009) to be "fragile" (p. 196), and remains the foundation for the Flow Model (See Figure 1.). In a particular task, the challenges "stretch but do not overmatch existing skills" (Nakamura & Csikszentmihalyi, 2009, p. 195). "Fragile" is used to describe the construct because the balance can shift at any moment. Feedback

from a sudden event or change in environment can cause a shift in subjective state; this in turn can impact perceived skills and related challenges (Nakamura & Csikszentmihalyi, 2009). The Flow Model framework is ever-changing. There is no growth ceiling; as a person develops and masters new skills, he must seek activities that are more difficult in order to maximize his skill set (Moneta & Csikszentmihalyi, 1996; Nakamura & Csikszentmihalyi, 2002).

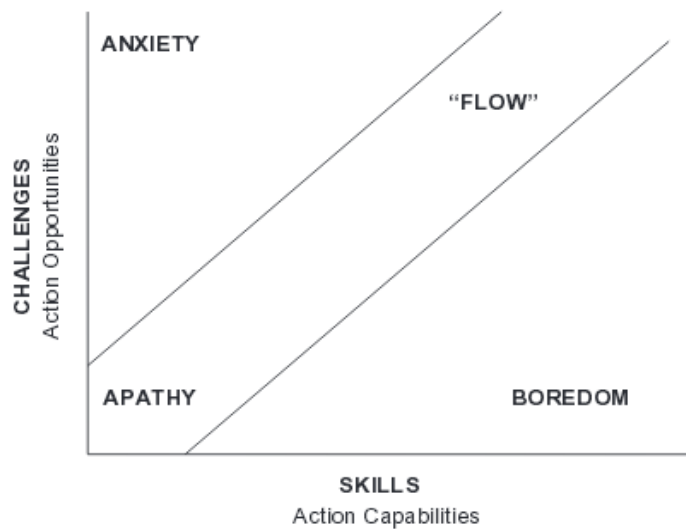


Figure 1. The Flow Model: Challenge- Skill Balance; adapted from Csikszentmihalyi (1975) and Fullagar et al. (2013)

The Flow Model indicates that if a task is very challenging and exceeds an individual's skill level, then that person may become anxious. If a person's skill level is greater than the demands of the challenge, then that person may become bored and possibly underperform (Nakamura & Csikszentmihalyi, 2009). Lastly, if the skill level of a person is low, and the task is not challenging, that person may be apathetic toward the task and fail to even attempt it. Thus, it is the "perfect" balance of challenge and skill that catalyzes a flow experience.

Despite research suggesting that the challenge-skill balance construct is the cornerstone of flow theory (Fullagar et al., 2013), Fullagar and colleagues (2013) argued that “little research has empirically investigated the relationship” (p. 238). Engeser & Rheinberg (2008) noted that just because a supposed balance of challenge and skill is achieved in a task does not guarantee that flow happened. Additional research has tested the challenge-skill balance construct. One study (Vittersø & Warholm, 2012) found that when job challenges exceeded skill level, Norwegian workers actually made greater improvements, but also possessed a happier disposition toward scenarios where challenges were lower than the skill required. Even Csikszentmihalyi himself found conflicting results related to the challenge-skill balance. Abuhamdeh and Csikszentmihalyi (2009) found that enjoyment was greater in online chess players who played against better opponents (i.e., had greater skills), and chess games between players of equivalent skill were described as less enjoyable.

Additionally, Fullagar and colleagues (2013) studied 27 college music students preparing for careers in music education or music performance (Fullagar et al., 2013). In the ten week period leading up to a recital, music students were asked to fill out a survey if they practiced without interruption, and they were required to complete the survey immediately after practicing to account for any recall bias (Fullagar et al., 2013; average lag between practice session completion and survey completion = 2.19 minutes). The survey had many questions addressing perceived challenges (*How much challenge was there in playing this passage of music?; How difficult was this passage of music to play?;* Fullagar et al., 2013, p. 242) and perceived skills (*How much more do you need to rehearse this passage?; How well prepared were you to play this passage of music?;*

Fullagar et al., 2013, p. 242). These questions were answered on a ten-point Likert scale (1 = “*Not at all challenging/Very easy*”, 10 = “*Extremely challenging/Extremely difficult*”; Fullagar et al., 2013, p. 242). The “absolute difference” between the challenges and skills was the calculated challenge/skill balance construct (Fullagar et al., 2013, pp. 242-243). A measure of flow (Flow State Scale-2) was also included in the survey, in addition to a question addressing anxiety (*How anxious were you feeling while playing this passage of music?*) that was scaled 1-10 (1 = “*Not at all anxious/extremely relaxed*”, 10 = “*Very anxious/extremely tense*”; Fullagar et al., 2013, p. 243). Results found that flow was more likely to occur when perceived skills and pressures were balanced, and anxiety was more associated with an imbalance of challenge and skills (Fullagar et al., 2013). However, of interest was the level of anxiety found in the musicians reporting higher skills. Musicians reporting higher skills exhibited anxiety when playing an easier piece; this lies counter to the traditional challenge-skill balance construct suggesting that boredom occurs in such scenario (Csikszentmihalyi, 1988, 1990). According to The Flow Model, anxiety should occur when completing a *difficult* task that outweighs skill; not when completing an easy task.

Although it is clear that challenge-skill balance is a precursor to the flow experience, the conceptualization of this popular and most documented (Fullagar et al., 2013) construct may appear differently pending the performance situation. These findings imply that perhaps the challenge-skill balance construct is not a universal phenomenon and should not be defined similarly across all performance domains, especially in regards to music performance. In future flow research, it is important to keep these conflicting considerations in mind when evaluating the essence and experience of flow.

Measuring Flow

Engeser and Schiepe (2012) argue that Csikszentmihalyi's definition of flow has barely changed since its initial inception in 1975. Yet, researchers continue to modify and revise how flow should be appropriately measured (Moneta, 2012). It is paradoxical to have a widely understood and accepted theory with no corresponding best measurement (Moneta, 2012). Moneta (2012), in his research on measuring and conceptualizing flow, argues that flow theory has been over-simplified and its meaning capriciously interpreted in an effort to predict measurable outcomes associated with the theory. Because of this, many flow measurement methodologies possess many limitations. The most common methodologies, and the limitations they possess, are delineated below.

The Flow Questionnaire

When initially conceptualizing flow, Csikszentmihalyi took the most "insightful and clear" (Moneta, 2012, p. 24) descriptions of flow from multiple interviews that he conducted to create a Flow Questionnaire (FQ; Csikszentmihalyi, 1988). The Flow Questionnaire has five separate sections. The first section contains three sample quotes that detail a flow experience. The second section is a yes/no answer portion in response to the first section (i.e., "Have you ever felt similar experiences?"). If the participant answers "yes", then the third section asks to list the "flow-conducive" activities. If the participant lists more than one activity, then the fourth section asks the participant to select the activity that best relays the essence of the flow experience. The fifth section asks the participant to rate certain flow experiences on a Likert-type scale (Moneta, 2012). Overall, the FQ is good for estimating the prevalence of flow occurring in a population during a particular activity, but it fails to address the balance of challenge and skill

associated with the flow state (Moneta, 2012). Additionally, it cannot measure the intensity of specific flow experiences (Moneta, 2012). Due to these methodological limitations, the FQ has not been validated.

The Experience Sampling Method

Csikszentmihalyi (1990) asserted that flow cannot be initiated. In fact, the more conscious a person is about achieving a state of flow in performance, the less likely flow will occur (Jackson & Csikszentmihalyi, 1999; Wrigley & Emmerson, 2011). Past research has described states of flow as spontaneous (Fritz & Avsec, 2007), subjective (Csikszentmihalyi, 1990), and ephemeral (Koehn & Morris, 2012). Given the seemingly unexpected nature of flow, researchers have exhibited great difficulty capturing present-moment flow experiences, especially since the mere interruption of a task can inhibit flow (Scollon, Kim-Prieto, & Diener, 2003; Wrigley & Emmerson, 2011). The Experience Sampling Method (ESM) has been employed to measure flow experiences during activities (Scollon et al., 2003; Wrigley & Emmerson, 2011) in an attempt to eliminate biases associated with recalled self-report measures (Brewer, Van Raalte, Linder, & Van Raalte, 1991) and to assess the level of flow intensity and challenge-skill balance not present in the Flow Questionnaire.

During ESM, the participants record repeated samplings of their activity experiences (Csikszentmihalyi & Larson, 1987). In the early developments of ESM in flow research, Csikszentmihalyi and Larson (1987) had participants take eight reports throughout the day, triggered by beeps on a pager. These reports were compiled on an Experience Sampling Form (ESF) that Csikszentmihalyi and Larson (1987) created. Such form had “13 categorical items and 29 scaled items” (Moneta, 2012, p. 30). The

categorical items asked open-ended questions such as “Where were you?”, “What was the main thing you were doing?” and “What were you thinking about?” (Moneta, 2012, p. 31) The scaled items listed statements such as “describe your mood as you were beeped” (Moneta, 2012, p. 31) with a set of mood states coded from 1 to 7 (alert, happy, active, involved, drowsy, sad, passive, detached) and a definitive ranking (very, quite, some, neither). Additional scaled items asked questions regarding the level of challenge, skill, and importance of the activity. These responses were ranked from low (0) to high (9). However, it still remains difficult to overcome the methodological challenge of stopping a performance to collect data about a transient experience.

Flow State Scale and Dispositional Flow Scale

The impracticality of implementing ESM during such active performance endeavors (i.e., stopping a soccer game to record data) led Jackson and Marsh (1996) to develop and validate the Flow State Scale (FSS-2; Wrigley & Emmerson, 2011) and Dispositional Flow Scale (DFS-2; Jackson & Eklund, 2002), both of which were revised from their original versions to improve internal consistency (Whitmore & Borrie, 2006). FSS-2 employs self-reported, valid measures of flow reported after an athletic performance (Wrigley & Emmerson, 2011). To further contribute to measurement of flow, Jackson and Eklund (2002) created and validated a questionnaire assessing an athlete’s propensity to exhibit flow. This measure was called the Dispositional Flow Scale (DFS-2). Understanding an athlete’s proclivity to exhibit flow was hypothesized to control for flow’s transience.

The DFS-2 and FSS-2 ask the same questions, except the DFS-2 inquires about typical flow exhibited during an activity, taken at a time separate from the activity itself.

The FSS-2 is designed to be taken immediately following an activity. When used simultaneously, researchers can differentiate any parallels between state and trait flow (Jackson et al., 2010). These measures were specifically designed to assess flow within a physical activity setting (Jackson et al., 2010). The DFS-2 was validated in physical activity settings (Jackson & Eklund, 2002; Marsh & Jackson, 1999) with item loadings ranging from $\alpha = .59$ to $\alpha = .86$ ($M_{alpha} = .77$; Jackson et al., 2010, p. 24). Additionally, its reliability estimates (Jackson & Eklund, 2002) range from $\alpha = .81$ to $\alpha = .90$ ($M_{alpha} = .85$; Jackson et al., 2010, p. 31). The FSS-2 has item loadings ranging from $\alpha = .56$ to $\alpha = .88$ (Jackson et al., 2010, p. 21). Correlations between the factors “ranged from low to moderate, varying from .18 to .72” (median $r = .50$; Jackson et al., 2010, p. 21). Reliability was $\alpha = .77$ for dispositional flow and $\alpha = .75$ for state flow, respectively (Jackson et al., 2010).

These measures are limited in that they assume that all factors of flow are equal, however, flow is experienced in varying degrees, in different ways, and at any point in time depending on the individual. Additionally, the measures tend to impose flow on the individual by suggesting that certain flow phenomena occurred (Moneta, 2012). For example, by prompting participants to rate their experiences of flow based only on Csikszentmihalyi’s nine constructs of flow (“my actions felt automatic”), participants are deductively forced to select and rate their subjective experience based on given constructs. If other flow related experiences may have occurred that are not written on the DFS-2 or FSS-2, researchers will be unaware of such experiences. Lastly, these measures, regardless of the performance domain in which they are used, are often criticized as failing to fully encapsulate the breadth of the flow experience in detail.

Kirk (1986) alleged that once researchers begin shifting towards a quantification of flow, especially in a sport context, they move away from understanding what “participation... actually feels like for the athlete” (p. 333). Csikszentmihalyi (1982) warned that too much of a focus on empirical measures of flow in general causes the experience to lose its essence and inscrutability.

Qualitative Flow Research

Nakamura and Csikszentmihalyi (2002) noted that the semi-structured interview provides a “holistic, emic account of flow in real-life context” (p. 93); namely, qualitative research is essential to “identifying and delineating dimensions and dynamics of the flow experience” (Nakamura & Csikszentmihalyi, 2002, p. 93).

Rich (2013) noted that “qualitative interviews, especially when documenting experiential states of flow, have a place even in the high technology modern era of experiments, statistical analysis and brain science” (p. 48, Davidson, 2005, cited in Harari, 2008, p. 258). Rich (2013) further argues that no matter how advanced technology becomes, we can never truly understand a person’s lived experience without merely asking them to tell us.

Similarly, Jackson (1992) asserted that flow cannot be solely assessed from a positivistic, scientifically-oriented approach. A positivistic approach is highly objective and argues for an understood truth or salient, consistent principle (Jackson, 1992). The defining characteristic of flow is its subjectivity, which lies counter to empirical analysis (Csikszentmihalyi, 1982). As mentioned previously, flow has remained constant across culture, gender, age, and socioeconomic status (Csikszentmihalyi, 2002).

In response to her assertion, Jackson (1992) conducted the first extensive qualitative examination of flow to better understand the richness and subjectivity of flow in performance. In this analysis, sixteen elite figure skaters were asked to describe an optimal performance experience, what the flow experience meant to them, the frequency they experienced flow, what they believed the most important factors of flow were, and the intensity of the optimal performance experience they articulated. These interviews were conducted via phone, and the responses were transcribed verbatim. Raw data themes were extrapolated from the interviews, and then axially coded into deeper, meaningful themes (Jackson, 1992). From these higher order themes, it was determined that the rich detail of flow differed immensely across individuals. However, there was a close similarity between the articulated flow experiences and the accepted theoretical underpinnings of the constructs of flow (Jackson, 1992). For example, elite skaters stated that when in flow, time seemed to pass by very quickly (*time transformation*), they were in control of their performance (*control*), and that their actions seemed automatic (*merging of actions and awareness*). Jackson (1992) determined with great certainty that the emergent themes can be generalized to other elite athletes' experiences of flow when controlled for specific sport experiences.

Some methodological limitations of qualitative research include participants' recall bias (Pannucci & Wilkins, 2010), social desirability bias (Neeley & Cronley, 2004), the study's inability to be replicated (Marshall & Rossman, 2011), as well as interviewer's bias (such as, asking leading questions; Pannucci & Wilkins, 2010). Despite these limitations, qualitative research appears to be the supposed "best" way;

perhaps the lesser of existent evils – to understand the flow experience in a particular context. Consider the following statement:

“Imagine how preposterous a psychologist responding to a client or research participant would sound by saying, ‘you may be feeling miserable, but on the basis of physiological data, we will tell you that you are in fact happy’”

(Davidson, 2005, cited in Harai, 2008, p. 258).

How will we know exactly what is happening during a flow experience without asking? Additionally, are flow constructs universal across all performance domains, or are researchers merely deducing findings into a pre-existing theoretical framework? The argument becomes philosophical; for example, can experiences truly be measured? Kraus (2003) stated that the investigation of flow is difficult, and argued that

“no single research method or single study can accurately define or explain the subjective and metaphorical nature of human experience, and most specifically, the broad theory of flow” (p.162).

Finding Commonalities in People Who Experience Flow

Flow research within the last decade has primarily focused on its application in a given performance setting. Researchers often ask, “How can we promote, evoke, and enhance flow to provide great performances and happiness?” In order to answer this question, many have attempted to target environments, personality characteristics, and situational factors that might contribute to one’s propensity to “get in the zone”; many such attempts are described below.

Flow Proneness

Flow experiences are individualistic in that there is a breadth of difference in the

intensity as well as the frequency of flow happening during an activity (Ullen, Manzano, Almeida, Magnusson, Pedersen, Nakamura, & Csikszentmihalyi, 2012). Flow proneness concerns the ability to “get into flow” (Bloom & Skutnick-Henley, 2005, p. 25). The differences that occur in each individual’s experience of flow are often a result of personality traits and “situational variables” such as perceived ability, self-esteem and self-concept (Adlai-Gail, 1994; Jackson et al., 1998; Jackson, Thomas, Marsh, & Smethurst, 2001). In a cluster analysis, Kee and Wang (2008) found that those who have a proclivity to be more mindful, or intentionally focused in the present moment, are also more likely to experience flow. Vealey and Perritt (2015) found that higher levels of hardiness and optimism predicted flow. Those who are optimistic tend to believe they have greater control over their situation (Scheier & Carver, 1992), and hardy individuals are often defined as having stress-resistant personality characteristics (Maddi, 2002) that lend a hand to optimal performances. Swann, Keegan, Piggot, & Crust (2012) found that in athletics, “focus, preparation, motivation, arousal, thoughts and emotions, confidence, environmental and situational conditions, feedback, performance, and team play and interaction” (p. 61) each facilitate flow when experienced in their positive form, but when experienced improperly (over arousal, self-consciousness) the factors could inhibit flow (Swann et al., 2014). Rich (2013) argued that nearly all games (e.g., Csikszentmihalyi, 1975) and sports (e.g., Jackson & Csikszentmihalyi, 1999) are arranged in a way that involves the following conditions of flow to occur; immediate feedback, clear goals, and the perfect balance of challenge and skill.

Ullen et al. (2012) assessed flow proneness as it related to the Big Five personality traits (Openness, Conscientiousness, Extraversion, Agreeableness,

Neuroticism) and intelligence. One sample of individuals was administered the Dispositional Flow Scale-2 (DFS-2, Jackson & Eklund, 2004), and the Swedish Flow Proneness Questionnaire (SFPQ), Revised NEO Personality Inventory (NEO-PI, Costa & McCrae, 1992), and the Raven SMS plus or the Weiner Matrizen Test (WMT) for intelligence (Ullen et al., 2012). These items were completed by pencil and paper. A second sample completed the same measures, but in an online setting (Ullen et al., 2012). Flow proneness was related to neuroticism and conscientiousness, but was not related to intelligence (Ullen et al., 2012). Namely, neuroticism was inversely related to one's propensity to exhibit flow (Ullen et al., 2012). This makes sense, given that neurotic individuals exhibit negative affect (Gray & McNaughton, 2000; Ullen et al., 2012) which impedes the enjoyment aspect of flow. Contrarily, conscientiousness represents "active problem coping" (D'Zurilla, Maydeu-Olivares, & Gallardo-Pujol, 2011; Ullen et al., 2012, p. 171) and is often related to life satisfaction and positive affect (Marrero Quevedo & Carballeira, Abella, 2011; Ullen et al., 2012). It was hypothesized that conscientious individuals may take more time to practice and master material, perhaps creating a positive environment for flow to foster (Ullen et al., 2012). It is evident that certain personality characteristics are related to the flow experience; however, these relationships are causal and not absolute. Additionally, the present study failed to address the environmental context which may influence the "proneness" of flow. However, hypothesizing potential relationships between flow and personality is important in conceptualizing the essence of the flow experience, especially during a performance.

From the initial inception of flow, Csikszentmihalyi (1975) hinted at the possibility of an autotelic personality found in those who easily experience flow. A

person with such personality “generally does things for their own sake, rather than in order to achieve some later external goal” (Csikszentmihalyi, 1997, p. 117). The autotelic personality concerns “a general curiosity and interest in life, persistence, and low self-centeredness” (Nakamura & Csikszentmihalyi, 2002, p. 93). Little research has been devoted to understanding this topic or validating Csikszentmihalyi’s early hypotheses of an autotelic personality. Recently, Ross and Keiser (2014) modified the questions of the DFS-2 to assess a person’s tendency to experience flow in daily life to provide a measure that evaluates the “cross-situational consistency of flow” (p. 3) and perhaps identify characteristics of an autotelic personality. The researchers asserted that characteristics related to the autotelic personality are often constellated within the framework of the Five Factor Personality Model (Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism; Costa & McCrae, 1992) and should be studied in relation to such model. After administering the DFS-2 (revised to ask about general life experiences) and the NEO Personality Inventory-Revised questionnaires to 316 undergraduate students, it was found that low neuroticism, high extraversion, low agreeableness, and low conscientiousness predicted the propensity to experience flow, accounting for 38% of the variance (Ross & Keiser, 2014). These results suggest that the autotelic personality can be somewhat captured and measured, but within the framework of the Five Factor Model (FFM). These results are limited within the specific FFM context, but represent one of the few studies attempting to quantify an autotelic personality in relation to flow proneness.

Jackson’s (1992) qualitative research on flow in elite figure skaters found that athletes were likely to get into a state of flow during a performance when they possessed a positive mental state, had positive pre-competitive and competitive affect, maintained

focus, felt physically ready, and had unity with their skating partner. Although the study was conducted with a specific focus on elite athletic behavior, Jackson (1992) established a clear link between that state of flow itself and the situation (environment, mental capacity, physicality) in which flow occurred.

These results further suggest the likelihood that flow can be promoted in a given performance.

In regards to proneness in musicians, Klausmeier (1978) found that performance, practice, and transference of music allow musicians to be fully absorbed in music activities and get “in the zone”. Palmer (1989) asserted that personally identifying with the music also contributes to immersion in the performance – a construct of flow theory. Sutton (2004) concluded that in group flow, friendship, the audience, possessing ownership of the music, trust, preparation, and no strong sense of ego all had an impact on the flow experience.

Despite the fact that “flow may occur in virtually any activity” (Rich, 2013, p. 48), it appears as though certain environments may be more conducive to flow. Even though there are some similarities in reported characteristics related to flow proneness (i.e., low neuroticism, doing activities for their own sake, etc.), it is important to note that a universally accepted ideal scenario, personality trait(s), or environment conducive to flow proneness has yet to be reported. It also appears as though the type of performance (sport, music, academic setting, general life experiences, etc.) requires different environmental contexts, thoughts, and behaviors that lead to an optimal performance. Perhaps, then, flow proneness characteristics should be solely assessed within the performance domain in which they are attributed. Despite commonalities amongst the existing data, there is

arguably no “perfect” characteristic that lends a hand to flow proneness, further contributing to its elusiveness. It is hypothesized that the subjective nature of interpreting flow is the rationale behind a breadth of flow proneness characteristics contributing to a flow experience.

Flow Subjectivity

The experience of flow during a performance is dependent on a person’s perception (Rich, 2013). How a person perceives a task – whether or not he believes that the task is difficult or easy – can impact the flow experience. It is not solely the event itself that causes flow, but the extent to which the person feels that he can appropriately master the event. Flow theory encompasses *interactionism* (Magnussen & Stattin, 1978), or a mix of person and environment. Being able to seek such challenges in particular tasks depends on certain inherent characteristics. It is the “subjectively perceived opportunities and capacities for action that determine experience” (Nakamura & Csikszentmihalyi, 2002, p. 91). These “capacities” include mastered skills, personality characteristics, and behaviors that are often associated with flow proneness. However, even if one possesses the supposed characteristics associated with flow proneness, an appropriate interaction with an event is necessary for flow to occur. Furthermore, whether or not a flow experience occurs depends on interpretation and acknowledgment from the individual. Perhaps this is why characteristics of flow have remained consistent across culture, gender, age, and socioeconomic status (Csikszentmihalyi, 2002). Rich (2013) found that people exhibit flow while they are volunteering in their local communities or even fighting in a war. Rich (2013) concluded that the experience of flow can be “amoral” (p. 48); studies have even found flow occurring during episodes of illegal

activity, such as during gang fights (Csikszentmihalyi & Csikszentmihalyi, 1988; Rich, 2013) and exotic dancing (Barton & Hardesty, 2010; Rich, 2013). In summary, the flow experience itself is subjective, despite various connections amongst flow, personality, and environment, some of which are characteristics often associated with flow proneness. These supposed connections (flow, personality, and environment) appear to be objective, but are often correlated retrospectively. Without the subjective interpretation and explanation of a “flow experience” or “being in the zone” by a person, such connections cannot be made. Nakamura and Csikszentmihalyi summarize this concept comprehensively;

“A given individual can find flow in any activity, however – working a cash register, ironing clothes, driving a car. Similarly, under certain characteristics and depending on an individual’s history with the activity, almost any pursuit – a museum visit, a round of golf, a game of chess – can bore or create anxiety. *It is the subjective challenges and subjective skills, not objective ones, the influence the quality of the person’s experience*” (Nakamura & Csikszentmihalyi, 2002, p. 91).

Flow in Athletic Performance

Given the marketable performance gains an individual can experience when in a state of flow, and because flow can be experienced in just about any activity, research has assessed methods of enhancing flow across numerous performance domains. However, the most extensive amount of flow research is seen across athletics (Jackson & Marsh, 1996; Jackson, Martin, & Eklund, 2008; Martin & Jackson, 2008; Partington et al., 2009; Stavrou et al., 2007). This is not unexpected, given that the first valid and reliable

measures of flow were created and tested on athletes. However, despite extensive research, Jackson and Csikszentmihalyi (1999) regard flow as “one of the least understood phenomena in sport” (Swann et al., 2014, p. 61).

Ravizza (1977, 1984) was the first researcher to directly connect flow to sport experiences, although the term “flow” was described under a different guise. Ravizza referred to flow-like states as a “peak experience”, using the same diction as Maslow. To better understand Maslow’s idea of “peak experience” within a sport context, Ravizza (1977) conducted interviews with twenty male and female athletes across twelve different sports, and he asked about the athlete’s most joyous moments in sport. Emerging themes, ranked in the order of response percentage, included a

“loss of fear, ability to execute basic skills, no thinking of performance, individual gives full attention (total immersion in an activity), narrow focus of attention, the experience is perfect, temporary phenomenon, feeling of being Godlike (in control), self-validating experience, involuntary experience, unique experience, perception of the universe as integrated and unified, passive perception (effortless), time-space disorientation, awe and wonder of the experience, transcendence of ordinary self, fusion of the individual, unique being of the individual, rich perception during experience, unity of the world, athlete in good physical condition, accomplished goal, premonition of experience, unclassified perception, important to have spectators, fusion of dichotomies, awareness of the absolute, abstract perception, nature of the object in itself, meaning to life in general, [and] discussed experiences with others” (Ravizza, 1977, p. 37).

It is evident that certain characteristics of Ravizza's 1977 emergent themes (i.e., total immersion in an activity, narrow focus of attention, effortless performance, time-space disorientation, feeling of being in complete control) are parallel to some of Csikszentmihalyi's 1990 emergent flow themes (i.e., total absorption, total concentration, merging of actions and awareness, time transformation, total control).

It is important to note the literature confusion between Csikszentmihalyi's flow and Ravizza's "peak performance", specifically in regards to describing flow within a sporting context. In a comprehensive literature review of peak moments in sport, McInman and Grove (1991) argued that "the area of peak moments is plagued by a definitional crisis" (p. 334). McInman and Grove (1991) noted that flow and peak performance are often used to describe similar phenomena in sport; sometimes interchangeably. However, the present study is considering Csikszentmihalyi's conceptualization of "flow" rather than other terminology due to the breadth of research attributed specifically to Csikszentmihalyi. Additionally, "flow" has its own operational definition that encapsulates aspects of both peak performances and peak experiences, as noted earlier in this chapter. Ravizza, however, is credited as being the first person to qualitatively identify flow-like behaviors in a sport context, so commenting on his findings within the context of this literature review is essential.

Privette and Bundrick (1987) interviewed 123 university students about general peak experiences in life and determined that sport was the main source of flow. No participants mentioned experiencing flow during "school, at work, in a relationship, at another's death, during sickness, or in connection with religious events" (McInman & Grove, 1991, p. 341). These results hint at the popularity of flow in sport context. Perhaps

the frequency in which flow is experienced in sport context parallels why flow is such a popularly researched topic in sport literature.

McInman and Grove's (1991) comprehensive literature review of peak moments in sport found similarities in all "peak" domains (for example, peak performance, peak experience, and flow), regardless of how the domains were described or classified in the literature. The similar aspects of a peak experience in a sport context included a) *absorption*, or total concentration and involvement in a task; b) *detachment*, or performing actions automatically, as if mentally "detached" from them; c) *emptiness*, or a hollow feeling (often following a moment of greatness); d) *ecstasy*, or euphoria; e) *larger energies*, or a physical or collective presence seemingly larger than oneself; f) *altered perceptions of time*, or time that seems to speed up or slowdown; and g) *sense of unity*, or a oneness with the environment (McInman & Grove, 1991, p. 343). Although Csikszentmihalyi's flow is compiled into the review with other related descriptors of optimal experiences, it evident that similar characteristics of peak moments in sport emerge consistently. The fact that enough research existed to compile and target similar characteristics related to the experience of "being in the zone" reinforces the depth of flow research in a sport context. Additionally, these findings were five years prior to Jackson and Marsh's (1996) validation of nine flow constructs defined by Csikszentmihalyi. In spite of the extensive literature commenting on flow's importance in sport, additional research is still recommended by researchers due to the elusive and spontaneous nature of flow itself (McInman & Grove, 1991).

Flow in Music Performance

In stark contrast to sport, music performance is a field possessing a limited amount of research concerning flow (Bakker, 2004; Bloom & Skutnick-Henley, 2005; Byrne, MacDonald, & Carlton, n.d.; Freer, 2009; Fritz & Avsec, 2007; Kirchner, Bloom, & Skutnick-Henley, 2008; MacDonald, Byrne, & Carlton, 2006; O'Neill, 1999; Sinnamon, Moran, & O'Connell, 2012; Wrigley & Emmerson, 2011). The importance of flow specific to music education literature has been theorized, but not studied, in three instances; Reimer (1995), Swanwick (1999/2012), and Elliot (1995). As of 2012, "there is only one peer-reviewed published paper exploring adults' flow states in music" (Sinnamon et al., 2012, p. 9). This brings us to the scope of the present study.

The lack of research on flow in music performance is startling, given that this specific population could benefit from a deeper understanding of the nuances of the flow experience, due to flow's inherent performance enhancement benefits. For example, achieving flow during a music performance could lessen performance anxiety, improve confidence, and decrease cognitive distortions associated with performance (Kirchner, 2011). Music provides heavy emotional expression, practice, presentation, connection with the audience, communication amongst performers, evokes feelings in others, produces sound, etc. (Sinnamon et al., 2012). These circumstances may be unique to music performance, in comparison to other domains like sports.

Perplexities about both the uniqueness and paucity of research on flow in music performance lead to further analysis of any existing studies measuring the phenomena. How can we learn more about this specific population? What research methodologies have been employed to best understand flow in music? How are these experiences

different from the flow experience in sport? Each respective study possesses a different aim as to why flow was measured as part of their research, and provides evidence toward the need for continued research on flow in music.

Existing Research on Flow in Music Settings

Bakker (2004) examined flow in 178 teachers and 605 students across 16 music schools to see if the experience of flow was contagious between music teachers and music students. It was hypothesized that certain factors related to positive job resources – such as autonomy and social support from faculty – could contribute to flow experiences because having strong job resources often relates to commitment, goal-setting, and motivation (Bakker, 2004). Higher motivation positively influences the balance of challenge in a job and the skills required to meet the challenge, and this balance often explains flow experiences. Additionally, it was hypothesized that flow experiences could be transferred to students. Through the framework of the emotional contagion theory, it was posited that positive flow experiences in music could be interpreted by students and “passed along”. This could potentially increase enjoyment and intrinsic motivation on behalf of the student. Participants completed the WOLF (WOrk-reLated Flow scale; Bakker, 2001), a five-scale challenge-skill balance questionnaire (French, Caplan, & Harrison, 1982), an adapted Leader- Member Exchange scale (LMX; Grahn & Uhl-Bien, 1995), a performance feedback questionnaire (Bakker, 2001), an autonomy questionnaire (Bakker, Demerouti, Taris, Schaufeli, & Schreurs, 2003), and a social support questionnaire (Bakker et al., 2003). Results indicated that absorption, intrinsic motivation, and work enjoyment related to challenge-skill balance within a work environment. Challenge-skill balance could then predict flow frequency in music teachers (Bakker,

2004), which could optimize experiences. Higher flow states in instructors related to higher flow states in students, respectively, suggesting a likelihood of flow transfer. Although the study possesses strong implications for music educators, this study was predictive in nature and failed to address all aspects of flow. Bakker (2004) himself argues the causality and lack of relationships that can be established in this study as a result of its cause-effect nature. Additionally, the reported measures were not completed in a performance setting. However, the study provides insight to environments conducive to flow promotion as well as application of the emotional contagion theory (Hatfield, Cacioppo, & Rapson, 1994) as a means of promoting or evoking flow in others, especially within a music setting.

Bloom and Skutnick- Henley (2005) surveyed 90 musicians about the experience of flow during instrument play. The researchers do not explicitly state what quantitative measures they implemented to assess flow. However, they alluded to administering surveys with write-in descriptions fitting into specific flow-related categories. Furthermore, there was no mention of exclusion criteria related to who they surveyed, with the exception of “musicians”. The findings suggested that love of music, familiarity with music, emotionality, letting go, connection/rapport, and concentration/focus led to their flow experiences (Bloom & Skutnick- Henley, 2005). These themes were not related back to Csikszentmihalyi’s (1990) validated constructs of flow. However, Bloom and Skutnick- Henley (2005) recommended an expansion of their methodology to include interviews with musicians to “discover new factors and validate the ones found in our study” (p. 28), which is pertinent to the design of the present study.

Fritz and Avsec (2007) commented on the “little research published regarding

music and flow” (p. 8), and sought to establish a connection between well-being and flow in musicians. They hypothesized that positive affect – often manifested as enjoyment – could contribute to more flow experiences. They studied 84 students in the Music Academy of Ljubljana. Participants completed the Positive Affect Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988), the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), and the Dispositional Flow Scale (DFS-2; Jackson & Eklund, 2002). These measures were administered during a class lecture, and not following a performance. Results showed that certain aspects of Csikszentmihalyi’s (1990) validated constructs of flow (challenge-skill balance, concentration on the task at hand, and autotelic experience) were related to subjective well-being, with challenge-skill balance reflecting the strongest relationship. However, other aspects of Csikszentmihalyi’s (1990) flow constructs were not significantly related to subjective well-being; *loss of self-consciousness* and *time transformation*. The authors suggested that these constructs are experienced rarely in music; for example, time is heavily regimented and regulated in music which may not allow for an easy “transformation” of time. Additionally, because musicians often become or evoke characters different from themselves when performing, it could be argued that they are not as aware of their true selves because they are immersed in another character, and are therefore less self-conscious. Knowing that potential differences in constructs of flow theory exist in music is cause for consideration when assessing the flow experience of musicians in future research. Perhaps new or different constructs exist that better explain the flow experience in musicians.

Kirschner, Bloom, and Skutnick-Henley (2008) examined the relationship

between performance anxiety and flow in 90 undergraduate music majors using the Performance Anxiety Inventory and the Music in Flow Inventory. Results demonstrated that flow proneness was significantly inversely related to performance anxiety ($r = .20, p = .034$) suggesting that creating an environment conducive to flow could lessen music performance anxiety and therefore increase performance. This study used the qualitative component of the Music in Flow Inventory to examine flow experiences in detail. However, the themes extrapolated from the qualitative analysis were merely mentioned as ancillary detail and not linked back to Csikszentmihalyi's (1990) flow dimensions, with the exception of conceptual flow related definitions. Therefore, it is difficult to get a sense of what it truly feels like to be in a state of flow as a musician, especially in relation to the flow theory constructs. However, results demonstrate that certain performance environments may be more conducive to flow.

Sinnamon et al. (2012) validated the Dispositional Flow Scale-2, a scale traditionally used with athletes, with 205 elite and amateur musicians to compare how “flow was captured psychometrically” (p. 8) in sport and music performance contexts. The researchers were influenced by Martin and Jackson's (2008) validation of the short nine-item measure of flow with 224 classical music students at high schools and colleges. Martin and Jackson (2008) found high reliability ($\alpha = 0.73$) of the short-form measure of flow across all dimensions of flow theory. Sinnamon and colleagues (2012) were the first to test the psychometric adequacy of the longer, “more established” (p. 8), DFS-2. There were no significant differences between the amount of flow experienced in amateur musicians and elite musicians (Sinnamon et al., 2012), perhaps alluding to its subjectivity. It was determined that the reliability across all subscales of the DFS-2 was very high (α

= .92). The *loss of self-consciousness* dimension had “a lower mean score and higher and higher standard deviation than the other flow dimensions” (Sinnamon et al., 2012, p. 11). They found no abnormalities with the *time transformation* dimension of flow, a construct that tends to vary in other sport (Jackson, 1996) and music (Fritz & Avsec, 2007) research.

Another problematic finding in the Sinnamon et al. (2012) article concerns the differentiations in the general frequency of each type of flow construct experienced. For example, although 95% of elite musicians reported experiencing flow and 87% of amateur musicians reported experiencing flow, there was extreme variation in the frequency of each individual flow construct experienced (see Table). Although, arguably, only one aspect of flow theory needs to occur for flow to happen, from a theoretical standpoint, the differences amongst each construct have implications for interpreting DFS-2 scores (especially total flow scores). This corroborates the methodological flaws associated with using empirical measures to evaluate flow. Additionally, the *merging of actions and awareness* subscale (Sinnamon et al., 2012) frequency was lower than overall flow seems to indicate. This is particularly important because the validity of the scores depends on the *merging of actions and awareness*, as the construct is seen as “the most telling aspect of the experience of flow” (Jackson & Csikszentmihalyi, 1999, p. 20; Sinnamon et al., 2012, p. 20).

Table 1. Frequency of Flow Experience Among Categories of Music Students

(adapted from Sinnamon et al., 2012)

	Total Sample (%)	Amateur Students (%)	Elite Students (%)
Dimensions of Flow	<i>N</i> = 205	<i>N</i> = 125	<i>N</i> = 80
Challenge-Skill Balance	66.2	54.4	82.5
Merging Action/Awareness	55.7	49.6	65
Clear Goals	79.6	71.9	91.2
Clear Feedback	70.1	70.2	77.5
Concentration	61.7	61.2	62.5
Sense of Control	49	45	55
Loss of Self-Consciousness	29.1	31	26.2
Time Transformation	61	63.3	57.5
Autotelic Experience	80	73.3	90
Overall Flow	90.3	87	95

This dissonance of flow constructs across the music performance domain appears to be problematic, because it demonstrates a lack of clarity in the construct, and allows for misinterpretation of scores for overall flow. It is clear that not all constructs of flow are experiences when one is “in the zone”. Sinnamon et al. (2012) hypothesized that the *merging of actions and awareness* and *loss of self-consciousness* may be more transient and undetectable than the other constructs, which might account for the low scores and/or insignificance statistically. However, it was suggested by the researchers that interviews or additional qualitative research should be implemented in conjunction with measures in order to accurately assess flow, especially as it pertains to music performance.

O'Neill (1999) sought to examine intrinsic motivations of children practicing musical instruments. It was suggested that the difference between high achievers and low achievers is the extent to which children find practicing and playing their instruments intrinsically pleasurable or "flow" related (O'Neill, 1999). Researchers employed Csikszentmihalyi and Larson's (1987) Experience Sampling Method (ESM) as a way to determine events related to music practice (O'Neill, 1999). Participants from a music school and a non-specialist school participated in the study. The students in the music school were ranked by faculty, and the twenty highest achievers and twenty lowest achievers from the sample were asked to partake in the study (O'Neill, 1999). Those in the non-specialist school were identified as musicians at the school (O'Neill, 1999). Participants wore a pager and were asked to carry journals. The pager went off at random intervals throughout the day for a week long period. Once the beeper went off, participants filled out the journal, which asked questions about the people they were surrounded by, what they were thinking about, what they were doing, their current location, etc. (O'Neill, 1999). Flow scales were also administered as part of the journal of response forms (O'Neill, 1999). Eighteen categories of music and non-music activities students were involved in throughout the day were extrapolated from the journal entries (O'Neill, 1999). Some of these activities included doing homework, watching television, reading, eating, sleeping, and playing music for leisure (O'Neill, 1999). Data showed that music school students who were high achievers and students from the non-specialty school reported significantly more "flow" when engaged in musical activities than the moderate achievers. Despite these findings, the overall essence of the flow experience exhibited by the musicians is not fully understood because of the limitations associated

with ESM sampling; that is, disrupting flow occurrences with its presence and interjection. This, arguably, does not allow for a true flow experience to be captured. Additionally, the flow measures themselves were self-reported by the sample and the created measure was not empirically validated by the researchers. To overcome these limitations, interviews with musicians could be conducted to fully address the breadth and detail of performance experiences.

Byrne, MacDonald, and Carlton (n.d.) conducted a study assessing flow and creativity amongst collegiate music students. Students were working on compositions for their music class in groups of three, and met at least three times as a group (Byrne et al., n.d.). During each session students filled out Experience Sampling Forms (ESF; Csikszentmihalyi, 1988). Completed compositions were scored by teachers within the department using a Consensual Assessment Technique (Amabile, 1983, 1986; Hickey, 2000). Creativity correlated with high ESF scores. Namely, flow levels were related to the quality of creative output in composing music, as was determined by the teachers' creativity grade (Byrne et al., n.d.). Although there are implications for the rating scales used by teachers to grade the musicians, it was evident that when given the opportunity to be creative, there is a great likelihood that flow can occur in a music performance.

Perhaps creativity is an antecedent to flow occurring within a music setting.

Another study by Diaz and Silveira (2013) sought to explore flow in high school students attending a music camp. Namely, the researchers were curious about what conditions foster flow, whether or not flow is even experienced during music camp, and the relation between variables such as enjoyment, focus, academics, and social factors as they relate to flow. Diaz and Silveira (2013) developed a questionnaire addressing

potential interactions of the aforementioned variables relating to an experience in which the camper felt “absorbed in an activity”; a flow theory concept. All of the campers experienced flow (as defined by Diaz and Silveira) at least once. Results showed that large ensemble rehearsals (73%) induced flow to the greatest degree (Diaz & Silveira, 2013). Other instances where flow was experienced included studying music theory and participating in a camp elective activity. Over half of the sample reported a social event as inducing flow, such as hanging out with a friend (Diaz & Silveira, 2013). Students indicated enjoyment as well as an increased focus in their flow activities, which relates back to the foundations of flow theory. However, a crucial qualitative element is nonexistent in this particular study. Although we understand what types of environments may promote flow, readers are unclear about what it felt like when those music students were in flow. Additionally, the created flow measure used for assessment was not empirically validated, and only addressed one aspect of flow (total absorption in a task). The remaining constructs of flow theory are left unaddressed.

A rare qualitative analysis that addresses flow in music concerned six youth ($M_{age} = 16$ years) discussing their experiences in a choir ensemble (Freer, 2009). The overall focus of the article was not predominately concerned with understanding flow; but instead assessed strategies for retention and increased participation in choir. Freer (2009) discussed intrinsic motivation and its relevancy to maintaining commitment to a choir program. It was suggested that flow theory can foster student learning. If educators tailor their programs in such a way that students are challenged but can succeed autonomously, then students may be more apt to remain in choir or music programs long term (Freer, 2009). Students will then strive to recreate flow experiences they have had in music,

which will in turn foster intrinsic motivation. Although not a direct analysis of flow, the study demonstrates that qualitative analysis in a music setting exposes a breadth of experiences unfound in positivistic research approaches.

Kraus (2003) conducted a case study design to assess flow in a wind ensemble using the Experience Sampling Method for data collection. During rehearsal, the researcher had participants self-report their psychological state on note cards when prompted by a vibrating pager. The note cards had as single phrase that read “right now, I feel...” with multiple columns. The first column had words related to flow states, the second column had words descriptive of the “non-flow state”. He followed up the responses with interviews to illuminate the experiences. Kraus (2003) found that his musicians all appeared confident, relaxed, and exhibited an autotelic experience. These constructs related back to three of the constructs present in flow theory. Participants were distracted when they were not involved in the piece being played, or when the instructor was giving feedback to another musician. These performance breaks inhibited flow. This research provides insight to the type of flow experiences a musician may experience, and provides examples of environments non-conductive to flow. However, musicians were asked to respond to prepared prompts about flow, and perhaps had flow imposed on them as a result. This research does not accurately capture the essence of the flow experience in ways that in-depth interview might. In an interview setting, flow constructs may emerge naturally instead.

The current research demands a greater need for qualitative research on the flow experience in musicians. The limitations in the current empirical measurements of flow can be overcome by an in-depth analysis via interview. Although there is research to

suggest that certain antecedents, commonalities, and personality characteristics better contribute to the flow experience, it is difficult to pinpoint exact trends in these characteristics. Better understanding the conditions surrounding and optimal performance experience can be helpful for music educators and performance consultants. Such individuals can work with musicians to create the ideal environment for flow to occur.

Chapter 3

PROPOSAL: METHODS

The following chapter includes the study's methodology, which provides details surrounding the data collection portion of the study. This section will be subdivided accordingly: a) design and b) procedures. The procedures were written according to the five steps for conducting phenomenological research as recommended by Pollio, Henley, and Thompson (1997).

Design

In the present study, the fundamental nature of flow was qualitatively assessed within a population of performance artists. It was hypothesized that flow will be experienced in ways that both differ and remain similar to the constructs commonly found in Csikszentmihalyi's flow theory. Phenomenological research uses in-depth interviews to explore the "core meaning" of a lived experience (Merriam, 2009, p. 25). Central to phenomenology is the understanding of the essence of a particular topic or concept (Merriam, 2009, p. 25). Because the present research was exploratory and aimed to better comprehend the essence of the "lived" flow experience, a phenomenological approach was used. Phenomenological research strongly aligns with studying emotional human experiences (Merriam, 2009), much like that of the flow experience.

Procedures

The procedures were reflective of Pollio, Henley, and Thompson's (1997) steps for conducting phenomenological research. The steps included: Exploring Researcher Bias, Selection of Participants, Data Collection, Data Analysis, and Confirming Thematic Structure (Pollio et al., 1997).

Step 1: Exploring Researcher Bias

Indicative of phenomenology, the researchers gathered in-depth descriptions of a flow experience that was unique to each participant and eliminated pre-existing attitudes about the phenomena in question. However, Schwandt (1993) noted that even in qualitative research, “atheoretical research is impossible” (Merriam, 2009, p. 7). Even when analyzing data inductively, the inherent themes that emerge often “shapes or modifies an existing theory” (Merriam, 2009, p. 70), especially when the data is discussed in relation to existing research. For this reason, flow theory was a point of comparison for the emergent data, due to its heavy prevalence in the existing flow literature, and the tendency for researchers to conceptualize the flow experience within this theoretical framework (Swann et al., 2015). Of note is the principal investigator’s personal bias as a musician. This could have led to assumptions of themes represented in articulated music experiences, or probing with leading questions to insure that a specific response is rendered. For this reason, an advisor oversaw the development of the primary investigator’s question guide, and assisted the primary investigator in practicing her qualitative interviewing skills.

Step 2: Selection of Participants

When selecting participants to sample, phenomenological researchers must ask, “do you have the experience that I am looking for?” (Englander, 2012, p. 19). This sampling method is indicative of purposive representative sampling. Purposive representative sampling ensures that the data gathered from the participants is “representative” of the experiences and relevant concepts in question (Groom, Cushion, & Nelson, 2011; Strauss & Corbin, 1998). The goal of recruitment was to find collegiate

musicians who are familiar with the term flow and could describe an optimal performance experience. After receiving Human Subjects Review approval, instructors of required undergraduate music classes as determined by the College website (music theory, sight-singing, career orientations) in the School of Music at a private college in upstate NY were contacted. The initial contact email described the procedures and purpose of the study and asked if the primary researcher could recruit music students from each respective class. The researcher went to the classrooms of the consenting professors and further described the study and inclusion criteria to the students in the class. Students who consented to participate were given a Background Questionnaire (Appendix A) which they completed in class and returned to the primary investigator. The details on the Background Questionnaire were kept confidential but were not anonymous. Only the primary investigator had access to the questionnaire. In order to be included in the study, participants had to be familiar with the term “flow” and experienced “flow” during a performance. These questions were asked in yes/no format on the Background Questionnaire. From this initial recruitment phase, seventy-two students consented to potentially take part in an interview. Of those seventy-two students, four were ineligible to participate because they answered “no” to being familiar with flow and “no” to having experienced flow in a music performance before.

The final sample consisted of 15 undergraduate musicians who were randomly selected to be interviewed ($M_{\text{age}} = 19$, 53% male). Interviews were conducted and data collected ceased when no new data themes were discussed during the interviews. A full description of participant characteristics, including demographic information, is given in Table 2.

Table 2. Description of Music Participants

Participant	Age	Gender	Ethnicity	Years of Music Experience	Major BM = Bachelor of Music BA = Bachelor of Art
1	18	Female	Caucasian	10	Performance/ Music Education (BM)
2	18	Male	Caucasian	9	Sound Recording Technology (BM)
3	20	Female	Caucasian	8	Music (BA)
4	19	Female	Caucasian	12	Music (BA)
5	19	Female	Caucasian	11	Music Minor
6	19	Male	Caucasian	10	Performance (BM)
7	19	Male	Caucasian	11	Performance (BM)
8	18	Male	African American and Hispanic	11	Performance (BM)
9	19	Female	Caucasian	6	Performance (BM)
10	21	Female	Caucasian	N/A	Performance (BM)
11	21	Male	African American	11	Performance (BM)
12	18	Male	Caucasian	13	Music Education (BM)
13	18	Male	Caucasian	11	Music Education (BM)
14	18	Male	Caucasian	5	Music Education (BM)
15	19	Female	Caucasian	9	Music and Combination with outside field – Ethnomusicology (BM)

Step 3: Data Collection

Background Questionnaire. This questionnaire (Appendix A) was developed by the primary investigator. The background questionnaire listed demographic information such as gender, age, and ethnic background. Questions related to year in school as well as type of musician (vocalist, instrument, etc.) and years of experience were subcategorized within the classification. Additionally, spaces for the participant to provide contact information such as a phone number, email address, and/or preferred method of contact were listed on the questionnaire. This contact information was used to reach qualifying participants for a potential interview.

Interview Guide. A semi-structured interview guide beginning with a broad, open-ended question (Appendix B). The details of the interview guide are described in greater detail below.

Using the Background Questionnaire as a contact guide, all eligible consenting students were contacted via his or her method of preference (phone or email) to schedule a possible interview. Guided by the subjective nature of the flow experience, interviews were scheduled on a first-come, first-served basis in a non-meaningful way. The interviews were conducted in a private, reserved classroom on campus at a mutually convenient time between the researcher and participant.

An informed consent form was administered prior to the start of the interview. The format of the interviews was semi-structured, beginning with a broad open-ended question that was modeled off of Jackson's (1992) qualitative study of flow with elite figure skaters. Jackson (1992) first asked her sample of skaters to "describe an optimal experience in their skating, one they would consider the most satisfying personally and

which they would remember for the rest of their lives” (p. 165). Instead of asking about skating experience, the participants were asked to describe an optimal music performance experience. The proceeding semi-structured interview questions were also similar to that of Jackson’s (1992) initial qualitative study of flow in elite figure skating, but the questions were tailored specifically to music performance. For example, the probing questions that followed the initial interview question related to the quality of the flow experience, familiarity with concept of flow, the most important factors for the participants to get into flow, and what the experience of flow meant to the participant. To ensure that each participant had an opportunity to fully describe their performance experience, all participants were also asked if they had anything additional to add to the conversation. As is common in phenomenological research, the questions sometimes deviated from the standard form pending the type of responses evoked from the participant being interviewed. The open-ended, intermediate probing and closing questions asked of each participant are outlined in the interview guide (Appendix B).

The principle investigator conducting the interviews had appropriate graduate training and practice in qualitative interviewing. Piloting the interview in its early stages of development controlled for the primary investigator’s biases. It was a priority of the primary investigator to probe for as much detail as possible related to a particular response to ensure that the participant tells his full and true account of the flow experience without being primed.

Step 4: Data Analysis

The interviews ranged between 20 to 90 minutes and were audio recorded and transcribed verbatim by the principle investigator. The order of the interviews was not

meaningful; they were conducted in the order that they were scheduled with the primary investigator. Each interview was transcribed and analyzed independently before proceeding to conducting and analyzing the next interview. First, the data (the interview content) was analyzed using open coding. During open coding, the data was broken “down into their conceptual components” (Forrester, 2010, p. 157) with notable words, phrases, components, etc. found in the interviews. During this process, any observations, remarks, or relevant data components that emerged were documented (Merriam, 2009). This initial coding process was inductive; items were not grouped into meaningful categories during this phase. More specifically, constructs related to flow theory were not considered or identified during this stage of data analysis.

The second step of data analysis involved axial coding. During axial coding, the open codes were further categorized into similar categories and themes (Strauss & Corbin, 1998); further narrowing the scope of content. Relationships between the axial codes were deciphered into selective codes of a unified and overarching theoretical concept (Strauss & Corbin, 1998) in an attempt to understand the flow experience as it related to music performance. The axial coding process was deductive; categories and relationships were established amongst the data, especially in regards to identifying constructs of flow theory.

When the next set of interview data was analyzed, the content was coded the same way. The emerging themes were compared to the initial data set. Each subsequent interview followed the same procedure. The lists of themes were merged into one document or “master list of concepts” (Merriam, 2009, p. 180). The master list controlled for reoccurring patterns. These patterns of data were grouped into individual categories.

This process continued until no new themes or concepts emerged and the data was therefore saturated. Final themes were compiled together in a meaningful way to draw relevant inferences about what the data reflects; emblematic of selective coding.

Qualitative researchers note that it is near to impossible to predict how many participants a researcher needs to achieve saturation -or the emergence of no new data themes. (Driska, Kamphoff, & Armentrout, 2012). Creswell (1998) suggested that five to twenty-five interviews saturate phenomenological research; however, Morse (1994) recommended no less than six interviews. Charmaz (2006, p. 114) claims that sample size recommendations are “modest” and truly depend on the goal of the study. In the present study, saturation occurred after 15 participants. Once no new themes or categories emerged from the in-depth interviews, as determined by the compiled “master list of concepts” (Merriam, 2009, p. 180), data collection ceased.

To establish trustworthiness, an essential component of qualitative research, the principle investigator kept a research journal to document any questions pertinent to the research question, rationale into why the researcher took interest in this topic, various hypotheses, interesting notations, and definitions of ideas and codes to create a “living” document (Corbin & Strauss, 2008, pp. 117-118) as a means of deciphering the concepts relevant to the flow experience as well as flow theory. This method further accounts for bracketing, in which the primary investigator sets aside knowledge already incurred about the topic as well as her own personal assumptions (Starks & Brown-Trinidad, 2007). Lastly, these memos served as an audit trail or “evidence” that show the exact path the primary researcher took throughout the research process (Starks & Brown-Trinidad, 2007). Trustworthiness was further accomplished using peer-debriefing (Creswell, 2007).

Given that the themes were coded independently by the researcher and reviewed by additional faculty members, the data was triangulated. This way, other themes and ideas that emerged were accounted for and potentially debated. After reaching a consensus on the represented themes, the data was read and re-read to insure that the essence of each participant was represented in the results.

Step 5: Confirming Thematic Structure

Repetitive words that distracted from overall meaning, such as “um”, “like”, and “you know” were removed from the transcription. A full transcribed draft was returned to each participant to account for any potential discrepancies in content and provide an opportunity to add content to the interview, if applicable. One musician suggested shortening his interview and removed some content from his final transcript. No other revisions were suggested by the participants.

Chapter 4

RESEARCH MANUSCRIPT

ABSTRACT

Flow is an elusive state of consciousness associated with enjoyment and total absorption in a task (Csikszentmihalyi, 1990; Sinnamon, Moran, & O'Connell, 2012). When in a state of flow, actions are effortless and intrinsically motivated. Because being in flow – or “the zone” – is associated with an optimal performance state, flow has been studied extensively in athletics (Jackson & Marsh, 1996). It is argued that flow is also important in artistic activities like music performance due to the focused and goal oriented attention needed for peak performance (Csikszentmihalyi, Abuhamdeh, & Nakamura, 2005; Perry, 1999; Sawyer, 1992). Yet, when compared to athletics, the flow experience has been rarely studied within the domain of music (Sinnamon et al., 2012).

Empirical research examining flow in music suggests a need for in-depth interviews to better understand the essence of the flow experience. Using a phenomenological approach, the purpose of this study was to conduct semi-structured in-depth interviews with musicians, with the goal of illuminating aspects of flow presented during an optimal performance experience and to identify antecedents of flow. Lastly, the data was compared to Csikszentmihalyi's flow theory constructs (concentration, a balance of challenge and skill, a merging of actions and awareness, transformation of time, unambiguous feedback, autotelic experience, loss of self-consciousness, sense of control, and clear goals) to determine how and if the constructs are similar, and if new constructs emerged within a music population.

A purposive representative and random sample of undergraduates at a private college in upstate NY were recruited during their respective core classes (music theory, career orientation, and sight-singing) to participate. Participants were given a confidential background questionnaire, and those interested in being interviewed returned the questionnaire to the researcher and scheduled an interview (N = 72). Musicians who consented to participate were asked to describe an optimal performance experience. Interviews ranging 20 to 90 minutes were transcribed verbatim and coded into respective themes, and they continued until theoretical saturation was reached after 15 interviews. The final thematic structure demonstrated that *environmental context*, *emotional connectedness*, and *interpersonal relationships* exemplified the flow experience. All constructs of flow theory, with the exception of “clear goals”, were deductively discovered.

Some of these themes were sub-characterized by elements such as knowing and liking the music you are performing, seeking meaning in the music, not being too technical, fully immersing yourself into a character or concept, understanding the setting in which you are to perform, being focused, receiving positive feedback from the audience, and surrounding yourself with those who support and motivate you, to name a few.

Now that the optimal flow experience is better understood within a music population, researchers can develop interventions and strategies that target the specific performance needs of the music population as a means of promoting or enhancing flow. Most importantly, the ways in which a musician experiences the essence of flow in a performance is a crucial component to understanding flow theory within a music setting.

Introduction

Flow is an optimal state of consciousness characterized by creativity, enjoyment, and full immersion in a task (Csikszentmihalyi, 1990). The state of flow is often colloquially referred to as being “in the zone” (Young & Pain, 1999). During flow, a person feels as though his actions are automatic, is doing a task for their own sake, is in control of his or her actions, has full concentration, and is not self-conscious or critical of the outcome (Csikszentmihalyi, 1990). The experience of being in flow is associated with positivity and performance enhancement (Jackson & Eklund, 2002). Individuals often report performing at the peak of their ability when they are “in the zone”, which makes the state highly desirable (Jackson & Roberts, 1992). Csikszentmihalyi (1993) determined that flow could be experienced in just about any activity in a similar way, regardless of socioeconomic status, gender, age, or ethnicity (Csikszentmihalyi, 1993; Wrigley & Emmerson, 2011). The state is transient (Nielsen & Cleal, 2010) and often occurs moment to moment.

Csikszentmihalyi developed a flow theory (Csikszentmihalyi, 1975, 1990; Jackson & Csikszentmihalyi, 1999) as a means of universally measuring the dimensions of the flow experience in a given task. The flow theory consists of nine distinct constructs; transformation of time, a balance of challenge and skill, a merging of actions and awareness, transformation of time, unambiguous feedback, autotelic experience, loss of self-consciousness, sense of control, and clear goals (Table 3.). Flow is experienced when at least one of the aforementioned characteristics is exhibited during a task (Csikszentmihalyi, 1990; Kirchner, 2011).

Table 3. Constructs of Flow Theory Defined

Flow Theory Construct	Definition
Time Transformation	concerns the passage of time. When in a state of flow, time seems to stand or pass by quickly, depending on the type of performance (Fritz & Avsec, 2007)
Total Concentration	a feeling of great focus on a task (Tenenbaum, Fogarty, & Jackson, 1999)
Balance of Challenge and Skill	the extent to which an individual possesses the ability to perform the task (Kirchner, 2011). As the name suggests, it is the perfect “balance” of a challenge and the skills needed to meet the challenge that fosters a flow experience.
Merging of Actions and Awareness	deals with “oneness”; an individual does not think of himself outside of his actions, instead, he is fully emerged in them (Fritz & Avsec, 2007).
Unambiguous Feedback	involves an awareness that an individual is succeeding at the task they are performing (Jackson & Marsh, 1996).
Autotelic Experience	occurs when an individual does a task simply for the sake of doing it. The intrinsic nature of the task often leads to a state of flow (Jackson & Marsh, 1996).
Loss of Self-consciousness	involves the remittance of concern with the self, which leads to an innate and confident performance (Jackson & Marsh, 1996). An individual is not abandoning all actions involved with the self; instead, he is only focusing on relevant cues necessary for performance (Jackson & Marsh, 1996).
Sense of Control	characterized by a lack of intentional control. An individual merely senses that he is in command of the situation; the control is not forced (Kirschner, 2011)
Clear Goals	the goals of the task are meticulously defined, which gives individual a clear sense of what he needs to do to perform successfully (Jackson & Marsh, 1996)

According to Jackson, Eklund, and Martin (2010), flow happens when a person moves beyond an “average” experience to one that is above average. An above average experiences constitutes full “investment of psychic energy into a task” (Jackson et al., 2010, p. 7); one feels as though his capacities are being fully utilized (Nielsen & Cleal, 2010). This intrinsically motivated investment of energy is a prerequisite to flow. However, performing a task that is too challenging yields anxiety, and performing a task that is too easy yields boredom (Jackson et al., 2010). When a task has no challenge and requires no skill, a state of apathy occurs (Jackson et al., 2010). Therefore, a task that perfectly balances a level of challenge with the skills necessary to meet that challenge breeds the perfect environment for flow to occur.

Given the implications for enhanced performance while in a state of flow, the state has been examined in a variety of domains, perhaps most extensively in athletics (e.g., Jackson, 1992; Jackson & Marsh, 1996; Jackson, Martin, & Eklund, 2008; Martin & Jackson, 2008; Partington, Partington, & Olivier, 2009; Sinnamon, Moran, & O'Connell, 2012; Stavrou, Jackson, Zervas, & Karterliotis, 2007). This is not surprising given that the most empirically reliable and valid componential measures of flow – the Dispositional Flow Scale and the Flow State Scale – (Jackson, 1992, 1995, 1996; Jackson & Eklund, 2002, 2004; Jackson & Marsh, 1996; Marsh & Jackson, 1999) were developed in sport settings, initially with elite figure skaters (Jackson, 1992). In qualitative interviews, figure skaters exhibited all constructs of Csikszentmihalyi's flow as it related to their optimal performance experiences. For example, many skaters noted that time passed by quickly (*time transformation*), they were in control of their performance (*control*), and that their actions seemed automatic (*merging of actions and awareness*). Results also confirmed that the state of flow can yield positive sport performances as well as a positive experience overall (Jackson, 1992). The quantitative measures developed from this initial research with skaters (e.g., the Flow State Scale and Dispositional Flow Scale) “are the most frequently used in research and practice, particularly in the sports context” (Moneta, 2012, p. 40).

Measuring Flow

There have been a variety of measurement methodologies assessing flow. Early methodological flaws in Csikszentmihalyi's Flow Questionnaire (i.e., unable to measure flow intensity and the level of skill involved in the task) and Experience Sampling Method (i.e., interrupting daily activities to record impeded flow from occurring) were

overcame by empirically valid measures of state and trait flow. Jackson and Marsh (1996) developed the Flow State Scale (FSS) and Dispositional Flow Scale (DFS) which were eventually revised to their now current versions; FSS-2 and DFS-2 (Jackson & Eklund, 2002). The Flow State Scale was designed to measure flow immediately following a particular event. The Dispositional Flow Scale was designed to measure the “general tendency to experience flow characteristics” (Jackson et al., 2010, p. 12). Both 36-item measures were created to parallel each other as a means of comparing a person’s state and dispositional flow in response to a particular activity (Jackson et al., 2010). Despite the psychometrically sound properties of the DFS-2 and FSS-2 ($\alpha = 0.78- 0.90$; Jackson & Eklund, 2002), these measures also possess limitations. The measures tend to “impose” flow on those given the measure (Moneta, 2012, p. 43), do not distinguish between factors (antecedents) and experiences (indicators) that may cause flow to occur (Moneta, 2012), and fail to assess the concentration aspect of flow appropriately (Moneta, 2012). It has been argued that the “gold measurement standard” for flow “has yet to be achieved” (Moneta, 2012, pp. 23-24).

Jackson (1992) asserted that flow cannot be solely assessed from a positivistic, scientifically-oriented approach emblematic of the DFS-2 and FSS-2. A positivistic approach is highly objective and argues for an understood truth or salient, consistent, principle (Jackson, 1992). The defining characteristic of flow is its subjectivity, which lies counter to empirical analysis (Csikszentmihalyi, 1982). In order to best understand the experience of flow, Nakamura and Csikszentmihalyi (2002) noted that the semi-structured interview provides a “holistic, emic account of flow in real-life context” (p. 93); namely, qualitative research is essential to “identifying and delineating dimensions

and dynamics of the flow experience” (Nakamura & Csikszentmihalyi, 2002, p. 93).

Flow in Music

Despite the breadth of research on flow and performance in athletics, flow is also important in artistic activities, such as music performance, due to the focused and goal oriented attention inherent in such tasks, which is also believed to contribute to high levels of performance (Csikszentmihalyi, Abuhamdeh, & Nakamura, 2005; Perry, 1999; Sawyer, 1992). For example, achieving flow during a music performance could lessen performance anxiety, improve confidence, and decrease cognitive distortions associated with performance (Kirchner, 2011). Music provides heavy emotional expression, practice, presentation, connection with the audience, communication amongst performers, evoking feelings in others, production of sound, etc. (Sinnamon et al., 2012). These circumstances may be unique to music performance, in comparison to other domains. Lowis (2002) and Sinnamon et al. (2012, p. 8) noted that the scarcity of research on the flow experience in musicians as compared to athletes is “surprising”, given that peak performance experiences are exhibited in music activities quite frequently.

Fritz and Avsec (2007) conducted an empirical study comparing flow and subjective well-being in music students. They found the *loss of self-consciousness* dimension of flow and the *time transformation* dimension of flow theory to be much weaker than the other nine dimensions. It was argued that since time is often highly controlled in a music setting (for example, you perform a song for a consistent and specific period of time), a “transformation” of time passing may not occur. Additionally, because size and stature may not always relate to performance enhancement in a music population (for example, body type does not necessarily correlate to vocal capabilities), it

could be hypothesized why the *loss of self-consciousness* dimension of flow was not as evident in relation to subjective well-being in music. This finding suggests that perhaps flow is experienced in different ways in this specific population and questions whether the nine constructs of flow theory are universal in a music performance.

After assessing whether the DFS-2 was a reliable measure to study flow in musicians, Sinnamon et al. (2012) determined that future research on flow in music should include “in-depth interviews” to supplement empirical data on flow. Bloom and Skutnick-Henley (2005) echoed that sentiment. After surveying classical musicians on their flow experiences, they suggested expanding their methodology “to include interviews with musicians and music educators” (p. 28) as a means of validating the flow factors found in their research. For example, Bloom and Skutnick-Henley (2005) found two aspects of flow emerge that seemed to be unique to musicians; *emotional involvement in a performance* and *sense of connection with others*. Using interviews to gather detailed descriptions of what it felt like to be “in the zone” during a performance is appropriate for future research in flow among musicians. From this implication it is apparent that understanding the essence of flow in musicians could be better understood qualitatively, because flow states might be represented differently in this specific population.

Phenomenological research seeks to understand the “essence” of a lived experience within a particular phenomenon and how these experiences are subjectively perceived (Lester, 1999), often through the use of in-depth interviews. Because the need to better understand the lived experience of flow amongst musicians is apparent, a phenomenological approach seems most appropriate for its analysis. Additionally,

understanding how flow occurs in a music setting can help musicians, music educators, performance consultants, etc., facilitate an environment that fosters a flow experience and therefore improves performance. In recent years, researchers studying flow in a sport and/or exercise setting have developed interventions with aims of enhancing flow for improved performance. Some of these interventions include Mindful Sport Performance Enhancement (MSPE; Kaufman, Glass, & Arnkoff, 2009), sport-specific imagery (Straub, 1996), goal setting (Karageorghis & Terry, 2001), positive self-talk (Karageorghis & Terry, 2001), and hypnosis (Pates, Cummings, & Maynard, 2002). When the flow experience is better understood within a music population, perhaps related interventions and strategies can be developed that target the specific performance needs of the music population. Most importantly, the ways in which a musician experiences the essence of flow within the performance is a crucial component to understanding flow theory within a music setting. Do the nine constructs of the flow theory remain true in a music performance setting? Are some constructs more apparent than others? In what ways are the emergent constructs similar or different? How do musicians articulate the flow experience?

The purpose of this study was to use phenomenological, in-depth interviews with musicians to illuminate aspects of flow that are apparent during an optimal performance experience. These in-depth interviews fulfilled the need for a better understanding of the flow experience amongst musicians. Additionally, such interviews will potentially identify antecedents of flow. Lastly, the data was compared to Csikszentmihalyi's flow theory to determine if the constructs remained consistent within a music population, or if new constructs emerged.

It was hypothesized that the constructs of the flow theory will remain fairly consistent within a music population, with the exception of the *loss of self-consciousness dimension* and the *time transformation dimension*. Other aspects pertinent to flow in a music performance may be discussed by the participants, such as *emotional involvement* or a *sense of connection with others*.

Methods

The present study used a phenomenological approach to subjectively study the nature and essence of the flow experience in musicians. The procedures were reflective of Pollio, Henley, and Thompson's (1997) steps for conducting phenomenological research. The steps included: Exploring Researcher Bias, Selection of Participants, Data Collection, Data Analysis and Confirming Thematic Structure (Pollio et al., 1997).

Step 1: Exploring Researcher Bias

Indicative of phenomenology, the researchers gathered in-depth descriptions of a flow experience that was unique to each participant and eliminated pre-existing attitudes about the phenomena in question. However, Schwandt (1993) noted that even in qualitative research, "atheoretical research is impossible" (Merriam, 2009, p. 7). Even when analyzing data inductively, the inherent themes that emerge often "shapes or modifies an existing theory" (Merriam, 2009, p. 70), especially when the data is discussed in relation to existing research. For this reason, flow theory was a point of comparison for the emergent data, due to its heavy prevalence in the existing flow literature, and the tendency for researchers to conceptualize the flow experience within this theoretical framework (Swann et al., 2015). Of note is the principal investigator's personal bias as a musician. This could have led to assumptions of themes represented in

articulated music experiences, or probing with leading questions to insure that a specific response is rendered. For this reason, an advisor oversaw the development of the primary investigator's question guide, and assisted the primary investigator in practicing her qualitative interviewing skills.

Step 2: Selection of Participants

After receiving Human Subjects Review approval, instructors of required undergraduate music classes as determined by the College website (music theory, sight-singing, career orientations) in the School of Music at a private college in upstate NY were contacted. The goal of recruitment was to find collegiate musicians who were familiar with the term flow and could describe an optimal performance experience. The initial contact email described the procedures and purpose of the study and asked if the primary researcher could recruit music students from each respective class. The researcher went to the classrooms of the consenting professors and further described the study and inclusion criteria to the students in the class. Students who consented to participate were given a Background Questionnaire (Appendix A) which they completed in class and returned to the primary investigator. The details on the Background Questionnaire were kept confidential but were not anonymous. Only the primary investigator had access to the questionnaire. In order to be included in the study, participants had to be familiar with the term "flow" and experienced "flow" during a performance. These questions were asked in yes/no format on the Background Questionnaire. From this initial recruitment phase, seventy-two students consented to potentially take part in an interview. Of those seventy-two students, four were ineligible to participate because they answered "no" to being familiar with flow and "no" to having

experienced flow in a music performance before. The final sample consisted of 15 undergraduate musicians who were randomly selected to participate ($M_{\text{age}} = 19$, 53% male). Interviews were conducted and data collected ceased when no new data themes were discussed during the interviews. A full description of participant characteristics, including demographic information, is given in Table 4.

Step 3: Data Collection

Background Questionnaire. This questionnaire (Appendix A) was developed by the primary investigator. The background questionnaire listed demographic information such as gender, age, and ethnic background. Questions related to year in school as well as type of musician (vocalist, instrument, etc.) and years of experience were subcategorized within the classification. Additionally, spaces for the participant to provide contact information such as a phone number, email address, and/or preferred method of contact were listed on the questionnaire. This contact information was used to reach qualifying participants for a potential interview.

Using the Background Questionnaire as a contact guide, all eligible consenting students were contacted via his or her method of preference (phone or email) to schedule a possible interview. Guided by the subjective nature of the flow experience, interviews were scheduled on a first-come, first-served basis in a non-meaningful way. The interviews were conducted in a private, reserved classroom on campus at a mutually convenient time between the researcher and participant.

Table 4. Description of Music Participants

Participant	Age	Gender	Ethnicity	Years of Music Experience	Major BM = Bachelor of Music BA = Bachelor of Art
1	18	Female	Caucasian	10	Performance/ Music Education (BM)
2	18	Male	Caucasian	9	Sound Recording Technology (BM)
3	20	Female	Caucasian	8	Music (BA)
4	19	Female	Caucasian	12	Music (BA)
5	19	Female	Caucasian	11	Music Minor
6	19	Male	Caucasian	10	Performance (BM)
7	19	Male	Caucasian	11	Performance (BM)
8	18	Male	African American and Hispanic	11	Performance (BM)
9	19	Female	Caucasian	6	Performance (BM)
10	21	Female	Caucasian	N/A	Performance (BM)
11	21	Male	African American	11	Performance (BM)
12	18	Male	Caucasian	13	Music Education (BM)
13	18	Male	Caucasian	11	Music Education (BM)
14	18	Male	Caucasian	5	Music Education (BM)
15	19	Female	Caucasian	9	Music and Combination with outside field – Ethnomusicology (BM)

Interview Guide. A semi-structured interview guide beginning with a broad, open-ended question (Appendix B). The details of the interview guide are described in greater detail below.

An informed consent form was administered prior to the start of the interview. The format of the interviews was semi-structured, beginning with a broad open-ended question that was modeled off of Jackson's (1992) qualitative study of flow with elite figure skaters. Jackson (1992) first asked her sample of skaters to "describe an optimal experience in their skating, one they would consider the most satisfying personally and which they would remember for the rest of their lives" (p. 165). Instead of asking about skating experience, the participants were asked to describe an optimal music performance experience. The proceeding semi-structured interview questions were also similar to that of Jackson's (1992) initial qualitative study of flow in elite figure skating, but the questions were tailored specifically to music performance. For example, the probing questions that followed the initial interview question related to the quality of the flow experience, familiarity with concept of flow, the most important factors for the participants to get into flow, and what the experience of flow meant to the participant. To ensure that each participant had an opportunity to fully describe their performance experience, all participants were also asked if they had anything additional to add to the conversation. As is common in phenomenological research, the questions sometimes deviated from the standard form pending the type of responses evoked from the participant being interviewed. The open-ended, intermediate probing and closing questions asked of each participant are outlined in the interview guide (Appendix B).

The principle investigator conducting the interviews had appropriate graduate training and practice in qualitative interviewing. Piloting the interview in its early stages of development controlled for the primary investigator's biases. It was a priority of the primary investigator to probe for as much detail as possible related to a particular response to ensure that the participant tells his full and true account of the flow experience without being primed.

Step 4: Data Analysis

The interviews ranged between 20 to 90 minutes and were audio recorded and transcribed verbatim by the principle investigator. The order of the interviews was not meaningful; they were conducted in the order that they were scheduled with the primary investigator. Each interview was transcribed and analyzed independently before proceeding to conducting and analyzing the next interview. First, the data (i.e., interview content) was analyzed using open coding. During open coding, the data was broken “down into their conceptual components” (Forrester, 2010, p. 157) with notable words, phrases, components, etc. found in the interviews. During this process, any observations, remarks, or relevant data components that emerged were documented (Merriam, 2009). This initial coding process was inductive; items were not grouped into meaningful categories during this phase. More specifically, constructs related to flow theory were not considered or identified during this stage of data analysis.

The second step of data analysis involved axial coding. During axial coding, the open codes were further categorized into similar categories and themes (Strauss & Corbin, 1998); further narrowing the scope of content. Relationships between the axial codes were deciphered into selective codes of a unified and overarching theoretical concept

(Strauss & Corbin, 1998) in an attempt to understand the flow experience as it relates to music performance. The axial coding process was deductive; categories and relationships were established amongst the data, especially in regards to identifying constructs of flow theory.

When the next set of interview data was analyzed, the content was coded the same way. The emerging themes were compared to the initial data set. Each subsequent interview followed the same procedure. The lists of themes were merged into one document or “master list of concepts” (Merriam, 2009, p. 180). The master list controlled for reoccurring patterns. These patterns of data were grouped into individual categories. This process continued until no new themes or concepts emerged and the data was therefore saturated. Final themes were compiled together in a meaningful way to draw relevant inferences about what the data reflects; emblematic of selective coding. After completing the data analysis inductively for naturally emerging themes across participants, exemplars of the constructs of flow theory were then deductively searched for across the data and tabulated for its prevalence across all interviews. If a construct of flow theory was discussed at least once in an interview, it was counted in the analysis.

Qualitative researchers note that it is near to impossible to predict how many participants a researcher needs to achieve saturation – or the emergence of no new data themes. Charmaz (2006, p. 114) claims that sample size recommendations are “modest” and truly depend on the goal of the study. In the present study, saturation occurred after 15 participants. Once no new themes or categories emerged from the in-depth interviews, as determined by the compiled “master list of concepts” (Merriam, 2009, p.180) data collection ceased.

To establish trustworthiness, an essential component of qualitative research, the principle investigator kept a research journal to document any questions pertinent to the research question, rationale into why the researcher took interest in this topic, various hypotheses, interesting notations, and definitions of ideas and codes to create a “living” document (Corbin & Strauss, 2008, pp. 117-118) as a means of deciphering the concepts relevant to the flow experience as well as flow theory. This method further accounts for bracketing, in which the primary investigator sets aside knowledge already incurred about the topic as well as her own personal assumptions (Starks & Brown-Trinidad, 2007). Lastly, these memos served as an audit trail or “evidence” that shows the exact path the primary researcher took throughout the research process (Starks & Brown-Trinidad, 2007). Trustworthiness was further accomplished using peer-debriefing (Creswell, 2007). Given that the themes were coded independently by the researcher and reviewed by additional faculty members, the data was triangulated. This way, other themes and ideas that emerged were accounted for and potentially debated. After reaching a consensus on the represented themes, the data was read and re-read to insure that the essence of each participant was represented in the results.

Step 5: Confirming Thematic Structure

Repetitive words that distracted from overall meaning, such as “um”, “like”, and “you know”, were removed from the transcription. A full transcribed draft was returned to each participant to account for any potential discrepancies in content and provide an opportunity to add content to the interview, if applicable. One musician suggested shortening his interview and removed some content from his final transcript. No other revisions were suggested by the participants.

Results

Three major themes characterized optimal performance experiences in musicians; *environmental context*, *emotional connectedness*, and *interpersonal relationships* (Appendix D). Sub-themes within each major theme are discussed. These themes collectively captured the musicians' essence of a flow experience. Some exemplars of each related theme are described below each description.

Because the individual constructs of flow theory can be categorized across two of the final emergent themes, the theory is described independent of the emerging data. For example, some aspects of flow theory are conditions in which flow occurs, which can be interpreted as the environmental context (i.e., challenge-skill balance, clear goals, and unambiguous feedback) and the remaining six constructs describe what goes on during a performance, which can be interpreted as emotional connectedness or environment context, depending on the construct.

Theme 1: Environmental Context

The environment before, during, and after a particular performance impacted the flow experience. The environment was interpreted as both the physical and mental attributes that characterize an optimal performance.

Sub-theme 1: Focus. During a peak performance, many musicians recalled feeling focused ($n = 9$) in some capacity. Being “in the zone” meant being focused (Participant 2: p2). Focus was described as being fixated solely on the performance, “blocking everything else out” (p2), or being fixated on the “one thing...nothing else matters...I was really focused” (p1). Focus was also attributed elsewhere, such as “focusing on my voice and portraying the meaning of the song” (p2), “focusing on...not

messing up” (p2), connecting with the audience (p3), the music (p3, p5), the “intellectual aspect of it” (p15), “having fun” (p5), “making music instead of playing music” (p7), or simply, “what I need to focus on” (p8). Participant 4 likened his focus to being “a machine, even though it’s an art form”; and you “know exactly what to do” (p4) and you execute it accordingly. Participant 9 relayed the importance of keeping and maintaining focus in order to find flow by “not getting distracted” by her phone or negative internal thoughts. Participant 13 noted a greater intensity in his focus during an optimal performance he described. In order to achieve an optimal performance, participant 2 noted this advice he received from an instructor; “don’t look all over the place when you are singing, just find a spot on the wall or something and just sing to that or focus on that”. When musicians were fully attentive during a performance or paid attention to a relevant cue – such as a spot on the wall – they were able to perform optimally.

Sub-theme 2: “Stop thinking about the technical; go more with... natural instinct” (p15). Participants performed optimally when they worried less about the technical aspects of a performance ($n = 7$) and just went with his or her natural instinct. The musicians’ actions were seemingly automatic during an optimal performance, and there was not much cognitive thought when performing. For example, one musician called flow a “sense of knowing what you are doing, and not really thinking about it” (p12). When Participant 15 was in flow, she noted; “I go more with my natural instinct and I just inherently know what I should be doing” (p15). Another “wasn’t really thinking about the show anymore, it was just thinking about having a fun time and just laying it out there” (p13). When in flow during a performance, the musicians tended to “think about it a lot less” (p11), and one felt as though the music “is more of an extension

of myself as opposed to something I had to be trained to do” (p11). One noted that her most optimal performance “was like breathing. It was natural and it just felt so good to be up there” (p10). In regards to going with natural instinct during a performance, some noted the following; “[I] didn’t really have to look at the music very much” (p7); “all the hand positions... I wasn’t really thinking about them anymore” (p6); “if it’s like second nature, it’s better” (p10); “[I am] not worried about getting everything perfect” (p5); or “it’s just the music and the way I am interpreting it” (p5). One musician felt as though his optimal performance was effortless and without any insecurities; “we’d be worried about it... what if he doesn’t come in? Little thoughts like that; they were totally non-existent” (p6) and “you ...just have to just get out of your sheet music and just play” (p6). When the musicians negated the technical aspects of a performance, expressed no worry, and felt as though their actions were automatic, they were often performing at his or her peak and enjoyed the performance when doing so.

Sub-theme 3: “I was getting to show off what I’ve done” (p9). When musicians framed a performance as a chance to “show off”, they were more likely to find flow (n = 5); “I was feeling excited about it...I was excited to show it off” (p9). Participant 11 noted that he felt “in the zone” when he was “sounding good and doing my best”. Another musician noted giving herself a pep talk before her best performance, saying; “I am really ready to do this...I’m ready to show off what I’ve done and what I can do” (p10). Participant 1 said that “just being able to show them that I can play this well was really good” and helped her find flow. Another commented that “it was hard work paid off... you get on stage and it is just what you expected” (p2). The responses demonstrate that when some musicians confidently framed a performance as an opportunity to flaunt,

“show off”, or capitalize on an opportunity to sound his or her best, they were more likely to be “in the zone” during a performance.

Sub-theme 4: “You just drink up the environment” (p14). Some performers discuss how they enjoyed the physical environment of simply being on stage (n = 5). That type of genuine happiness, in turn, lent itself to an optimal performance. The stage was articulated as “a comfortable environment” (p6). One musician noted that “being on stage is the best place to be” (p10) and that during her optimal performance, “it just all came together...I experience flow probably every time I sing and every time I get out there just because I love singing so much. It’s always fun to get out there” (p10). In regards to replicating flow with each performance, participant 2 noted; “it depends on the environment you are in”. One musician said that he “got lost on stage and in the character” (p4), and another added, “you just put yourself out there [on stage] and you’re not afraid anymore” (p14).

Participant 14 noted that certain type of stage environments evoke flow; “it’s very comfortable when you sing in there. It sort of opens out to you as opposed to [another venue], which is like a block. You have so much space. I feel like in the [optimal venue] I can ...move around and gesture and feel like space a little better. Being comfortable in your environment is really critical because...you have to be comfortable in your environment, comfortable in your clothes, comfortable emotionally all the time.”

These responses demonstrate that being in a performance environment itself, and the type of stage being performed on, was sometimes conducive to evoking a flow-like experience.

Sub-theme 5: Relaxation. Getting “in the zone” often required a relaxed mental state prior to going on stage (n = 3) or “having a place where I can just clear my mind” (p5). One participant noted that before a particular optimal performance she stepped on stage and said to herself, “deep breath, alright, we’re gonna play this now” (p1) to relax her mind and body. When playing music, some noted that “nervous energy” did not work; “it makes you rush, it makes you fumble a bit and it kills you” (p1). There appears to be an optimal level of energy and relaxation that musicians seek in order to put on a great performance; “you need to be ‘in the zone’ but nervous just enough...but not too much where you start to mess up” (p1). Another commented, in regards to relaxation, “I like to do some meditation before all of my performances so that I can calm down” (p7). Participant 5 noted that in order to find flow during a performance, she “needed time to relax beforehand”. It is suggested that relaxation prior to a performance and seeking an optimal level of excitement/arousal may help certain musicians perform at his or her peak.

Sub-theme 6: “You play, and all of the sudden it is over” (p8). During some optimal experiences, time often sped up (n = 2) or slowed down (n = 1). One musician mentioned, “it was like you stayed in that moment for a lot longer than it actually was. It was like two beats or something, but it felt so exaggerated to us” (p15). Participant 8 noted, “normally if I am in flow I play – it’s like you lose track of time. You play, and all of the sudden it is over.” Another stated, “we played probably an hour and a half, and it felt like ten minutes” (p6). For a few of the musicians interviewed, time transformed itself in a meaningful way, and this in turn influenced the performance in a positive way.

Sub-theme 7: “There’s no flow in a lesson” (p12). In contrast to the environments that evoke optimal performances, it was expressed by some musicians (n =

3) that flow was typically not experienced during a practice session. Musicians stated things such as “it’s kinda hard to get into that state [of flow] while practicing” (p6); “we were working on segments. It was hard to get into it” (p8); “there’s no flow in a lesson. You start to play and you get stopped” (p12). The stop-and-go nature of practicing, and the accompanying self-consciousness (i.e., “what am I doing wrong?”) was detrimental to achieving flow during a practice. Participant 12 added, “it isn’t really until you get to play with a lot of people in the audience that you get the flow”. For the participants, sometimes stopping a performance can impede flow.

In summary, the participants commented on many aspects of focus attributing to optimal performances, were “in the zone” when they felt the performance was natural instead of technical, felt as though being on stage or in a physical performance venue promoted flow, experienced flow when they believed they were “showing off” what they could do, were in a state of relaxation prior to the optimal performance, felt as though time slowed down or sped up in a meaningful manner during a flow experience, and neglected to find flow during a lesson.

Theme 2: Emotional connectedness

Optimal performances were characterized by an emotional connection in some capacity. This emotional connection was articulated as a personal connection to the music emotionally, a connection with the audience listening to the performance, or a connection to the words as they related to the composed music.

Sub-theme 1: “That’s where the ‘ping’ is” (p14). Musicians described finding flow when they simply enjoyed the art of music on a personal level ($n = 4$). The emotional connectedness to the art of music is captured in the phrase, “I chose music

because that is where the ‘ping’ is and that is where the drive is and that is what gets me excited every time I go up [on stage]. That’s what makes me want to dress up and sing something” (p14). Four musicians commented on his or her personal connection to music itself. One musician noted, “[flow] is really self-affirming...it just reminds you of why you love doing what you love to do” (p15). These phrases support the idea that a flow experience is inherently enjoyable and fulfilling. Related to a personal connection to the music, a specific word or feeling that was repeated often throughout the interviews to describe this connection was a sense of vulnerability, reticence, or defenselessness; “singing is so personal to me and vulnerable to me” (p10) and “I think there needs to be an element of modesty and an element of humanity in some way ... to really get into that [flow]” (p14).

One participant noted a term she called ‘pouring’ (p10) to describe her personal connection to her performances;

“It’s like we are going to just lay it all out there. We call it ‘pouring’. It’s like we pour ourselves into everything musically that we do. We just go there and give of ourselves 110%.” (p10).

Yet another musician described her peak moment in a spiritual ways, such as “being lifted” (p15); “it was this amazing transcendental experience” (p15), and two likened it to a high (p12, p15), perhaps exemplified in the phrase, “you are on top of the world when you’re really doing it” (p12). These descriptions emphasize the personal connection associated with certain emotions evoked during a performance.

Sub-theme 2: “Breaking the barrier” (p7). Helping the audience or “whoever is listening” (p7) feel a particular emotion often promoted flow during an optimal

performance (n = 3). One musician stated, “you have to be able to break that barrier of ‘okay you’re sitting, you’re listening’...[instead] it’s like ‘this is what I have to say; so take this and interpret it as you will” (p7). Another noted, “if there is a really energetic crowd than I am going to be more energetic in my playing” (p5). It is clear that there is a fostered emotional connection between the audience and the performer (n = 7). This was often experienced in the feedback given from the audience. Participant 3 noted; “I love getting reactions from the people I am singing for” because the reactions help her get “in the zone” and “makes her performance even stronger”. Another commented that he felt most “on” when he was “in front of a live audience...if I know I am being watched...I’ll just rid of all doubts that I have and just do it” (p2).

One musician noted that his ability to simply “see into the audience or not” (p11) impacted his ability to “get in the zone”. He also enjoyed receiving positive feedback from the crowd he was performing to. Another musician stated,

“there were a lot of people there [in the audience], a lot of really good, well-known musicians. Just being able to show them that I can play this well was really good. They would come up to me afterwards and be like ‘wow, that was excellent’ and that made me feel so good about my playing” (p1).

For participant 1, getting positive reactions from audience members who appreciated the art – instead of “just parents” who “don’t really know” – was another aspect that contributed to an optimal performance she described. The feedback, connection, and emotional reaction from the audience often determined whether or not a performer found flow during a given peak performance.

Sub-theme 3: “There needs to be a reason why you are playing it” (p1). For many of the musicians, they were not able to be “in the zone” if they could not relate to the piece in some way (n = 5), find the meaning in the song (n = 2) or convey the emotion to others (n = 2). One performer would “find a story to go with it...then...just focus on putting out what I am feeling” (p7). Another noted, “you need to be that sort of emotionally attached to it [the song]” (p1); Participant 3 added, “if I could make someone feel something emotionally, just anything when I am singing to them...than I have done my job”. Participant 2 sought meaning by asking himself, “okay, what does this mean? What are you singing right now?” Participant 4 found meaning by “putting myself in somebody else’s shoes, whether it’s like a character...or a musical or an opera... or a random song...and being able to tap into that character completely”. Seeking the “why” behind a given song’s message, creating a storyline, developing a character’s persona, etc. sometimes related to a peak performance.

Sub-theme 4: “You could tell it wasn’t a modern story” (p2). Musicians had trouble connecting to stories that took place in classical settings in comparison to modern contemporary settings (n = 4). As a result, it was “harder to relate to it and get ‘in the zone’” (p2). Musicians noted the following about performing classical pieces versus modern/contemporary pieces; “I am one of those people who loves being myself on stage; and with contemporary music, I can be that way. But when we are doing choral or classical music I feel like I have to be a certain way; I have to be poised, I have to be calm” (p3). Another commented,

“I think being trained as a classical musician a lot of times we are focused on things like technique, the sound we are producing, the volume...but in

contemporary music I don't think about that stuff. I just go out there and sing and do what I know how to do" (p11).

Additionally, participant 12 compared playing classical piano to playing jazz piano, and noted that they were

"extremely different in terms of flow...with classical music you sit down and you play it. It's much calmer, and there's a lot more worry in classical music, and that disrupts the flow".

Jazz piano was described as natural extension of himself, which he likened to "a mood" (p12). Classical music, in contrast, was "boring" (p12) and "repetitive".

Participant 6 commented on the differentiation between contemporary music and classical music;

"I think playing contemporary music or pop music or rock or anything like that is way different because the worries that you have are different. In orchestra you're worried about if you come in correctly, and if you're with a conductor, and if you're blending, and these weird classical phenomena."

Related to the differentiations between contemporary and classical performance, participant 3 commented that the audiences' interpretation of a performance is "different in many atmospheres of concert venues and just different genres of music in general". At a contemporary show, the audience can typically clap and provide feedback. But, at "a classical choral recital...there are three movements in a song. You can't clap...it's like, 'I wonder if they liked that one'". Not receiving audience feedback during a classical performance further inhibited flow from occurring.

Additionally, some also noted that singing a song in a foreign language felt unnatural and impeded flow (p2). When one musician was focused too much on the pronunciation and translation of the message being performed, he was unable to find flow. Performing in a language other than English “was easy to forget” (p2). When performing in English, he said, “I know what it is about and it is easier to get into it” (p2). The technical aspects of classical performances often inhibit a flow from occurring during a performance.

It is evident that the personally relatable and less technical aspects of contemporary performances allow for greater enjoyment, which in turn positively influences a performance. The anxieties surrounding classical performances; technicalities, physical posture, lack of audience feedback, perfectionism, sound production, finding meaning, singing a foreign language, etc., inhibit flow.

Sub-theme 5: “Flow is really understanding a piece...you grasp what it is as well as you execute it” (p5). Flow was often described as an understanding (n = 2), preparedness (p6), or personal interpretation such as; “really understanding how the piece is run; how the piece is supposed to be performed” (p5). Even if a performer was playing all the notes to the song correctly, if they didn’t “grasp” the piece itself, then it was difficult to experience flow (n = 5). Another stated,

“I was moved to tears for most of this piece...I don’t know exactly how to describe what I was thinking...but it was more like ‘we are all feeling what Tchaikovsky wrote here and we are helping whoever is listening get a hold of what we were feeling’” (p7).

Another musician goes on to describe understanding a piece through a term he called “text painting” (p14); namely,

“what the words mean are so indicative of how the performance is to be held...the composers don’t just set words as a melody...they will alter the melody based on what the words are because that informs the words.” (p14)

He provides an example; “...in the middle he modulates to this dissonant key that is really far away from the original so he feels the disconnect. As a performer I can really drink that up and really feel how disconnected Brahms felt” (p14). By connecting to the meaning of the words and the meaning of the composed music as it relates to the words, this musician was able to find flow quite easily. When describing her own flow experience, another musician noted, “it’s when I feel like I am completely engaged and invested in a song...telling a story and communicating a message” (p4).

Sub-theme 6: “The actual moment of experiencing flow” (p10). Many described what it felt like during what they interpreted as a rewarding flow experience (n = 6). When musicians had a difficult task to complete but felt as though they had the talent and necessary skills to meet the challenge, they often performed optimally, felt that the experience was rewarding (p10), and had fun performing (p6). Another suggested that performers should “not worry about trying to do something you are not capable of or creating a situation that [it] is not...why get all flustered about it? Just enjoy it [the performance]” (p6). One musician noted;

“I was playing [a part] which [was] a really big deal and out of my comfort zone vocally and character-wise...It was probably one of the things...that has really taken me out of my comfort zone and really...pushed me...I just

remember...being rewarded for doing something that I actually love so much.”

(p10)

When it came to the actual moment of experiencing flow, one musician articulated; “It’s like nothing else. It’s like flying...having a passion and having flow is one in the same” (p10) and “I’m just going to go in there, and I am just gonna sing and you know what? It’s gonna be what it is! I have nothing to lose” (p10). Others stated, “I was freaked out but I really liked it. I was so ‘in the zone’ and I just didn’t care about anything else” (p3) and it “felt like totally no effort...no insecurities about playing at all” (p6), or “It’s all coming to me and it’s not a whole lot of worry. It just feels right” (p12) and “I was not worried about getting everything perfect” (p5). One musician noted that simply getting “past the first page” was all she needed to get “in the zone”; another noted that “before the performances, there is always anticipation...it’s like butterflies everywhere...you’re excited and ready to go and also [have] a feeling of preparedness” (p10). Participant 1 said; “I had been preparing for it the entire summer...and I nailed both of [the performances]...I just started crying because I was so happy...it was just so satisfying” and “it was such a gratifying moment, like this is my last band song, and this is for me...I think it’s very fun and empowering”. Participant 2 commented on his optimal experience of flow; “it was hard work paid off...I felt REALLY good after...it’s always satisfying when you are worried or doubtful...and then you get on stage and it is just what you expected”; and “when you are on it; that’s it. You can’t really explain it.” For participant 3, the experience of flow “solidified what I am doing [as a singer].”

During these optimal performances, musicians were intrinsically motivated to pursue music, did not care about anything else, relinquished perfectionism, found the

experience rewarding, exceeded expectations, were extremely proud of the final product, and worked hard to accomplish challenging performance goals.

In conclusion, the musicians commented on many aspects of emotional connection related to an optimal performance experience. Many were connected to music performance overall as a primary passion, and others found flow when they were connecting emotionally to the audience. Some felt that in order to be “in the zone”, there needed to be a reason why they were performing a piece, and they often created their own unique connection to the piece in order to achieve this aim. Many commented that it was easier to find flow when the story or message being portrayed was contemporary/modern, and in the English language. Others likened an optimal performance to an “understanding” rather than simple execution of a song; understanding what the words meant, understanding why the composer selected certain melodies to match the text, and understanding the intended message to be communicated. Lastly, many musicians noted how the moment of being “in the zone” was emotional in itself; using words such as “fun”, “excited”, “empowering”, and “satisfying” to describe the overall experience.

Theme 3: Interpersonal Connectedness

The people involved in the participants’ performance often impacted the flow experience. The interpersonal connections amongst these people, whether it is professors, adjudicators, vocal instructors, performers/cast members, or other music students at the college, often played an influential role in an optimal performance.

Sub-theme 1: “Just being...with a group of people I was so comfortable singing with” (p1). For many performers, who they were performing with influenced whether or not they experienced flow. Performing with a group of people related to

comfort (n = 4). A great deal of the musicians interviewed discussed a preference for performing in a group (n = 5); however, one noted that he enjoyed performing alone over performing with a group (p8). This question of preference was not explicitly asked but presented itself naturally in conversation, for example; “I feel like with band solos I am less nervous because there are usually other people playing...and solo is a little more nerve wracking because it’s only you” (p1); “I think working with other people musically, because we all have the same passion, helps [flow]...we are all so close” (p3).

Participant 4 noted a performance as optimal because “all my best friends were in the cast so we were all singing together...you can build off each other”. Another mentioned, “being in a group with a bunch of knowledgeable musicians who cared as much as I did really helped...everyone had such a drive for it, and that was electric for me” (p14).

In discussing a flow experience during a band performance, a musician commented, “we just look at each other and all do that. That’s like our moment of flow” (p6), and another noted that “a lot of it matters on who you are playing with” (p12). In many interviews it was made clear that being comfortable with the people the musicians were performing with, and the amount of people they were performing with, influenced the flow experience.

Sub-theme 2: “We are all very supportive of each other” (p9). Musicians often found that the support they had from other musicians and classmates helped achieve optimal performances (n = 3); “we are all very supportive of each other... [and are] willing to help each other out” (p9); “I wasn’t worried about what other people thought of me because I knew that everyone was in this supportive environment” (p2); “I trust the people around me to have their part done and to play it spot on” (p5). One put it simply;

“we are all talented” (p9), so there was no need for cut-throat or unsupportive behaviors. It was clear that having the support and assistance from other musicians made it comfortable and easier for some musicians to get “in the zone”.

Sub-theme 3: “I felt less like I was being judged and more like I was being helped” (p8). Some (n = 4) noted that the authority figures (professors, adjudicators, directors) they interacted with determined their ability to find flow. One musician noted that before an audition, “the adjudicator...was very nice and she knew that we would be nervous. She made a really comfortable environment and it helped me get into the music more” (p8). He continued by stating, “people...really determine your flow. My teacher was very old, strict...I was more critical of myself” (p8). When a professor was too focused on preventing mistakes, the musicians were harder on themselves and did not enjoy playing as much. Another musician found flow when he was “not worried about getting comments, like written comments” from judges evaluating him (p2). When discussing her optimal performance, participant 5 noted, “I knew that if I messed up the teacher wouldn’t mind and my parents wouldn’t mind”. This eased her nerves and allowed her to have fun on stage as a result. Another noted, “at that moment in time I am just worried about what I want instead of what everyone else wants” (p5). Participant 14 described a choral director that helped him perform optimally; “he motivated in a way that I never saw a choral director motivate before...he could take the best out of a choir” by making the students want to learn the material for intrinsic reasons.

In one participant’s account of what her optimal performance experience meant to her, she noted, “it means the chorus director believes... I am capable of doing these things. He has faith in me and he knows I can do it...which is really satisfying” (p9). It is

clear that the characteristics of the professors, adjudicators, instructors, etc. who interact with certain musicians played a role in the flow experience. The connections established with other people often impacted the musicians' optimal performance experiences. Being surrounded by knowledgeable, helpful, talented, and supportive musicians made it easier to get "in the zone" during a performance. Additionally, professors/adjudicators/vocal instructors who helped and encouraged the performers instead of judging and criticizing them often made a positive impact on the musicians' performance overall.

Constructs of Flow Theory

Because flow theory is the basis of flow's conceptualization in the present study, it is important to see how the data reflected the current constructs that Csikszentmihalyi (1990) developed. Recall that the following examples were discovered deductively. After naturally emerging themes were analyzed inductively across participants, exemplars of the constructs of flow theory were then deductively searched for across the data.

Although the names of the constructs were not explicitly stated, when deducing the responses, the definitions of the constructs were described in varying contexts by the participants. The amount of times a participant's response represented the essence of a flow theory construct was counted. One example of each construct mentioned is given below, and the percentage of participants who mentioned the flow construct at least once in his or her interview is also described (Table 5).

Table 5: Flow Theory Constructs and Examples

Construct Present	Percentage of participants who mentioned the construct at least once	Example
Challenge-skill balance	40%	“I was totally out of my comfort zone vocally and character-wise. This [role] was...totally different for me. It was probably one of the things...that has really taken me out of my comfort zone and really, really, really challenged me and pushed me.” (p10)
Merging of actions and awareness	73%	“Even our conductor remembered saying after, ‘that just felt like a totally no effort performance’. From little things like entrances or worrying about people coming in for one particular note- that stuff just wasn’t an issue at all.” (p6)
Unambiguous feedback	60%	“Because sometimes if you don’t get an immediate reaction you are like, ‘oh no, are we doing okay?’ or are they [the audience] sitting there and enjoying it and not wanting to disturb anything?” (p3)
Concentration on the task at hand	60%	“I feel focused. I feel like I am blocking everything else out...I remember one tip that I’ve always gotten was ‘don’t look all over the place when you are singing, just find a spot on the wall or something and just sing to that or focus on that.’ And that’s helped me in regards to flow and feeling ‘in the zone’”. (p2)
Sense of control	33%	“Because if you are in flow, nothing can touch you. If a baby starts to cry you just...think that’s cool. Of course the baby would cry. Why would it interrupt me? Instead of, ‘oh a baby cried, now I forgot [the] note’”. (p6)

Loss of self-consciousness	27%	“I only want to be conscious that the person I am playing is a person. And that I am the only person I think of. And I think that’s a critical distinction to make. If you are thinking about your own stuff, your own little issues...you didn’t pay your electric bill, you need to do laundry...if you are thinking about that stuff, than you are not a character- you are playing a character.” (p14)
Time transformation	27%	“Normally if I am in flow I play- it’s like you lose track of time. You play, and all of the sudden it is over. But if you are not in flow you play and you are like, ‘oh my gosh, when is this piece going to be over? When can I stop playing?!’” (p8)
Autotelic experience	40%	“I just remember it wasn’t like doing a job. It was like breathing. It was natural and it just felt so good to be up there. And you are just in your element...I was like, ‘I can’t see myself doing anything else and working so hard for anything else.’” (p10)

The nine constructs of flow theory as defined by Csikszentmihalyi (1990) were sought deductively in the musicians’ responses, indicating that the most discussed construct was the merging of actions and awareness (73%), and that the construct of clear goals was not mentioned in any of the interviews. Of the responses given, the loss of self-consciousness dimension of flow and time transformation dimension were the least discussed, mentioned at least once in 27% of the interviews. Overall, the three major overarching themes of environmental context, emotional connectedness, and interpersonal connectedness are complemented and often described by flow theory. Recall that challenge-skill balance, clear goals, and unambiguous feedback are conditions through which flow ensues (Nakamura & Csikszentmihalyi, 2002; Swann et al., 2015),

often related to the environmental context (e.g., perfectly executing a difficult role, leading to challenge-skill balance) as well as emotional connectedness (e.g., emotional connection to the audience led to unambiguous feedback). The remaining six constructs (sense of control, loss of self-consciousness, merging of actions and awareness, concentration on the task at hand, time transformation, autotelic experience) describe what is happening during the flow experience (Nakamura & Csikszentmihalyi, 2002; Swann et al., 2015), which could also be likened to aspects of the environmental context (focus relating to concentration on the task at hand), emotional connectedness (i.e., connection with the meaning song made time pass by quickly, leading to time transformation) and in some cases, the interpersonal connections with others (i.e., being supported and not judged by the adjudicator fostered intrinsic motivation, leading to an autotelic experience).

It is evident that collectively understanding the interconnectedness between the inductive themes (emotional connectedness, interpersonal connectedness, and environmental context) and deductive themes (flow theory) is imperative to conceptualizing the optimal experience as it related to the musicians interviewed.

Discussion

The present study used phenomenological, in-depth interviews with musicians to enumerate aspects of flow apparent during an optimal performance experience. The data was compared to Csikszentmihalyi's constructs of flow theory, and additional constructs of flow are hypothesized. Antecedents of flow are found within the sub-themes surrounding *environmental context* and *interpersonal relationships*. These in-depth interviews fulfill the need for a better understanding of the flow experience amongst

musicians. Implications for performance psychology consultants, music educators, and musicians themselves are also discussed.

Flow Theory in Musicians

Identifying constructs of flow theory in the data (Table 5) maintains Martin and Jackson's (2008) assertion that aspects of flow theory are important in any performance, despite its validation and use in physical activity settings. When considering the individual constructs of flow, the present study also mirrors Wrigley and Emmerson's (2011) overall conclusion that flow in a music performance is similar to findings of flow in a sport performance. This finding also supports this study's initial hypothesis that the constructs of flow theory will remain fairly consistent in a music population. Saturating flow theory with musicians is important because it gives light to Jackson, Eklund, and Martin's (2010) claim in the current Flow Manual; "assessing this experience across different settings is an exciting next phase" (p. 19). Although Jackson, Eklund, and Martin were interested in developing flow scales related to flow theory psychometrically, it is important to note that qualitative data often informs new concepts in scale development. Specific to flow, this was seen in Jackson's (1992) qualitative study on flow in figure skaters. Jackson's (1992) results informed the creation of the Dispositional Flow Scale and Flow State Scale. Although arguably not the best way to assess flow, perhaps the present study's findings can evoke revisions to scales that attempt to measure flow more accurately; specifically with regard to music performances.

When asked to describe an optimal performance experience, eight of the nine constructs of flow theory (autotelic experience, challenge-skill balance, merging of actions and awareness, unambiguous feedback, concentration on the task at hand, loss of

self-consciousness, time transformation) were described by the musicians in varying degrees, as is reflected in Table 5. The construct of “clear goals” was not represented in the sample. This is surprising, given that some studies show the “clear goals” construct of flow being experienced most frequently in a performance (Jackson, et al., 2001; Vealey & Perrit, 2015). However, none of the participants sampled in these studies were musicians. Some participants in the present study commented on the preparation process leading up to an optimal experience, but evidence of specific and clear goals being set were not articulated by any musician. Research has suggested that only a small amount of experienced musicians are intrinsically motivated to better their craft; only a threat of an upcoming performance informs practice and goal attainment (Hallam, 1997; Lehmann, Sloboda, & Woody, 2007). Perhaps this is why the construct was not found in the sample. Additionally, it can be inferred that during preparation for a performance, goals are possibly implied or even imposed on the musicians by directors, professors, vocal instructors, etc. The optimal performance itself could be conceptualized as an achievement of a goal. Lehmann et al. (2007) suggested that a “looming performance represents a concrete goal” (p. 58). The musicians were asked to describe an optimal experience, and most spoke of the experience as it occurred in the moment and did not comment on the preparation process, which might have included setting goals. This is not to say that the musicians did not set goals, but that the questions were structured in a way that prevented such a discussion. Maybe if the interview questions were tailored to address the musicians’ process of preparing for an optimal performance, evidence of clear goals would be articulated. However, aside from a few mentions of the need to practice, evidence of setting “clear goals” was not found in the data.

Other aspects of flow theory that were unexpectedly represented in this sample included the discussion of *time transformation* (identified by 27% of the participants) and the *loss of self-consciousness* dimension of flow theory (identified by 27% of the participants). It was hypothesized that these constructs would be under-utilized in a music population. Vealey and Perritt (2015) found that the loss of self-consciousness and time transformation dimension of flow were “unrelated to optimism and hardiness”, two hypothesized predictors of the flow experience. Comparable results regarding the weakness of the time transformation and loss of self-consciousness dimensions of flow were found in studies of flow and figure skating (Jackson, 1992), cycling, orienteering and surf life saving (Jackson et al., 2001). Although not the strongest representation of the data, these two constructs were still mentioned by nearly a third of musicians interviewed. With the alternative being no mention of the construct at all (i.e., clear goals), it is important to comment on its prevalence in the given study.

Fritz and Avsec (2007) hypothesized that *time transformation* was likely weaker in their sample because time is often heavily regimented and calculated in a music performance. However, contrary to this, participants in the present study noted that despite having a strong idea of the amount of minutes they were playing, time still transformed. Marin and Bhattacharya (2013) found that the transformation of time construct had one of the highest average mean scores found in piano players, perhaps indicating its importance in a performance context. Many gave specific examples of acknowledging the regimented nature of a song and still experiencing time transformation. For example, one noted that he knew the song was exactly “eleven and a half minutes long” (p13) but it felt much quicker when he was in flow. Another noted

that it the note in the song represented “one chord” but singing it felt exaggerated when in flow (p15). This finding shows that although time is often calculated and regimented in a music performance – and acknowledged as such – it is still a strong factor in conceptualizing a flow experience in a music performance for this particular sample.

Additionally, Fritz and Avsec (2007) noted that *the loss of self-consciousness* dimension of flow was weaker in their music sample, and the primary investigator of the present study interpreted that this was likely due to the performer “becoming” someone else and losing all sense of who he or she is as a person. However, many performers in the present study still noted the need to remit concern with the self in order to find flow. In order for a performer to become someone else, some commented that they needed to be strong in who they were as a person and confident in their belief that they possessed the necessary skills to be successful (p10, p14). Although it was hypothesized that the challenge-skill balance construct would be most apparent in the sample, it was the third most prevalent characteristic (40%), falling below merging of actions and awareness (73%), unambiguous feedback (60%), and concentration on the task at hand (60%). While the percentage is still high, it is clear that not every participant described a balance of challenge and skill, the apex of the Flow Model and primary method of understanding flow and optimal performance (Csikszentmihalyi, 1975; Fullagar et al., 2012). Perhaps this construct is not as central to the conceptualization of flow within a music population.

Supporting this assertion, Løvol and Vittersø (2014) suggested that “challenges and skills are not important predictors of subjective experiences in general” (p. 120). The authors determined that a perfect balance could be boring and evoke disinterest (Løvol & Vittersø, 2014). As is evident by the lower-than-anticipated prevalence of the challenge-skill

balance construct in the present study, future research should assess the extent to which challenge-skill balance fully encapsulates the definition of flow.

A construct with the high prevalence, unambiguous feedback (60%), is supported in the literature as having high occurrence in flow experiences. Vealey and Perritt (2015) found that their participants experienced unambiguous feedback “most frequently in competition” (p. 332), relating to the findings of Jackson and colleagues in 2001 as well. However, additional research is needed to target which characteristics of flow theory are most important in certain activities, like music performance. This qualitative assessment of flow is a step in that direction.

Antecedents to Flow

The overarching themes of environmental context and interpersonal connectedness help address the initial research question concerning the identification of flow antecedents. Understanding what occurs before, during, and after a flow experience can help musician’s perform optimally by helping to identify what specific physical and mental aspects of the environment to personally enhance or evoke flow in his or her future performances.

Environmental Context. The aspect of focus was a crucial antecedent to the flow experience. Focus and attention are teachable skills. For example, musicians can learn to identify what type of attentional focus is demanded of the performance task (broad, narrow, internal, external; Nideffer, 1976). Interventions such as centering (Nideffer, 1980), use of routines (Beckmann & Elbe, 2015), thought-stopping/reset (Beckmann & Elbe, 2015), and autogenous training (Beckmann & Elbe, 2015) to cope with distracting

noises (e.g., audience members, crying babies) are a few that can be implemented with musicians to increase focus as a means of promoting flow.

For some musicians, the type of stage they performed on influenced their optimal performance. For example, a stage that allowed musicians to see out into the audience produced optimal performances due to the energetic interaction with the crowd. A few commented that the excitement of simply *being* on a stage elicited a flow experience because it represented “show time” or a pure love of the activity; an essential element used to define flow. Fritz and Avsec (2007) noted that performances, concerts, and “simply playing and instrument or singing” (as cited in Chirico, Serino, Cipresso, Gaggioli & Riva, 2015, “Introduction”, para. 1) are among the highest flow-conductive activities, as 22% of flow is experienced in these activities. It is apparent that no one stage “type” or stage presence was the gold standard to elicit a flow state. Musicians are encouraged to figure out what type of stage environment works best for his or her level of comfort and to seek opportunities to capitalize on performing on these types of stages. Contrarily, musicians should also be aware that they may not always, or ever, get the opportunity to perform on an “optimal” stage. Musicians who cannot perform on his or her “ideal” stage are encouraged to recognize aspects of the performance that they can control (for example, you can control your own preparation; you cannot control the size of the venue) and embrace any discomfort associated with the performance (e.g., adjusting to a new sound system). Additionally, mental imagery rehearsal (Freed, 2000) can also help musicians prepare for a performance on an unfamiliar or uncomfortable stage. These aspects can also be applied to musician’s who prefer to perform alone or with a group in order to perform at his or her peak. By recognizing that certain aspects of

a stage, venue, amount of performers, or performance itself are uncontrollable, preparing for potential obstacles of an imperfect stage, and of course practicing a great deal on the stage in an environment similar to a live performance, musicians can embrace the qualities of a stage with which they were given and hopefully achieve a peak performance on that particular stage. Musicians should be familiar with use of imagery, as imagery-related terminology is used frequently in music instruction (i.e., “head voice”, “hum on the tongue”, “drink in the tone”; Freed, 2000).

It was clear that the “stop and go” aspect of practice/rehearsal inhibited a flow experience in many performers. Just as performers were starting to get “in the groove” they were often stopped by instructors critiquing a particular aspect of the performance or interrupted by the knocking on the door from outside students waiting to get into the practice room. Extensive practice allowed performers to automate their actions, which in turn eliminated any doubt associated with achieving the given performance aims. This assertion is reflected in Marin and Bhattacharya’s (2013) research finding that a musicians’ amount of daily practice predicted flow occurring, captured by 27% of the variance. Although practice itself is important to find flow during the actual performance, the present study suggests that they should not expect flow to occur in practice.

Performance psychology consultants can help musicians struggling with optimizing practice sessions by helping to create a routine to follow during practice sessions. Such routine, when implemented consistently, can eliminate extraneous thought and can help musicians maintain focus, “shut off” a wandering mind, and eliminate distractions during a practice session.

Some musicians performed optimally when they were in a relaxing environment before going on stage, proving relaxation to be another important antecedent to flow. Others needed to meditate to create a nonjudgmental attitude about themselves and the upcoming performance; a concept typically found in mindfulness practice (Kabat-Zinn, 1994). In considering research on mental skills delivered in a music setting, many interventions have been proven helpful to lessen pre-performance anxiety before going on stage. Self-talk with relaxation under hypnosis (Stanton, 1994), guided imagery and relaxation (Esplen & Hodnett, 1999; Gratto, 1998), increased confidence through body posture/body awareness exercises (Beckmann & Elbe, 2015), and breathing and relaxation interventions (Gratto, 1998) have been cited in music literature as just a few helpful techniques. Music educators and performance consultants can implement mental skills training interventions to interested musicians to help lessen the impact of performance anxiety and evoke relaxation. An overwhelming amount of musicians interviewed found flow when performing contemporary music. This was large in part due to the contrasting technical nature of classical music in comparison to the more “natural” aspects of contemporary music. Musicians had a lot of “noise” to think about during a classical performance (e.g., is my posture correct? Am I translating that word correctly? Did the audience like this piece?). Although learning music theory and classical training may be a necessary foundation to becoming a strong performer, musicians should be given the opportunity to perform “fun” contemporary music throughout their formal training. Lehmann and colleagues (2007) recommend that musicians should “play a favorite music style that is absent from their formal music involvement...[and] they should look for ways to exert personal choice...in the repertoire they work on or kind of

performances they engage in” (p. 60). Sometimes the fun, playful nature of contemporary music and the ability to relate to the story help musicians find flow. In contrast, Lamont (2012), in her research examining emotion, engagement, and meaning in a strong music performance found that “strong experiences of music performing come from music that is not chosen by the participants (in the context of examinations, lessons, and orchestral and choral concerts, p. 588).” It is implied that music chosen for the participant through specific training can evoke an optimal performance. In this circumstance, musicians should trust that the music selected for him or her to perform – even if it is classical in nature – has a purpose and may even lead to a “strong” or optimal performance experience.

The musicians often found flow when they believed that their performance was more natural, instead of technical. During an optimal performance actions were automatic, they were not thinking about what to do next, they were having fun, and they were not worried about getting everything perfect. Mindfulness practices help foster a non-judgmental attitude (Kabat-Zinn, 1994), which can lead to a flow experience. Other interventions such as cognitive restructuring to reframe perfectionist attitudes (Hewitt & Flett, 2007) can assist in creating an optimal performance. Violin enthusiast and author of “Bulletproof Musician”, Noa Kageyama (n. d.), suggested that when you “focus on the music and what it is that you intend to ‘say’”, you are less nervous and relinquish aspects of perfectionism. Music educators and performance consultants can implement mental skills training interventions to ease perfectionist tendencies and foster a sense of enjoyment as a means of achieving optimal performances.

Interpersonal Connectedness. In the present sample, the interpersonal connections made with fellow classmates, performers, and oneself seemed to be an essential element to finding flow. The importance of social connections in music performances has been relatively established. For example, Persson (2001) determined that both social motives and the importance of belonging are prominent factors in motivating pianists to keep playing (see Lamont, 2012), and Faulkner and Davidson (2004), found that male choirs singers felt that singing connects with other people in an impactful way.

Like any team, understanding the specific roles, strengths, and weaknesses of those you are “working” with is essential to its success (Janssen, 1999). Sometimes just spending time with those you interact with is enough to figure out what makes them “tick”. Performance psychology consultants can facilitate group discussions with music classes, production teams, club and team building activities that bring groups closer together toward a common goal. These activities give participants a chance to learn more about others in a fun, interactive way.

Many students found that the support from other musicians was crucial to finding flow in a performance. Creating a collaborative and friendly environment that seeks to build others up instead of break others down seemed to be at the pinnacle of this success. Level of achievement in music is often impacted by the school environment (Gembris & Davidson, 2002) and social support within the environment (North & Hargreaves, 2008). Students who could easily seek help with song selection, help with sight-singing, etc. felt more at ease performing in front others in the group. Instead of facilitating a cut-throat environment that emphasizes excessive competition, institutions should foster group

growth and improvement. Nogaj and Ossowski (2015) noted that one of the most important actions music teachers need to uphold is “the ability to create a friendly atmosphere and comfort in preparing the repertoire” (p. 301). This responsibility often falls on the onus of the music educators, instructors, and adjudicators who must encourage students to support each other through the development process and ensure that upper-class students are acting as mentors for the less experienced. Developing effective leaders within a music program is crucial to fostering a supportive environment. Crozier (2009) commented that sometimes social support is stronger across individuals who play different instruments because a sense of perceived competition is reduced. Nogaj and Ossowski (2015) noted that music educators must demonstrate emotional support (for example, reflecting positive emotions), instrumental support (such as, giving specific instruction), informative support (for example, giving detailed instructions on how to improve/giving advice), and evaluative support (such as, instilling belief that the student has potential) to foster a supportive environment.

Directors, adjudicators, professors, and others, are also encouraged to motivate students to be successful performers by providing autonomy support (Kupers, van Dijk, van Geert, & McPherson, 2015) instead of harsh criticism. As indicated in the results, when some musicians felt as though his or her professor wanted to them to be successful, he or she was more likely to be “in the zone” on stage.

Emotional Connectedness as a New Construct?

As indicative in the over-arching theme, this qualitative study suggests an additional construct to add to flow theory that is important for conceptualizing a music performance experience: *emotional connectedness*. Recall that this was expressed by the

sample as connectedness to the message of a particular song, connectedness to words of a song and how the words related to the composer's musical interpretation, connectedness to other performers on stage, and overall connectedness to the audience. The emotional component of music performance was extremely evident amongst all musicians interviewed. Without fully understanding the story behind a particular piece, without conceptualizing why certain notes corresponded to certain words, without being fully immersed in the nuances of a particular character, and without trusting the support of other performers on stage, many musicians could not find flow. Totally investing emotionally in a craft was the way in which musicians demonstrated total involvement and focus in a task – emblematic of Csikszentmihalyi's (1990) original definition of flow itself. Marin and Bhattacharya (2013) noted that very few studies have addressed flow theory relative to emotion in musicians and suggested that this could be the biggest difference between examining flow in music and sports. The lack of examination of emotion is surprising because music is often communicated through the use of emotions (Juslin & Sloboda, 2010; Marin & Bhattacharya, 2013).

Lamont (2012) interviewed 35 musicians, asking about their “strongest, most intense experiences of performing music” (p. 574). According to Lamont (2012), most of the current research on emotion in music relates to conveying emotion to an audience which was reflected in many responses in the present study. Part of the Lamont's (2012) results suggested that “every account included a strong emphasis on at least one element of eudemonia (Waterman, 1993), including flow” (p. 588). This finding establishes a relationship amongst flow states, emotional connection, and music performance which demonstrates the importance of linking flow to emotions in music in future research.

This finding also supports the study's initial hypothesis that additional constructs related to flow, initially posited as *sense of connection* or *emotional involvement*, would be found in the analysis. Bloom and Skutnick-Henley's (2005) findings helped inform this initial hypothesis, suggesting that *emotional involvement in a performance* and *sense of connection with others* were unique to music performers in a flow state. The overarching theme of "emotional connectedness" in the present study encapsulates both a sense of connection and emotional involvement, because it reflects the inter-relatedness of emotional immersion in a character or song and its subsequent connection to "others" (i.e., the audience, a musical piece, people on stage) through such emotional display. Although this study reflects progress toward further development of a new construct in flow theory, additional mixed-methods research needs to be conducted with musicians to corroborate and validate these findings. Performers should be encouraged to seek a meaningful connection or create a storyline that is associated with the piece that they are performing, as evidenced by the overarching theme of *emotional connectedness*. Without finding a connection or seeking meaning to a song or piece, musicians risk performing a piece as a separate entity from the song itself and are less likely to exhibit flow during a performance.

With regard to the developing field of sport, exercise, and performance psychology, there is evidence to suggest that performance consultants, or individuals who provide mental skills training to "performers" (for example, musicians and athletes), can help musicians find flow. Additionally, music educators who teach music to students and musicians themselves can benefit from this study's implications to promote or enhance flow in a given performance.

Optimal performance experiences in this study were characterized by knowing the music well, liking the music you are performing, relating to it/seeking meaning, fully immersing yourself into a character or concept, understanding the setting in which you are to perform, relinquishing worry about “getting it right” or being too technical, focus/relaxation, receiving positive feedback from the audience, executing what you rehearsed, and surrounding yourself with those who support and motivate you. Perhaps more importantly, this study demonstrated the relative consistency of flow theory constructs within a music performance population and showed that being in flow can, in fact, enhance performance in a music setting. Given the strong presence of emotional connection and optimal performances in all of the participants sampled, perhaps this is cause for including an emotional construct of flow when conceptualizing flow theory in this specific population, but future research should examine this assertion further.

REFERENCES

- Abuhamdeh, S. & Csikszentmihalyi, M. (2009). Intrinsic and extrinsic motivation orientations in the competitive context: An examination of person-situation interactions. *Journal of Personality*, 77(5), 1615-1635.
- Adlai-Gail, W. (1994). Exploring the autotelic personality. Unpublished doctoral dissertation, University of Chicago.
- Amabile, T. M. (1983). *The social psychology of creativity*. New York: Springer-Verlag.
- Amabile, T. M. (1996) *Creativity in context*. Boulder, Colorado: Westview Press.
- Bakker, A.B. (2001). Questionnaire for the assessment of work-related flow: The WOLF. (Department of Social and Organizational Psychology, Utrecht University, The Netherlands).
- Bakker, A. B. (2004). Flow among music teachers and their students: The crossover of peak experiences. *Journal of Vocational Behavior*, 66, 26-44.
- Bakker, A. B., Demerouti, E., Taris, T., Schaufeli, W. B., & Schreurs, P. (2003). A multi-group analysis of the Job Demands Resources model in four home care organizations. *International Journal of Stress Management*, 10, 16-38.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215.
- Barton, B., & Hardesty, C. L. (2010). Spirituality and stripping. *Symbolic Interaction*, 33 (2), 280-296.
- Becker, A. J. (2009). It's not what they do, it's how they do it: Athlete experiences of great coaching. *International Journal of Sports Science & Coaching*, 4(1) 93-119.

Beckmann, J., & Elbe, A. (2015). *Sport psychological interventions in competitive sport*. Newcastle upon Tyne: Cambridge Scholars Publishing.

Bernier, M., Thienot, E., Codron, R., & Fournier, J. F. (2009). Mindfulness and acceptance approaches in sport performance. *Journal of Clinical Sport Psychology*, 3 (4), 320-333.

Bloom, A. J., & Skutnick-Henley, P. (2005). Facilitating flow experiences among musicians. *American Music Teacher*, 54, 24–28.

Brewer, B. W., Van Raalte, J. L., Linder, D. E., & Van Raalte, N. S. (1991). Peak performance and the perils of retrospective introspection. *Journal of Sport & Exercise Psychology*, 13, 227-238.

Byrne, C., MacDonald, R. & Carlton, L. (n. d.) Flow and creativity in the music classroom. Retrieved from http://www.researchgate.net/profile/Charles_Byrne2/publication/267688507_Flow_and_creativity_in_the_music_classrom/links/54d20220cf28959aa7becc7.pdf

Carter, L., River, B., & Sachs, M. L. (2013). Flow in sport, exercise, and performance: A review with implications for future research. *Journal of Multidisciplinary Research*, 5 (3), 17-31.

Charmaz, Kathy (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Thousand Oaks, CA: Sage.

Chirico, A., Serino, S., Cipresso, P., Gaggioli, A., & Riva, G. (2015). When music “flows”: State and trait in musical performance, composition and listening: a systematic review. *Frontiers in Psychology*, 6, 1-14.

- Clay, R. A. (2002). A renaissance for humanist psychology. *American Psychological Association*, Retrieved from <http://www.apa.org/monitor/sep02/renaissance.aspx>
- Costa, P.T. & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual*. Odessa, FL: Psychological Assessment Resources.
- Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five approaches*. Thousand Oaks, CA: Sage.
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd edition). Thousand Oaks, CA: Sage.
- Crozier, W. R. (2009). Music and social influence. In: D. J. Hargreaves & A. C. North (Eds.) *The social psychology of music* (p. 67-83). New York: Oxford University Press.
- Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety*. San Francisco: Jossey-Bass.
- Csikszentmihalyi, M. (1982). Towards a psychology of optimal experience. In L. Wheeler (Ed.), *Review of personality and social psychology*, Vol. 3 (p. 13-36). Beverly Hills, CA: Sage.
- Csikszentmihalyi, M. (1988). The flow experience and its significance for human psychology. In M. Csikszentmihalyi & I. Csikszentmihalyi (Eds.), *Optimal experience: Psychological studies of flow in consciousness* (pp. 15–35). Cambridge, England: Cambridge University Press.
- Csikszentmihalyi, M. (1988b). Society, culture, person: A systems view of creativity. In R. J. Sternberg (Ed.), *The nature of creativity* (p. 325-339). New York: Cambridge University Press.

- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York, NY: Harper and Row.
- Csikszentmihalyi, M. (1993). *The evolving self*. New York, NY: Harper & Row.
- Csikszentmihalyi, M. (1996). *Creativity*. New York, NY: Harper Collins.
- Csikszentmihalyi, M. (1997). *Finding flow. The psychology of engagement with everyday life*. New York, NY: Basic Books.
- Csikszentmihalyi, M. (2002). *Flow: the classic work on how to achieve happiness*. 2nd ed. London: Rider Books.
- Csikszentmihalyi, M., Abuhamdeh, S., & Nakamura, J. (2005). Flow. In Elliot, A. (Ed.), *Handbook of competence and motivation* (pp. 598–698). New York: The Guilford Press.
- Csikszentmihalyi, M. & Csikszentmihalyi, I. (1988). *Optimal experience: Psychological studies of flow in consciousness*. Cambridge: Cambridge University Press.
- Csikszentmihalyi, M., & Larson, R. (1987). Validity and reliability of the experience sampling method. *Journal of Nervous and Mental Disease*, 175(9), 526-536.
- Davidson, R. J. (2005). Well-being and affective style: Neural substrates and biobehavioural correlates. In F. A. Huppert, N. Baylis, & B. Keverne (Eds.), *The science of well-being* (pp. 107–140). Oxford, England: Oxford University Press.
- deCharms, R. (1968). *Personal causation*. New York: Academic Press.
- Deci, E. L. (1975). *Intrinsic motivation*. New York: Plenum Press.
- Dewey, R. (2007). *Peak performance and flow states*. Retrieved October 3, 2015, from http://www.intropsych.com/ch14_frontiers/peak_performance_and_flow_states.html

- Diaz, F. M., & Silveira, J. (2013). Dimensions of flow in academic and social activities among summer music camp participants. *International Journal of Music Education, 31*(3), 310-320.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment, 49*, 71-75.
- D’Zurilla, T. J., Maydeu-Olivares, A., & Gallardo-Pujol, D. (2011). Predicting social problem solving using personality traits. *Personality and Individual Differences, 50* (2), 142-147.
- Driska, A. P., Kamphoff, C., & Armentrout, S. M. (2012). Elite swimming coaches’ perceptions of mental toughness. *Sport Psychologist, 26* (2), 186-206.
- Elliott, D. J. (1995). *Music Matters: A New Philosophy*. New York: Oxford University Press.
- Engeser, S., & Rheinberg, F. (2008). Flow, performance and moderators of challenge-skill balance. *Motivation and Emotion, 32*, 158-172.
- Engeser, S., & Schiepe-Tiska, A. (2012). Historical lines and overview of current research. In S. Engeser (Ed.) *Introduction to flow research*. New York: Springer.
- Englander, M. (2012). The interview: Data collection in descriptive phenomenological human scientific research. *Journal of Phenomenological Psychology, 43*, 13-35.
- Faulkner, R., & Davidson, J. W. (2004). Men’s vocal behaviour and the construction of self. *Musicae Scientiae, VIII*(2), 231–255.
- Forrester, M. (2010). *Doing qualitative research in psychology: A practical guide*. London, UK: Sage Publications.

- Freed, D. (2000). Imagery in early twentieth- century American vocal pedagogy. *Journal of Singing*, 56 (4), 5-12.
- Freer, P. (2009). Boys' descriptions of their experiences in choral music. *Research Studies in Music Education*, 31, 142- 160.
- French, J. R. P., Jr., Caplan, R. D., & Harrison, R. V. (1982). *The mechanisms of job stress and strain*. London: Wiley.
- Fritz, B. S., & Avsec, A. (2007). The experience of flow and subjective well-being of music students. *Horizons of Psychology*, 16 (2), 5–17.
- Fullagar, C. J., Knight, P. A., & Sovern, H. S. (2013). Challenge/skill balance, flow, and performance anxiety. *Applied Psychology: An International Review*, 62, 236–259.
- Gembris, H., & Davidson, J. W. (2002). Environmental influences. In: R. Parncutt, G. E. McPherson (Eds.), *The science and psychology of music performance* (p. 17-30). New York: Oxford University Press.
- Getzels, J. W., & Csikszentmihalyi, M. (1976). *The creative vision: A longitudinal study of problem finding in art*. New York: Wiley.
- Glaser, B. G. & Strauss, A. L. (1967). *The discovery of grounded theory*. New York: Aldine.
- Graen, G. P., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *Leadership Quarterly*, 25, 219–247.

- Gray, J. A., & McNaughton, N. (2000). *The neuropsychology of anxiety: An enquiry into the functions of the septo-hippocampal system* (2nd ed.). Oxford, England: Oxford University Press.
- Hallam, S. (1997). Approaches to instrumental music practice of experts and novice. In H. Jorgensen and A. Lehmann (Eds), *Does practice make perfect? Current theory and research on instrumental music practice* (p. 89-108). Oslo: Norges musikkhogskole.
- Hatfield, E., Cacioppo, J., & Rapson, R. (1994). *Emotional contagion*. New York: Cambridge University Press.
- Harari, Y. (2008). Combat flow: Military, political, and ethical dimensions of subjective well-being in war. *Review of General Psychology*, 12 (3), 253-264.
- Hewitt, P. L., & Flett, G. L. (2007). When does conscientiousness become perfectionism? *Current Psychiatry*, 6 (7), 49-60.
- Hickey, M. (2000) The use of consensual assessment in the evaluation of children's musical compositions. In, C. Woods, G. Luck, R. Brochard, F. Seddon, & J. A. Sloboda (Eds.), *Proceedings of the Sixth International Conference on Music Perception and Cognition*. Keele, UK: Keele University, Department of Psychology
- Jackson, S. A. (1992). Athletes in flow: A qualitative investigation of flow states in elite figure skaters. *Journal of Applied Sport Psychology*, 4, 161–180.
- Jackson, S. A. (1995). Factors influencing the occurrence of flow in elite athletes. *Journal of Applied Sport Psychology*, 7, 138–166.

- Jackson, S. A. (1996). Toward a conceptual understanding of the flow experience in elite athletes. *Research Quarterly for Exercise and Sport*, 67, 76–90.
- Jackson, S., & Csikszentmihalyi, M. (1999). *Flow in sports: The keys to optimal experiences and performances*. Champaign, IL: Human Kinetics.
- Jackson, S. A., & Eklund, R. C. (2002). Assessing flow in physical activity: The Flow State Scale-2 and dispositional flow scale-2. *Journal of Sport and Exercise Psychology*, 24, 133–150.
- Jackson, S. A., & Eklund, R. C. (2004). *The flow scale manual*. Morgantown, WV: Fitness Information Technology.
- Jackson, S., Eklund, B., & Martin, A. (2010). *The FLOW manual: The manual for the flow scales*. Mindgarden, Inc. Secured online 06/13/14.
- Jackson, S. A., Kimiecik, J. C., Ford, S. K., & Marsh, H. W. (1998). Psychological correlates of flow in sport. *Journal of Sport and Exercise Psychology*, 20, 358–378.
- Jackson, S. A., & Marsh, H. (1996). Development and validation of a scale to measure optimal experience: The Flow State Scale. *Journal of Sport and Exercise Psychology*, 18, 17–35.
- Jackson, S. A., Martin, A. J., & Eklund, R. C. (2008). Long and short measures of flow. *Journal of Sport and Exercise Psychology*, 30(5), 561–587.
- Jackson, S. A., & Roberts, G. (1992). Positive performance state of athletes: Towards a conceptual understanding of peak performance. *Sport Psychologist*, 6 (2), 156–171.

- Jackson, S. A., Thomas, P. R., Marsh, H. W., & Smethurst, C. J. (2001). Relationship between flow, self-concept, psychological skill, and performance. *Journal of Applied Sport Psychology, 13*, 129-135.
- Janssen, J. (1999). *Championship team building*. Tuscon, AZ: Winning the Mental Game.
- Juslin, P. N., & Sloboda, J. A. (2010). The past, present, and future of music and emotion research. In P. N. Juslin & J. A. Sloboda (Eds.), *Handbook of music and emotion: Theory, research, applications* (p. 933-955). New York: Oxford University Press.
- Kabat-Zinn, J. (1994). *Mindfulness meditation for everyday life*. New York: Hyperion.
- Kageyama, N. (n. d.). Don't read this if you are a perfectionist. *Bulletproof Musician*. Retrieved October 3, 2015, from <http://www.bulletproofmusician.com/dont-read-this-if-you-are-a-perfectionist/>
- Karageorghis, C. I., & Terry, P. C. (2001). The magic of music in movement. *Sport and Medicine Today, 5*, 38- 41.
- Kaufman, K. A., Glass, C. R., & Arnkoff, D. B. (2009). An evaluation of Mindful Sport Performance Enhancement (MSPE): A new mental training approach to promote flow in athletes. *Journal of Clinical Sport Psychology, 4*, 334-356.
- Kee, Y. H., & Wang, C. K. J. (2008). Relationships between mindfulness, flow dispositions and mental skills adoption: A cluster analytic approach. *Psychology of Sport and Exercise, 9*, 393-411.
- Kirchner, J. M. (2011). Incorporating flow into practice and performance. *Work, 40* (3), 289-296.

- Kirchner, J. M., Bloom, A. J., & Skutnick-Henley, P. (2008). The relationship between performance anxiety and flow. *Medical Problems of Performing Artists*, 23(2), 59– 65.
- Kirk, D. (1986). The aesthetic experience in sport. *Journal of Human Movement Studies*, 12, 99-111.
- Klausmeier, F. (1978). *Die lust, sich musikalisch auszudrücken* [The passion to express oneself with music]. Hamburg: Rowohlt Verlag.
- Koehn, S., & Morris, T. (2012). The relationship between performance and flow state in tennis competition. *Journal of Sports Medicine and Physical Fitness*, 52 (4), 437-447.
- Kraus B. N. (2003). Musicians in flow. Optimal experience in the wind ensemble rehearsal. *Dissertation Abstracts International*, 64, 839.
- Kupers, E., van Dijk1, M., van Geert, P., & McPherson, G. E. (2015). A mixed-methods approach to studying co-regulation of study autonomy through teacher-student interactions in music lessons. *Psychology of Music*, 43 (3), 333-358.
- Lamont, A. (2012). Emotion, engagement, and meaning in strong experiences of music performers. *Psychology of Music*, 40 (5), 574-594.
- Lehmann, A. C., Sloboda, J. A., & Woody, R. H. (2007). *Psychology for musicians: Understanding and acquiring the skills*. New York, New York: Oxford University Press.
- Lester, S. (1999). An introduction to phenomenological research. Taunton, UK: Stan Lester Developments. Retrieved October 3, 2015, from www.sld.demon.co.uk/resmethy.pdf

- Løvol, H. S., & Vittersø, J. (2014). Can balance be boring? A critique of the “challenges should match skills” hypotheses in flow theory. *Social Indicators Research*, 115 (1), 117-136.
- Lowis, M. (2002). Music as a trigger for peak experiences among a college staff population. *Creativity Research Journal*, 14, 351–359.
- MacDonald, R. A. R., Byrne, C., & Carlton, L. (2006). Creativity and flow in musical composition: An empirical investigation. *Psychology of Music*, 34, 293-307.
- Maddi, S. R. (2002). The story of hardiness: Twenty years of theorizing, research, and practice. *Consulting Psychology Journal: Practice and Research*, 54, 175-185.
- Magnusson, D., & Stattin, H. (1978). A cross-cultural comparison of anxiety responses in an interactional frame of reference. *International Journal of Psychology*, 13, 317-332.
- Marin, M. M., & Bhattacharya, J. (2013). Getting into the musical zone: Trait emotional intelligence and amount of practice predict flow in pianists. *Frontiers in Psychology*, 4, 853.
- Marr, A. J. (2001). In the zone: A biobehavioral theory of the flow experience. *The Athletic Insight: Online Journal of Sport Psychology*, 3(1), NP, Retrieved October 3, 2015, from <http://www.athleticinsight.com/Vol3Iss1/Commentary.htm>
- Marrero Quevedo, R. J., & Carballeira Abella, M. (2011). Well-being and personality: Facet-level analyzes. *Personality and Individual Differences*, 50, 206–211.
- Marsh, H. W., & Jackson, S. A. (1999). Flow experiences in sport: Construct validation of multidimensional, hierarchical state and trait responses. *Structural Equation Modelling*, 6, 343–371.

- Marshall, C., & Rossman, G. B. (2011). *Designing qualitative research* (5th ed.). Thousands Oaks, California: Sage Publications.
- Martin, A. J., & Jackson, S. A. (2008). Brief approaches to assessing task absorption and enhanced subjective experience: Examining 'short' and 'core' flow in diverse performance domains. *Motivation and Emotion*, 32, 141–157.
- Maslow, A. H. (1962). *Towards a psychology of being*. Princeton: D. Van Nostrand Company.
- Maslow, A. H. (1971). *The farther reaches of human nature*. New York: The Viking Press.
- McAdams, D. P. (1990). Unity and purpose in human lives: The emergence of identity as a life story. In A. I. Rabin, R. A. Zucker, R. A. Emmons, & S. Frank (Eds.), *Studying persons and lives* (pp. 148-200). New York: Springer.
- McInman, A. D., & Grove, J. R. (1991). Peak moments in sport: A literature review. *Quest*, 43, 333-351.
- Merriam, S. (2009). *Qualitative research: A guide to design and implementation*. San Francisco, CA: Jossey-Bass.
- Moneta, G. B. (2012). On the measurement and conceptualization of flow. In S. Engeser (Ed.), *Advances in flow research* (pp. 23-50). New York, NY: Springer Science.
- Moneta, G. B., & Csikszentmihalyi, M. (1996). The effect of perceived challenges and skills on the quality of subjective experience. *Journal of Personality*, 64, 275-310.

- Neeley, S. M., & Cronley, M. L. (2004). When research participants don't tell it like it is: Pinpointing the effects of social desirability bias using self vs. indirect-questioning. *Advances in Consumer Research*, 31, 432-433.
- Nogaj, A. A., & Ossowski, R. (2015). Social support as a mediator for student achievement. *Polish Psychological Bulletin*, 46 (2), 300-308.
- North, A., & Hargreaves, D. (2008). *The social and applied psychology of music*. New York: Oxford University Press.
- Palmer, C. (1989). Music therapy in gerontology: A review and a projection. *Music Therapy Perspectives*, 6, 52-56.
- Pannucci, C. J., & Wilkins, E. G. (2010). Identifying and avoiding recall bias in research. *Plastic and Reconstructive Surgery*, 126 (2), 619-625.
- Partington, S., Partington, E., & Olivier, S. (2009). The dark side of flow: A qualitative study of dependence in big wave surfing. *The Sport Psychologist*, 23, 170-185
- Pates, J., Cummings, A., & Maynard, I.W. (2002). The effects of hypnosis on flow states and three-point shooting performance in basketball players. *The Sport Psychologist*, 16(1), 34-47.
- Perry, S. K. (1999). *Writing in flow*. Cincinnati, OH: Writer's Digest Books.
- Persson, R. (2001). The subjective world of the performer. In P. N. Juslin & J. A. Sloboda (Eds.), *Music and emotion: Theory and research* (pp. 275-289). Oxford, UK: Oxford University Press
- Pollio, H. R., Henley, T. B., & Thompson, C. J. (1997). *The phenomenology of everyday life*. Cambridge University Press, New York.

- Privette, G. (1983). Peak experience, peak performance, and flow: A comparative analysis of positive human experiences. *Journal of Personality and Social Psychology*, 45 (6), 1361-1368.
- Privette, G. & Bundrick, C. M. (1987). Measurement of experience: Construct and content validity of the experience questionnaire. *Perceptual and Motor Skills*, 65, 315-332.
- Ravizza, K. (1975). A subjective study of the athlete's greatest moment in sport. *Proceedings of the 7th Canadian Psychomotor Learning and Sport Psychology Symposium* (pp. 399-404). Toronto: Coaching Association of Canada.
- Ravizza, K. (1977). Peak experiences in sport. *Journal of Humanistic Psychology*, 17, 35-40.
- Ravizza, K. (1984). Qualities of the peak experience in sport. In J.M. Silva & R.S. Weinberg (Eds.), *Psychological foundations of sport* (pp. 452-461). Champaign, IL: Human Kinetics.
- Reimer, B. (1995). The experience of profundity in music. *The Journal of Aesthetic Education*, 29 (4), 1-21.
- Rich, G. J. (2013). Finding flow: The history and future of a positive psychology concept. In Sinnott, J. D. (Ed.), *Positive psychology: Advances in understanding adult motivation*. (pp. 43-60). Springer Publishing: New York, New York
- Rogers, C. (1977). *Carl Rogers on personal power*. N.Y.: Delacorte Press.
- Ross, S. R., & Keiser, H. N. (2014). Autotelic personality through a five-factor lens: Individual differences in flow-propensity. *Personality and Individual Differences*, 59, 3-8.

- Sawyer, K. (1992). Improvisational creativity: An analysis of jazz performance. *Creativity Research Journal*, 5(3), 253-263.
- Scheier, M. F., & Carver, C. S. (1992). Effects of optimism on psychological and physical well-being: Theoretical overview and empirical update. *Cognitive Therapy and Research*, 16, 201-228.
- Scollon, C. N., Kim-Prieto, C., & Diener, E. (2003). Experience sampling: Promises and pitfalls, strengths and weaknesses. *Journal of Happiness Studies*, 4, 5-34.
- Seligman, M., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55, 5-14.
- Sinnamon, S., Moran, A., & O'Connell, M. (2012). Flow among musicians: Measuring peak experiences of student performers. *Journal of Research in Music Education*, 60(1), 6-25.
- Sherhoff, D., Knauth, S., & Makris, E. (2000). The quality of classroom experiences. In M. Csikszentmihalyi & B. Schneider (Eds.), *Becoming adult* (pp. 141-164). New York: Basic Books.
- Stavrou, N. A., Jackson, S. A., Zervas, Y., & Karterliotis, K. (2007). Flow experience and athletes' performance with reference to the orthogonal model of flow. *The Sport Psychologist*, 21, 438-457.
- Straub, C. E. (1996). *Effects of a mental imagery program on psychological skills and perceived flow states of collegiate wrestlers*. Unpublished Master's Thesis, Miami University, Oxford, Ohio.
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory (2nd ed.)*. Thousand Oaks, CA: Sage.

- Sugiyama, T. & Inomata, T. (2005). Qualitative examination of flow experience among top Japanese athletes. *Perceptual and Motor Skills*, 100, 969-982.
- Schwandt, T. A. (2003). Three epistemological stances for qualitative inquiry: Interpretativism, hermeneutics and social constructionism. In Denzin, N. and Lincoln, Y (Eds.), *The landscape of qualitative research: Theories and issues*. (pp. 292-331). Thousand Oaks, CA: Sage.
- Starks, H., & Brown Trinidad, S. (2007). Choose your method: A comparison of phenomenology, discourse analysis, and grounded theory. *Qualitative Health Research*, 17(10), 1372-1380.
- Sutton, R. C. (2004). *Peak performance of groups: An examination of the phenomenon in musical groups*. Malibu: Pepperdine University.
- Swann, C., Crust, L., Keegan, R., Piggott, D., & Hemmings, B. (2015). An inductive exploration into the flow experiences of European Tour golfers. *Qualitative Research in Sport, Exercise and Health*, 7 (2), 210-234.
- Swann, C., Keegan, R., Piggott, D., & Crust, L. (2012). A systematic review of the experience, occurrence, and controllability of flow states in elite sport. *Psychology of Sport and Exercise*, 13(6), 807-819.
- Swanwick, K. (2012). *Teaching music musically*. New York: Routledge.
- Tenenbaum, G., Fogarty, G., & Jackson, S. (1999). The flow experience: A Rasch analysis of Jackson's Flow State Scale. *Journal of Outcome Measurement*, 3(3), 278- 294.
- Ullen, F., De Manzano, O., Almeida, R., Magnusson, P.K.E., Pedersen, N. L., Nakamura, J., Csikszentmihalyi, M., & Madison, G. (2012). Proneness for psychological flow

- in everyday life: Association with personality and intelligence. *Personality and Individual Differences*, 52, 167-172.
- Vealey, R. S., & Perritt, N. C. (2015). Hardiness and optimism as predictors of the frequency of flow in collegiate athletes. *Journal of Sport Behavior*, 38 (3), 321-338.
- Vittersø, J., & Warholm, V. (2012). *Positive feelings and increased job performance: Pleasure, interest, and the challenges-skills ratio as predictors of work achievement and skill improvement*. Unpublished manuscript.
- Waterman, A. S. (1993). Two conceptions of happiness: Contrasts of personal expressiveness (eudaemonia) and hedonic enjoyment. *Journal of Personality and Social Psychology*, 64, 678–691.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology*, 47, 1063–1070.
- White, R. (1959). Motivation reconsidered: The concept of competence. *Psychological Review*, 66, 297- 333.
- Whitmore, J.G., & Borrie, W.T. (2006). Exploring the usefulness of the Dispositional Flow Scale for outdoor recreation activities. In Peden, John G.; Schuster, Rudy M., (Comps., Eds.), *Proceedings of the 2005 Northeastern Recreation Research Symposium*; 2005 April 10-12; Bolton Landing, NY. Gen. Tech. Rep. NE-341. Newtown Square, PA: U.S. Forest Service, Northeastern Research Station.

- Wright, J. J., Wright, S., Sadlo, G., & Stew, G. S. (2014). A reversal theory exploration of flow process and the flow channel. *Journal of Occupational Science*, 21(2), 188-201.
- Wrigley, W. J., & Emmerson, S. B. (2011). The experience of the flow state in live music performance. *Psychology of Music*, 41(3), 292-305.
- Young, J. A. (2000). Professional tennis players in the zone. In S. J. Haake & A. Coe (Eds.), *Tennis science and technology*. Malden, MA: Blackwell Science.
- Young, J. A., & Pain, M. D. (1999). The zone: Evidence of a universal phenomenon for athletes across sports. *Athletic Insight: The Online Journal of Sport Psychology*, 1(3), 21-30.

APPENDIX A
BACKGROUND QUESTIONNAIRE

1) Name _____ 2) Age _____ 3) Gender _____

4) Race/Ethnicity _____ 5) Major _____

6) Grade (Year in School) _____ 7) Years of Experience _____

8) Are you familiar with the term flow (being “in the zone”)? (Circle one)

YES

NO

8a) If yes, have you experienced flow during a music performance? (Circle one)

Contact Information:

Phone Number _____

Email Address _____

Preferred Method of Contact (Circle One)

Phone

E-mail

By returning this questionnaire to the researcher, you are consenting to be contacted for a potential interview. The interview will discuss the environment surrounding your best performance experience.

APPENDIX B

INTERVIEW GUIDE

1. Take some time to think back to your many experiences _____ (playing, singing, performing, etc.). Of those times, “describe an optimal performance experience, one you would consider the most satisfying personally and which you will remember for the rest of your life.”
2. What did this experience mean to you?
3. You mentioned _____, tell me more about it. What was _____ like for you?
 - a. Objective: quality of the lived flow experience, circumstances, feelings
 - b. Probing questions
4. What does the word “flow” mean to you?
5. How often do you experience flow?
6. What were you _____ (seeing, thinking, seeing) prior to being “in the zone”?
7. Is there anything else unique to your performances experiences that you wish to comment on, or that we haven’t discussed today?

APPENDIX C

INFORMED CONSENT FORM Flow in Musicians: A Phenomenological Approach

1. Purpose of the Study
The purpose of the study is to better understand what “being in the zone” is like for musicians.
2. Benefits of the Study
Participants will become more familiar with the context and feelings surrounding their optimal performance experiences (i.e. *flow*). By becoming more aware of these positive characteristics, performers can work to create an environment that promotes flow, which could enhance performance. This knowledge will help sport psychology consultants, musicians, and music educators create an atmosphere that might promote peak experiences performing “in the zone”. The research will contribute to a growing body of qualitative research of flow in various performance domains, with a potential presentation and article publication upon the study’s completion.
3. What You Will Be Asked to Do
Participants must be a graduate or undergraduate student in the Whalen School of Music or the Department of Theatre Arts to participate. Of all the students recruited, some will be selected for an interview. Participants selected will be asked a series of questions relating to the conditions and feelings that occurred during a memorable music performance. The interview will take approximately one hour, and it will be audio recorded. Those interviewed will receive a summary of the interview the day after its completion to check for any discrepancies in content.
4. Risks
There is minimal risk associated with discussing feelings. These risks do not extend beyond any risk a person might experience in daily life. When interviewed, participants may share personal or confidential information by chance. Participants do not have to answer any question or take part in the interview if you do not wish to do so.
5. Compensation for Injury
Not applicable.
6. If You Would Like More Information about the Study
If you would like more information about the study, please contact Jessica Ford at jford3@ithaca.edu or 732-687-1810.
7. Withdraw from the Study
Participants are free to withdraw from the study at any time, and may skip any question without penalty.
8. How the Data will be Maintained in Confidence
The details on the background questionnaire will be confidential but not anonymous. For recruitment purposes, the names of the participants will be connected to the information given in

APPENDIX C continued

INFORMED CONSENT FORM
Flow in Musicians: A Phenomenological Approach

both the interview and on the background questionnaire. Only the primary investigator will have access to these documents. All data including audio recordings and transcriptions will be kept in a file on a computer in a locked office of a faculty supervisor for up to five years and will not be destroyed following completion of the study. Additionally, the names of the participants will NOT be included in any published papers from the study. Testimonies will be quoted but not directly attributed to the participant.

I have read the above and I understand its contents. I agree to participate in the study, and I am 18 years of age or older.

Print or Type Name

Signature

Date

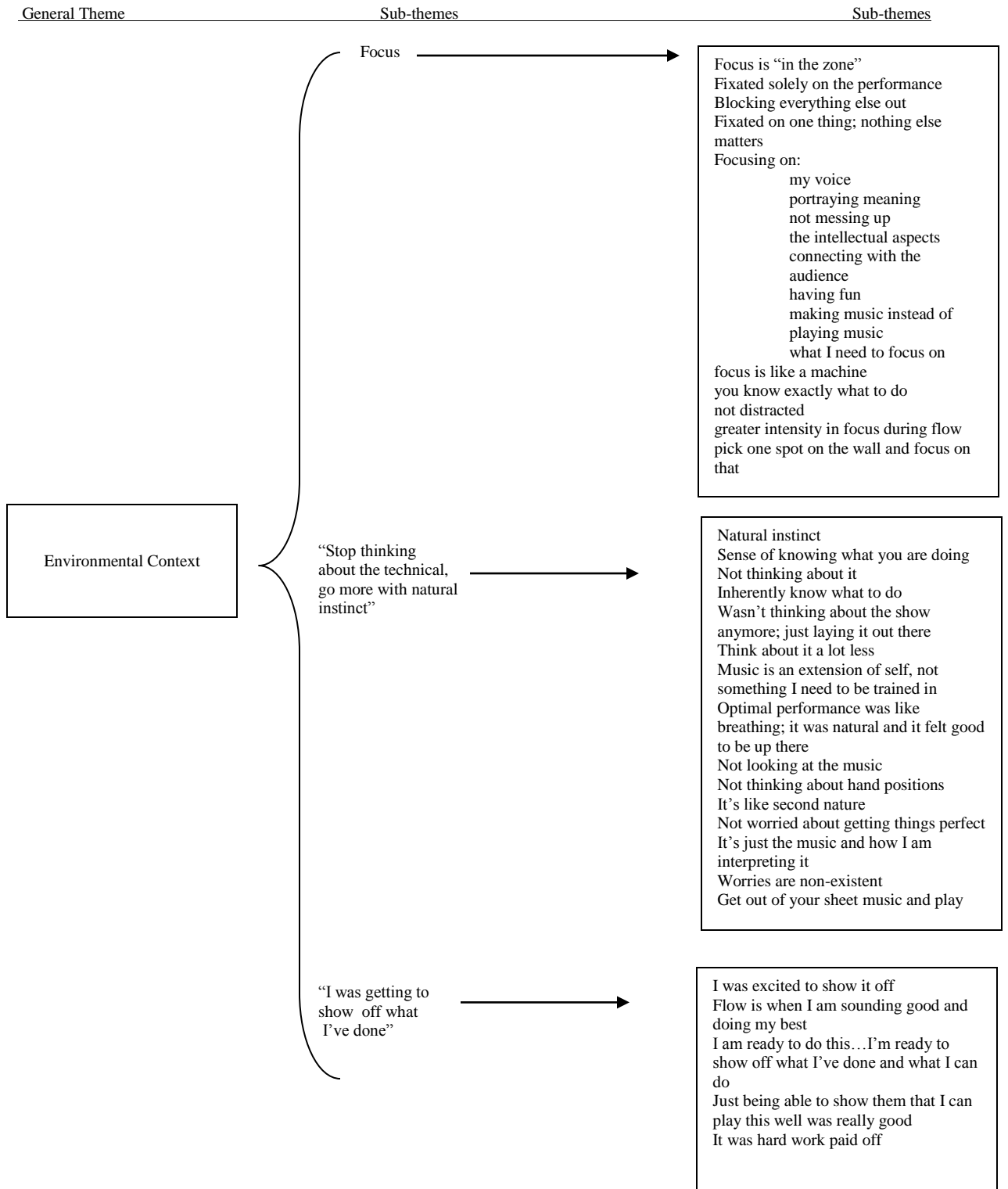
I give my permission to be audiotaped.

Signature

Date

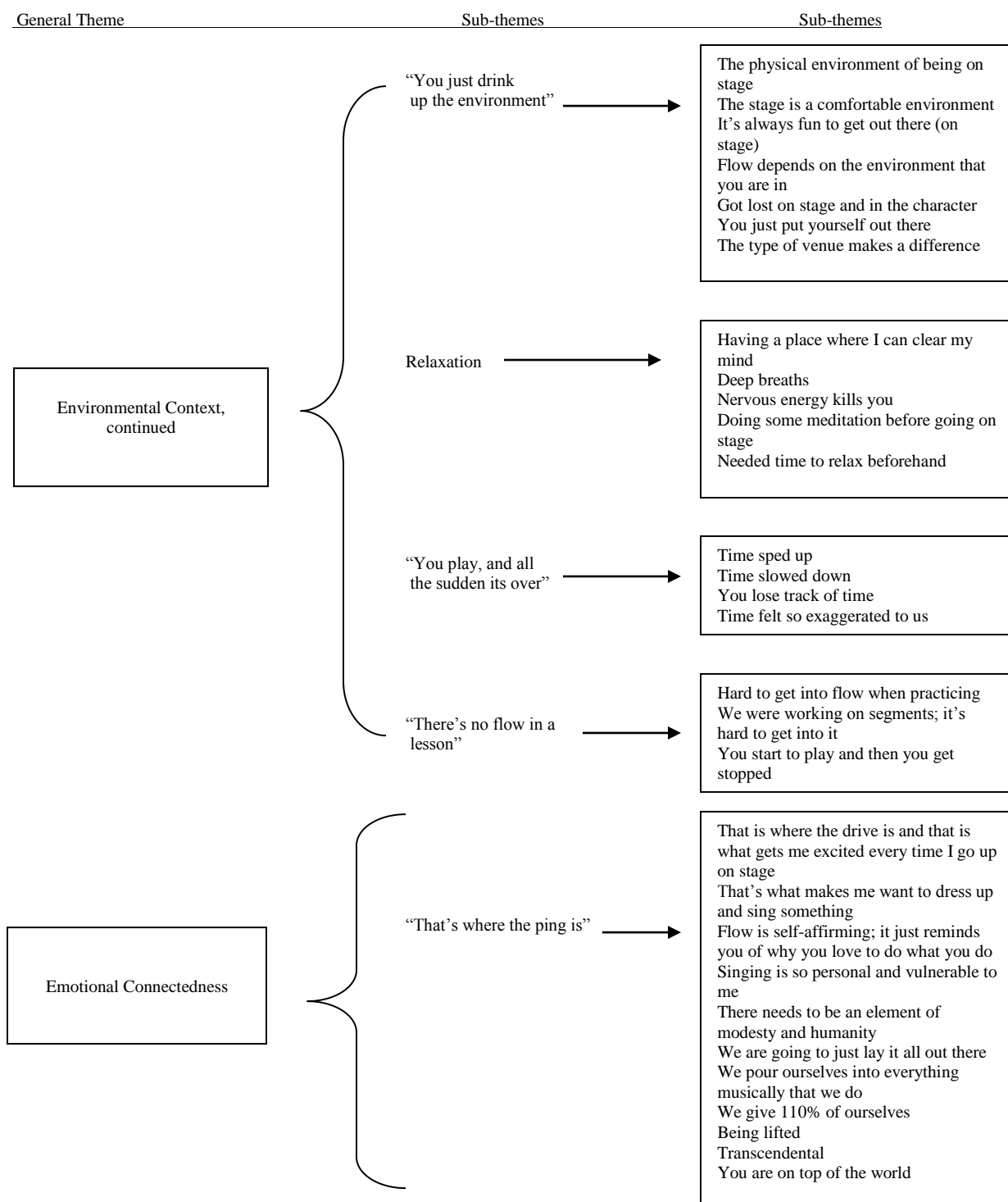
APPENDIX D

THEMES AND SUB-THEMES



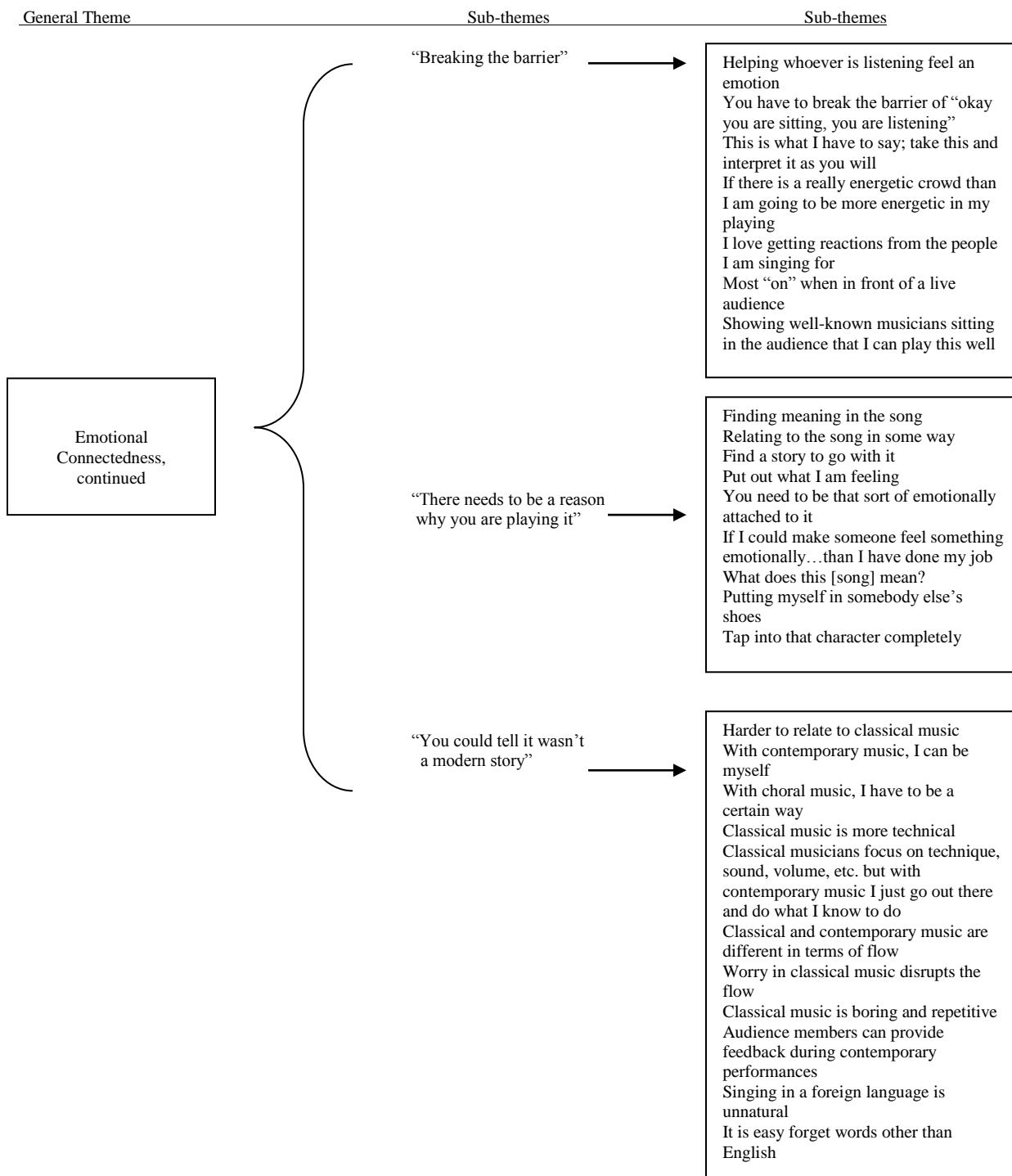
APPENDIX D Continued

THEMES AND SUB-THEMES



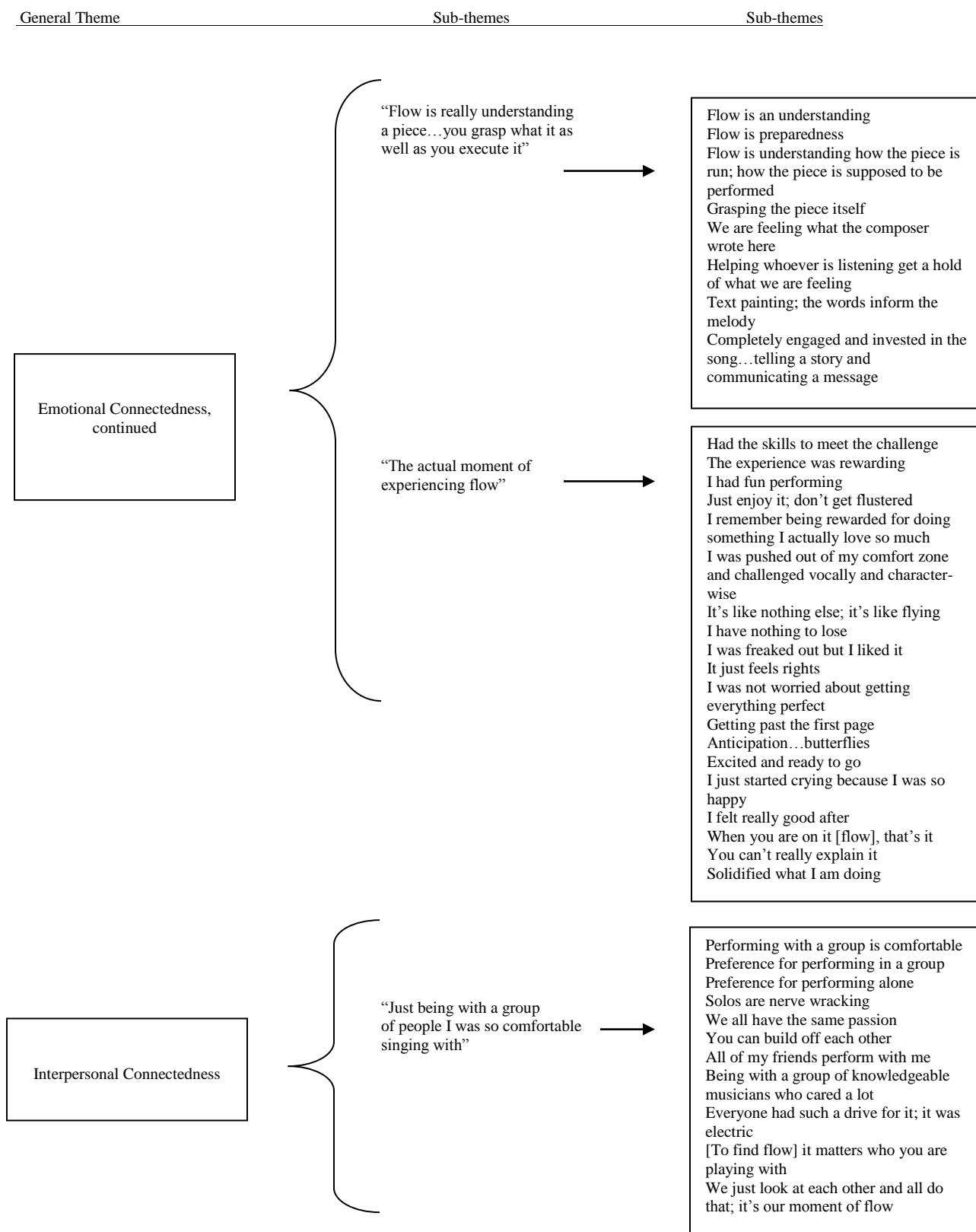
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THEMES AND SUB-THEMES



APPENDIX D Continued

THEMES AND SUB-THEMES



APPENDIX D Continued

THEMES AND SUB-THEMES

