AUTHOR(S): LAVRANOS, C., KOSTAGIOLAS, P. and MARTZOUKOU, K.

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Trends in Music Information Seeking, Behavior, and Retrieval for Creativity

Petros Kostagiolas
Ionian University, Greece

Konstantina Martzoukou
Robert Gordon University, UK

Charilaos Lavranos
Ionian University, Greece

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Chapter 1
Theoretical and Applied Issues on the Impact of Information on Musical Creativity: An Information Seeking Behavior Perspective

Charilaos Lavranos
Ionian University, Greece

Petros Kostagiolas
Ionian University, Greece

Konstantina Martzoukou
Robert Gordon University, UK

ABSTRACT

This century is an era of information and knowledge intensification. Novel information systems and services are developing through modern online information technologies. The rapid changes in the online information environment have greatly affected the way in which individuals search for music information and engage with musical creativity, within different music domains and for different purposes which involve composition, performance and improvisation, analysis and listening. The aim of this book chapter is to investigate the theoretical and practical issues relating to the impact of music information on musical creativity from an information seeking behavior perspective. Musical creativity is perceived as an intentional process which acts as a motivator for information seeking, leading to the utilization of different information resources and to the development of specific information seeking preferences. The chapter highlights the implications for research in this area and presents a research agenda for the interrelation between music information seeking and musical creativity.

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INTRODUCTION

This is the century of information and knowledge intensification (Papatheodorou, Kapidakis, Sfakakis, & Vassiliou, 2003; Liem et al., 2012) and this also stands true for the music information seeking domain. Rapid changes in the information environment and the Internet have impacted the way in which individuals with an interest in music (e.g. composers, performers, researchers, educators, students, etc.) are seeking music information (Pierce, 2004; Hunter, 2006). In recent years, professional and amateur musicians have been introduced to a rapidly changing and expanding music information environment (Casey, Veltkamp, Goto, Leman, Rhodes, & Slaney, 2008; Kostagiolas, Lavranos, Korfiatis, Papadatos, & Papavlasopoulos, 2015). Today, music information not only constitutes every musician's matter but also every musician has the opportunity to access a wide range of music information including both national and international resources that are available in print or digital format. Accordingly, many of those engaged with music information have adjusted their information seeking behavior in order to incorporate electronic or digital tools and information resources (Laplante & Downie, 2006; Dougan, 2012; Lavranos, Kostagiolas, & Papadatos, 2015c). Research further suggests that the rapid progress in the information and communication technology applications in the past few years has affected significantly musicians' information seeking behavior (Liem, Müller, Eck, Tzanetakis, & Hanjalic, 2011; Liem et al., 2012), a change which requires the development of effective information retrieval skills and techniques on different music online information retrieval systems (Lavranos et al., 2015c).

However, as the environment of music information is constantly changing and expanding with increasing information availability (Raimond & Sandler, 2008), the study of music-related information seeking behavior also presents an area of ongoing interest within a broader context, that of musical creativity. Within the music information domain, information seeking is performed with the purpose of several musical creative activities, such as composition, performance and improvisation, listening and analysis (Webster, 2002; Lock, 2011; Menard, 2013). These are active, multi-faceted and constructive processes, which involve different musical expressions and behaviors aimed at the production of something new by the person who is engaged in it (Webster, 2002; Lock, 2011; Menard, 2013). Thus they involve the utilization of multiple features of music, critical thinking and constant exposure to ideas and experiences which lead to personal discovery and construction of new knowledge. The analysis of these complex musical creative activities provide a useful framework for understanding individual music information seeking behavior (Lavranos, Kostagiolas, Korfiatis, & Papadatos, 2015a; Lavranos, Kostagiolas, Martzoukou, & Papadatos, 2015b). In this process, the intention for musical creativity acts as a motivator for information seeking, leading to employing different information resources (Lavranos et al., 2015b). Therefore, musical creativity requires information and is associated with the individual's information seeking preferences (Lavranos et al., 2015a), i.e. a musician's refusal of using online musical information resources may have an impact on his/hers creative outcome (e.g. that related to composed music scores and recordings, performances of music both pre composed and improvised or written analysis and mental representations of the music heard) (Webster, 2002; Kiehn, 2007; Ryan & Brown, 2012; Lavranos et al., 2015b). In that way, the effective utilization and greater use of information resources may enable a richer exposure to musical information which, in its own turn, can have a positive impact on the development of musical creativity and the creation of musical creative outcomes (Lavranos et al., 2015a; Lavranos et al., 2015b).

Although a wide array of studies on music information seeking and retrieval have been made available (e.g., Lee & Downie, 2004; Lee, Downie, & Cunninghamm, 2005; Laplante & Downie, 2006; Laplante, 2010; Lee, 2010; Laplante & Downie, 2011; Weigl & Guastavino, 2011; Kostagiolas et al., 2015) the impact of information and information seeking preferences on musicians' everyday musical creative practices is rather understudied. A number of studies have presented theoretical perspectives in relation to the role of information seeking in reducing uncertainty and satisfying musicians' information needs (Orio, 2006; Kostagiolas et al., 2015). Other research has focused on music information seeking and how it is changing the way individuals perceive the essence of music and the manner in which collections of musical material are managed for preservation, access, research and other uses (Cunningham, Reeves, & Britland, 2003; Cunningham & Nichols, 2009). However, little research has been conducted on the impact of musicians' information seeking behavior on different aspects of musical creativity which may involve, as explained above, different musical activities, such as composition, performance and improvisation, listening and analysis. This book chapter therefore aims to present a developing area of interest for music information seeking research and particularly, to investigate the theoretical and practical issues surrounding the impact of information seeking behavior on musical creativity. The chapter will highlight the implications for research in this area and further present a research agenda for the interrelation between music information seeking and musical creativity. The following section provides a broad overview of the relevant literature in this context. This is followed by a discussion of the theoretical and practical research implications for the impact of music information on musical creativity. The research agenda for the interrelation of music information and musical creativity is discussed in section four and the book chapter concludes with the presentation of issues for further research.

THEORETICAL CONSIDERATIONS AND BACKGROUND KNOWLEDGE

The focus of this book chapter is to provide a selected literature review of the theoretical and applied issues and the research implications related to impact of music information seeking behavior on musical creativity as well as to discuss a research agenda for the interrelation between them. The book chapter's main concern echoes the belief that there is a strong relation between music information seeking behavior and musical creativity (Lavranos et al., 2015b). Although there is a substantial amount of empirical and theoretical research on music information seeking and retrieval (Weigl & Guastavino, 2011; Kostagiolas et al., 2015) and on musical creativity (Webster, 2002), only a few attempts provide clear conceptual and operational criteria for linking music information seeking behavior and musical creativity (Lavranos et al., 2015a).

With the aim of better understanding the impact of music information seeking on musical creativity, it is necessary to first map out the modeling and formulation of the constructs of information seeking and creative behaviors within several different environments. Existing models of information behavior emphasize the importance of the environmental context, while incorporating social and personal influences (Lee, 2010). A variety of conceptual models of information seeking behavior can be found in the general field of information seeking literature (Case, 2012). Most notably, Krikelas' model of everyday information seeking behaviour (1983), Bates' (1989) 'Berry-picking' model of information seeking, Kuhlthau's (1991) model of the information search process, Dervin's (1992) sense-making model, Ingwersen's (1992) cognitive model, Savolainen's (1995) everyday life information seeking model, Leckie, Pettigrew and Sylvain's information seeking model of professionals (1996), Saracevic's model

of stratified interaction (1996), and Wilson's (1999) model of information seeking behavior (Lavranos et al., 2015b). However, most of the models that are mentioned above are concentrated on describing the general process of information seeking from a broad perspective, providing limited information about the information seeking behavior in specific contexts such as that of music.

In relation to musical creativity, there are also several theoretical models suggested in the literature which aim to describe the musical creative process by developing upon general theories of creative behavior (Webster, 2002). Some examples include Webster's (2002) model of creative thinking in music, Burnard and Younker's (2002) work on fostering creativity in composition, Espeland's (2003) model for the compositional process, Hickey's (2003) componential model and Wiggins's (2003) framework for understanding creative process for individuals and groups However, most of the models mentioned above acknowledge that creative thinking is a form of a complex problem solving activity which involves critical thinking and the construction of new knowledge via continuous exposure to information on multiple levels and stages. Thus, models of information seeking behavior provide a useful framework for understanding and analyzing the complexity of creative activities within the context of music (Lavranos et al., 2015a; Lavranos et al., 2015b).

According to this concept, an integrated information seeking and musical creativity model would take into account the impact of information seeking behavior on musical creative activities, within the specific personal, interpersonal (e.g., social, cultural), organizational, community and physical environmental in which it takes place. Such a model would provide a comprehensive framework for understanding the multiple and interacting determinants of music information seeking behaviors on specific musical creative activities, such as composition, performance and improvisation, listening and analysis. Therefore, on the basis of this idea, three core principles are proposed for the development of an integrated information seeking model for musical creativity:

1. There are multiple factors (e.g. at the personal, interpersonal, organizational, community, physical and environmental level) which influence music information seeking behavior for musical creativity.
2. These factors interact across different levels/stages of musical creativity.
3. The process of musical creativity is a problem solving information intensive activity which involves continuous exposure to information and critical thinking for the construction of new knowledge.

Theoretical Construct for Modeling Information Seeking and Musical Creativity Behaviors

The theoretical construct of this chapter is informed by Wilson's (1999) macro model of information seeking behavior and Webster's (2002) model for creative thinking in music. This is employed in order to understand information motives and needs, as well as obstacles in information seeking of musicians and their impact on creative activities such as composition, performance and improvisation, listening and analysis. The key features of the two models are identified and their relation is analyzed and discussed in relation to music information technology issues as well as socio-cultural considerations. The significance and originality of the current research area should be noted, since it is one of the very few studies providing theoretical issues linking music information seeking behavior and musical creativity. Music information seeking behavior is conceptualized as a socioeconomic phenomenon which arises from information needs related to both personal and social music roles manifested within the everyday life of individuals (Kostagiolas et al., 2015). According to Wilson's (1999) general model of informa-

tion seeking behavior (which also demonstrates the search behaviours defined by Ellis (1989) in Figure 1, below), information seeking is considered as an effort to satisfy a set of information needs which are activated by needs created within different contexts: personal (e.g., physiological, affective and cognitive needs), social role related (e.g. individual work, life, or the wider physical context) and environmental (e.g. the wider socio cultural and politico-economic environment). Within these contexts, individuals play a range of intertwined roles utilizing information resources (e.g., conventional, digital and interpersonal resources) in order to satisfy their diverse information needs and may encounter a variety of different barriers which can be of personal, interpersonal or environmental nature. These act as obstacles (or intervening variables) to information seeking and obstruct the progress towards addressing their primary needs (Wilson, 2006).

In the context of musical creativity, Webster's (2002) conceptual model for the creative thinking in music encompasses a number of creative activities, composition, performance and improvisation, listening and analysis. According to Webster (2002), creative thinking in music is defined as a complex mental process which begins with an intention and ends with a creative outcome; it involves an interplay between divergent and convergent thinking, occurs at various levels and the final musical product is enabled by internal musical skills and external conditions.

At the center of the Webster's (2002) model is a four phase creative thinking process which occurs across time, enabling skills and conditions (figure 2). The creative thinking process involves the phases of: a. preparation, in which the creative person begins thinking about and gathering materials or ideas for the creative product; b. incubation, which occurs when a person steps away from the creative prob-

Figure 1. Wilson's model of information seeking behavior
Modified from Wilson, 1999

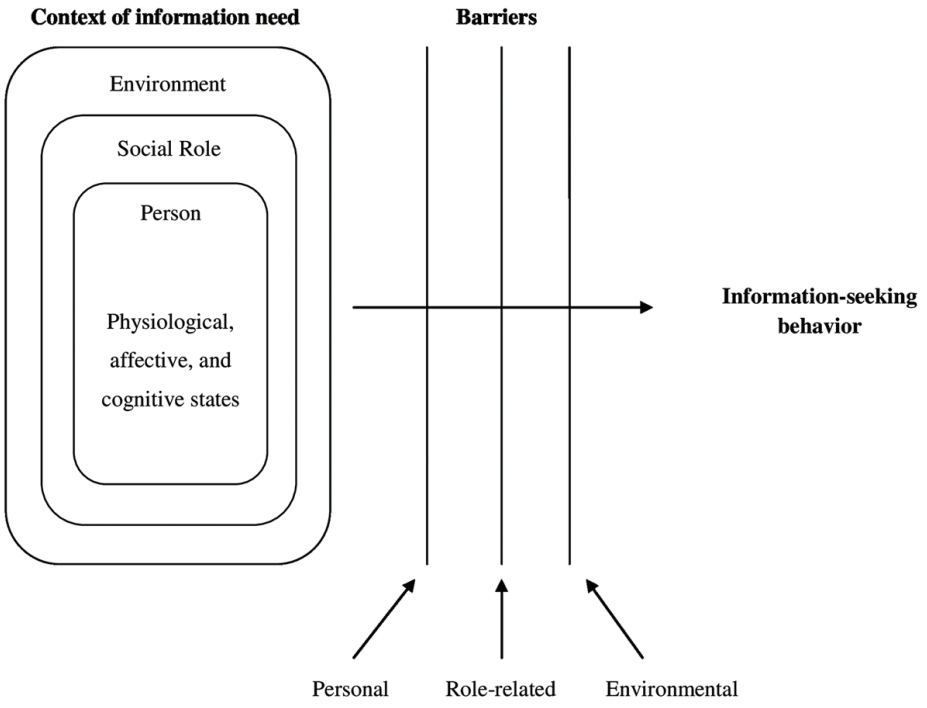
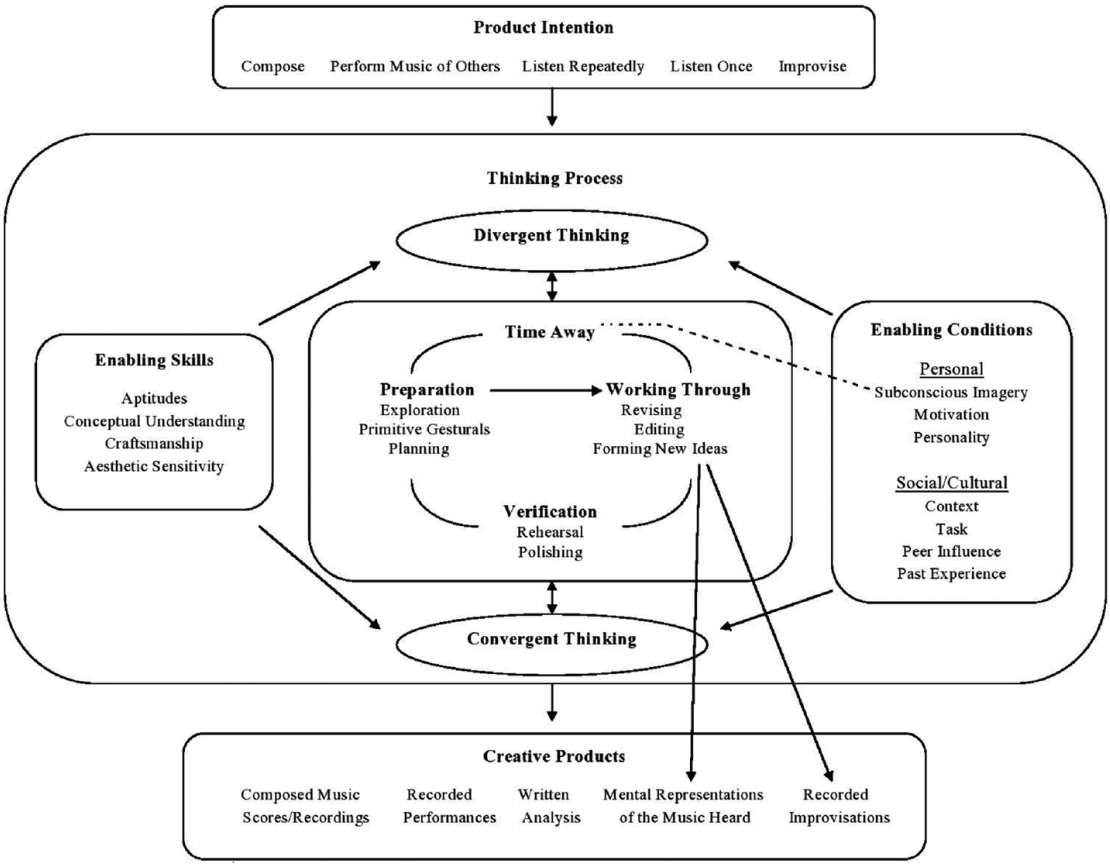


Figure 2. Webster's model of creative thinking in music
Modified from Webster, 2002



lem, as this stage is an important time for the brain to do its work; c. illumination, in which a great idea suddenly comes to mind; and d. verification, which brings the ideas together and tries out the creative product. This is the procedure of divergent thinking which is rooted in finding many possible answers to a particular problem or open ended task. According to this theory, divergent thinking dimensions include originality, musical extensiveness, flexibility and leads to the convergent thinking process (Kiehn, 2007). Composition, performance, improvisation, and analysis, written and listening, can be considered at the outset of creative thinking as the intentions of the creator. At the same time, they represent the final products of music creation (Ryan & Brown, 2012).

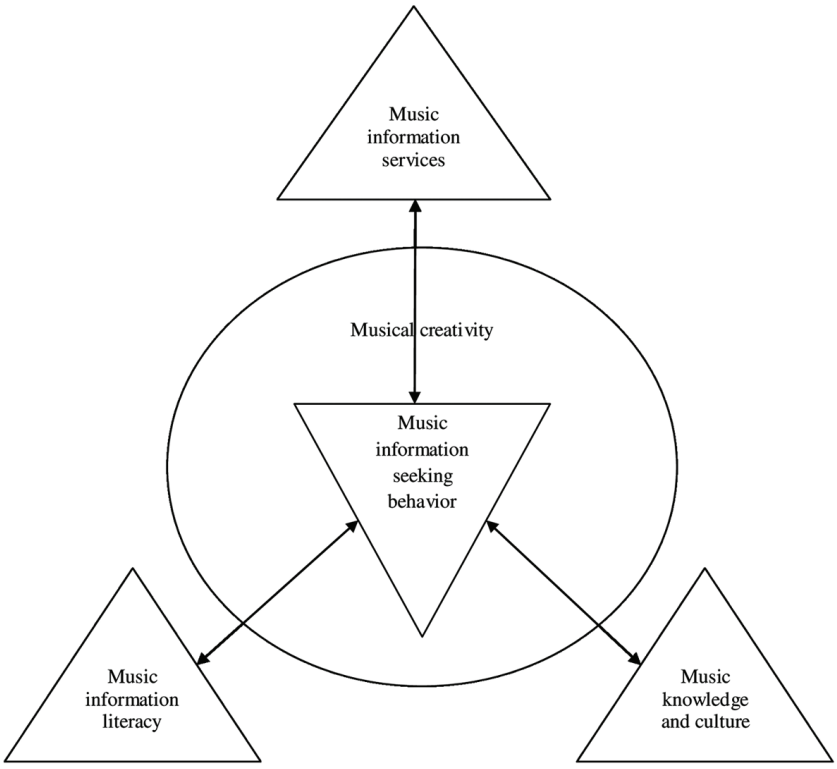
In the two models presented above, there is a clear relationship between musical creativity and music information seeking. The different intended products of music creation may be viewed as activating mechanisms which motivate and stimulate information seeking and discovery. In addition, the different phases of the divergent creative process involve a number of information seeking activities which include searching, evaluating and synthesizing music information and are linked to both personal and social/cultural conditions and skills which may act as enablers or barriers (when the right conditions are not present).

According to this approach, music information seeking behavior and musical creativity are mutually depended and are directly associated with individual and contextual characteristics surrounding them The following section discusses this relationship more analytically and develops a conceptual model which positions information seeking at the center of music creativity, examining the role and impact of information related conditions.

A Framework for the Impact of Information on Musical Creativity

The conceptual model in Figure 3 provides a useful research framework which could be used as a basis for investigating the impact of information on musical creativity. The framework considers three important layers which are related to music information activities and have a direct impact on musical creativity (Lavranos et al., 2015b): the design and development of reliable music information tools and services, the development of music information literacy skills and the sustainability of musical knowledge and culture. The framework is a rather simple and implicit version and more elements need to be added for specific settings. However, the very fact that it is implicit, stimulates further research into the specific context surrounding individuals' music information seeking motives, intentions, needs, resources and the information related intervening variables encountered during the musical creativity process.

Figure 3. Information seeking behavior framework for musical creativity



More specifically, the framework highlights the key role of music information seeking behavior as a catalyst in the development of the three abovementioned layers of music information for musical creativity. Music information seeking behavior has an important involvement in the provision of music information services, such as the development of organized music information resources and information decision aids which can be used by individuals with the aim of music creation (Lavranos eta al., 2015c). In addition, music information seeking behavior is linked with the development of music information literacy skills as well as the sustainability of music knowledge and culture. As mentioned above, music information literacy skills include the recognition of the need for music information, the ability to locate, evaluate and organize that information as well as the effective use of information to solve problems, make decisions, create new music knowledge and maintain the old, and supply music information to others (Manus, 2009). The purpose of music information literacy is therefore to provide an essential music information seeking, critical information evaluation and use know-how which has a significant role to play in musical creativity (Lavranos et al., 2015b).

During this specific process of information seeking behavior for musical creativity a set of additional skills which point to a more collaborative relationship and effective dialogue between individuals who are interested in music creation, either professionals or amateurs, and music information specialists is also proposed. These skills put emphasis not only simply on finding and evaluating music information but also on effectively communicating that information. Musicians (professional and not) may benefit from the additional support and expertise of music information specialists in the use of a number of tools and techniques to support the effective communication and exchange of music information for musical creativity (Lavranos et al., 2015b). By supporting individuals to develop their information literacy skills in that way, specialists in music information can play a key role in the process of music information seeking behavior for musical creativity.

In addition, socio-cultural aspects related to the production of musical data, the development of information seeking behavior and music knowledge production play a fundamental role in the diffusion and the adoption of music information for creativity, which in its own turn contributes to the dissemination of musical culture around the world (Lam, 2011; Lavranos et al., 2015b). The relation between these three concepts suggests a linear sequence where musical data generate music information seeking behavior and music seeking information behavior generates music knowledge production (Lavranos et al., 2015b). Music knowledge constitutes the product of socio-cultural processes while, at the same time it also forms a basis for understanding socio-cultural phenomena (Lam, 2011). Music information and music knowledge exist in the cultural context of the society and are fundamental to the development of social structures, building relationships between individuals and cultural value systems (Omekwu, 2006). The interrelation between music information behavior and music knowledge production consists of patterns of individual behaviors including ideas and values that may be considered as products of creative activities as well as conditioning elements of further actions (Omekwu, 2006). Music information seeking behavior and music knowledge are mutually depended and their patterns are directly associated with specific or distinct musicians' behaviors (Lavranos et al., 2015b). Individuals learn about their music culture or other places' culture through music information dissemination and assimilation. Music information process constitutes the means of cultural acquisition or transmission, as well as the acquired music information becomes personal knowledge of the world's music culture (Lavranos et al., 2015b). Therefore, the impact of music information on musical creativity describes those attributes, behavioral patterns and norms that lead to the maintenance of universal music knowledge and culture.

Practical Implications

In the current digital era, information technology advances and the Internet have led to the proliferation of online information and to the development of more sophisticated information retrieval and information management practices (Papatheodorou et al., 2003; Liem et al., 2012). The advances in music information and communication technologies have similarly affected the way in which music is distributed, shared and consumed, changing individuals' music information seeking behavior (McLean, Oliver, & Wainwright, 2010). Recently, various interactive applications with an approach to music information research have been created including web-based information services, software tools, file compression services, and handheld music devices (Nanopoulos et al., 2009). All of these contribute in a different manner to musical creativity supporting musicians' information seeking and retrieval. Furthermore, the increasing demand for music information and the need for effective use of music information technology have created novel opportunities for the music industry. Several commercial and communication systems have been developed with varying objectives, i.e., online purchasing of tracks, albums, or music recommender systems (Dittmar et al., 2012) supporting musicians' creative activities.

Musicians have access to a large amount of music information through digital information services and the Internet (Lavranos et al., 2015c) and via online musical professional and informal communities (e.g., composers, performers, listeners, musicologists, etc.) (National Research Council, 2003) and are increasingly becoming more exposed to music information in everyday life environments. In addition, musicians' creative activities are supported in more robust, reliable and secure online information environments (Nanopoulos, Rafailidis, Ruxanda, & Manolopoulos, 2009) which create more opportunities for communication, exchange of information and collaboration (Nikolaidou, Hadjileontiadou, & Hadjileontiadis, 2004). Online collaborative and creative musical environments affect the way in which musicians interact with music information for different musical creative activities, such as music listening, music performance, or musical composition (Dittmar, Cano, Abesser, & Grollmisch, 2012) and enable meaningful and constructionist interactions to take place (Lavranos et al., 2015c), changing in that way the musical creative thinking practices (Heo, Suzuki, Ito, & Makino, 2006). Therefore, more and more direct links between music information and society are gradually established due to the advances of music information technology (Kostagiolas et al., 2015). This happens because the progress of information technology systems and multimedia applications (which support musical creativity) expand the availability of music information through different media, digital storage devices, and on the Internet, affecting in that way musicians' information seeking behavior on everyday social activities such as composition, performance, listening, etc. Furthermore, the development of music information technology increases the preservation, and dissemination of music knowledge and culture, making music scores, recordings, performances, etc., easily accessible by musicians from all over the world, contributing to the maintenance of the knowledge of the world's music culture (Lavranos et al., 2015b).

The ultimate purpose of an integrated model of information seeking for musical creativity is therefore to inform the development of comprehensive information-based intervention approaches that can systematically target specific levels of creative musical activities, such as composition, performance and improvisation, listening and analysis. Modeling information seeking behavior for musical creativity has a number of practical implications for developing music information resources and designing systems and services aiming to satisfy musicians' information needs and it will help us understand in more detail how musicians interact with their information environments. This will contribute to determining what constitutes efficient music information seeking behavior in the musical creativity context and what im-

pact this may have on musicians' creative efforts. Such knowledge can then be applied to developing a framework for music based information systems and services which specifically target musical creativity processes and further support musicians' exposure to an information rich environments that enhance their musical creative choices.

Furthermore, research based on musicians' information seeking behavior for musical creativity will be helpful for the design of other supportive music information seeking, sharing and communication tools, such as online discussion boards, chat rooms and communities of practice since these also play a significant role in musicians' interactions for musical creativity (Lavranos eta al., 2015c). These tools should be able to facilitate either synchronous or asynchronous exchange of information found for different stages of the musical creative process, but also have a variety of functions to allow the collaboration and exchange of information for musical creative activities (Lavranos et al., 2015c).

Finally, musicians will be more effectively supported to develop music information literacy which will assist them in understanding their information needs for particular creative activities such as composition, performance and improvisation, listening and analysis (Lavranos et al., 2015a) and thus meeting their creative needs via utilizing more effectively diverse music information systems, resources and applications (Lavranos et al., 2015b; Lavranos eta al., 2015c).

RESEARCH AGENDA FOR THE INTERRELATION OF MUSIC INFORMATION AND MUSICAL CREATIVITY

This book chapter focused on the presentation of theoretical and applied issues on the impact of information seeking on musical creativity from an information seeking behavior perspective. This work provides the basis for further discourse and research on the topics related to music information seeking behavior and musical creativity. Undoubtedly, further qualitative and quantitative research is required for the investigation of the interrelation between these two fields of research (music information seeking and musical creativity). Based on this, the following section outlines a research agenda which offers a list of questions that has not been yet examined and would play an important role in the investigation of the impact of music information on musical creativity. This research agenda is therefore developed with the aim to provide a stimulus for future research. The questions that are identified fit into the five following themes:

Music Information Seeking in Different Groups

Future work in this area includes the investigation of group information seeking behavior in music. It may also be advantageous to examine how musical creativity takes place during information seeking in different music communities-groups, professional or not (e.g., composers, performers, researchers, amateur musicians, etc.), thus contributing further to our knowledge. Prior work on music information seeking behavior has focused on how information seeking by musicians is influenced by environmental, technical, or personal characteristics (Kostagiolas et al., 2015; Lavranos et al., 2015a). In a group context, decision makers from different music communities can contribute their knowledge and cooperate to solve a task or a problem on musical creativity, and thus benefit from a larger pool of knowledge than might individual decision makers. Various factors may impact group music information seeking during creative activities in music. These may include, among others, the degree of consensus of group opinion,

whether the information is common or not, the number of decision alternatives, the availability of a group support system, etc. The assumption is that group discussions around the interrelation of music information and musical creativity may lead to the introduction of additional more specific research questions.

To Quantify Musical Creativity as a Function of Information Provision

Another topic for further research in the near future is to quantify musical creativity as a function of information provision. Research in this area will provide better insight into how we can use the theory given in the previous section to map more accurately musical creativity. An accurate model based on the theory proposed would enable us to study musical creativity in a more logical way with a possibility of understanding the concept of musical creativity in its entirety. Future work could aim to study how music information provision induces musical creativity and how we can use our knowledge of information seeking as a tool to quantify creative activities in music by surveying the following: a. where do we find music information around us, b. illustrations of how information provision forms a major part of our knowledge in music, c. how we understand music information in relation to creativity, and d. how we can use music information to study musical creativity.

Big Data and Big Considerations for The Music Information Space

The continuous digitation of music production and consumption will require more attention from both researchers and practitioners in the future. Big data and big considerations for the music information space constitutes another interesting topic for further research in the near future and below there are some related issues that should be addressed. Big data presents many exciting opportunities to improve the music information space. There are many opportunities to make research on music information seeking and retrieval more productive, and to accelerate discovery, innovation and creativity. Musicians can use new tools to help improve their creative activities such as composition, performance and improvisation, listening and analysis, and overall musical creativity can be made more efficient and effective. Furthermore, large databases open up all sorts of new business opportunities helping music companies understand the real-time dynamics of music information space which will have many long-term reverberations on music market. In the near future, researchers will need to devote much greater attention to the economic, social and personal implications of musical large databases.

Social-Group Based Music Information Behavior

Social-group based music information behavior addresses the groups' various individual and collaborative musical activities (e.g., composition, performance and improvisation, listening and analysis). Group members' music information behavior refers to the identified music information activities as well as creative experiences in a social context. Future work in this area includes the exploration of group members' music information behavior, when social, work task and creativity factors were taken into account. More specifically, the aim of this work would be to explore the influence from these factors on group members' music actions and cognitive and affective experiences during their music information

seeking behavior, addressing the indications of mapping between group members' music information behavior and musical creativity.

Personality Traits in Music Information Seeking

Future research in this area includes the study of the role of personality characteristics on music information seeking behavior and their impact on musical creativity. Although the literature on music information seeking is growing rapidly and includes many socio-technological concerns (Kostagiolas et al., 2015; Lavranos et al., 2015a), one aspect which has been underrepresented and must be examined in this context is the role that personality characteristics play on music information needs, information seeking preferences and the creative process in music. The assumption is that this research will draw attention to the importance of personality traits in music information seeking that correlate significantly with musical creativity. Furthermore, will be useful to other researchers seeking to understand the impact of personality dimensions on music information seeking and the way in which they influence music creative activities such as musical composition, performance and improvisation, and listening and analysis.

CONCLUSION

The focus of this book chapter was to provide an overall literature evaluation of theoretical and applied issues for the impact of music information seeking behavior on musical creativity. The present conceptual study presented some theoretical and practical implications of the research for the impact of music information on musical creativity and a research agenda for the interrelation between them has been discussed. The outcomes of this brief review of the literature established a theoretical connection of music information seeking behavior to musical creativity patterns, as well as identified that it is necessary the modeling and formulation of the constructs of different information and creative behaviors in several environments. According to the book chapter direction, there is a need for an integrated information model for musical creativity. The core concept of such a model is that music information seeking behavior has multiple levels of influences on creative activities, often including personal, interpersonal (e.g., social, cultural), organizational, community, physical environmental, etc. Such a model is believed to provide comprehensive a framework for understanding the multiple and interacting determinants of music information seeking behaviors on musical creative activities such as composition, performance and improvisation, listening and analysis.

Furthermore, the present conceptual study provided foundations for further discourse and research on topics related to music information seeking behavior employed for creative activities. Certainly, further qualitative and quantitative research on the interaction between music information seeking behavior and musical creativity is required based on: a. music information seeking in different groups, b. to quantify musical creativity as a function of information provision, c. big data and big considerations for the music information space, d. social-group based music information behavior, and e. personality traits in music information seeking. In conclusion, the significance and originality of the current study should be noted, since it is one of the very few studies providing theoretical and practical issues linking music information seeking behavior and musical creativity.

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