

Revisiting composition and improvisation with a historical perspective

ANDREAS C. LEHMANN
Hochschule für Musik Würzburg

REINHARD KOPIEZ
Hochschule für Musik und Theater Hannover

The expression “historical perspective” in the title has a twofold meaning. First, we will try to review critically the extant literature on the topic of generative creativity in music. The starting point for this is Sloboda’s chapter on improvisation and composition in The Musical Mind, where he gave a relatively complete account of the research situation back then (Sloboda, 1985, pp. 102-150). We will use his four suggested sources of data in our analysis, namely information by composers about the compositional process, sketches, experimental data, and observations of improvised conduct. Second, we will illustrate the benefits that music psychologists would have from considering more historical data on composition and improvisation than generally done. This data stems from musicological work done since Sloboda’s review and work done by a German psychologist in the 1930s (Bahle, 1982).

Our working hypothesis is that improvisation and composition are two manifestations of very similar underlying types of problem-solving processes (e.g., how to generate ideas, how to optimize the product through trial and error, final documentation of the result through notation and recording). It is possible to analyze improvisation and composition at a level that underscores these commonalities.

In the literature on improvisation and composition, three differentiating aspects recur. First, improvisation is characterized as being highly time constrained, i.e. it unfolds online in real time, while composition happens mostly offline. Second, improvisation tends to be more of a patterned type of music with a relatively high degree of redundancy, while compositions can achieve any amount of desired complexity. A final point of contrast is that improvisations are rarely written down (with few exceptions) while compositions almost always exist in notation prior to their performance. The path of transmission is therefore aural in the case of improvisation and textual for compositions. However, these three characteristics (time constraint, complexity, transmission) may be less helpful for our understanding of musical creativity than is generally assumed.

Research problems with regard to improvisation and composition

A clear distinction of improvisation and composition is difficult because both activities fulfill a similar function, namely the intentional creation of an aesthetically pleasing and structured artifact, and it is virtually impossible for the audience to distinguish between them. The avant-garde musician P. Bley stated in an interview with improviser P. N. Wilson that he did not like to draw a clear dividing line between composition and improvisation, because the goal was to make the transition as seamless as possible so that the audience does not know where the composition ends and the improvisation begins (cit. in Wilson, 1999, p. 163). Given that the audience cannot readily distinguish between the genesis of the audible

outcomes, we argue that the underlying mental processes are – within a given style of music – not qualitatively different.

The Western concepts of improvisation and composition contain a historical dimension that cloaks some of the similarities inherent in both processes. For example, the composer who is not at the same time performer is a recent historical development, whereas composers in former times were invariably also performers/improvisers. The dissociation of both processes (creating and re-creating) into two unique professions disguises the closeness that the respective activities may have had for their creators in the past. Correlated with this artistic specialization is the departure from the traditional tonal idiom and use of forms among composers, a development which precludes statements about “the” compositional process in general (e.g., how does composing with serialist techniques compare to composing *Musique Concrete* or with computers?). Even if controlling for these historical confounds might initially mean leaving out certain types of improvisation and composition in our research, it will ultimately help us better understand the processes involved.

Musical creations are judged by society in the same way that creative products are in other domains. Composers and improvisers receive recognition once they have produced something innovative and useful (Sternberg, 1999). They are recognized when recordings are produced, their biographies appear in dictionaries, and their works are mentioned in school and college textbooks. Many recent composers and improvisers have not yet had the chance to become established experts in the true sense that Mozart, Stravinsky, Boulez, Louis Armstrong, Charlie Parker, and Keith Jarrett have become recognized artists. Thus, generalizations gleaned from work on contemporary novice or expert creators may be problematic if not seconded by historical evidence.

We have to find levels of analysis that transcend the cultural contexts in which improvisation and composition occur in order, for example, to compare the improvisation in jazz and baroque music. Two aspects that appear promising from a psychological perspective – particularly from the point of view of expertise research – are the prerequisites for high achievements and the cognitive processes from which masterpieces emerge.

Constraints on the creative performer and process

Base of knowledge and procedures

Music is a domain with extensive declarative and procedural knowledge, and performers have to invest large amounts of time to acquire the relevant knowledge. Weisberg (in Sternberg, 1999) discusses the tension between knowledge and creativity and shows that even the Beatles needed considerable training and experience in the domain of popular music to make their lasting contributions. This long preparatory phase (10-year-rule?) can be demonstrated for classical music, jazz, and popular music. What is it that takes time to develop? Biographies reveal that composers and improvisers have studied extant styles and

There are some odd exceptions to the above rule, because great familiarity without excessive immersion may allow innovations in composition (e.g., Cage). This is possible, for example, in avant-garde improvisation where musicians perform on instruments or objects that are not completely mastered in a traditional sense. However, we know from work on historical developments of expertise (Lehmann & Ericsson, 1998) that performance tends to increase over time and initial performance may be lower or less complex than later performance. Thus, these exceptions may not be as crucial as one might think.

Part of being able to improvise is the fluent generation of musical ideas, and this implicates strategies and production rules which act upon the stored knowledge. In a recent exploratory study (Lehmann & Hoffmann, 2002), an Early Music performer and a professional pianist with a specialization in improvisation were given a variation task in their respective styles. The question under investigation was the extent to which improvisers repeat themselves after several trials. Performances were tape recorded, transcribed and analyzed. Our findings suggest that the Early Music performer, who could be called a novice improviser, was less inventive and more repetitive after fewer trials while the pianist improviser was able to generate many more non-redundant consecutive variations. We concluded that experienced improvisers have a large repertory of methods for varying material that allows them non-redundant playing. This facility corresponds to the training activities the individuals had engaged in.

Refining the creative product

Searching from a given solution may improve the chance of finding a better solution. Master chess players have been shown to play close to their normal strength even if they are not given much time to think about the next move. This suggests that suitable solutions are retrieved in short time and subsequent deliberation may only serve to refine the initial solution or search for oversights. The transfer to improvisation and composition is obvious: Composition would allow more searches for an even better solution based on an initial idea while improvisation would rely on the first solution.

As a rule, composers work from small ideas which they extend to large scale forms. Often, the starting point is a rather small segment that is extended to fit a known schema (e.g., sonata form). The stages of composition proceed from initial sketches to piano scores to full scores. Composers sometimes edit the page proofs of their printed music, suggesting that even at this stage the composition process is not over yet. In recent years, historical musicologists have debunked some of the alleged exceptions to the above rule including Mozart and Reger: they sketched and used an instrument (piano) to compose like everybody else (Danuser & Katzenberger, 1993).

We can view both composition and improvisation as consisting of trial and error with iterative selection of the best solution. One difference is that in improvisation consecutive trials may be very close to each other (e.g., adjacent choruses in jazz) while in composition

this evolution is less complicated in composition due to surviving evidence of the composer's process. In improvisation, we often do not know the successor or predecessor of a given version; exceptions are alternate tracks on recorded CDs. Our assumption of similar processes happening on different time scales challenges the supposed distinction between improvisation and composition as occurring online and offline respectively.

Contrary to the traditional view, the dividing line between improvisation and composition is weak. The composer Scelsi, for example, tape recorded and subsequently edited the transcribed improvisations. The resulting work looked like a notated traditional composition. In the area of jazz performance, especially in larger ensembles such as swing bands, arrangements are frequently notated and rehearsed even in parts where improvisation would be expected by the audience. Individual observations by musicians suggest that musicians practice and memorize parts of their improvisations. Furthermore, improvisations are sometimes rehearsed to the point of a mental collective composition (Berliner, 1994) that may or may not be notated.

Optimizing the creative process and the environment

From the point of view of the psychologist, improvising musicians have a better chance than composers at improving their performance over shorter time spans, because they receive immediate feedback (Knowledge of Results) from their fellow musicians or audiences and are thus guided to develop more precise ideas of a goal performance. On the contrary, the feedback for composers is often delayed (especially for larger works), and they have to self-generate their feedback during the process of composition. This leads to a greater insecurity about their works, and feedback is sought from various sources during the compositional process.

By assuming that a knowledge base and problem solving is at the core of music creation, we downplay the role of "divine inspiration" mentioned by composers and improvisers. We may hypothesize that composers talk about "inspiration" because of need for impression management, to justify challenging novel ideas, or for lack of a better explanation of their facilities. Similar to the concept of "talent" among performers, "inspiration" may also act as a motivational force and becomes part of the self-concept of musical creators. Unless excluding these instances would unduly bias our remaining sample, we might disregard these mystical reports for now.

Composers try to optimize their work environments. This means blocking out disturbances and noises, and setting aside times for work especially in the mornings. At least for classical music composers, major facilitating effects on the creative process of altered states, dreams or alcohol on the creative process have not been substantiated (e.g., Bahle, 1982). These results resemble findings in other areas of expert performance.

Summary

Our main hypothesis was that composition and improvisation are much more akin than commonly assumed. The large individual differences in observable behavior (e.g., process traces) and phenomenology (e.g., self-reports) of the creative process may prompt us to postulate differences between the processes that have no empirical basis in the underlying mechanisms. By analyzing optimization processes and constraints on the creative performer and process, we are showing that both processes tap into the same mental mechanisms and require similar prerequisites. This view opens up new ways of investigating generative creativity in music.

Address for correspondence :

ANDREAS LEHMANN

Hochschule für Musik

Hofstallstrasse 6-8

97070 Würzburg

Germany

E-mail: ac.lehmann@hfm-wuerzburg.de

References

- Bahle, J. (1982). Eingebung und Tat im musikalischen Schaffen (orig. publ. 1939). Hemmenhofen: Kulturpsychologischer Verlag.
- Berliner, P. A. (1994). Thinking in Jazz. Chicago: Chicago University Press.
- Danuser, H., & Katzenberger, G. (1993). Vom Einfall zum Kunstwerk. Laaber: Laaber.
- Lehmann, A. C. & Ericsson, K. A. (1998). Historical developments of expert performance: public performance of music. In A. Steptoe (ed.), Genius and the mind (pp. 67-94). Oxford: Oxford University Press.
- Lehmann, A. C., & Hoffmann, J. (2002). Was den Profi vom Anfänger unterscheidet: Fallstudien zur Improvisation. MS in preparation.
- Sloboda, J. A. (1985). The musical mind. Oxford: Clarendon.
- Sternberg, R. (ed.) (1999). Handbook of creativity. Cambridge: Cambridge University Press
- Wilson, P. N. (1999). Hear and now. Hofheim: Wolke.