

Introduction

Notation and/as material culture

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Notation has long occupied a major position in music scholarship. Indeed, for many years it constituted the essential object of study, not only representing musical styles and practices but more broadly defining what music *is*. Guido Adler, writing his foundational programme for the study of music in 1885, stated that the history of music ‘looks at *artistic creations as such*, [...] without special consideration given to the life and effect of individual artists who have participated in [their] steady development’ (Mugglestone and Adler 1981, 7; emphasis added). Thus, he not only defined the existence of music in terms of separate, independently existing objects rather than as a practice or performing art, but also suggested that these objects could be understood—indeed, were *better* understood—without any consideration of the social and cultural life in which they were created and performed. The idea that music scholarship studies musical works as represented by notation and not the practices and processes of musical production, performance, dissemination, and reception remained a foundational assumption of musicology for a long time. Nearly a century after Adler, Carl Dahlhaus expressed more or less the same idea more succinctly: ‘The concept “work”, and not “event”, is the cornerstone of music history’ (Dahlhaus 1983, 4).

Since the end of the twentieth century, musicology has increasingly moved away from this work-centred perspective towards an understanding of music as a social and cultural practice. Arguments for this shift have proceeded largely from a critique of the centrality of the score in traditional music scholarship (see, among many others, Cook 2013; Goehr 2007 [1992]). However, while few scholars still consider notation to be an objective representation of music *per se*, this invites the question of how to conceptualise the role of musical writing, representation, and visualisation in the cultural practice of music. Both the traditional work concept and a performance-orientated music scholarship seem to locate notation outside of both music and culture. After the critique of the work concept, the ways in which writing and reading music are themselves an integral and important part of ‘musicking’ behaviour must be reconsidered (Schuiling 2019). The iconoclasm of the New Musicology thus necessitates an investigation into how notations construct—or compose—musical cultures.

Critiques of the centrality of the score in music scholarship questioned the reification or objectification implied by a work-centred musicology on the premise that music is better understood as a process than as a tangible object. However, scholars in the field of material culture studies have suggested ways of thinking about objects that do not set them apart from social and cultural processes. One might view objectification as *itself* a process in which questions of epistemology, cultural identity, and social values are negotiated

(Miller 2005). Alternatively, one might consider objects as ‘actors’ that participate in our social and cultural practices (Gell 1998; Latour 2005). Yet another view would question the opposition between processes and tangible objects, arguing that knowledge, creativity, and the social are formed in the development of a ‘co-responsiveness’ between material processes of becoming (Ingold 2011). The term ‘material culture’ comes from anthropology and archaeology, where, in the course of the twentieth century, its study developed from the collection and taxonomy of objects from the past and from non-western cultures to the ‘investigation of the relationship between people and things irrespective of time and space’ (Miller and Tilley 1996, 5). The idea that there exists a reciprocal relationship between people and things has, in different ways, been a fundamental tenet of various other twentieth-century strands of scholarship, including media studies, science and technology studies, cybernetics, and ecological theories of perception—to name just a few. Over the last two decades, this perspective has been influential across the humanities and social sciences with scholars drawing on these and other fields in a movement variously labelled ‘thing theory’ (Brown 2004), ‘new materialism’ (Coole and Frost 2010; Dolphijn and Van der Tuin 2012), or, more generally, the ‘material turn’.

Reflecting this broader trend in the humanities and social sciences, a rapidly growing number of music scholars have turned their attention to the role of material objects and technologies in the construction and transmission of (musical) knowledge, culture, and creativity. In particular, there has been a renewed interest in organology, a field that until recently played a relatively minor role in these conversations. Its significance has been somewhat greater in ethnomusicology, where perhaps the earliest beginnings of a twenty-first-century organological revival can be identified.¹ Scholars such as Veronica Doubleday (1999), Regula Qureshi (2000), and Kevin Dawe (2012 [2003]) have shown how politics, power, and identity are configured in the interplay between instruments, bodies, repertoire, and performance. More recently, the work of Eliot Bates (2012) has been influential in its focus on the active role of instruments in such processes. In the last decade, musicological reconsiderations of musical instruments have emphasised their role in politics and identity less than in the construction of musical ontologies and epistemologies (although see Ahrendt 2018; Irving 2009). In different ways, Emily Dolan (Dolan 2012; Tresch and Dolan 2013) and Roger Moseley (2016) have revealed musical instruments’ entanglements with the emergence of modern science and technology, opening up a field of inquiry into the materialist foundations of western art music. From a music-theoretical perspective, Alexander Rehding (2016a; 2016b) and Jonathan de Souza (2017) consider instruments as materialisations of knowledge and cognition, illustrating how musicians quite literally ‘think with’ their instruments, and that composition is not just an abstract arrangement of tones, but a practical intervention into this embodied relationship.

Compared to organology, the study of notation has been more central to music scholarship. Yet, it has similarly been regarded by some as exemplifying a stuffy positivism, concerned with technicalities rather than the things that ‘really matter’ about music.² In his book that is viewed by some as having kindled the New Musicology in the 1980s, Joseph Kerman asserts that the seminar on notation in mid-century musicological curricula ‘focused not on music but on rather low-level problem-solving’, and that dropping this seminar from the core curriculum was a ‘first step in the liberation of musicology’ from its positivist paradigm (Kerman 1985, 46). However, as the chapters in this volume demonstrate, a total rejection of the study of notation excludes a wide range of interesting work on the reciprocity between notation and its social contexts, on its relations to musicians’ bodies and to other musical technologies, as well as work that develops a multifaceted understanding

of notation's representation of musical structure. The materialist approach found in recent music studies, we argue, provides a way to attend to these aspects of notation without returning to the positivism of traditional music scholarship.

Yet, it should be noted that the materiality of notation is by no means a wholly new area of study. Although some scholars have argued that the recent surge in organological research constitutes a 'new organology' (Roda 2007; Tresch and Dolan 2013), Moseley suggests that 'organology's attentiveness to specific instantiations of musical culture and its concomitant suspicion of generalisations derived from sweeping narratives can be seen to have anticipated the recent material and informational turns of the (post)humanities at large' (Moseley 2016, 90). Similarly, the attention to empirical detail in the study of notation has meant that historians of notation have always had to attend to the materiality of their subject matter. They have long been aware that the idea of a musical 'work' is far from absolute, insofar as scores construct the music as much as they represent it. In other words, to approach notation as a form of material culture is not a matter of breaking radically new ground but rather to recognise and attend to an aspect of notation that has long been inherent to its study. The work of Leo Treitler (1974; 1982) in particular marked a crucial shift in considering early music notations in the context of already existing practices of performance, memorisation, and transmission, as material artefacts embedded in these practices, rather than as the first steps from an 'oral' to a 'literate' culture. Whether it is through the study of notation as visual culture (Haar 1995), codicological studies of early music manuscripts (Alden 2010; Deeming and Leach, 2015; Dillon 2002; Leach 2011), or the study of music printing and the music publishing industry (Christensen 1999; Davies 2006; Loughridge 2016; Orden 2000, 2015), the materiality of notation has been both an implicit and explicit concern in historical musicology.

The same can be said, perhaps even more assuredly, about ethnomusicological studies of notation. Discussions of notation in ethnomusicology almost exclusively concern the practice of transcription, underlining the foundational distinction between oral and literate culture as well as the colonialist legacies of the field. Although this work has enabled essential reflections on the politics of notation, its relations to performance, instruments, and recording media, and its role (both positive and negative) in the construction of scholarly knowledge (Ellingson 1992a; England et al. 1964; Jairazbhoy 1977; Seeger 1958; Stanyek 2014), its aim has usually been the representation of musical structures or practice, rather than to consider the use of notation itself as the subject of ethnomusicological research. Nevertheless, there has been a minor tradition of ethnomusicological work on non-western notation, championed particularly by Mantle Hood, who saw it as a way for the western scholar to 'kick the habit of his addiction to the Western staff' (Hood 1971, 93). Much of this research has been concerned with Asian musics (Kaufmann 1967) and it frequently includes discussions of notation in studies of musical instruments, underlining the connection between notations and instruments discussed above (e.g. Becker 1980; Berger 1969; Gulik 1940; Kaufmann 1975; Malm 1959; Wade 1976). Such studies offer important insights ranging from basic considerations of notation and performance practice to the philosophical and cosmological significance of the relation between body and instrument, as well as issues of transnational exchange and the power dynamics of colonialism. The wide variety of relations between text and performance has frequently led to reflections on the distinction between orality and literacy and its impact on the methodologies of music scholarship (Ellingson 1992b; Tokumaru and Yamaguti 1986). Since ethnomusicology has loosened its primary focus on non-western music, some scholars have embedded questions of notation in broader considerations of musical technology. Kiri Miller, for instance, after

working on the notation of Sacred Harp repertoire (Miller 2004; 2008) has frequently included insightful discussions of notation and visualisation in her work on video game music (Miller 2012; 2017).

This volume builds on such precursors and brings them into conversation with a broad range of inter- and sub-disciplinary debates. Organised into four parts, the contributions presented here approach notation as something beyond a vessel of musical ‘content’: as an object of knowledge construction, bodily and social interaction, and technological mediation. As such, it encourages an interdisciplinary approach to a topic that has been at the centre of musicology’s disciplinary identity by engaging with work from disciplines including media studies, performance studies, gender studies, material culture, art history, sensory studies, and science and technology studies. Below, we briefly discuss the significance of these four themes—epistemology, the body, social relations, and technology—in relation to notation and introduce the chapters in each respective section.

Part I: Epistemologies of notation

This section posits a fundamental question: music notation has traditionally been the object of music-analytical study, but how does notation itself mediate or construct forms of knowledge? What Kerman referred to as the ‘positivist paradigm’ of twentieth-century musicology saw notation as a (potentially) neutral vessel of pre-given musical content, so that the transcription from one notation system to another becomes a process of ‘low-level problem-solving’ as it need not consider how the notation constructs what it represents. The chapters presented here provide detailed accounts of the relations between notation and musical knowledge. Though they describe very different cases, each chapter embeds notation in a broader media-historical context and shows how questions of the representational function of notation are deeply political.

Focusing on the Index of New Musical Notation, an initiative led by Kurt Stone in 1970, Guilia Accornero ([Chapter Two](#)) provides a critical account of the ways in which musicians and theorists have tried to ‘improve’ notation to increase its universal applicability and the political considerations might underlie such attempts. Elaine Fitz Gibbon’s contribution in [Chapter Three](#) focuses on a case study of music notation being employed within a visual context: artist Hanne Darboven’s *Quartett »88«* (1989), a ‘cataloguing’ project that combines music notation with other printed media. Fitz Gibbon examines Darboven’s use of notation and its implications for ontologies of the musical work, drawing connections between time, music, the writing of cultural history, and women’s presence therein. Taking an example of an apparently aural-centric musical practice—acousmatic composition—Patrick Valiquet ([Chapter Four](#)) investigates the epistemologies of ‘listening scores’ produced in 1970s France and Quebec. His chapter reveals—in contrast to existing phonocentric accounts—the ways in which acousmatic music has been tightly intertwined with visual representation and scrutinises the contemporary political and pedagogical motivations behind this form of mediation.

Part II: Notation and the body

As a way of making musical structures visible, notation has frequently been associated with disembodiment. An essential component of the ‘ocularcentrism’ that identifies ‘the score with what the music is’ (Cook 2004, 21) is not just the prioritisation of vision over other forms of sensory perception, but the premising of this valorisation on an understanding of

vision as a somehow ‘disembodied’ form of perception (Jay 1993, 80–81). By contrast, the volume’s second part, ‘Notation and the body’, explores how the function of notation is intrinsically connected to musicians’ bodies across different musical traditions, with three chapters that, in very different ways, engage the embodied nature of visual perception. Although it might seem that the material turn would also entail a consideration of the physical human body, the exclusion of questions of embodiment in its wake has often been noted. Tim Ingold has long argued that the concept of ‘material agency’ tends to foreclose considerations of skilled practice in our bodily engagement with the material world (Ingold 2011, 89–94). Holly Watkins and Melina Esse (Watkins and Esse 2015) similarly criticise the neglect of questions of embodiment and the physical nature of musical performance and perception in the recent musicological attention to technology. For them, such neglect risks losing sight of the intimate forms of self-knowledge that music provides, as well as the politics of bodily difference.

In [Chapter Five](#), Chae-Lin Kim examines the work of Deaf sound artist Christine Sun Kim, whose notation incorporates conventional staff notation and signs and symbols associated with American Sign Language. Kim’s analysis reveals the qualities of hearing that are implicit in such notation and how this work challenges both the notion of reading and writing as a purely visual practice and the assumption that musical notation only serves the hearing body. Notation’s powerful role in interpersonal interaction is also a significant theme in the final two chapters of this section but in two quite different musical traditions. Tim Shephard and Sanna Raninen ([Chapter Six](#)) explore the role of music scores in paintings and prints in early sixteenth-century North Italy, showing how notations choreograph different forms of physical interaction among performers and shed light on musical participation and the notion of musical community. Beth Williamson ([Chapter Seven](#)) examines combinations of notation and visual imagery in manuscripts in order to consider what they might tell us about medieval worship as a multi-modal experience.

Part III: Notation and social relations

As already noted, the main critique of work-centred music scholarship is that notation tends to decontextualise music and sets it apart from social and cultural processes. Despite the work mentioned above, the study of notation has therefore remained a somewhat marginal concern in ethnomusicology. Especially in recent decades, when fieldwork became the defining method of the discipline, and its aims moved from ‘observing and collecting’ to ‘experiencing and understanding music’ (Titon 2008 [1997], 25), discussions of notation have become increasingly rare, suggesting a lingering suspicion that notation only serves to observe and collect, and is not a form of musicking, of ‘experiencing and understanding music’ in its own right. This suggests a further significance to the study of notation proposed in this volume. If the work-concept locates music’s existence in an ideal realm, detached from the social and material processes of music-making, to understand music as only existing in performance risks a further dematerialisation of music, making it essentially evanescent and intangible. If the study of musical performance has been an important step towards the increasing convergence between musicology and ethnomusicology, it evades questions of orality and literacy that lie at the heart of the distinction between these fields. Celebrations of participatory musical practices, and arguably the field of ethnomusicology more broadly, often depend on uncritical assumptions of pre-technological, oral ‘otherness’ (Amico 2020; Hesmondhalgh 2013, 87–97). In other words, there remains some work to be done before we can claim that, when it comes to the study of notation, ‘we are all ethnomusicologists now’ (Cook 2008).

The aim of [part three](#), ‘Notation and social relations’, is to commence this work, examining notation’s role in the sociality of music-making. The section assembles research on a variety of musical traditions, as well as contemporary global circulations of notation through social media. Joseph S. Kaminski ([Chapter Eight](#)) documents the dissemination of Chinese music through a form of notation, *jianpu*, and the implications of this practice not just as a means for sharing music but as an object of transnational identity and community for contemporary musicians in New York City’s Chinatown. Complementary to Kaminski’s contribution, David Maw ([Chapter Nine](#)) shows how notation mediates social identities and strata, but in the context of fourteenth-century polyphonic song, demonstrating the powerful role of musical literacy in social hierarchies. Lara Pearson similarly pursues the embodied knowledge of notation but in the more intimate setting of South Indian Karnatak music pedagogy. In [Chapter Ten](#), she provides a detailed account of the relations between gesture and notation and their role in identity construction in the teacher-student relationship.

Part IV: Notation, instruments, and technology

The aforementioned new materialist work on musical instruments has important implications for the study of notation. In particular, an emphasis on the epistemic and ontological aspects of musical instruments implies that the ‘literate tradition’ of western art music (Taruskin 2005) consists not just of the scores that represent this repertoire; rather, it is equally inscribed into the construction of the instruments that perform it. Notations are not the only means of turning music into an object; indeed, from this perspective, we could question the extent to which notation has ever achieved the metaphysical separation of mind and body of which it is so frequently accused. The representation of musical structures might be considered as a way of interfacing with an infrastructure of modern musical instruments instead of the creation of a Platonic ideal. This shift of perspective also stresses the continuity between instruments, notations, and recording technologies rather than viewing them as categorically distinct entities. Mackenzie Pierce (2017) discusses the short-lived nineteenth-century practice of musical stenography to set out a history of capturing musical sounds long before the invention of mechanical recording. Writing on sound production rather than recording, Thomas Patteson (2016) shows that attempts by modernist European composers to use phonographs as musical instruments in the late 1920s led to radical experimentations with new forms of inscription that could be mechanically transformed into sound. In his genealogy of digital music, Thor Magnusson (2019) treats instruments, notation, and recording as different expressions of a process that Bernard Stiegler (2010) calls ‘grammatization’, that is, the rendering of thought into discrete material elements.

The final part, ‘Notation, instruments, and technology’, underlines the fact that not only do notations rely on technological developments such as writing, print, and computer technology, but they also represent and construct relations to musical instruments that allow music to sound. Brian A. Miller ([Chapter Eleven](#)) is concerned with questions of digital mediation relating to how notations’ forms of codification prefigured current computational trends in music analysis. Moving from Miller’s focus on the technology of inscription to more obviously ‘physical’ technologies of notation and the labour that underpins them, the next two chapters address twentieth-century musical practice. Naomi Woo ([Chapter Twelve](#)) discusses Conlon Nancarrow’s works for Player Piano, illustrating the ways in which notation is embedded in processes of codification and automation

and how the body of the composer can be materially ‘traced’ in the physical score. Her work thus shows how a purely ‘mechanical’ understanding of these pieces is necessarily limited. You Nakai ([Chapter Thirteen](#)) examines David Tudor’s realisations of indeterminate graphic notations, focusing on John Cage’s *Variations II*. Through a detailed investigation of Tudor’s work with electronics, Nakai argues persuasively for a reconceptualisation of music notation as a form of musical instrument, showing how its materiality functioned as a tool within Tudor’s creative decision-making. More broadly, Nakai’s arguments have implications for the ontologies of improvisation and performance, as well as notions of musical literacy. The section concludes with Kiene Brillenburg Wurth’s contribution ([Chapter Fourteen](#)), which posits the notion of ‘music mutation’ in electronic music through a retelling of the history of Donna Summer’s 1977 hit, ‘I Feel Love’. Similarly revealing the ways in which musical compositions cannot be separated from their methods of creation, nor their medium of performance, here it is electronic media that takes on a notational function, its inscription affording a reconfiguration of traditional modes of creative authorship.

Conclusion

Taken together, the chapters in this book indicate the wide range of exciting questions and topics that a study of music notation informed by material culture might address. They show that the study of notation need not be opposed to the questions of identity, embodiment, politics, or other issues that have decisively changed music studies since the rise of New Musicology at the end of the previous century. Indeed, by considering notational practices as forms of musicking in their own right, they offer unique perspectives on the ways in which such questions are embedded in the musical infrastructures (Devine and Boudreault-Fournier 2021) that shape musical epistemologies, ontologies, practices, and cultures. More importantly, they make clear that the idea of notation as constituting a distinction between a ‘literate’ tradition of Western Art Music and its ‘oral’ others is untenable, not only because it ignores the diversity of notational practices both within and outside of this tradition, but also because notations are embedded in networks of musical practices, discourses, and technologies, as well as broader social processes in ways that trouble such clear-cut distinctions between orality and literacy.

We hope that this volume will help to both revitalise and relativise the study of music notation in the twenty-first century. Revitalise because it shows the stimulating possibilities of a study of notation beyond the work concept, in spite of—yet simultaneously thanks to—the critiques of the centrality of notation in musicology. Relativise, because it dismisses the notion of a monolithic literate musical tradition, but perhaps more importantly because it positions the study of notation as an important yet ultimately peripheral concern in a decentred music scholarship, rather than at the heart of our disciplinary identity. If our broadening of the scope of notation studies appears to present an excessively optimistic and ‘catchall’ outlook on music-making, we wish neither to overstate the universality of such an approach nor to elide musical practices and traditions in a way that risks overlooking the significant aesthetic, ideological, and practical differences that distinguish them. Rather, this volume seeks to disrupt disciplinary and genre boundaries in order to reconsider the concepts and assumptions that lie behind them. By creating space for reading and writing within a performance-oriented musicology, notation becomes not a definition of what music is but just one element within the socio-musical interactions that characterise artistic *cultures* rather than creations.

Notes

- 1 While organology is generally considered an independent field, the Hornbostel-Sachs instrument classification system fits the penchant of early ethnomusicology (then still called ‘comparative musicology’) for taxonomy and comparison over fieldwork and ethnography. With the development of ethnomusicology in the second half of the twentieth century, more culturally informed approaches to instruments were developed (see, e.g. Merriam 1969), suggesting a longer pre-history than the recent claims of a ‘new organology’ suggest.
- 2 Eliot Bates, for instance, writes: ‘Instrument museums are mausoleums, places for the display of the musically dead, with organologists acting as morticians, preparing dead instrument bodies for preservation and display’ (Bates 2012, 365).

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