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Musical identities mediate musical development

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This chapter has two main aims. The first is to identify those aspects of developmental psychology as a whole which are most useful in trying to explain musical development in particular. From the theoretical point of view, it was clear from the outset that we would need to place a strong emphasis on the expansion and application of the socio-cultural approach. This has become a dominant force in developmental and educational psychology more generally, and its influence is also apparent in the study of musical development (see eg. North & Hargreaves, 2008).

This is perhaps most clearly shown by the rapid growth in studies of musical identity (see eg. MacDonald, Hargreaves and Miell, 2002), and so the second aim of this chapter emerged: to develop our central argument that the study of people's musical identities is an essential part of the explanation of their musical development. People's developing self-concepts tell us a great deal about why they develop in the ways they do. This argument is particularly important since one of its implications is that musical development involves a number of important factors not necessarily concerned with technical aspects of musical performance. Recent advances in identity research have come to highlight the reciprocal relationship that exists between identity and musical development (eg. Eccles, O'Neill and Wigfield, 2005; Randles, 2009; Welch, 2007).

As far as our first aim is concerned, we can look back to the first attempt that was made to map out the developmental psychology of music approximately 25 years ago (Hargreaves, 1986): the field has grown enormously since then. Many books, journal articles and research projects have appeared, and this is now not only a very significant part of music psychology more generally, but an increasingly important part of psychology as a whole: it has also become an important foundation of and influence upon music education, which was certainly not the case in 1986. Subsequent milestones in the field have been the publication of DeLiège and Sloboda's (1996) Musical Beginnings (1996), and McPherson's comprehensive review and update in The Child as Musician (2006).

In the first of the chapter's four main sections, we provide a summary of the main theoretical perspectives on musical development since the 1980s. The remaining three sections pursue our central argument, as stated above, in those areas of the field in which it is most clear. We do so by providing one or two representative examples of empirical research from three broad areas - cognitive, social, and affective. The second section of the chapter looks at the cognitive aspects of musical development and learning: this was the predominant emphasis of developmental studies in the 1980s. A great deal of effort was devoted to understanding the emergence of musical concepts and skills, centring on the development of musical competence: in subsequent years, this emphasis has been complemented by the rapid growth of neuroscientific studies of musical development, as well as by research on prenatal and infant musical development.

Another major feature of research since the 1980s has been the strong emphasis upon the social and cultural contexts in which musical cognition and learning takes place

(eg. Barrett, 2006; Ivaldi and O'Neill, 2009; Odena and Welch, 2009). The social aspects of musical development, which have come to include the study of personality, are therefore dealt with in the third section of the chapter. At the heart of the socio-cultural approach is Vygotsky's (1966) fundamental idea that we all develop primarily through our interactions with significant others, as well as with cultural objects, tools, and institutions; social relations with others form the basis of our own individual development, such that 'we become ourselves through others'.

This basic premise of Vygotsky's theory could be seen as the precursor to our central argument, namely that the development of musical identities enables us to see how the social environment is incorporated into the development of musical thinking at the individual level. We have hinted at this idea in previous publications (eg. Hargreaves, Marshall and North, 2003), and it is developed in much greater detail in the present chapter. We deal with the relationship between musical identity and the development of musical skills, with the development of positive and negative musical identities, and with the social construction of musicianship. The concept of musical identity can begin to explain 'how individuals' views of themselves can actually determine their motivation and subsequent performance in ...music. It holds out the promise of explaining musical development 'from the inside'' (North & Hargreaves, 2008, p. 338).

The third broad area of empirical research is that on the development of the affective aspects of musical behaviour, ie. those concerning emotion, which are covered in the fourth section of the chapter. These were more or less absent from this field in the 1980s, but their investigation has grown very rapidly over the last two decades. This has been brought sharply into focus by two seminal edited collections by Juslin and Sloboda (2001, 2010). We focus here on the cognitive and emotional determinants of people's musical likes and dislikes, and, once again, on the role of the social and cultural environment in shaping these preferences. The latter aim is achieved by referring to our own 'reciprocal feedback' model, in which people's responses to music are explained in terms of the interactions between the properties of the music itself, of the listener, and of the situation in which this takes place. We also outline some important developmental changes in musical likes and dislikes: these are the real-life manifestations of affective and cognitive responses, as well as a vital component of our musical identities.

1. Theoretical perspectives on musical development

The socio-cultural approach predominates in current developmental and educational psychology: the ideas of Jean Piaget and Lev Vygotsky remain the most influential. North and Hargreaves (2008) have traced the recent history of the explanation of musical development from the socio-cultural perspective. This originates from Vygotsky's (1966) fundamental idea that 'the relations between the higher mental functions were at one time real relations among people' (p. 37), such that the social environment - our parents, family members, peers, teachers, and so on - forms the basis of our own individual development. In one sense, this is the direct opposite of Piaget's

view, in which individuals assimilate the social world around them to their own thinking: Piaget felt that thinking predominates over social development, whereas Vygotsky's view was that social relationships actually determine individuals' thinking. Piaget's well-known theory of qualitatively different stages of cognitive development in childhood and adolescence is accepted by very few contemporary developmental psychologists in its original formulation, although many of Piaget's developmental concepts still influence our thinking (and it is interesting to note that Vygotsky also proposed that developmental stages exist in children's thinking, in his case in relation to the foci of different types of activity at different age levels (see El'Konin, 1971).

The main theoretical explanations of musical development in particular were reviewed by Hargreaves and Zimmerman (1992) in the first Handbook for Research in Music Teaching and Learning (Colwell, 1992); by Swanwick and Runfola (2002) in the second edition of the Handbook; and also, very briefly and specifically from the socio-cultural point of view, by North and Hargreaves (2008). There is little point in repeating these here, although it is instructive to see how the actual models reviewed, and their particular theoretical and content emphases, have changed over that 20 year period. Hargreaves and Zimmerman reviewed three main theories, namely Swanwick and Tillman's (1986) 'spiral' model, Serafine's (1988) developmental view of 'music as cognition', and the symbol system approach, principally associated with Howard Gardner and the Harvard Project Zero group. We also tried to assess the success of each theory in dealing with three critical questions, namely (a) does each theory deal with musical production, perception, performance and representation; (b) does each theory deal specifically with developmental progression; and (c) does each theory deal specifically with music?

Swanwick and Runfola (2002) drew extensively on the original chapter, including their own views on the three theories identified in the original, and also included Gordon's (1976, 1997) music learning theory, the work of other members and associates of Gardner's group (e.g. Davidson and Scripp, 1989; Bamberger, 1991): they also cite Hargreaves and Galton's (1992) more general descriptive model of the normative developmental changes that occur across different art forms. This 1992 model was updated and revised by Hargreaves (1996), who described five age-related phases in artistic development, namely the sensorimotor (artistic expression takes the form of physical action sequences such as scribbling or vocal babbling), figural (children's representations convey the overall form or shape of the subject, but not its fine detail), schematic (figural representations begin to display adult artistic conventions), rule systems (the use of fully-fledged artistic conventions), and professional phases (in which the artist employs a variety of styles and conventions according to the demands of the task). This broad description is generally accepted as providing a rough and ready map of development in these areas, given that there is huge scope for individual variation within each phase.

North and Hargreaves's (2008) application of the socio-cultural approach to musical development quickly revealed that it is impossible to build specific social and cultural contexts into developmental phase/stage models because stage theories are essentially

individual rather than social. They represent generalised descriptions of the development of children's thinking, and this makes it impossible to specify any social situations or cultural contexts. One side-effect of the prominence of the socio-cultural perspective in studies of musical development has been a growth of interest in teachers' and learners' self-perceptions, and at their interrelationships.

One important way forward here is to employ the concept of identity, which has long been used in sociology and in other fields of cultural study, and which forms the central argument of this chapter. In Musical Identities (MacDonald, Hargreaves and Miell, 2002), we argued that the development of people's musical identities begins with biological predispositions towards musicality, and is then shaped by the people, groups, situations, and social institutions that they encounter as they develop in a particular culture. This approach enables us to incorporate socio-cultural factors into the explanation of development 'from the inside': understanding how individuals perceive and conceptualise their own musical development may be important in shaping that development.

2. Cognitive aspects of musical development: The acquisition of musical competencies

2.1 The universality of music

Whilst there is considerable evidence to support the idea that children move through different stages of development not only psychologically but also musically, and whilst it is important to recognize that children may move through these stages at different speeds, developing new skills at different ages, it is also crucial to note that all children have the potential to express themselves through music. In this section we examine the evidence to support the notion that 'we are all musical': that every human being has a biological and social guarantee of musicianship. We suggest this not as a vague utopian ideal, but rather a conclusion drawn by a growing number of researchers who are exploring the foundations of musical behaviour (MacDonald, 2008). The work of Colwyn Trevarthen (Trevarthen, 2002; Trevarthen, in press) has demonstrated how the earliest communication between a parent and a child is essentially musical. The cooing and babbling interplay that takes place between a parent and a child is a form of communication that has more in common with musical interaction than with spoken language: work in this area involves detailed microanalyses of the moment by moment communicative interactions between parent and child.

We therefore suggest that music plays a vital role in the earliest and most important bonding relationship that is developed throughout our whole lives, namely that with our parents. Our previous work (Hargreaves, MacDonald and Miell, 2005) has also highlighted how music acts as a separate channel of communication which is quite distinct from, though often related to language. Trevarthen (2002) provides evidence that not only do we all have the potential to communicate through music, but that we are all born musical communicators. Not only is this type of communication musical,

but it is also improvisatory. The kinds of musical interaction displayed between a parent and a baby are quite different from those taught within conventional music education. However, the development of musical expertise and knowledge in singing or instrumental playing, for example, build upon the communicative systems which are rooted in infancy, and there is no doubt that these early interactions are spontaneous musical gestures that demonstrate our universal potential for musical communication.

2.2 Normal distribution of musical behaviour

Given that the previous section has provided evidence to suggest that ‘we are all musical’, and that we all begin life as expert musical communicators, why do so many people see themselves as unmusical? This is a complex question and it raises an issue which manifests itself in many ways. For example, there is evidence to suggest that 15% of the population may define themselves as ‘tone-deaf’ (Williamson, 2009). Many people claim to not be musical in terms of not having ‘musical genes’, or not coming from a musical family, and received wisdom tends to suggest that in order to develop advanced music skills, individuals’ genetic inheritance must be favourable, and that this should coincide with a tradition of music-making within the family.

However, evidence suggests that the virtuoso musician is more likely to be the product of a supportive and fertile musical environment that encourages and develops skills that we are all capable of achieving, rather than deriving from innate musical ability: there is copious anthropological and empirical support evidence for this argument (Blacking, 1973; Costa-Giomi, in press; Sloboda, Davidson & Howe, 1994a, 1994b). However, if other personal characteristics such as intelligence and athletic prowess are normally distributed throughout the population, could it not be that this also applies to musical abilities (whatever they might be)? A possible answer to this apparent paradox may be that even if musical talent is normally distributed within the general population, then it is distributed around a mean that is much higher than received wisdom suggests. For example, some of our work has shown how individuals with learning difficulties or mental health problems can learn to play a musical instrument, and that psychological benefits often result from musical engagement of this kind (MacDonald, Davies and O’Donnell, 1999; MacDonald and Miell, 2002).

Where does this leave the virtuoso musician, and the argument that some people just have a natural propensity for music? Perhaps there is a compromise position – that we are all musical, but that musical ability is still normally distributed within the population. To put it simply: we are all musical, but some people have more natural potential to develop musical skills than others.

2.3 The fundamental mastery misconception

Our basic argument here is that everybody is musical, and that the technical and expressive aspects of musical performance demand skills that everyone is capable of learning given the appropriate environmental intervention. However, the consistent emphasis upon the technical aspects of performance in music education in many countries, and the corresponding lack of emphasis on critical thinking and the development of creativity, could be another reason why many people feel ‘unmusical’. This ‘artisan’ approach to music education, in which students are required to develop advanced technical skills, underplays the importance of creative thinking and creative expression, and contributes towards the ‘fundamental mastery misconception’. This is that order to be an authentic musician, one must possess singularly high levels of technical skill on a given instrument: that in the training of professional musicians, the key skills involve the technical mastery of the instrument, and that these high levels of technical skill are what define the musician (Johansson, in press; MacDonald, Kreutz and Mitchell, in press). Those people who do not have such high levels of technical skill may feel excluded and may even regard themselves as ‘unmusical’, such is the strength of the mastery misconception.

3. Social/personality aspects of musical development: Musical identity

3.1 Musical identities

We argued earlier that the study of people’s musical identities is an essential part of the explanation of musical development: we conceive of musical identities as ubiquitous, constantly evolving aspects of the self-concept that are negotiated across a range of social situations. Research on identity facilitates the exploration of fundamental research questions relating to musical behaviour and the social construction of musical activities in contemporary contexts. Musical identities influence not only the development of specific musical skills, but also the rate at which that development occurs, and this provides the vital link between the development of very specific musical skills, and the effects of wider social and cultural influences on individual learning (Sichivitsa, 2007). As stated above, this link is reciprocal: in addition to musical identities affecting musical development, the development of specific musical skills can also influence developing musical identities. For example, a young child who learns to play a demanding new piece of guitar music will experience a confidence boost that may influence in a positive way how she feels about her own musical abilities. There is considerable scope for research on the psychological processes surrounding how developments in technical aspects of musicianship influence musical identities.

In exploring how musical identities are constructed, and how they may influence the development of musicality, it is important to consider the wide variety of ways in which identity can be theorized. Identity is a very topical subject for current research, and there has been an exponential growth in studies exploring identity issues across a whole range of disciplines - particularly within psychology and sociology (Elliot and du Gay, 2009; Wetherell and Mohanty, 2010). One of the reasons for the dramatic increase in

identity research is the extent to which life choices regarding jobs, relationships, pastimes, locality of residence, etc have become more fluid in post-industrial societies (Beck, 2009). Our earlier work (MacDonald, Hargreaves and Miell, 2002) provides a detailed exploration of the concept of musical identities and the diverse ways in which they can be considered. In this chapter, we focus specifically upon the role that identities can have in the development of musical skills.

The ways in which we view ourselves, and evaluate our own skills and competencies, form a key part of the development of our identities, and these self-assessments influence our development in general (Bandura, 1986) as well as in musical terms (Hargreaves, MacDonald and Miell, 2002). For example, individuals with low self-efficacy (ie. with a low estimate of their capability to complete a specific task) in a musical context may regard their musical potential as minimal, perhaps arguing that ‘my family is not musical and so I cannot learn the piano’. This is a very common popular misconception regarding the development of musical skills: but it is often these low expectancies, rather than the family’s lack of musicality, that are more likely to contribute the eventual non-development of musical skills.

In other words, we suggest that musical identities mediate musical development. While there is considerable evidence to support the idea that musical development occurs in age-related phases (see eg. Hargreaves, 1996), and that these phases of skill development depend to a certain extent upon extensive hours of practice within a supportive environment (Sloboda, Davidson & Howe 1994a, 1994b), these developments are also affected by social psychological factors, and by musical identities in particular (Costa-Giomi, in press). Developing a positive musical identity can increase the extent to which individuals will engage in musical practice, which can in turn enable the development of specific musical skills (Lamont, Hargreaves, Marshall & Tarrant, 2010; McPherson and O’Neill, 2010).

3.2 Social construction of musicianship

The extent to which we view ourselves as ‘musicians’ is an essential aspect of our musical identities. Whether we might be a professional opera singer, or just someone who sings in the bath when we think no one is listening, we all have an implicit view about the status of our own musicality, and this also influences how we develop musically. We suggest that the term *musician* is a socially and culturally defined concept, and that it is not simply the case that individuals practise over many years, develop high levels of technical skill, and only then adopt the label ‘musician’. In other professions, people obtain qualifications that enable them to adopt the appropriate professional title, such as ‘doctor’, ‘dentist’, or ‘lawyer’, etc. This has no parallel in music: individuals do not go to university or college, attain a degree in music, secure a job as a musician, and then adopt the label ‘musician’ in the same way the way. The term musician is considerably more fluid, and is not necessarily dependent upon the attainment of qualifications.

Jazz musicians, for example, use elements of life style choice to help them define the ‘professional jazz musician’ (MacDonald and Wilson, 2005), and this is not solely dependent on the attainment of technical skills. For example, Caldwell and MacDonald (2010) interviewed 10 self-defined ‘non-musicians’ about their musical tastes, preferences and behaviours. In spite of their self-definition, all had experience of playing music in public, and some had advanced technical skills evidenced by the fact they had been performing regularly in bands, in some cases for over 20 years. Conversely, MacDonald and Miell (2004) report a study of young adults without formal education in music, but who performed in a band that practised every day: these individuals did see themselves as ‘musicians’. The key point here is that the term musician is a socially constructed label, and not an identity that is dependent upon formal education or qualifications. These examples highlight how the concept of ‘being a musician’, and the development of our musical identities, are influenced by non-musical factors within the immediate and wider social environment, in particular by the ways in which we relate to people around us (MacDonald, Miell & Wilson, 2005).

In a related study, Borthwick & Davidson (2002) studied 12 families over a number of years, undertaking interviews with all family members. Their work highlights in significant detail how social factors such as family interactions and sibling communication influence the construction and negotiation of musical identities. In this instance, musical influences merge with those present in the family. In one example, a family in which all the siblings have considerable musical experience and skill appears to interact in such a way that the oldest sibling adopts the identity of ‘musician’. This in turn inhibits the younger siblings, who discuss their musical skills by comparing them unfavourably with those of the older, apparently more musical sibling.

The way in which music is structured and delivered in the school context also has a huge influence upon our developing musical identities (Barrett and Stauffer, 2009) Lamont (2002) compared one school in which some pupils received peripatetic music lessons out of regular class time with another in which all pupils received music lessons together in the classroom. Many more children in the latter viewed themselves as being ‘musical’ in comparison to the former. We do not present this example to advocate one way of teaching music rather than another, but as a way of highlighting how the delivery of music education within a school context can influence the pupils’ developing sense of musical identity, and the resulting development of musical skills. In the first school, most of the pupils who were taken out of the class for music lessons saw themselves as ‘musicians’, but the rest of the class did not, as they felt excluded from this specialist treatment. In the second school, however, many more of the children perceived themselves as ‘musical’ and as being ‘musicians’ because they did not see a small group of specialist pupils that were getting a lot more musical input than they were. This shows once again how the social environment influences our developing sense of musicality.

Musical identities can be conceptualized as multifaceted, as constantly evolving, and to a certain extent, as contextually dependent (Wilson & MacDonald, 2005): we all have several musical identities that manifest themselves in different ways. For example, our

musical preferences and tastes help to shape how we view ourselves, as well as the image of ourselves that we wish to present to world around us (Zillman & Gan, 1997; MacDonald, Hargreaves and Miell, 2008). We use music as a ‘badge of identity’ (cf. Frith, 1981) and this aspect of our musical identity has an important influence upon how we engage with music at a practical level: how we may learn the guitar, the style of music we might like to play, and with which other musicians we might like to play.

In other words, our musical identities not only influence the development of our musical skills, but also the ways in which we learn an instrument (MacDonald, Hargreaves and Miell, 2009). Our preferences are also dependent upon the listening situation: we choose different pieces for listening in the car, in a supermarket, in a restaurant, whilst relaxing at home, whilst exercising, etc (see eg. North and Hargreaves, 2008). Zillman and Gan (1997) also provide evidence that music may be the most important recreational activity in which young people engage. At around the time of life when this occurs, however (around early adolescence in many cases), it appears that many lose interest in more formal music education activities (see North & Hargreaves, 2008). The challenge for music education is to harness the power of music in young people’s lives in practical ways that can facilitate the development of musical activities throughout the life span.

4. Emotional aspects of musical development: the development of preference and taste

4.1 The reciprocal feedback model

We have proposed elsewhere (Hargreaves, MacDonald & Miell, 2005) that in the most general terms, people’s responses to music are determined by three broad classes of variable, namely those which relate to the listener, to the music, and to the listening situation. The various interactions between each of these are summarised in the ‘musical response’ part of our ‘reciprocal feedback’ model of musical communication, which is reproduced in Fig. 1.3.1. We describe it as a reciprocal feedback model because each of the three main components can exert a simultaneous influence upon each of the other two, and because these mutual influences are bi-directional in each

-----Figure 1.3.1 about here-----

case. Very briefly, the music itself can be seen to vary in various respects, such as in its complexity, familiarity, or prototypicality (ie the extent to which a piece is typical of the genre or style which it represents; listeners vary with respect to ‘individual difference’ factors such as age, gender, personality, musical training and experience; and situations and contexts, which complete the triangle, include features of the listener’s immediate situation (eg. the presence or absence of others, or simultaneous engagement in other ongoing activities): the immediate social or institutional context (eg. concert hall, shop, restaurant, workplace, school classroom, consumer or leisure environment): or broader factors relating to regional or national influences (eg. music

associated with sports clubs, political movements, or national figures). This conceptualisation enables us to see how reciprocal feedback relationships exist between each one of the three broad factors and each of other two: and as far as preference and taste are concerned, we can see from the Figure that the dynamic relationship between ‘music’ and ‘listener’ refers to the constant process of evolution and change in an individual’s musical taste: and that between the ‘listener’ and the ‘situation’ describes the ways in which people in contemporary society use music as a resource, eg. in managing emotional states or moods.

This general model of responses to music provides a useful perspective from which we can explain individual preferences and tastes. The response to music itself, shown at the centre of Figure 1.3.1, has many components: just three broad types of these are mentioned in the Figure, namely physiological responses (eg. arousal level); cognitive responses (eg. attention, memory, perceptual coding, expectation, and evaluation); and affective responses, which are the main focus of this section. It is the latter which determine musical preferences and tastes. Most people have strong and distinctive patterns of preference: immediate, short-term reactions to particular pieces at specific times gradually accumulate to produce medium- and longer-term taste patterns, which are more stable: these patterns become an important part of individuals’ musical identities, as we explained above. These medium- and long-term patterns, though relatively stable, are still subject to continual change as new musical experiences are encountered: immediate responses to new musical stimuli are determined by longer term taste patterns, but these new experiences can feed back into the system and change those longer-term patterns, such that this aspect of the musical identity system is in a constant state of evolution and change.

4.2 Developmental changes

A good deal of research has described age-related related changes in musical perception, production and performance. As we saw earlier, Swanwick and Runfola (2002) reviewed this literature in Colwell and Richardson’s New Handbook of Research on Music Teaching and Learning, drawing extensively on an earlier review by Hargreaves and Zimmerman (1992) in the original Handbook. There is still considerable disagreement about the existence of Piagetian-style developmental stages in musical (and artistic) development. Many contemporary developmental psychologists reject stage-type theories for a variety of different reasons, and the notion of age-related stages or phases in musical development is correspondingly problematic.

However, musical preferences and tastes may be less dependent on the maturation of competencies and skills than performing, composing or listening abilities, for example. It is important to note that the technological revolution in how we listen to music means that individuals can have access to complete personal music collections instantly and constantly via mp3 players (often incorporated into mobile phones). Moreover, the decision to select a given piece of music in a particular situation involves a series of psychological decisions: ‘how do I feel right now?’, ‘how do I want to feel in 5

minutes?’, ‘what music will help me achieve these goals?’, ‘is this music appropriate for this situation?’, and so on. In this sense we are all very sophisticated consumers of music, not least because we make these personal and complicated psychological assessments very quickly (Cassidy and MacDonald, 2010).

We should therefore evaluate the research literature on the development of musical preference and taste with a clear distinction in mind between the capabilities that are involved in making particular preference decisions, and the actual content of those decisions. It may be that something like ‘cognitive aesthetic development’ does exist, and that this idea could be used to explain how children’s aesthetic judgments become more mature as they get older: but this does not necessarily have any bearing on the musical content of those judgements. In one of our own studies (Hargreaves and North, 1999), we made the distinction between the cognitive and affective components of responses to musical pieces and styles, suggesting that there is likely to be more consistent age-related change in the cognitive than in the affective component: but both aspects are influenced directly by the social and cultural context within which particular pieces and styles are evaluated.

The research literature on the content of the musical preferences of different age groups has been reviewed by Finnäs (1989) and LeBlanc (1991), and more recently by Hargreaves, North and Tarrant (2006). LeBlanc’s (1991) review led to his developmental account of ‘open-earedness’, a term first employed by Hargreaves (1982) in explaining the results of his own study on age changes in preference. Hargreaves used the term to refer to some children’s ability listen to and maybe also enjoy unconventional or unusual (eg. ‘avant garde’, aleatory or electronic) musical sounds, as they may ‘show less evidence of acculturation to normative standards of ‘good taste’ than older children (Hargreaves, 1982, p. 51). LeBlanc developed the idea of open-earedness by using it as the basis for four generalisations emerging from his literature review: that ‘younger children are more open-eared....open-earedness declines as the child enters adolescence.... there is a partial rebound of open-earedness as the listener matures from adolescence to young adulthood....open-earedness declines as the listener matures to old age’ (pp. 36-8).

Hargreaves, North and Tarrant (2006) summarised the studies reviewed by LeBlanc, as well as some more recent ones, in a table which shows the details of the participants in each study and the music that was employed; and which summarized the results in each case. LeBlanc’s generalisations do seem to be supported by this analysis: there is a ‘dip’ in open-earedness in later childhood which occurs at around the age of 10 or 11 years which typically shows itself in strong preferences for a narrow range of pop styles, and strong general dislike for all other styles. After this, there seems to be a general decline in liking for all popular music styles across the rest of the life span, and a corresponding general increase in ‘classical’ and other ‘serious’ styles.

It remains to be seen whether the ways in which people listen to music in the noughties will continue to show these developmental regularities. The advent of music downloads

on to large capacity hard disks, and the use of playlists which are structured by the individual listener's categorisation of different pieces, as well as the sheer volume of available music, and its increasing encroachment into many areas of everyday life, may give rise to quite different patterns of age-related development. What is not in doubt, however, is that music will continue to exert an increasing influence in many areas of our lives, and that the study of these influences will therefore be increasingly important and necessary.

5. Conclusion

The developmental psychology of music has come a long way in the last 25 years: technological developments have given rise to considerable advances in research methodology and instrumentation, which in turn has led to the emergence of several new areas of developmental study. Among the most prominent we would include the recent growth in neuroscientific studies of musical development; work on the development of emotion in musical behaviour; and the detailed study of prenatal and infant musical development. Along with this has gone a significant change in the general theoretical zeitgeist, perhaps the most important aspect of which is the increasing influence of the socio-cultural approach, which originates in the work of Vygotsky, as well as a general increase in interest in the emotional aspects of development in relation to cognition.

Vygotsky's (1966) basic idea that 'we become ourselves through others': that our social relationships with others form the basis of our own individual development, has led indirectly to our own emphasis on the importance of individual identity in musical development: in this chapter we have elaborated upon the different ways in which musical identities mediate musical development, and we have tried to do so by looking in more depth at three representative areas: the cognitive, the social, and the affective (emotional) aspects of musical development.

Because of the complexity, symbolic and expressive power of music, the study of musical development is giving insights into aspects of general development that have not previously been possible. We suggest that the explosive growth of music psychology in the 2000s and 2010s parallels the growth of psycholinguistics in the 1960s, or even the 'cognitive revolution' of the 1980s: it is able to explain aspects of symbolic and representational development that have hitherto been beyond the reach of empirical psychology. This growth will continue because of its central importance within psychology, and because there is still so much that we still just don't know.

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