

# Perceptions of Crystallising and Paralysing Factors in the Development of Student Teachers of Music in Scotland

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## Abstract

For some time there has been debate about differing perspectives on musical gift and musical intelligence. One view is that musical gift is innate: that it is present in certain individuals from birth and that the task of the teacher is to develop the potential which is there. A second view is that musical gift is a complex concept which includes responses from individuals to different environments and communities within which they might be placed (Davidson, Howe and Sloboda, 1997). This then raises the possibility that musical excellence can be taught.

We have already explored this idea with practising musicians (Stollery and McPhee, 2002). Our research has now expanded to include musicians in training, and, in this paper, we look at the influences in their musical development which have either 'crystallised' or 'paralysed' the musical talent which they possess. We conclude that there are several key influences in the musical development of the individual, including home and community support, school opportunities and teaching styles. The research is part of a continuing wider project which will involve investigation in schools.

## Introduction

There has been a considerable degree of debate in recent years about the nature of musical intelligence and what constitutes musical gift. In connection with this, a number of differing perspectives have emerged. The first of these may be described as the psychological perspective (e.g. Sloboda, 1985; Storr, 1992; Snyder, 2000) - although within this, there may be discerned a number of subdivisions. For example, one could approach the issue from the point of

neuropsychology (e.g. Gardner 1993, Rauscher, 1995, Schlaug et al, 1995, etc): or from the viewpoint of perception (Schiffman, 2000). Clearly, the emotional perspective would be another area within which music could be approached (Robertson, 2000). In terms of musical education, one might, for instance, look at the curriculum (eg Paynter, 1982), or at how musical ability develops over the course of the educative experience (e.g. Moog, 1976; McDonald and Simons, 1989). Recent research has drawn the psychological and educational perspectives together, and has shown that there are considerable links between the two areas. This metacognitive claim for music is finding increasing acceptance as a result of neurological and neuropsychological research, and it is one which the authors have considered in a recent paper (Stollery and McPhee, 2002).

The concept of musical gift may also be seen to be rooted in a number of other debates. There is a general interest in the education of gifted pupils, and this interest is world-wide (Kirk et al, 2000) However, for the purposes of this paper, we define musical gift as

*...a situation where receptive, creative, responsive and technical skills are at a highly developed level.*

(Stollery and McPhee, 2002: 90)

Musical giftedness has been identified in a number of different ways. For example, a checklist-base approach has been advocated for some years and continues to be supported by some investigators (Hartounian, 2000). This approach is also one which has found favour amongst those investigating general high levels of ability amongst children (e.g. Passow, 1979). Nevertheless, there are others who advocate a more developmental approach in that rather than seeing children as *born* gifted - children can *become* gifted (Skinner, 1991). For the purposes of our paper, this is a very important distinction. And the logical concomitant of this position is that if giftedness in music is not simply the preserve of an elite few, then it must be possible for it to be taught. In the context of this debate, Michael Howe believes that excellence may depend not only on inherited factors, but also on opportunities for learning and the way in which these are presented to individuals (Howe, 1990). It is the opinion of Davidson, Howe and Sloboda (1997) that while biological factors do have an undoubted role to play, we should not see the gifts and talents area in purely deterministic terms. Rather, we should also see it in terms of the environmental factors which influence development.

An important commentator in the area of musical excellence and the psychology of music is Sloboda (1990). If musical excellence can in fact be taught, then Sloboda takes the view that there are a number of 'myths' which we need to explore.

These 'myths' are as follows:

- *To be excellent in music, one has to be excellent to begin with*
- *If one works hard, this will eventually lead to the attainment of excellence*

Following on from these two myths, is the idea that musical excellence can only be achieved by those blessed with innate ability. Further, if one is to attain excellence, then musical training from experienced musicians who have themselves displayed the appropriate qualities is essential. However, we are not looking at a situation where the idea that excellence can be taught has replaced or supplanted the earlier model that excellence is innate: there are still commentators such as Eastop (2001) who hold firmly to the older view.

We have therefore arrived at a position where it can be seen that there are really two positions amongst commentators in this area. The first of these is that musical intelligence is possessed by a few of the population, who may be seen as constituting an elite. These people require to have their innate gifts and talents developed in a special way in order to maximise the potential which they represent. The second view is that musical intelligence is innate in all of us, and that the task of the educator is to ensure that this particular intelligence is drawn out and developed to the fullest extent.

### **Educating musically gifted children in Scotland**

It is possible to see reflected in the provision made for the education of musically gifted children in Scotland, the working out in practice of these two positions. There have been a number of case studies undertaken in this field, both within the state sector and private institutions (McPhee, 2000). If we look first at the position that musical excellence is the preserve of a few, we can see, for example, the possibility of conservatoire-based provision through the Junior School of the Royal Scottish Academy of Music and Drama (RSAMD, 1998 - 2001). Here, there are opportunities for young people who wish to develop their potential in music within the context of an internationally reputable institution. It is of interest that applicants for this particular provision are required to undertake entrance auditions and tests which serve to identify those within whom excellence, or the potential to be excellent, is thought to reside. Further, they are given tuition by practising, professional musicians in the various elements which they have chosen to study. In this, the positions identified by Eastop and by Sloboda in his 'myths' are seen to be operative.

Similarly, in the institution which was established to provide for gifted young musicians in Scotland as a result of the Cameron Report (SED, 1975), there are similar tests and auditioning procedures in place in order to identify those for whom the provision on offer is thought to be most suitable. However, it is notable that in the case of this particular school, there are conditions written into

the audition/testing protocols which provide for the identification of potential rather than established technical excellence.

In the state sector, a comprehensive school in Renfrewshire which was studied in the light of its enviable reputation in fostering musical ability in large numbers of young people showed that it, too, utilised audition, co-ordination and affinity testing (Bentley, 1966) in order to establish which young people would be most likely to benefit from an enhanced level of musical activity. However, it does offer this to all of its students, and not to an elect minority. The level of provision, which it does make, is in fact quite staggering, with an orchestra, bands and choirs in addition to a wide range of group music making activities and instruction. The point here is that the level of exposure which young people have to the possibility of music making and achievement in music is enhanced: the opportunities are present, and young people are encouraged to make the most of them. There are of course, other schools - many others - which offer similar opportunities, although perhaps not on quite so large a scale.

Thus, from case studies of the provision made within Scotland for the enhancement of musical excellence, we see that the two polarities are in fact represented: there are institutions which are designed to cater for an elite and to develop their musical ability to a very high perceived level indeed - and there are others which strive to bring out musical excellence in all their pupils, where it may be seen to be ripe for development.

### **The conditions in which excellence may develop.**

If, as we suppose, it is true that musical excellence or musical intelligence can be in fact taught, then it may be possible for us to identify those experiences in life which are more conducive for its development. Similarly, it will be possible for us to identify those which act as barriers to it. We have, in our earlier work, chosen to call these *crystallising* and *paralysing* experiences, respectively. Thus, crystallising experiences will be those which have, in the musically educative and developmental history of the individual, served to enable growth in musical ability. Likewise, the paralysing experience will be those which have served to stultify or to prevent it.

Our first research was carried out in 2001 at the conference of the Scottish Network for Able Pupils (Stollery and McPhee, 2001, op.cit.). Here, we presented a paper on musical gift to an audience of professional educators, and we used the opportunity to gather data on the crystallising and paralysing experiences which they had themselves experienced. We asked respondents if they could describe experiences which had happened to them and which had helped to develop or to prevent from developing, their musical ability. The format used was that of a free text box. There was no questionnaire used, and at this particular session, there was no debriefing of the responses - although there was a very full and interesting discussion of the issues.

The responses to the crystallising experiences showed a distinct pattern, and the following emerged as significant:

- Parents affording opportunities, through instrumental provision and opportunities for exposure to music in various forms
- Pupils given high self-esteem through reinforcement and praise
- Motivation from a 'gifted' teacher
- Motivation provided by other members of the family - siblings, etc - participating in musical activities
- Motivation from a successful performance in front of an audience
- Working with other musicians at the same and at different stages
- Realising that one has the ability to respond to music

Three factors emerged, by a considerable margin, as being pre-eminent in this discussion:

- Motivation through praise and enhancement of self-esteem
- Parental encouragement and support - in various forms
- Inspiration from a gifted teacher or role model.

We identified from these responses that there was a general reference to the provision of opportunity, rather than attempts to shut potential down. Those who thought that they had achieved, had done so when they had been given the chance to do so. We then turned to the paralysing factors, and here a number of areas were suggested:

- Being embarrassed in front of a group by poor or inadequate performance
- Ridicule from peers for carrying an instrument or not conforming to the social norms of that particular group
- Poor teaching/ boredom from tutors who operated a deficit model, with resultant destruction of confidence
- Lack of opportunity to become involved in musical activity
- Negative comments about playing
- Negative effects about formal examinations in music and the processes leading to them

- Costs of tuition in financial terms
- Low importance attached to music by school or family
- Time required for the practice thought necessary to be proficient
- Pressure to perform to a high standard before confidence had matured
- Inappropriate or boring repertoire
- Ill informed personal comments by staff.

When the prevalent factors from this analysis were considered, they appeared to be

- Poor or inadequate teaching
- Negative attitudes from parents, teachers or peers
- Lack of opportunities
- The demands of musical development.

There were a number of features from the analysis of this admittedly small and unrepresentative sample which we thought important. Firstly, the number of comments relating to the paralysing or negative aspects were roughly in the proportion of two to one against those which were crystallising or positive in tone. Secondly, it was clear that there was great importance attached to the provision of opportunity for musical development. Thirdly - and for the purposes of this paper, perhaps most importantly - it was clear that the quality of teaching and tuition was of great relevance in deciding whether an individual's development was affected either in a positive or in a negative way.

### **The importance of teacher development**

If, as we have seen, teachers and teaching can play a critical role in musical development and thence into the attainment of musical excellence, it is therefore important to look at the development of music teachers themselves. Modelling is of great importance in looking at the ways in which people develop (Papalia et al, 2001): music teachers themselves are not immune from this process. Thus, it is also interesting to look at developing teachers of music and to see to what extent, their own development had been affected by the factors which our earlier study had identified. The authors of this paper are both centrally engaged in the education of music teachers in Scotland, - one in terms of music studies and the other in terms of education studies - and the opportunity was present to look at our own students to see the extent to which crystallising and paralysing

processes had influenced their own progress and development. (In fact, the institutions in which the authors of this paper are employed - the Universities of Aberdeen and Glasgow - are two of only three in Scotland involved in the undergraduate education of potential teachers of music). It was thought that such research, besides shedding some light on these processes as they affect our own students - and therefore a substantial number of the music teachers about to go into careers in Scotland - would allow further illumination of the crystallisation and paralysing processes in general. This suggested a larger study, and it is intended to proceed with this when time and resources permit.

The methodology chosen was as follows, and was based upon the findings of the first study (the SNAP conference). Students were gathered together in their year groups and the purposes of the study were outlined to them. They were then given the free text boxes and were asked to list the factors in each of the processes, as they had been affected by them. Students were asked to provide details of their year group, but all responses, in line with the original study, were anonymous. This was to allow students to make comments free from fear that in some way they could be identified and feedback given to teachers or other interested parties. They were provided with additional guidance as and when necessary by the researchers. The research data was then collated at the University of Glasgow and the results were entered on repertory grids listing each response. The repertory grids allowed analysis by comment and by year group; further, correlation with the responses obtained at the SNAP conference was allowed. In all, responses were received from students in all four year groups at the University of Glasgow, and from first and final year students at the University of Aberdeen. The repertory grids are shown in Appendices One and Two. The use of questionnaires was considered, and these will be used in the next stage of our research. However, it was felt that at this stage in our exploration of these crystallising and paralysing features it would be helpful to assemble as many ideas and factors as possible without constraining individuals by the format of a questionnaire.

## **Results**

The results were as follows:

In terms of crystallising responses, the following factors were identified: total responses under each heading are given.

- Performing opportunities including competitions (solo) - 15
- Availability of / affinity with instrument - 16
- Good school Music Department - 24
- Performing opportunities (ensembles/bands) - 21

- Hearing/watching others perform - 15
- Family interest and encouragement - 30
- Opportunities for composing/inventing - 4
- Inspiring/encouraging music teacher - 38
- Feedback on performance / exam success - 10
- Opportunities for travel abroad - 6
- Feel good factor - 2
- Musical environment at home - 20
- Starting early - 1
- Personal reasons such as the availability of money - 9
- Positive peer influence - 7

The three most important factors in the crystallising grid by frequency of response were:

- Inspiring / encouraging music teacher
- Family influence and encouragement
- Good school music department.

In terms of year group and institutional distribution, it was notable that family influence and encouragement was seen as an important factor by first year students in both institutions while the importance of a good teacher was recognised as critical evenly across both institutions and all year groups. Glasgow students seemed to value the home environment more than the Aberdeen students, although students at both universities listed this as important in their development. Environmental factors such as opportunities for performing and availability of the instrument were evenly divided between the institutions and across year groups, although there was a stress on this by first year students at Aberdeen. Opportunities for composing and inventing were listed by some students at Aberdeen and by none at Glasgow - an interesting result in view of the fact that importance is placed on this activity in both institutions. Feedback on examination success seemed to be more important for the Aberdeen students than for the Glasgow students at the same stages, while the availability of resources such as finance was more important in Glasgow than in Aberdeen. Correlation with the SNAP conference results showed that while 7 factors were listed, 14 appeared in the larger sample. Of these, all 7 SNAP responses re-appeared in some form or another.



The grid for paralysing factors in musical growth yielded the following data: again, total responses are given under each heading:

- Pressure to achieve / practise - 13
- Poor teaching - 24
- Lack of opportunities - e.g., ensembles - 8
- Discouraging / demanding / over critical teaching - 27
- Held back by slower progress of others - 5
- Personal reasons - illness, lack of motivation - 12
- Lack of family interest or encouragement - 11
- Lack of support in school department - 8
- Music examination pressure - 10
- Being made to perform in front of others - 4
- Negative effects of competition - 2
- Performance nerves - 2
- Lack of financial resources - 14
- Low self esteem - 3
- Discouragement by the school in favour of 'academic' pursuits - 8

The three most popularly identified paralysing factors were thus:

- Over-critical / discouraging / demanding teachers
- Poor teaching
- Pressure to perform and practise.

In terms of analysis by institution and year group, students at Glasgow felt under much more pressure to achieve than those at Aberdeen, and this was evident across all year groups at Glasgow. Poor teaching was perceived as a significant factor evenly by all students, as was lack of opportunity in ensemble playing. Students at Aberdeen - particularly in the first year - felt that discouraging or over critical teachers were a paralysing factor, whereas this did not seem to be quite so important to those at Glasgow. Lack of resources was evenly perceived to be a paralysing factor by students attending Glasgow than students attending Aberdeen, as was lack of family interest and encouragement. Lack of support in school music departments did not figure as largely in the consciousness of

Glasgow students as those from Aberdeen, but negative peer influences was again evenly distributed. Discouragement at school to study music in favour of more 'academic' activities was a significant factor for students in both universities. In terms of correlation with the SNAP study, it emerged that while the smaller study raised 12 factors which had been 'paralysing' in the experience of the sample, the present study identified 16, of which 9 were present in the SNAP sample.

## Commentary

It is perhaps significant that the larger second sample generated many more crystallising experiences than the earlier SNAP sample, and that the ratio of crystallising experience to paralysing ones is much more even. . The critical role of the teacher and the style adopted by the teacher in the musical development of children stands out as by far the most important feature in both the crystallising and paralysing experiences. These music teachers of tomorrow clearly valued encouraging teachers, and felt severely constrained by those who were over critical or too demanding. As one student put it:

*'... no matter how hard I try or how well I play, it is never good enough'.*

Thus, it would appear that the operation of a deficit model where there is a mythical level of perfection which the student might achieve is instrumental in preventing young people from achieving their musical potential, causing lack of motivation and self-esteem. It would also appear that teachers must exercise care over forcing young people at a delicate age to perform in front of their peers: while some found this exciting and motivating, others found this a nerve racking and distressing experience. Further, some students found that their development had been constrained by being held back by the slower pace of learning of some of their classmates: it would appear that there are implications here for class management strategy and the teaching of gifted children in the context of the comprehensive school. In addition, it is perhaps notable that a number of our respondents were affected in a negative way by pressure to succeed which was transmitted to them by their teachers.

It seems from the evidence of this study that the music department in the school plays an equally important role in terms of the provision of ensemble opportunities, and the creation of an ethos or atmosphere in which musical talent may develop. Particularly important is the provision of opportunities for playing with other young musicians in ensemble groupings and the creation of opportunities for solo performing is also pointed up as a crystallising factor by many of our students. Opportunities for hearing and watching others perform was seen as a crystallising factor by a number of respondents. However, it seems that there is a fine line to be drawn between the creation of opportunities which lead to enhanced esteem and those which do not, as many students commented on the negative effects of pressure to achieve in competitions. Opportunities for travel abroad in order to perform were commented upon by

several students in the context of vibrant school departments of music: one cannot be sure if the music was the excuse for the travel, or whether the travel served to further motivate students who were already committed to their musical development.

The influence of the home is another factor which has attracted comment in the sample. Support from parents and family is seen as of great importance in the crystallising sense, and is also commented upon as a paralysing factor by students who have found this to be a problematic area. Likewise, the influence of peers is pointed up as having either a positive or a negative influence on whether potential can be fully realised. Those who were encouraged by their schoolmates clearly valued this experience, while those who were discouraged felt alienated: it is creditworthy that they managed not only to survive but to continue their musical careers in higher education. Access to resources is seen as being of importance to many students, either through family means or through the school. Of importance to a number was having access to an instrument: it was clear that many families had made sacrifices in order to provide an instrument of appropriate quality.

Several crystallising features seem to have been more important to first year students than to those in later years and this may reflect the chain of memory being changed by the Higher Education experience, or it may equally reflect changing teaching in the schools. It is perhaps again notable that first year students had clearer memories of peer influence on their development than those in later years, where they had been in the company of fellow musicians for a longer period of time. That said, it is also clear that a large number of the factors which were identified and upon which commentary has been made, were equally perceived by students at the different stages of musical and educational development represented in our sample.

Across the two teacher education institutions, there were two major points of commentary. The first of these has already been alluded to: that is, the emphasis on opportunities for composing and inventing which were valued by the students at Aberdeen and not commented upon by students from Glasgow. This is perhaps a surprising finding, as the Glasgow students study this in depth in classes at the Royal Scottish Academy of Music and Drama. However, it is also a widely recognised element of excellence in the course at Aberdeen, and perhaps it receives greater prominence in this institution: in other words, there may be a greater emphasis on performance standards in the conservatoire element of the Glasgow course. Secondly, it was quite clear that the first year students at Aberdeen felt that they had had more discouragement from teachers than those at Glasgow, by a considerable degree. This is perhaps more difficult to explain, and one can only conjecture about teaching styles in music in the local area. However, it has to be borne in mind in this context that both institutions, while retaining a strong local catchment for their respective courses, nevertheless recruit from the whole of Scotland and indeed beyond.

## Conclusion

While our sample in the present study is a more significant one than that which was used in our previous work on this topic, it is nevertheless one which has to be treated with some care when conclusions are being drawn. Although the students involved in the research are studying music in higher education and although those involved in the Glasgow sample are students at the national conservatoire, these students are being educated to become teachers of music rather than professional performers or virtuosi. Thus, although they are very competent and excellent in terms of their performance skills - necessary for admission to either of these B Ed courses - they may in some quarters not be seen as the pinnacle of musical gift in Scotland. Such students might well have had a specialised musical education, perhaps in one of the institutions alluded to in the second section of this paper. This in turn will to a certain degree, affect the responses which the students have given us in their text boxes. Secondly, the sample, being education students, might well be expected to be more aware of pedagogical issues than another sample composed of students with no education input. It would be an interesting exercise to see how such students would respond. Thirdly, the students are bound to be affected by institutional factors in terms of the courses which they are currently pursuing and the personalities which they encounter on these courses - and there is, particularly in the responses indicating the importance of composition to some students, evidence that this is happening. However, the sample may also be seen as fairly homogeneous in that these are young - and occasionally more mature - people who are pursuing a common aim in their musical studies and for who there will be a certain similarity in the learning outcomes of the courses. In this sense, then, we feel that it is valid to attempt some generalisation from the evidence which we have obtained in this research.

The finding that the role of the teacher and the school is of critical importance in the development of musical excellence is one which is supported by other research (Sloboda, 1985 *op cit*; Swanwick, 1988, etc.) Our study has reinforced this, and, given the fact that our sample is composed of aspiring teachers of music, perhaps gives this an extra edge. The commentary by many of our students on the importance of teaching style gives focus to the importance of pedagogy in framing conditions and an ethos within which the crystallisation of musical ability can occur. This, likewise, has been commented upon by others (e.g. Swanwick, 1988, 1994.) It is therefore important that firstly, our students keep in mind the extent to which their own development was either hastened or hindered by appropriate or inappropriate pedagogy, and that they rehearse the correct skills in their own teaching. It is also clearly important that institutions of teacher education should impress upon students the creation of a suitable teaching style and a fertile classroom ethos (Farmer, 1979).

There are several implications from our study for the school as institution. Firstly, it appears that the music department has a critical role to play in creating conditions where talent can flourish. The provision of performing opportunities, both solo and ensemble, is seen as critical (Mills, 1985). This in turn has

implications for the resourcing of such activities in terms of the provision of appropriate staff - not just teachers of music, who play a vital role in the academic and social leadership of the department - but also allied personnel such as instrumental instructors. These resources require to be carefully managed, and a climate of growth, allied to appropriate pedagogy, constructed. It is disappointing that some students reported that they had been discouraged from taking up music in favour of concentration on more 'academic' subjects: this reveals a sad lack of appreciation of the role of music both in terms of the nature of the experience which a course in music offers, and in terms of the potential for metacognitive development which is offered by it. However, this verifies earlier study by one of the present authors (McPhee, 2000) which revealed that after hours musical activities were under threat from extra classes in perceived 'academic' subjects. Issues of policy and resource have been the subject of recent study in Scotland (Johnston, 2002), and clearly there are implications for choice and management there.

Finally, there are implications for the home environment within which young people grow and develop. Our respondents commented favourably on the influence of musical families (cf. Schwartz), and on those families which provided support for the musical activities which they were undertaking. Davidson, Howe and Sloboda (1997: 197) refer to these - along with peers and professionals - as 'key others'. This is supported by other research, such as that described in McDonald and Simon (McDonald and Simon 1989:40). Our evidence is that they are indeed 'key' to aspects of musical development and that they occupy a fairly central and pivotal role in the attainment of excellence by many young people. Whether that be by the encouragement of active participation in family musical activities: by supporting instrumental development through private tuition: through encouraging participation in school musical activities, or through the provision of an instrument, it is clear that family social factors occupy an important position.

Finally, it is perhaps appropriate to point out that this study is an interim stage in a larger enterprise which will it is hoped, look at young people presently in a variety of different schools and at how their musical development is being carried through in terms of crystallising and paralysing experiences which they are currently experiencing. Thus, this is an interim stage in an examination of these factors in a variety of different contexts, and it is hoped to shed more light on this area, with all the social and pedagogical implications which it has for schools, families and the young people themselves.

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