

MACRAE, Barbara Anne
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R. B. Lib

CASE STUDIES EXAMINING THE EFFECTS OF
SPECIALIST SCHOOLING ON SUCCESSFUL MUSICIANS

Barbara Macrae

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R. B. Lib

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ABSTRACT

The subjects of the case studies are four ex-students and two present students of the Conservatorium High School, Sydney. They include internationally and nationally renowned performers as well as successful musicians with career interests outside music. Interview data is the main material on which the case records of the subjects are based. This material is compared in terms of the specific questions arising from the conceptual framework which were also the questions provided the "topic guide" for the interviews. These questions concerned the aspirations, expectations and attitudes of the students, their parents and their teachers in relation to both musical and general education. They also sought information about subjects' lifestyles during their years of secondary schooling.

The literature review examines material and issues associated with specialist provision for the musically gifted in terms of philosophy, policy, identification, psychology, curriculum, environment, perceptions and careers. In introduction and in conclusion as well as in discussion this review recognises the inter-dependent nature of the separate factors. However concern is expressed about the apparent dearth of research into career possibilities for gifted musicians since this is seen as a potential stimulus to creative curriculum design.

In answer to the wider research questions about the role of specialist schooling in the development of musical talent

a number of crucial factors emerge. These include the effectiveness of mentors with broad intellectual interests, the significance of peer interaction in developing awareness of the dimensions of individual talent and the importance of role models in the articulation of career aspirations. However the overriding factor is that of environment - a supportive home environment and a sympathetic school environment which nurtures emerging musical talent.

INTRODUCTION

Australian attitudes to giftedness and talent are generally ambivalent and provision for gifted and talented students in selective high schools remains a controversial issue since coming to prominence with the introduction of comprehensive secondary education in the 1960s. Nevertheless, a small specialist high school for talented musicians has survived and prospered. In this climate it is appropriate that such a school should seek to clarify its role. While social science's "limitations in the area of prediction"¹ are acknowledged it is appropriate that in researching its role some guidance for future policy and curriculum decision making should also be sought. Thus the education of students at this school, the Conservatorium High School, provides the context for the research situation constructed in this essay.

While it was intended that the researcher take an inductive approach to this study the following general research questions were presented, as a starting point, in the hope that for the reader as for the writer, "they make the implicit explicit."²

1. How do musically gifted students develop their talents and prepare themselves for life after secondary school?

¹ King, R.J.R. and Young, R.E., A Systematic Sociology of Australian Education, Sydney : Allen & Unwin, 1986. p.3.

² Miles, M. & Huberman, A. Qualitative Data Analysis. London : Sage, 1984. p. 35.

2. What is the role of a specialist high school in preparing its students for a professional career ?

3. What changes have taken place in attitudes to specialist schooling among students, parents and the community ?

LITERATURE REVIEW

INTRODUCTION

The aim of this review is to examine the literature related to specialist schooling for gifted and talented students in music. However it is not possible to understand fully the issues involved in such schooling unless some attempt is made to understand the nature of musical giftedness itself. A definitive answer to this question has historically eluded philosophers and psychologists alike. Nevertheless psychological research and biological research in particular have identified factors for our consideration and increased our awareness of those factors and their significance in educational practice.

The question of whether special provision should be made for the musically gifted is largely the preserve of government policy. The policies adopted have their roots in philosophies past and present and are continually being influenced by the growing awareness of some of the psychological factors inherent in such giftedness. Policy makers, philosophers and psychologists by their very deliberations recognise the existence of musical giftedness. However its systematic identification is a phenomenon of the last six decades of the twentieth century. If it can be scientifically identified contemplation of a policy of special provision is likely to stimulate further examination of philosophical and psychological concerns.

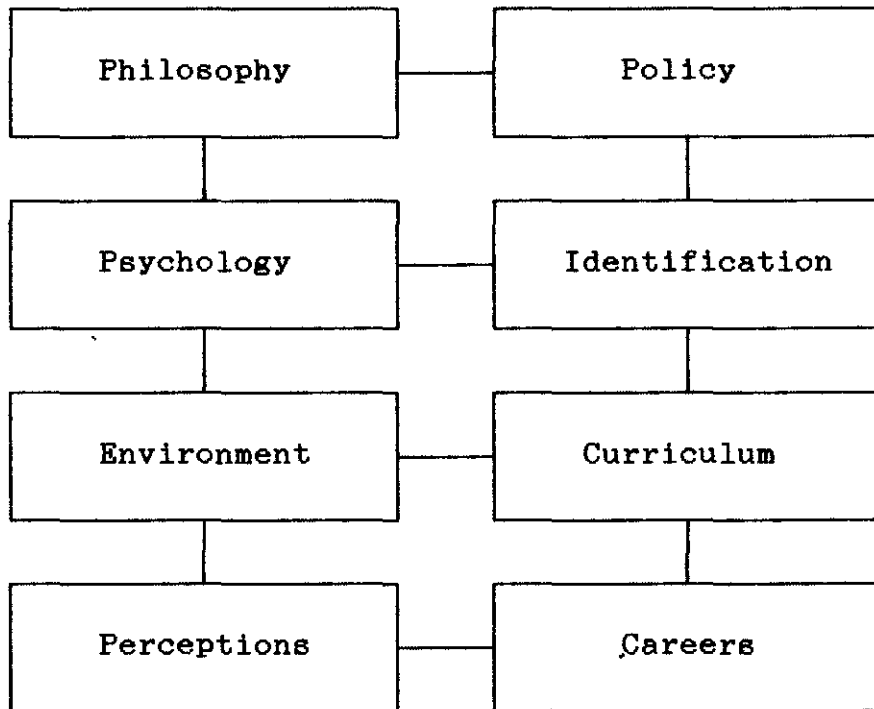
One of the most important of these concerns is the effect of environment on both the existence and development

of musical talent. If environmental factors are important there are important implications not only for the experiences provided in the home but also for the nature of the curriculum provided by the school. With what knowledge, skills and attitudes should its students emerge? What subjects should be taught? Should the curriculum be career oriented? Should it allow for narrow specialisation or should it allow for broad interests to develop? Who should teach the gifted? The questions which could be asked are extensive indeed.

How do students, their parents and their teachers perceive the curriculum offered by the school? It is likely that their perceptions of its usefulness in terms of career preparation are likely to be influential in the modification of that curriculum as these perceptions are fed back to policy makers. What careers are possible in music will to a large extent depend on the prevailing philosophy about the place and importance of music in contemporary society.

Thus while so many inter-dependant factors associated with musical giftedness and its educational provision create complex and shifting patterns the following framework separates eight of those factors for focussed discussion in this review of literature.

Figure 1. Analytical Framework



PHILOSOPHY

Music in Education

In discussing the place of music in general education most contemporary writers in the field refer to the literature of ancient Greece, in particular the writings of Plato which emphasise the necessity of music in the development of the individual. From Plato to Spencer in the middle of the twentieth century music was seen as a means of educating for citizenship."³ From Plato to Dewey music in education has had an end - "to produce a perfect harmonized self." (Plato)⁴

³ Mark, M. 1982. The Evolution of Music Education Philosophy from Utilitarian to Aesthetic. Journal of Research in Music Education, 30, 1, p. 18.

⁴ Ibid., p. 17.

Even the twentieth century's drive for universal education has had little impact on this view which has gone virtually unchallenged until recent times and is in fact still embodied in the methods of Shinici Suzuki whose advice to parents is not to worry about whether or not their children will become successful performers, but through violin playing become "splendid in mind and heart also."⁵ Although a perusal of international conference reports indicates that some redefinition of aims and directions was taking place in Eastern Europe in the 1970's, the impetus to develop a new philosophy of music education seems to have come from American educators with a professional identity crisis in the emerging technological society of post World War II, the Cold War and the desperate competitiveness inspired by the Sputnik launch. The problems of developing a philosophy were clearly set out by Charles Leonard in the 1960's. He saw in the various existing philosophical systems no basis for developing a framework since he believed that the process would involve "structuring a theory on the meaning of music, the valuation of music and the role of music in human living."⁶

The answer to this challenge has been best articulated by Bennet Reimer. In fact the acceptance of Reimer's ideas appears to have been so strong that little has been written since on music education philosophy, and according to

⁵ Suzuki, S., 1978. Nurtured by Love. Melbourne: Centre, p. 15.

⁶ Leonard, C. and House, R.W., 1959. The Foundations and Principles of Music Education. New York: McGraw-Hill, p. 43.

supporter Charles Leonard the aesthetic education advocated by Reimer must be regarded as the prevailing philosophy, certainly in America. In rejecting the extramusical values of a utilitarian philosophy the aesthetic philosophy also rejects the "romantic" conception of the nature of musical experience in favour of the view that music, like all the arts "are human phenomena growing out of human experience and having roots in ordinary experience."⁷

The Musically Gifted

Where does the predominance of this philosophy leave the education of the musically gifted and talented? Even now many parents have the old utilitarian aims when having their children taught to play a musical instrument. This Sigrid Abel-Struth calls the "material implicit cultural effect expected of music."⁸ Such aims support a dichotomous philosophy by which the talented few are formally taught and the masses are "entertained."⁹ Alternately, with misguided dedication and without cynicism, they attempt to "build a musically literate public in the image of the professional musician."¹⁰ Music education's failure to do this over the last hundred years has provided further emphasis for the need to develop a clear philosophy which is relevant to the musically gifted and the general student.

⁷ Ibid., p. 81.

⁸ Abel-Struth, S., 1978. Methods of Determining Aims in Music Education. ISME Yearbook, p. 93.

⁹ Reimer, B., 1970. A Philosophy of Music Education. New Jersey: Prentice-Hall. pp. 22-23.

¹⁰ Seeger, C., 1978. The Musician: Man Serves Art. The Educator: Art Serves Man. ISME Yearbook, p. 90.

Since one of the criticisms of the instrumental, utilitarian approach is that standards are irrelevant, it is interesting to note that while criticising Formalism as an approach to music education Reimer recognises the high level of success that this approach has had for the musically gifted. In articulating the aesthetic education philosophy he emphasises the dual responsibility of music education to both groups for their mutual, supportive benefit and warns of the loss to the individual, the art and society if education were to deny this role.

POLICY

Rationale

For many educators the rationale for making special provisions for the musically gifted is closely linked to psychological issues which are discussed in another section of this review, and practical considerations of musical tuition and schooling. Barresi suggests that for governments it is the recognition that "societies are ultimately judged by the quality of their cultural environments and...their contributions to the human spirit."¹¹

At a practical level one of the difficulties Leonhard saw in developing a new philosophy of music education was the dichotomy between the schools endorsing instrumental values and the tertiary institutions, and also, presumably, musicians themselves, dealing with music for its own sake.

¹¹ Barresi, A., 1981. The Role of the Federal Government in Support of the Arts and Music Education. Journal of Research in Music Education, 29, 4, p. 245.

Barresi's view of the 1960's and 1970's is interesting in this regard. He sees the federal government, responding to "what it felt were the aesthetic needs of its people", emerging as the agent of change by bringing all parties together to resolve, at least partially, that traditional artist-educator controversy.¹²

Seeger has pointed out the necessity for accommodating both points of view. His statement that "each should dominate in its own place"¹³ is easy to read as an endorsement for the notion of specialist schools which is probably the only system by which that would be possible. Reimer certainly supports the idea of special education for the relatively few who are musically talented and whose educational needs in music are greater than those of students generally.

Mallinson claims that in the history of Western civilisation consensus on what constitutes musical giftedness has meant that for "promising children special schools were soon devised and have now come to be internationally accepted."¹⁴ This seems to deny the existence or even relevance of any debate on the issue. Equality of opportunity is at the heart of policy statements on the education of children with special talents. Of particular interest to any discussion of rationale is also the argument that special schools are truly egalitarian in

¹² Ibid., pp. 248-254.

¹³ Seeger. op.cit., p. 91.

¹⁴ Mallinson, V., 1980. Educating the Gifted Child: A Comparative View. In R. Povey (Ed.), Educating the Gifted Child. London: Harper and Row, p. 94.

that neither income nor race determine attendance.¹⁵ However to provide for those children in special schools or within comprehensive schools is usually the basic policy decision of governments and educational bureaucracies today.

Types of Specialist Provision

Two types of provision for the musically gifted and talented have emerged in Australia. Special Interest Centres attached to comprehensive secondary schools are features of the systems in West Australia, South Australia, Victoria and Queensland. A more rigorous training is available through the high school attached to the New South Wales State Conservatorium of Music.

In Great Britain a number of significant reports between 1968 and 1982 have been devoted in whole or in part to the question of training gifted and talented musicians. The first of these at least was prompted to some extent by what was perceived as "Great Britain's failure to compete on equal terms in the international musical world" and the accompanying loss of national prestige.¹⁶ The 1978 report, "Training Musicians", in offering the Pimlico model of incorporating specialist provisions within a comprehensive school as worthy of emulation in other parts of the country, made its recommendations about specialist schools in the following terms:

¹⁵ Cox, J., Daniel, N. and Boston, B.D., 1985. Educating Able Learners. Programs and Promising Practices. Texas: University of Texas Press, p. 119.

¹⁶ 1965. Making Musicians. A Report to the Calouste Gulbenkian Foundation. London: Shenval, p. 12.

"We would urge ... authorities to support their gifted children at specialist music schools. The financial commitment will be slight as such children are rare." ¹⁷

The English inquiry recognised the difficulties involved in simply grafting a specialist unit on to an existing comprehensive school without providing adequate and suitable resources. On the other hand the Scottish inquiry of 1975 was encouraged to find no problems of student integration in that model and made recommendations accordingly, rejecting the notion of the specialist school. In England specialist provision ranges from the Yehudi Menuhin School for less than 50 highly gifted students, including international students, to the Pimlico Comprehensive School where 65 of the 1300 students are music specialists. London's Purcell School and Manchester's Chetham School of Music which have 180 and 250 students respectively both offer boarding facilities. The 50 music students of the 650 strong Wells Cathedral School incorporate choristers of the Wells Cathedral as does Chetham the choristers of the Manchester Cathedral.

In his report "Specialized Music Education: Career Centered Instruction in High School" Karl Glenn points to the program and organisational diversity represented in his list of seventeen American schools which provide career-oriented instruction in music. His list is interesting because of the preponderance of schools catering for the arts in general or for the visual and/or performing arts.

¹⁷ 1978. Training Musicians. A Report to the Calouste Gulbenkian Foundation. London: Bett, p. 44.

Schools with specialist schools within a larger school are also represented.

Many American institutions enjoy a very high international reputation, and the achievements of American performers on the international stage are outstanding. However when compared to the systematic development of musical talent in Russia, in America "the preparation of a gifted youngster ... is decidedly haphazard and depends on the initiative and insight of a parent."¹⁸

The Soviet Union has had its greatest success in training virtuoso performers. There appear to be two key factors contributing to the type of success which has Soviet performers winning international competitions. The first, as Schwarz points out, "lies in the discovery of the gifted child at an early age."¹⁹ The second must surely be in the expectation that virtuosos who have benefited from Soviet training will ensure the continuance of that tradition by devoting some time to teaching.²⁰

Organisationally the astonishingly large network of provision for specialised training in music is part of the general system of Soviet education and covers the entire country. There are two paths through the system. For a child showing musical talent the first step is enrolling at the age of 7 or 8 in a children's music school while attending a normal day school. These schools which in 1982 numbered 6,256 and had an enrollment of 1,175,000 pupils "are an

¹⁸ Schwarz, B., 1983. Music and Musical Life in Soviet Russia. Bloomington: Indiana University Press, p. 381.

¹⁹ Ibid., p. 395.

²⁰ Ibid., p. 105.

older Russian tradition: there were forty such schools in Tsarist Russia."²¹ If successful, after seven years of study, the student may attend a specialised secondary school, the music college, where music can be studied with general subjects. In 1982 there were 255 music colleges catering for approximately 50,000 students.

A more direct path and integrated approach is via one of about 30 special music schools which are usually affiliated with a conservatory. Children enter these at age 7, the same age as children entering the children's music schools. This eleven year program provides a complete elementary and secondary general education in addition to the specialised music program.

"These are schools with a clear professional bias, which have the aim of preparing the pupils for entry to the conservatoire. Pupils of specialised music schools pay neither for tuition nor for boarding-home accommodation."²²

IDENTIFICATION

Tests

The difficulty in identifying musical aptitude is in knowing what it is. A further difficulty in identifying the musically gifted is surely one of degree, to distinguish between aptitude and giftedness. At this stage the performance aspect must almost inevitably be taken into account and with it the effect of training on both aptitude and performance.

²¹ Ibid., p. 395.

²² Merkuriyev, P., 1984. Music Education in the USSR. International Journal of Music Education, 4, p. 44.

The work of John McLeish is very important in that in testing the opposing theories underlying two of the earliest published batteries of tests of musical aptitude he proved the existence of a general factor of musical ability. The theories, that is Seashore's theory that musical talent consisted of a number of specific talents and Wing's theory that it is a single entity, became irrelevant to the question of how it should be measured. The fact that McLeish used both batteries as well as the "Oregon Musical Discrimination Tests" on the same 100 intelligent subjects makes his study one of the most convincing in the field.

Nevertheless these findings are disputed by Whellams who, in his factorial investigation, re-analysed and compared results from various published studies using Seashore, Wing, Kwalwasser-Dykema and Gordon's MAP tests. The essential difference, and perhaps weakness in Whellams' study is that his data, while involving "many thousands of people" (9) was not obtained from the same subjects as was the case in the McLeish study. One of the most disturbing weaknesses of tests in general is pointed out by Whellams, the influence of the "guessing" factor on scores. It is to be hoped that his call for more careful construction of future tests to eliminate this aspect is heeded by future researchers as it is by those who simply include a "don't know" column for alternative answers.

The most thorough survey of published and unpublished tests which have been designed from Seashore to recent times is provided by Shuter-Dyson and Gabriel in "The Psychology

of Musical Ability". What is most interesting is to trace the factors or aspects of musical aptitude which have been considered worthy or necessary to attempt to measure. The earliest tests were concerned with aural ability and memory (Seashore, Wing). To these have been added interest (Gaston), taste and appreciation in interpretation (Gordon) and with less success to date, aesthetic response (Gabriel and Crickmore) and creativity (Vaughan and Myers). The significance of motor performance to success in playing an instrument is also recognised and becoming the subject of discussion and testing.

While studies such as Young's validate the Bentley "Measures of Musical Abilities" it is the work of Edwin E. Gordon which has been the subject of much critical acclaim by researchers in the last two decades. Some consideration of the need to distinguish aptitude from giftedness is evident in the stated aims of Gordon's "Primary Measures of Music Audiation". Although presenting the tests as having relevance for all children he claims that if the musically gifted are identified at an early age and their needs met in "advanced and compensatory instruction ... their aptitude should stabilize at a higher level."²³

Much of this research endeavour has been met with scepticism, particularly from musicians who were most critical of Wing's early work on the grounds that musicality was "too spiritual a thing to be measured statistically."²⁴

²³ Ibid., p. 108.

²⁴ Chalmers, B., 1977. Too Spiritual a Thing to Measure. Psychology of Music, 5, p. 32.

However, from a 1977 perspective Chalmers saw a new awareness and acceptance which had developed over time. While not overcoming the element of subjective opinion, the notion of a rank order scale and the interval scale do have great significance for the design of tests of musical ability.

This must be particularly true of tests of musical creativity. The "Sounds and Images" tests which were the results of the early work of Torrance and Khatena as described in their article "Originality of Imagery in Identifying Creative Talent" would certainly avoid the boredom factor associated with the more exact tests of musical ability. However using the number of awards a subject has received as a criterion for creativity again does not come to terms with the subjective nature of competitive judgments. Creative genius in music has either gone unrecognised or engendered gross antagonism in the past and it is not beyond the realms of possibility that this could be so in the present or future. It is interesting to note that later studies of Torrance and Khatena, namely "Career Patterns and Peak Creative Achievements of Creative High School Students Twelve Years Later" cast doubt on the power of creativity tests administered in high school to predict creative achievement in music, the visual arts, business and industry.

There seems to be an assumption among researchers that creativity is the preserve of composition. While the argument that interpretation in performance is a creative

act is straightforwardly and convincingly expressed by Giannini²⁵ there seems a dearth of studies concerned with this aspect of creativity. Another weakness in creativity studies is the selection of subjects from band programs thereby ignoring many possibly creative students among solo instrumentalists or among personality types who are not attracted to band programs. Trollinger, for instance, found that highly creative women did not participate in school music groups, selecting instead solitary pastimes.

Freeman's test of aesthetic discrimination is interesting and logical and deals with an area apparently less vexed than creativity.²⁶ However it could be assumed that children coming from the homes described in her paper might well have had considerable experience in listening to music and therefore might be discriminating stylistically on that basis in these tests.²⁷

Rationale

When so many difficulties are associated with tests of musical aptitude it is tempting to ask why researchers persevere and what the relevance is for the practitioner. Prediction of future success is one reason which keeps appearing throughout the literature. Catering for individual differences is, to this reviewer's mind, much more significant. The call for reliable testing of musical

²⁵ Giannini, V., 1968. Creativity in the Arts. In P. Heist (Ed.), The Creative College Student: An Unmet Challenge, p. 80.

²⁶ Freeman, J., 1974. Musical and Artistic Talent in Children. Psychology of Music, 1, p. 6.

²⁷ Ibid., p. 7.

aptitude is closely tied to economic factors involved in specialist educational provision. As Cooke points out :

" Many music educators fear to take the steps necessary to provide such a programme because of the risk of either heavily subsidizing many students who do not succeed in the end, thus representing a waste of time and money and also because of the risk that a student who fails in the pursuit of a musical career may be ill-equipped for anything else ." ²⁸

Another aspect of the rationale for early aptitude testing is contained in Michel's warning of the inhibiting effect of underestimating potential in children. Nevertheless he also highlights the "need to establish upper limits for the separate age-levels to prevent injurious and excessive demands being made on children." ²⁹ It is unfortunate that there is some contradiction in his argument since physical aspects are not singled out , nor are specific dangers exemplified and discussed. Although the writer identifies three levels of productivity in musical ability, no evidence is cited for the existence of the third level. His theories would therefore be difficult to apply in any experimental work in this important area.

²⁸ Cooke, M., 1974. ISME Yearbook. p. 254.

²⁹ Michel, P., 1973. The Optimum Development of Musical Abilities in the First Years of Life. Psychology of Music, 2, p. 14.

Conclusion

If the importance of musical aptitude tests is being recognised on both economic grounds and for the protective nurturing of talent it is necessary to confront the problems associated with them and evolve some guidelines for future directions. One of the most lucid pieces of writing in this vein must surely come from Karma who questions the procedure of validating aptitude tests against such factors as teachers' ratings which are substitutes for musical aptitude, the nature of which is unknown. In this way "achievement is predicted with achievement."³⁰ Although Webber's finding that academic success is the most effective predictor of success in band work is cited, Karma emphasises that current tests are testing the "culture-bound"³¹ consequences of aptitude rather than parts of musical aptitude. It is easy to understand the scepticism with which musicians view such measures. However Karma recommendations would provide a rational framework for future research. He advocates that :

- * hypotheses must be formed about the relations between criteria.
- * tests should be made to measure particular theoretical constructs.
- * relatively pure tests of musical aptitude must be found.

³⁰ Karma, K., 1982. Validating Tests of Musical Aptitude. Psychology of Music, 10,1, p. 34.

³¹ Ibid.

PSYCHOLOGY

The Place of Psychological Research

If satisfactory tests are to be found the work of psychologists with a particular interest in the field and a true understanding of the musical issues is of utmost importance. It is therefore interesting to note in Shuter-Dyson's resume of developments in Germany, Great Britain and America the impetus given these developments by psychologists who were and are also gifted musicians. The same article, while being too short to deal adequately with such a broad and important topic, is useful in providing the reader with information concerning the communications network in the field and in putting into perspective the whole question of the relevance of psychological research in music education.

Much of the effort in psychological research has been concerned with the measurement of human response, aptitude, ability and achievement in relation to various musical elements. There has also been an interest in the application of Piaget's concept of stages of development and the paradigms of cognitive psychology to music. The answer to the question of why musicians generally regard the explanations of such psychological research unsatisfactory could be found in Walker's perspective on the concept of giftedness and its treatment. In most non-Western cultures music is practiced by all. In Western culture "to succeed it is necessary to have special qualities which transcend mere

training."³² In dealing with the application of psychological research to music education the gulf between general music education, heavily influenced by psychological research, and specialist music education which relies on the continuation of the apprenticeship system is highlighted.

Biology, Physiology and Neurology

Dominating much research into understanding musical talent is that which concerns the functions of the left and right hemispheres of the brain. Although much of this research is couched in language beyond the scope of the layman, Pribram's explanation of his "brain theory of musical competence and musical meaning"³³ is reasonably accessible to the interested musician. By taking the analogy of music to language in relation to brain function and with reference to an extensive body of knowledge on the subject he demonstrates that "different neural systems are involved in syntactic, semantic and pragmatic processing"³⁴ and also that "the syntactic structure of music is more dependent on semantic processing."³⁵ Pribram also refers to data indicating that image processing and information processing in music are the separate functions of the right and left hemispheres respectively³⁶ and that the processing of

³² Walker, R., 1987. Musical Perspectives on Psychological Research and Music Education. Psychology of Music, 15, 2, p. 171.

³³ Pribram, K., 1983. Brain mechanism in Music: Prolegomena for a Theory of the Meaning of Music. In M. Clynes (Ed.), Music, Mind and Brain. New York: Plenum Press, p. 23.

³⁴ Ibid., p. 31.

³⁵ Ibid., p. 25.

³⁶ Ibid., p. 24-25.

information, while "constituting the aesthetics of music ... does not provide 'meaning' ."37

It is surprising that the research in the area physical characteristics and musical ability appears scant since, as Schleuter points out, this is likely to have considerable bearing on instrumental progress. It is significant that Cooke includes " a physical test in motor ability " for the "prospective instrumental performer."³⁸ The recent work of Fry et al would suggest that this type of testing should become more widely applied before instrumental study so that students are matched with instruments for which they are physically suited and so that later problems are avoided. The issue of the imposition of physical demands on the musically gifted child has also been taken up by Fry. While short practice segments are advocated to eliminate the possibility of "pushing hard at the limits of endurance and dexterity"³⁹ with such children, it is not clear that any experimental or case study work yet exists to guide the matching of instrument to child.

Heredity

The question of whether or not musical talent is inherited seems no closer to being solved in the 1980s than it has been in previous decades. The elite strata of the musical world contains many who have emerged from such a background. Oistrakh, Menuhin, Kogan are names which have

³⁷ Ibid., p. 29.

³⁸ Cooke, op.cit., p. 225.

³⁹ Fry, H., 1987. The Gifted Child. Physical Aspects of Musical Development. International Journal of Music Education, 8, p. 26.

stayed in the concert going public's consciousness for more than one generation.

In direct contrast to this observation is Figg's opening question : "What is the reason that highly gifted musicians rarely originate from extremely musical parents?"⁴⁰ This is an interesting and obviously controversial question in itself. Since as mentioned earlier in this section of this paper, there is no conclusive evidence to end the 'nature-nurture' debate, further information concerning the application of the law of regression to music could make a worthwhile and stimulating contribution to its continuance. However in this instance the author fails to explain adequately its significance to music education. While the important summative book of Shuter-Dyson and Gabriel cites enough research to convince that musical talent can be both inherited and acquired and can flourish in antipathic circumstances there is none to add credence to Figg's theory about the relevance of the law of regression.

Intelligence

Like the question of heredity the question of the correlation between intelligence, intellectual giftedness and musical giftedness is vexed. Bergman and DePue in discussing idiot savants take the extreme stand that musical ability is unrelated to intelligence. Although entertaining to read their article in no way proves such a hypothesis in

⁴⁰ Figgs, L., 1980. The Law of Regression as it Pertains to Musicality. Psychology of Music, 8, p. 19.

relation to a wider population of musically gifted and does not contribute significantly to the debate on the issue.

The work of Wallach and Wing has had enormous influence on attitudes to musical talent, its identification and treatment. Much more convincing is the work of Froebel Institute researchers Sargeant and Thatcher who tackle the question of the relationship between intelligence and musical ability by using alternative methods of processing data in a number of experiments. While making no claim to solving the issue through the application of alternative statistical methods they do show most convincingly that while "all highly musical people appear to have a high level of intelligence, not all highly intelligent people show a high level of musicality."⁴¹

Sargeant and Thatcher bring together findings from the research literature itself to draw implications that "musical abilities develop as a result of the interaction of intelligence with some other forces or factors"⁴² and point to environmental factors as the clue to the mystery. This is certainly the overriding view contained in the summary of research presented by Shuter-Dyson and Gabriel who observe that:

"As in the case of intelligence, the heated arguments in the nature-nurture controversy have tended to give way to an appreciation that heredity and environment interact in the development and manifestation of musical ability."⁴³

⁴¹ Sargeant, D. and Thatcher, G., 1973. Intelligence, Social Status and Musical Abilities. Psychology of Music, 2, p. 50.

⁴² Ibid.

⁴³ Shuter-Dyson, R. and Gabriel, C., 1981. The Psychology of Musical Ability. (2nd edition) New York: Methuen. p. 173.

Personality

Shuter-Dyson and Gabriel cite Martin's conclusions that "factors associated with home and social environment were more important than personality factors in the making of a musician."⁴⁴ However in summarising the discussion indicating the importance of new findings in this field they conclude that:

"Personality and motivational factors must be critical factors in how far musical talent is realised, even with intelligence held constant".⁴⁵

Kemp's work in developing psychological profiles of musical talent based on "actual life performance"⁴⁶ must surely be among the most important in this field. He identifies primary factors in the profile of the performing musician from secondary school to tertiary training and through to the profession as "introversion, pathemia and intelligence"⁴⁷ and confirms anxiety as a common trait. One of the most interesting aspects of his discussion is his positive view of introversion which "in creative persons indicates an inner strength and the richness and diversity of their thought processes."⁴⁸ Furthermore he offers as a possible explanation for the high introversion of musicians "Eysenck's (1976) suggestion that the basis his

⁴⁴ Ibid., p. 92.

⁴⁵ Ibid., p. 93.

⁴⁶ Kemp, A., 1981. The Personality Structure of the Musician. I. Identifying a Profile of Traits for the Performer. Psychology of Music, 9, p. 3.

⁴⁷ Ibid., p. 11.

⁴⁸ Kemp, A., 1981. The Personality Structure of the Musician. IV. Incorporating Group Profiles into a Comprehensive Model. Psychology of Music, 10, 2, p. 4.

extraversion-introversion scale lies in the biological factor of cortical arousal."⁴⁹

Kemp includes children attending residential music schools as a sub-group of his sample. Their greater introversion and anxiety levels than their peers in normal schools can possibly be explained by their more intense and competitive environments. Kemp speculates that the reasons for inconsistency in profiles of school-age musicians might have parallels with academic achievement and visual-spatial ability and be associated with the onset of puberty. Indeed Hassler and Birbaumer's more recent research contains further support for the need for flexibility in programming in specialist schools with convincing evidence of the following:

- * loss of the creative or the whole of musical talent in the mid - end teens.
- * replacement of music with other artistic interests.
- * relatively greater decline with increasing age in right hemisphere abilities and increasing reliance on left hemisphere strategies.⁵⁰

Other Considerations

Although some researchers are concerned with the connection between musical ability and other abilities such as those in the other arts, mathematical or spacial ability,

⁴⁹ Ibid., p. 12.

⁵⁰ Hassler, M. and Birbaumer, N., 1987. Musical talent and Visual-Spatial Ability: The Onset of Puberty. Psychology of Music, 15, 2, p. 150.

as Shuter-Dyson and Gabriel point out the evidence of such connections is hardly "overwhelming."⁵¹

Of more consequence in contemporary society might be research into sex differences in relation to musical ability and development. Trollinger's study of the effect of solitary or limited leisure activities on highly creative women musicians is an interesting area to research in an age when some concern has been expressed that women's talents may be under-developed and therefore lost to the community. However results of Sloboda's testing of 5-10 year olds showed that "girls performed better than boys on most tests and at most ages".⁵² These results are consistent with those of other researchers.

Sloboda's concern about research in music perception could be a concern of any area of psychological research. He reminds us that "we need to be constantly checking that questions of real musical importance are being asked and answered."⁵³ Walker's criticism of the application of science's nomothetic approach to music is convincing. He would also have the support of most musicians when he challenges researchers to "start from intuitive musical premises rather than objective, rational ones"⁵⁴ if they are to "produce anything which is musically relevant or significant."⁵⁵

⁵¹ Shuter-Dyson and Gabriel. op.cit., p. 93.

⁵² Sloboda, J.A., 1985. The Musical Mind: The Cognitive Psychology of Music. New York: Oxford University Press. p. 21.

⁵³ Ibid., p. 154.

⁵⁴ Walker. op.cit., p. 184.

⁵⁵ Ibid., p. 171.

In spite of scepticism and an apparent reliance on the apprenticeship system there is some acknowledgement of the importance of psychology to music curriculum for the gifted. Schaaf's interesting early history of the Peabody Preparatory School claims that it was the first music school to use psychological tests in diagnosing talent.⁵⁶ Admitting the difficulties of working with gifted children Lagutin concludes that "a deep insight into the child's psychology is therefore viewed as the indispensable condition of pedagogical work."⁵⁷

CURRICULUM

Although, as outlined in earlier sections of this paper, the structure of provision for the musically gifted depends on educational philosophy and government policy, a study of school documents indicates that whether the aim is to provide exclusively career-oriented instruction or whether career outcomes are seen as being of lesser importance than the training itself, the range of music subjects is similar. This is most evident in the comprehensive tables given by Glynne-Jones to show curriculum content in all special music schools or special music departments in England.⁵⁸ A similar format applied to schools in America and other countries, regardless of

⁵⁶ Schaaf, E., 1985. From Idea to Tradition: The Peabody Prep. Music Educators Journal, 72, 1, p. 43.

⁵⁷ Lagutin, A., 1985. The Education of Exceptionally Musical Children in the U.S.S.R. International Journal of Music Education, 6, p. 53.

⁵⁸ Glynne-Jones, M., 1985. The Education of Exceptionally Musical Children in England. International Journal of Music Education, 6, p. 44.

differences in financing, setting or history would draw the same conclusions. That is not to say that there are not subtle differences in how those subjects are practised. For example it is interesting to note the amount of time spent in supervised individual practice in English specialist schools, residential and non-residential alike, and compare that aspect of organisation in Australian specialist schools where staff are not allocated such duties.

There is also evidence of different attitudes to competition. While Chetham's recognises competitions as its "best source of public relations"⁵⁹ the Yehudi Menuhin School puts a great emphasis on concert giving, being concerned that "neither the teacher, the institution, nor the parents ought to exploit the talents of the student to meet their own needs."⁶⁰

Curriculum details of specialist schools in other countries are available in various publications. "Music and Musical Life in Soviet Russia" by Schwarz is most valuable in that it describes both system policy, provision and curriculum while assessing strengths and weaknesses of each.⁶¹ The historical context also provides interesting material for consideration. Turcsanyi's article in "Musical Education in Hungary" gives detailed information about the conservatoire component of the music curriculum in

⁵⁹ Personal letter from the Director of Music, The Yehudi Menuhin School. 21st November, 1988.

⁶⁰ Norris, P., Yehudi Menuhin School. School document.

⁶¹ Schwarz, op.cit., pp. 379-398.

specialist secondary schools.⁶² While the arguments presented for the integration of other academic subjects are basically the same as those presented by specialist schools in other countries no evaluation of the new organisation for music education is given. It is frustrating not to be given any reasons for the changes described. While Cox et al give enough information on specialist schools in Houston, Cincinnati and North Carolina to place them in the broad spectrum of American specialist schools curriculum detail is not as full as that provided by Schwarz and Turcsanyi.⁶³

An interesting perspective on curriculum is advanced by Tschaikov. Central to his article is the question: Does the musical education of those wishing to join the profession "prepare them for the conventional symphony orchestra, the demands composers are now making or the real world of professional music making?"⁶⁴ While it is difficult to see how the third category is not contained in the other two the discussion itself is interesting and stimulates one to ask questions relevant to curriculum planning for future musicians. Tschaikov does not avoid addressing such difficult issues and makes quite specific recommendations indicating that "those preparing to be musicians who will serve audiences well into the twenty-first century must have broader aspirations than their parents".⁶⁵

⁶² Turcsanyi, E., 1969. Secondary Music Instruction. In F. Sandor (Ed.), Musical Education in Hungary. Budapest: Boosey & Hawkes and Corvina Press. pp. 193-221.

⁶³ Cox et al., op.cit., pp. 110-118

⁶⁴ Tschaikov, B.D., 1987. Preparation for the Orchestral Profession: Which Kind of Symphony Orchestra Will We Have in 2000? International Journal of Music Education 9, p. 4.

⁶⁵ Ibid., p. 6.

Tellstrom raises some controversial issues about music curriculum for talented children, but in advocating a more comprehensive approach fails to assess the value of the academic rigour associated with formal, historical aspects of a traditional curriculum. This failure is also evident in a number of curriculum proposals or outlines.

Wooddell makes the point that in dealing with a differentiated curriculum for the gifted "there is no instant curriculum to be concocted, but only traditional disciplines to be used creatively".⁶⁶ Perhaps this is recognised by the proposers of an experimental, interdisciplinary program in the Arts and Sciences which is outlined by Zorman. The holistic approach is brave and forward, if not futuristic, thinking. However while emphasis in musical development remains so predominantly in the highly competitive performance area its appeal to highly talented musicians is likely to be limited. Students of dance are among those excluded from the project. Have the planners considered that many musicians, like dancers, often show little interest in the sciences, or do they intend to select music students from areas other than performance?

The main concerns of music curriculum content could be seen to be closely connected to the structure of the provision. The programs criticised above are mainly concerned with attempts to cater for the musically gifted away from specialised schooling. As discussed in the preceding section of this paper the rationale for specialist

⁶⁶ Wooddell, G., 1984. Gifted Children in General Music. Music Educators Journal, 70, p. 44.

provision lies to a great extent with the concern for psychological protection. However it is specialist provision which can provide the environment for a curriculum which is demanding and stimulating enough for the development of young talent. Giannini makes this clear when he compares the role of the professional school of the arts with the liberal arts school. He further supports the performing arts with his argument, straightforwardly and convincingly expressed, that interpretation in performance is a creative act.⁸⁷

ENVIRONMENT

The School Environment

How do specialist schools create a suitable environment for appropriate curriculum development? Deane is convinced that "frequent co-operation between the professional musician and the educator is one of the most exciting and potentially fruitful facets of musical education in Britain today."⁸⁸ That view is certainly supported in the American context by James Nelson, Director of the Alabama School of Fine Arts who advocates employing professionals in such schools regardless of their formal qualifications.⁸⁹ The significance of the contribution to Soviet music education by virtuoso performers is discussed early in this review.

⁸⁷ Giannini, V., 1968. Nurturing Talent and Creativity in the Arts. In P. Heist (Ed.), The Creative College Student: An Unmet Challenge. San Francisco: Jossey-Bass. pp. 73-83.

⁸⁸ Deane, B., 1981. The Professional Musician in Education. ISME Yearbook, 8, p. 63.

⁸⁹ Gear, G., 1984. The Anchor of Doing Something Well. Roeper Review, 6, p. 222.

The Juilliard School faculty biographies suggest a similar commitment. However the difficulties of these connections are encapsulated by Deane when he writes:

"In an educational context ... the danger for the musician is that he may present his art without taking into account the special nature of a children's audience. The danger for the educator is that he may regard the work of art purely as a tool in the educational process, and not as something with its own independence and integrity."⁷⁰

Nevertheless Gallagher is adamant that in any integrated curriculum with arts and sciences

"there must be every effort made to establish a real sense of community between the academic core teachers and the artist groups, and the scientists groups, so that you have a three way situation which really requires understanding."⁷¹

In fact Gallagher gives a deal of emphasis to the question of the teachers of the gifted, associating the rigour of specialised training with teaching quality and style. Since the quality of teaching of the gifted is such a vital issue it is a pity that Wooddell's article claiming that teachers who are not specifically trained to teach the gifted and talented are prejudiced against them fails to cite any research supporting this view. Certainly "competence in working with the gifted"⁷² is among the criteria for the selection of staff in the high school model outlined by

⁷⁰ Deane. op.cit., pp. 63-64.

⁷¹ Gallagher, J., 1987. How do you View Education of Gifted Youth with Special Talents in Arts and Sciences? Roeper Review, 10, p. 50.

⁷² Zorman, R., 1987. The Residential High School for Excellence in the Arts and in the Sciences - A Unique Experimental Model. Roeper Review, 10, 1, p. 8.

Zorman. Teacher competence and qualifications were among the observable differences in the schools of Phillip's experiments. While his findings, like those of Sargeant and Thatcher point to environmental factors as the connection between intelligence and musicality, most alarming is his finding that a superior school musical environment does not contribute significantly to the connection.⁷³

Many of the activities which are regarded as providing a suitable and superior school environment for the musically gifted both in specialist and in comprehensive schools involve some sort of group work, for examples in choirs, orchestras, bands and chamber music ensembles. Trollinger's finding that highly creative female musicians tend to select solitary pastimes in preference to participation in school music groups questions this assumption. What Trollinger does suggest is that this asocial tendency might indicate an unsupportive milieu. This in turn could be linked to unsympathetic staff or the home environment. Specialist school environment is generally considered most supportive not only in attracting sympathetic staff but in the relationships the students form with each other. As Nelson describes it: "Part of our educational program is that we mix ages in a natural way"⁷⁴, the result being the flow of a protective love from the older to the younger students. Also

⁷³ Phillips, D., 1977. An Investigation of the Relationship Between Musicality and Intelligence. Psychology of Music, 4, p. 30.

⁷⁴ Gear, G., 1984. The Anchor of Doing Something Well. Roeper Review, 6, p. 224.

according to Gallagher: "There is nothing more effective than a role model who is not much older than you are."⁷⁵

The Home Environment

It is the home environment which has been the subject of much scrutiny in seeking the intelligence-musicality connection. Many authors support Freeman's conclusion that:

"The exceptionally talented child ... is most suitably regarded as a part of his entire social context, which must be taken to include his family, socio-economic group and culture."⁷⁶

Freeman's later study of aesthetic development in children in which musically talented children are compared to a control group from the same schools who were matched in age, sex, socio-economic level and intelligence confirm the predominance of first born and only children among the gifted. However Albert is inclined to modify this by using "special position" rather than birth order as relating to the child's psychological role. His study found that relatively early recognition of a child's talents "helps orient him to the family in a special way."⁷⁷ Bridges raises a number of other issues about the role of the gifted child in the family and illustrates through anecdote ways in which giftedness can cause family problems. It is disappointing that the reader is not directed to any significant research in this area.

⁷⁵ Gallagher. op.cit., p. 48.

⁷⁶ Freeman, J., 1974. Musical and Artistic talent in Children. Psychology of Music, 1, p. 12.

⁷⁷ Albert, R.S., 1980. Family Positions and the Attainment of Eminence: A Study of Special Family Positions and Special Family Experiences. Gifted Child Quarterly, 24, 2, p. 93.

Perhaps the main obstacles to researching home environments are those put forward by Brand: the lack of reliable and valid instruments designed using "advanced criteria" for measurement.⁷⁸ Brand's study develops the Home Musical Environment Scale (HOMES) of 15 final items. There appears to be no indication of the percentage of completed instruments in the report of Brand's study in which the HOMES instrument was used with "an ethnic group in which environment-attitude relationships are not often studied."⁷⁹ This is unfortunate since the findings of such a study have serious implications for identification of musical talent and educational intervention in its development. The implications of the findings as stated are that "culturally disadvantaged groups" are able to supply the support needed for achievement certainly in music and perhaps in a wider context regardless of socio-economic status.⁸⁰

In discussing research into parental attitude it would be prudent to keep in mind this advice:

⁷⁸ Brand, M., 1985. Development and Validation of the Home Musical Environment Scale for use at the early Elementary Level. Psychology of Music, 13, p. 41.

⁷⁹ Brand, M., 1986. Relationship Between Home Musical Environment and Selected Musical Attributes of Second- Grade Children. Journal of Research in Music Education, 34, 2, p. 114.

⁸⁰ Ibid., p. 119.

"Too much of it ... is based on parent's statements regarding child upbringing, and it is well known that the views they are willing to express may bear little relation to their behaviour in practice, still less - in all probability - to the way their children perceive and interpret their behaviour."⁸¹

Among the writings on parental attitudes is Pringle's study of the educational and behaviour difficulties of 103 very intelligent children. While generalisations cannot be made from the small number for each category, findings which "suggest that good intellectual ability by itself is insufficient to compensate for inadequate parental support and interest"⁸² are consistent with Freeman's observation that children selected by the school for instrumental study will often give up if the home is not supportive and would be borne out by music teachers everywhere.

One of the interesting observations of parental attitude is that made by Vernon et al in reference to a number of studies which show that:

"Generally the parents (particularly the father) of the most able students seem to have been more permissive and democratic, less authoritarian, than those of the less successful."⁸³

Freeman's suggestion in her study of 1974 that musical children live in more democratic environments than their artistic counterparts is contradicted in her paper of 1984 in which she states that "musicians' parents appeared to be

⁸¹ Vernon, P.E., Adamson, G. and Vernon, D., 1977. The Psychology and Education of Gifted Children. London: Methuen, p. 122.

⁸² Pringle, M.L.K., 1970. Able Misfits. London: Spottiswoode Ballantyne. p. 85.

⁸³ Vernon, et al. op.cit., p. 129.

stricter than those of fine artists."⁸⁴ The latter opinion is more convincing when she reasons that "the nature of music calls for stricter discipline ... for successful achievement."⁸⁵

PERCEPTIONS

How do students and former students view their specialist training? What do successful musicians believe to be the special experiences or circumstances which lead to that success? The available literature from which an attempt might be made to answer these questions falls into two distinct categories. Reflections of individuals raise issues which might be significant to a wider population. Other research seeks to identify from the perceptions of a wider sample factors in backgrounds and training which have implications for both future research and current practice in the education of the musically gifted.

Students identified as gifted who take part in special programs provide one stratum for examining perceptions about contributing influences on student development. Another type of talented music student is recognised in Odam's interview with a seventeen year old student concerning his music education. That the editors call for more transcripts of such interviews suggests that there is an increasing awareness of the contribution student perception can make to educational debate and curriculum development.

⁸⁴ Freeman, J., 1984. Talent in music and fine art. Gifted Education International, 2, p. 109.

⁸⁵ Ibid.

A more detailed look at professional perceptions is taken through Shelter's pilot study of the training and career experiences of symphony orchestra musicians. Sampling takes representatives from different status USA orchestras who graduated from different types of training institutions over a twenty year period. The study examines their early experiences, post-secondary training career entry and current attitudes. It is significant that the research team recommends case and longitudinal studies to support questionnaire data.

Should research into student beliefs about the causes of success and failure in music reach undeniable conclusions the implications for music education at all levels would be significant indeed. However the difficulties of using established theories to this end are well illustrated by Asmus in applying attribution theory in his study of achievement motivation. An open-ended response format, chosen because of the existence of little research on which to base this study, elicited responses which could not be easily placed into the rigid categories offered by the theory. The process of artificially categorising the responses mitigated against the discovery of hitherto unconsidered factors. The author's call for future research to use factor analysis techniques is acknowledgement of this restriction.

In spite of the problems of instrument design the study raises concerns which suggest paths for future research. Research is cited which supports the suggestion that

students attribute success more to ability than to effort as they get older and that this is also true of students working in a competitive environment. Unfortunately it is not clear to the reader what the factors are which determined Asmus's finding that "the school attended significantly influenced how students responded in all four of the attribution categories." ⁸⁶

Like Asmus, Hylton worked with little empirical data in studying students' perceptions of the meaning of music experiences. However by restricting the study to the meaning of just one aspect of the school music curriculum, choral singing, an approach is established which can be applied across the music curriculum and from which comparisons of student perception of the various components can be made and the significance of these components assessed. While the research design itself is admirable it is difficult to accept from such a narrowly focussed study the claim that "The idea that music programs confer social benefits upon student participants is substantiated empirically."⁸⁷ Similarly it is difficult to accept as a generalisation that "Gratification gained through music is a byproduct of achievement per se rather than competition."⁸⁸ However it should be noted that such gratification is an aim of most

⁸⁶ Asmus Jr., E.P., 1986. Student beliefs About the Causes of Success and Failure in Music: A Study of Achievement Motivation. Journal of Research in Music Education, 34, 4, p. 274.

⁸⁷ Hylton, J.B., 1981. Dimensionality in High School Student Participants' Perceptions of the Meaning of Choral Singing Experience. Journal of Research in Music Education, 29, 4, p. 301.

⁸⁸ Ibid., p. 296.

specialist schools or programs and as has been discussed earlier in this review some schools are diligent in protecting their students from the strains of public competition. The role of competition is a factor which deserves special consideration in any research involving the musically gifted.

Of concern to educational policy makers in schools and administrative networks is not only students' perceptions of programs but also that of their parents and teachers. Colengelo and Kelly have attempted to test the attitudes of all three groups to one school's program for the gifted and to the gifted students themselves.⁸⁹ One of the weaknesses of the study is its total reliance on quantitative data. In using the questionnaire as the only means of collecting data the authors tend to over-interpret that data. However one of its strengths as a prototype for research in other schools is that none of the subjects knew that the gifted program was the focus of the study - it was presented merely as one of the school programs. Presumably similar information about other programs in the school could have been drawn from the same instrument.

CAREERS

There is a dearth of available literature about either the possible career opportunities for young people wishing to enter the music profession or about people pursuing musical careers. The main British reports are concerned

⁸⁹ Colengelo, N. and Kelly, K.R., 1983. A Study of Student, Parent and Teacher Attitudes Towards Gifted Programs and Gifted Students. Gifted Child Quarterly, 27, 107-110.

with the traditional avenues which absorb only the most outstanding and resilient performers and the training needs of that group. It is interesting therefore that Shelter's American pilot study examining the training and career experiences of symphony orchestra musicians makes the following claim:

"Our data clearly indicate that the employment and career development of the successful orchestral player do not relate to training alone. Many variables, some identified for the first time in this study, need to be considered."⁹⁰

Tschaikoff on the other hand is most concerned that training should prepare young orchestral players for a changed future. He addresses the problem of how labour intensive orchestras might survive and be relevant in the future.

Marcone leaves his readers in no doubt that there is a future for the gifted, creative musician.⁹¹ Although brief his article uses anecdote and references both to famous artists and to music industry leaders to present a vision of a future which offers great opportunities to those who are suitably trained. Training is seen as needing to be both broader and more creative than at present and to include courses which are concerned with the business aspects of the industry. He warns that career choices can no longer be limited to those of performing and teaching. This surely is also Solbu's message when he highlights the failure of

⁹⁰ Shelter, D., 1979. A Pilot Study of the training and Career Experiences of Symphony Orchestra Musicians. ISME Yearbook, 6, p. 173.

⁹¹ Marcone, S., 1984. Preparing Today's Students for Tomorrow's Jobs. Music Educators Journal, 70, 8, 38-39.

traditional structures to recognise the training needs of other than the traditional professional musician.⁹² That the debate on this issue is not yet over is indicated by Chailley who makes the case for retaining the old with the new.⁹³

CONCLUSION

Although a precise definition of musical giftedness has eluded researchers its existence is recognised and its development in individuals can be observed. In broad terms it is the individual student's environment which is going to determine the extent to which that giftedness or talent is developed. However the environmental factors which most influence musical growth and development have not been clearly identified. In spite of Vernon's warnings about the weaknesses inherent in data obtained from studying parental attitudes one can admire the efforts of Brand in designing a more sophisticated instrument for measuring home environments. What is lacking in the available literature on this aspect of musical giftedness is enough case study material against which findings can be tested and through which findings might come alive.

This is also true of the school environment. If Zorman's assertion that a superior school musical environment does not contribute significantly to the connection between intelligence and musicality is true, is it also true of the connection between musicality and the realisation of musical

⁹² Solbu, E., 1982. Response I. ISME Yearbook, 9, 61-64.

⁹³ Chailley, E., 1982. Response II. ISME Yearbook, 9, 65-70.

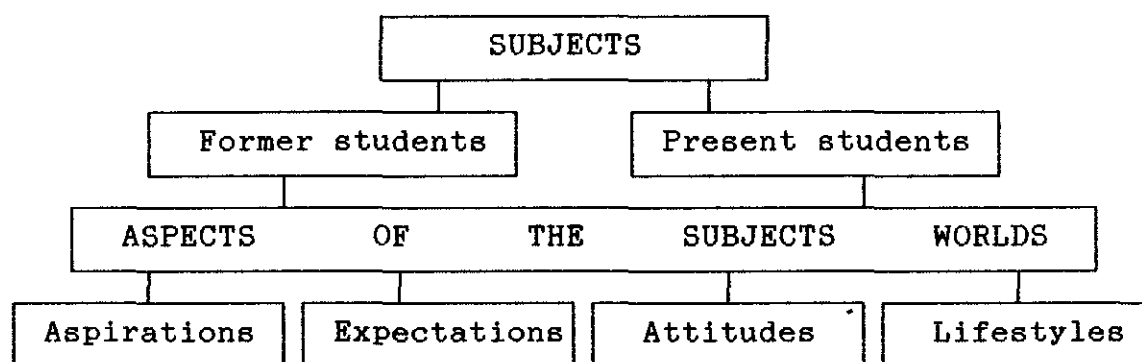
potential? If gifted students were stimulated to reflect on their school environments it is possible that this question could be satisfactorily answered. If Zorman's assertion is false case studies of gifted music students might identify those factors in school environments which are responsible for musical growth and development. The identification of such factors would of course have tremendous implications for school curriculum, particularly that of specialist schooling with which this writer is concerned.

It is disappointing that so little literature is available about career opportunities for gifted musicians particularly if one is convinced by Marcone's declaration of their existence. Whatever one's philosophical stance about the place of music in education or the place of education in music the existence of career opportunities for musical and personal fulfillment is an exciting notion. More research in this area might challenge curriculum designers to respond with creative solutions to the call for suitable training. It is a call which those responsible for nurturing musical talent can not afford to ignore.

THE CONCEPTUAL FRAMEWORK

Since the researcher in this study is familiar with the culture being studied, asking who and what will be studied leads to the building of a simple conceptual framework. (Figure 2.)

Figure 2. Conceptual Framework



The questions asked and answered in the preparation of the conceptual framework were as follows:

Question : Who will be studied ?

Answer : Former students of the school whose attendance spanned the decades between 1940 and 1980 as well as present students.

Question : What will be studied ?

Answer : The following aspects of the subjects' lives -

- * School and home environment and any other environments which emerge as influencing the subjects' histories.
- * Lifestyles in terms of routines and practice.
- * Career aspirations at various stages of development.
- * Student and parent expectations of the education system, the school, the Conservatorium.

* Student, parent and teacher attitudes to music and general education.

One of the advantages in preparing a conceptual framework is that it clarifies the relationships between those elements being studied and helps the researcher decide what not to study.⁹⁴ The extreme view of qualitative methodology, that the conceptual framework should evolve during the study in response to reflexive fieldwork, is recognised as an ideal. However this researcher finds comfort and support in the flexibility of the views expressed by Miles and Huberman :

"As qualitative researchers collect data, they revise their frameworks - make them more precise, replace empirically feeble bins (i.e., events, behaviours) with more meaningful ones, reconstrue relationships".⁹⁵

Specific Questions Arising From the Conceptual Framework

Similar advice is given about research questions which are formulated from the conceptual framework. Therefore the following questions arising from the conceptual framework for this research situation were used to give some momentum to the study so that further decisions about the specific approach could be made. These are organised following the advice of Miles and Huberman into major questions and sets of subquestions.

Re : Aspirations

1. What study and career aspirations did the subjects have on entering and leaving the school ?

⁹⁴ Miles and Huberman, op.cit., pp. 28-29.

⁹⁵ Ibid., pp. 29-33.

(Did these change? What caused them to change? Did the subjects become more resolved or less resolved? How?)

Re : Expectations

2. What study and career paths were encouraged by parents and teachers ?

(Were these realistic? Were paths assumed? Was advice available? From whom? Was it sought or offered? Were there conflicts between teachers, parents and students?)

Re : Attitudes

3. What was the attitude of students, parents and teachers to musical education and general education?

(Were there conflicts? How ere they resolved? How did these attitudes relate to study and career aspirations?)

Re : Lifestyle

4. How did lifestyle routines effect the subjects' chances of success?

(How was time organised and managed? What activities provided stimulation, balance and satisfaction? What were the pressures?)

METHODOLOGY

Background Studies

The following studies have provided both the background and stimulation for this study :

1. The Conservatorium High School in its Social Context - An Ethnographic Study through Participant Observation.

This study was done by the researcher as a requirement of an undergraduate course titled "The School in its Social Context". The areas considered were :

Environment and History

Aims

The Actors and their Relationships : Principal, Teachers, Parents, Students.

Processes : Administrative and The Learning Situation.

Outcomes

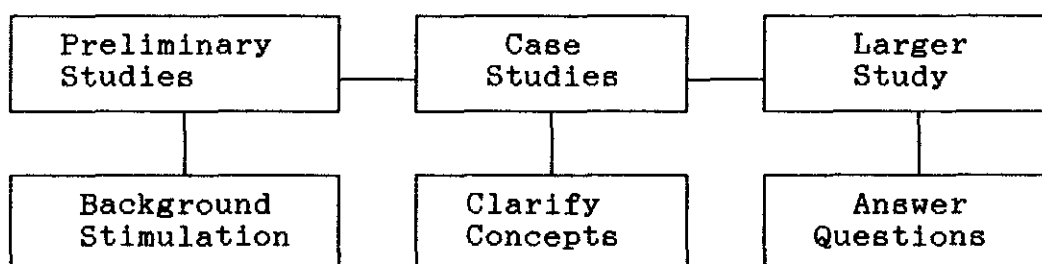
2. Case Study : The Conservatorium High School

This study was undertaken as an assignment for the Master of Education seminar, "Gifted and Talented Education". While the school's curriculum was compared to that of similar schools in other countries, the students themselves were the focus of the study. Information about students' musical backgrounds, socio-economic backgrounds and lifestyle routines was sought. The report is based on data collected from school records, a student survey and personal interviews aimed at building student profiles.

The Research Process

The studies outlined above used both quantitative and qualitative approaches. Walker accepts both approaches as being relevant to exploratory research, and in as much as "descriptive surveys often precede ethnographic studies" ⁹⁸ these studies were fundamental to the preliminary stage of this investigation. They provided the starting point for a series of interviews on which case studies were built. It is anticipated that these case studies will form a pilot study to clarify concepts so that a larger study can be undertaken which might answer the questions posed in the introduction. The process is set out in Figure 3.

Figure 3. Research Process



The Case Study Approach

The choice of the individual as the unit of analysis is significant. Bannister and Fransella acknowledge our debt to social psychology in our understanding of "man as a person" but are critical in the following terms :

⁹⁸ Walker, R., 1985. Applied Qualitative Research, England : Gower, p. 20.

"... in making the group their focus of convenience, social psychologists have lost much of the meaning of the individual person within the group and the meaning of the group to the individual person."⁹⁷

Denzin confirms the importance of individual histories to the perspective of interpretive interactionism and their relevance to the broad canvas of world history.⁹⁸ In fact there is much acceptance among sociologists of the importance to research of people's own accounts of their actions.⁹⁹

The type of case study attempted in this research project is what Gareth R. Jones refers to as "life history methodology".¹⁰⁰ The significance of this technique as a facet of qualitative methodology is provided in Jones' elaboration :

"...the technique takes as its research data the accounts of individuals about their lives or about specific segments of their social world. These accounts ... describe the ways individuals interpret and define the contexts in which their lives have been acted out and the meaning their participation had for them."¹⁰¹

This approach is also akin to Peter Abell's narrative approach the central tenet of which is that "a social event may be explained by describing the set of interrelated

⁹⁷ Bannister, D. and Fransella, F. Inquiring Man: The Theory of Personal Constructs, London: Penguin, 1974, p. 49.

⁹⁸ Denzin, N. Interpretive Interactionism in Morgan, op.cit., p. 130.

⁹⁹ Phillips, D. Abandoning Method, San Francisco: Jossey-Bass, 1973, p. 173.

¹⁰⁰ Jones, Gareth R., Life History Methodology in Morgan, G., Beyond Method, London: Sage, 1983, p. 152.

¹⁰¹ Ibid.

actions that brought it about."¹⁰² Walker's caution that this approach "has yet to be tested as a practical research tool"¹⁰³ is noted. However such an approach is attractive in that it has implications for data analysis since comparison of data from different narratives, when compared could reveal relationships between recurring events and outcomes.¹⁰⁴

¹⁰² Walker. *op.cit.*, p. 14.

¹⁰³ *Ibid.*, p. 15.

¹⁰⁴ *Ibid.*

SAMPLING

Rationale

In advocating the case cluster method McClintock et al are critical of qualitative research which depends on a small number of cases in that "a small N provides a tenuous foundation for generalizations."¹⁰⁵ They propose a "stratified" system of sampling which, they claim, is not only consistent with qualitative case study methodology but which is a help in controlling bias.¹⁰⁶ McClintock's experience is obviously worthy of serious consideration in designing a case oriented study. The idea that units of analysis can be attributes which can be identified, selected and altered by interaction with "informants" could have particular implications for the third stage of this research project i.e., the "larger study" referred to in Figure 2. of this essay. However the notion that these units of analysis be identified at this stage of the study is rejected as an unnecessary limitation.

Nevertheless, the following contentions of Miles and Huberman are accepted :

- * that some fundamental sampling can and needs to be made prior to fieldwork,
- * that these can and will change during fieldwork,
- * that the conceptual framework and the research questions will determine initial sampling choices, and
- * that not only people, but also setting, events and processes form the parameters for making sampling

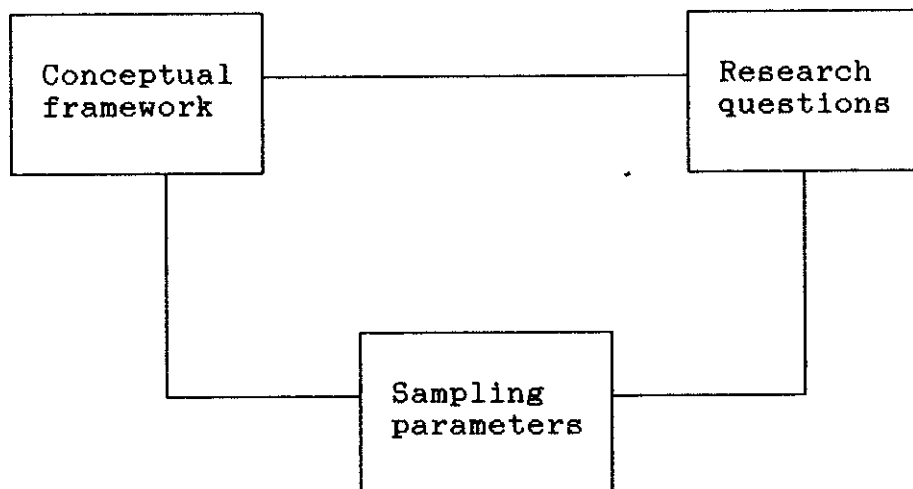
¹⁰⁵ McClintock, C.C. et al. in Walker, op.cit., p. 154.

¹⁰⁶ Ibid., pp. 159-161.

decisions.¹⁰⁷

It is interesting that Miles and Huberman are flexible about the order in which the conceptual framework, the research questions and the sampling procedures are tackled, but are adamant that "however you proceed, the sampling parameters are set by the framework and the research question."¹⁰⁸ The fluid nature of this approach is represented in Figure 4.

Figure 4. A view of the sampling process



Sampling Options

By using their guidelines for viewing the options, lists relevant to this study emerge and are presented in Figure 5.

¹⁰⁷ Miles and Huberman, op.cit., pp. 36-42.

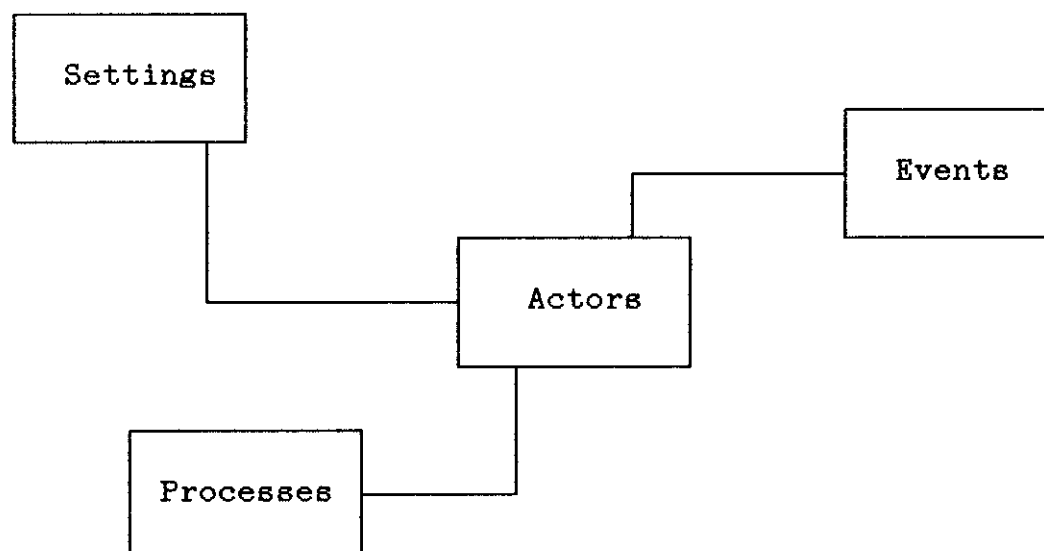
¹⁰⁸ Ibid., p. 37.

Figure 5. Sampling Options

SETTINGS	ACTORS	EVENTS	PROCESSES
Pre-school	Subjects:	Classes	Attending
Primary school	* ex-students	Concerts	classes,
Secondary sch.	representing	Rehearsals	rehearsals
Home	1940s-present	Special	special
Music Camps	* present stu-	occasions	occasions
Orchestra /	dents from		Travelling
Ensembles	junior,		Practising
Concert plat-	intermediate		Performing
form	& senior		Interacting
Teaching	years		socially and
studio			profession-
Commercial	Others:		ally.
world	* teachers		
	* parents		
	* peers		
	* colleagues		

Sampling Parameters

Because some of the actors listed in Figure 5 are the subjects of individual case studies in this project a better representation of the sampling parameters might be that presented in Figure 6.

Figure 6. Sampling Parameters

Sampling Subjects

As has already been established, the main actors or subjects of this research project are past and present students of the Conservatorium High School. Figure 7 offers a matrix set-up to help in the selection of subjects who are former students of the school. It assumes that the main career paths for musicians are in performance, composition, musicology and teaching, but allows for the inclusion of subjects from different areas both within and outside the profession.

Figure 7. Sampling Matrix: Ex-students

	PERFORMER	TEACHER	COMPOSER	MUSICOLOGIST	OTHER
1940					
1950					
1960					
1970					

This matrix set-up was part of the exploratory process; the researcher was interested to find out if many former students have pursued careers in any direction other than teaching and performing. The strong musicology and composition faculties within the N.S.W. State Conservatorium of Music are recent phenomena. Until the last decade the tertiary curriculum, and similarly the secondary music

curriculum, was like that of conservatories in the Soviet Union, designed to accommodate composition and musicology "but in truth ... geared towards the training of outstanding performers."¹⁰⁹ These assumptions were checked against school records in the process of selecting subjects.

Figure 8 offers a matrix set-up for subjects who are currently attending the school. It assumes that these students will have career aspirations in the same areas as the former students and, because of the greater diversity of tertiary faculty influence, that these aspirations might even at this stage be clearly articulated. Similarly it allows for other options.

Figure 8. Sampling Matrix: Present Students

YEAR	PERFORMER	TEACHER	COMPOSER	MUSICOLOGIST	OTHER
7/ 8					
9/ 10					
11/ 12					

Basic to any decision about sampling is the question of how many cases can be managed in a multiple case study. If the matrices presented above were completed a total of 35 individuals would become the subjects of case studies. This might have proven beyond the capacity of a single

¹⁰⁹ Shwarz, B., op.cit., p. 380.

researcher and might not have been warranted in a pilot study. In these circumstances revised matrices, such as are represented in Figures 9 and 10, which determine the selection 21 individuals for depth study were deemed more appropriate.

Figure 9. Revised Sampling Matrix: Ex-students

	PERFORMING & TEACHING	ACADEMIC	OTHER
1940			
1950			
1960			
1970			

Figure 10. Revised Sampling Matrix: Present Students

YEAR	PERFORMING & TEACHING	ACADEMIC	OTHER
7/ 8			
9/ 10			
11/ 12			

As interviews proceeded it became apparent that 21 individual case studies were well beyond the scope of this pilot study. Reduction of the ex-student sample was made by taking representatives of a longer period of time. Also the

separation of the categories "Performing and Teaching" from "Academic" proved artificial since musicians employed as academics are usually involved in performing and vice versa. Therefore the matrix for selection of ex-students as case studies was adjusted accordingly as is shown in Figure 11.

Figure 11. Adjusted Sampling Matrix: Ex-students

YEARS	MUSIC	OTHERS
1940-1950		
1950-1960		
1960-1970		

Similarly a reduction in the number of case studies of present students was made by restricting the sample to students in the senior years on the grounds that their career aims are likely to be more keenly focussed as they prepare for a public examination which to a large extent is going to determine the next step in their career paths. Also it was found that students at this stage appreciated the opportunity to reflect on their years at school and to articulate their hopes for the future. By merging the categories in line with the matrix for selection of ex-students the sampling matrix for present students was adjusted and is shown in Figure 12.

Figure 12. Adjusted Sampling Matrix: Present Students

YEAR	MUSIC	OTHER
1980's		

During fieldwork it became obvious that tracing suitable subjects to complete the sampling according to the matrices could not be done within the time frame of the pilot study. Final selection, although incomplete according to the matrices, allowed representation of ex-students who are following a musical career and those who are not and similar representation of both categories among present students. Figure 13 shows the completed sampling of ex-students identified by their given names. Figure 14 shows the completed sampling of present students also identified by their given names.

Figure 13. Completed Sampling Matrix: Ex-students

YEAR	MUSIC	OTHER
1940-1950	Clarence Barry	
1950-1960		Adrienne
1960-1970	Robert	

Figure 14. Completed Sampling Matrix: Present Students

YEAR	MUSIC	OTHER
1980's	Daniel	Bridget

The inclusion of two ex-students from the 1940s allows consideration of the two directions between which Australian musicians have traditionally had to choose, building a career in Australia or overseas. The selection here is significant in that both Clarence and Barry are contemporaries who studied the same instrument from the same teacher and who played together in the same orchestra before their paths diverged. Barry became recognised as the world's leading French Horn soloist and Clarence reached eminence as the leading French Horn player in the leading Australian orchestra.

Although aspiring to a career in music when she was at school Adrienne is now a teacher of Japanese language. Nevertheless music continues to play a very important role in her life. Robert is employed in a tertiary institution not only as a teacher of academic studies but also as a teacher of piano. However he is an active soloist and chamber music player who frequently undertakes tours within Australia and overseas.

Of the present students Daniel is one for whom practical studies have been abandoned in favour of composition. There is no doubt in his mind that that is where his future career

lies. Bridget on the other hand is a committed performer who wishes at this stage to use her musical knowledge in the area of psychology.

Further Considerations

A fundamental issue must also be considered through the question "Are the cases examined a reasonable sample of a larger universe?"¹¹⁰ It is possible that the answer to this question might be found in patterns emerging from the data analysis. On the other hand it might not be possible to answer this question at all in a pilot study. Nevertheless the significance of including in the sample what Patton terms "critical cases . . . that can make a point quite dramatically or are, for some reason, particularly important in the scheme of things"¹¹¹ was accepted. Also it was recognised that such cases were likely to be found among those subjects who hold positions of prestige or influence in the musical world. The researcher was aware from informal conversations and from what could be called common knowledge that these subjects would also include some whose school and professional careers have deviated considerably from what would be generally regarded as normal. Further support for their inclusion is provided by Patton in the following statement :

"In many cases more can be learned from intensively studying extreme cases than can be learned from trying to determine what the average case is like."¹¹²

¹¹⁰ Miles and Huberman, op.cit., p. 15.

¹¹¹ Patton, op.cit. p. 102.

¹¹² Ibid., p. 101

RESEARCH PROCEDURES

" ... it is important to consider under what conditions qualitative strategies, tempered by recognition of practical tactics, are particularly useful and appropriate."¹¹³

The Interview

The preference for qualitative methods in general and the case study approach in particular has been outlined earlier in this essay. The choice of the interview as the main technique was made realising that many of the subjects would require what Walker terms "VIP-status treatment". Walker explains this situation further by quoting Young and Mills who point out the inappropriateness of asking such subjects to respond to standard measurement instruments which may appear "at best mystifying or at worst humiliating."¹¹⁴

Many writers emphasise the importance of allowing subjects to respond to interview questions in their own terms. For example much of Kelly's work in self-characterisation is interesting to consider in relation to interviewing individuals for life history data. Bannister and Fransella point to the basic tenet of self-characterisation as the

¹¹³ Ibid., p. 48

¹¹⁴ Walker, op.cit., p. 21.

"recognition that a man's view of himself may be materially more worth our consideration ... than ... his answers to the semi-relevant questions which we have concocted for our questionnaires."¹¹⁵

Sue Jones also directs readers to Kelly's theories and supports the depth interview as one of the ways in which a researcher can come to understand the "meaning and significance" individuals give to their actions.¹¹⁶

It is the open-ended question which is most often associated with the depth interview. However Patton is emphatic in stating that :

"Qualitative measurement through in-depth interviewing requires no less precision in asking questions than is demanded by questionnaires constructed for quantitative measurement."¹¹⁷

While one of Patton's main concerns is clarity, Jones is concerned that the researcher use what is, according to her description, a reflexive approach in order to achieve "the complex balance between restricting structure and restricting ambiguity."¹¹⁸ Furthermore she sees structure as closely related to interviewer bias which, she claims, should be used creatively in developing with subjects the kind of rapport necessary for empathic ethnography.¹¹⁹

In endeavouring to strike such balance this researcher was inclined to use the "topic guide" recommended by Alan Hedges for group interviewing. In this approach responsibility for conducting a "steered conversation"

¹¹⁵ Bannister and Fransella, op.cit., pp. 81-82.

¹¹⁶ Walker, op. cit., pp. 45-46.

¹¹⁷ Patton, op.cit., p.224.

¹¹⁸ Walker, op.cit., p .47.

¹¹⁹ Ibid., pp. 48-49.

which is essentially reflexive becomes the demanding task of the interviewer. ¹²⁰ Although this in itself is a challenging prospect, it does include some negative aspects for consideration. A reflexive approach to interviewing can mean that different amounts of information will be collected from different people in unequal periods of time. The reality of this disadvantage is exemplified in the first case record which is shorter in length than the others. Although the specific questions arising from the conceptual framework became the topic guide for all interviews the first subject was interviewed more than two months earlier than the others who were interviewed within one month of each other. While Patton has no quarrel with this in basic research when "political credibility ... is less of an issue" he warns of the potential difficulties for data analysis. ¹²¹

In spite of such warning this researcher remained committed to the notion of data collection as a reflexive social process. After all, to ignore it, Phillips reminds us, would be likely to render one's measures and findings invalid.¹²² However a further problem is that people, suffering from evaluation apprehension and being "concerned with the purpose of the investigation ... will, consciously control their responses."¹²³ One reason for the emergence of this idea as a sociological finding, and this is particularly relevant to this study, is that revealed by

¹²⁰ Hedges, A., Group Interviewing, in Walker, op.cit., p.78.

¹²¹ Patton, op.cit., p. 203.

¹²² Phillips, op.cit., pp. 69-70.

¹²³ Ibid., p. 71.

Donald Light in his rejection of interviews in favour of observation. His claim is simply that "people are not good at recalling past events."¹²⁴ Patton also writes of the difficulty people have with questions about the past.¹²⁵ However surely new insights can equally be brought to the interview situation if one accepts the continuation of Light's argument that:

"Inaccurate recall is more insightfully seen as the reconstruction of past events to fit a new sense of self, an emerging professional identity."¹²⁶

Part of the answer to these problems is contained in aspects of the empathic ethnographic research approach referred to in various parts of this essay. This approach is summarised well by Smircich who recommends :

"establishing rapport and building a climate of trust, acceptance, and openness so that the researcher will be invited by people to see the world from their point of view."¹²⁷

One of the first moves in establishing trust was to inform the interviewee of the researcher's intentions. This included explaining the topic, which Jones recommends should be done even if only "in relatively broad terms", and why it was of interest to the researcher.¹²⁸ It also included explaining how the researcher anticipated using the data gathered from the interview. This move openly acknowledges

¹²⁴ Light, D., 1983. Surface Data and Deep Structure: Observing the Organization of Professional Training, in Van Maanen, J. (ed.), *Qualitative Methodology*, London: Sage. p.60.

¹²⁵ Patton, op.cit., p. 211.

¹²⁶ Light in Van Maanen, op.cit.p. 60.

¹²⁷ Morgan, op. cit., p. 166.

¹²⁸ Jones, S. Depth Interviewing in Walker, op.cit., p. 48.

that "information ... confers power."¹²⁹ Although the audience for this research is at present no wider than the teaching community of one school the possibility of the findings being of interest to policy makers on a wider stage should not be dismissed. The arts are generally related to national prestige, and therefore education in the arts is logically linked to this issue. Also, as Van Maanen points out when summarising themes emerging from the contributions to his book "Qualitative Methodology" :

" ... any kind of research endeavour is a social and cultural process with deeply rooted moral, political and personal overtones."¹³⁰

In considering how one might be invited by people to see the world from their point of view it was pertinent to reflect again on Phillip's discussion of opinions and arguments. Phillips cautions his readers with reasoning consistent with the interpretive interactionist views of Denzin who rejects searching for causality to answer 'why' in favour of asking 'how', i.e., "how is social experience ... organised, perceived and constructed by ... individuals."¹³¹ Patton goes as far as to suggest, in very persuasive terms, that the researcher avoid using 'why' questions at all in an interview. His argument outlines problems of "causal inference" and "infinite regression." As has been indicated the topic guide for the interviews was the series of questions arising from the conceptual

¹²⁹ Walker, op.cit., p. 19.

¹³⁰ Van Maanen, op.cit., p. 250.

¹³¹ Denzin, N. Interpretive Interactionism, in Morgan, op.cit., p. 132.

framework. Since these avoided 'why' questions in favour of 'how' questions they served to prevent the inexperienced interviewer from falling into this trap in questioning. In answer then to the question of 'how', analysis of interview data "could entitle (the researcher) to advance a certain opinion."¹³² In taking that opinion in the form of findings to an audience the researcher must relinquish control of the situation if Phillip's following statement is accepted:

"While such notions as truth, objectivity, and reality aim at achieving certainty, opinion is directed at opening debate and, creating confrontation."¹³³

In either situation it is doubtful whether the move to brief the interviewee about the possible uses of the research would itself overcome the moral issue of one's research being "used against the interests of the people ... studied."¹³⁴

Other Techniques

Although the interview was the preferred technique for the collection of data in this pilot study Smircich's warning about the dangers of losing sight of the context in which to interpret data was noted as being relevant. Examination of school records was an important part of developing in particular an historical perspective on the context for the research. While opportunities to observe subjects who are now attending the school were numerous this

¹³² Phillips, op.cit., p. 178.

¹³³ Ibid.

¹³⁴ Ibid.

technique was not ignored in the case of the former students.

DATA ANALYSIS AND PRESENTATION

INTRODUCTION

The analysis of qualitative data even without statistical or other computational implications is, as King and Young suggest, a potential labyrinth for the amateur researcher.¹³⁵ The following discussion focuses on some of the issues which needed to be kept in mind during the design and collection stages as well as the analysis stage of this inquiry.

The notion of data analysis as a cyclic activity which is undertaken during data collection is one which is surely most sympathetic to the ideals of qualitative research. This is particularly relevant in case study technique in which "the development of any descriptive category usually means moving backwards and forwards between data and description."¹³⁶ Walker takes the fluidity inherent in that notion even further when he suggests that analysis of interview data might force changes in sampling.¹³⁷ The truth of Walker's suggestion is exemplified by the sampling changes which occurred in this study when it was discovered that the sampling categories were in practice artificial. Taking such an approach does help to balance what Miles and Huberman see as a tendency to reduce and oversimplify complex information, particularly when dealing with

¹³⁵ King and Young, op.cit., p. 54.

¹³⁶ Bliss, J., Martin, M. and Ogborn, J., 1983. Qualitative Data Analysis for Educational Research. London: Croom Helm. p. 185.

¹³⁷ Walker, op.cit., p. 179.

narrative texts in which there is the potential for information "overload".¹³⁸

Therefore mapping procedures were preceded by what Patton refers to as a "case record"¹³⁹ from all the data available, including a transcript of the interview. The interview transcripts were used to answer the original questions in the form of a list of points or statements. These were then presented to interviewees who were asked to confirm their accuracy or to identify changes in emphasis which needed to be made, inaccuracies or omissions. These records are presented descriptively in the next section of this essay.

CASE STUDY RECORDS

Case Study No.1

According to this subject taking up the French Horn not only opened up a career path but saved him from delinquency. Coming from a musical family he had already tried violin, piano and organ but wasn't "good enough" to pursue those instruments with a view to a career in music. He had a natural aptitude for an instrument that is notoriously difficult to master and unreliable to play. He received enormous encouragement, not only from his parents but also from his sister who was studying music and her circle of friends many of whom are now internationally recognised leaders in their fields. The subject himself is described "the finest player of his generation and one of the finest

¹³⁸ Miles and Huberman, op.cit., p. 49.

¹³⁹ Patton, op.cit., p. 303.

who ever lived."¹⁴⁰ An honorary member of the Royal Academy of Music and of the Guildhall School of Music, London he has won many prizes including the Harriet Cohen Memorial Medal and has received an OBE for his services to music. Barry has recorded more of the French Horn literature than any other player in history. Although famous as a soloist he began his professional career as an orchestral player in the Sydney Symphony Orchestra and then in the London Symphony Orchestra. He has also formed his own wind quintet and is now taking engagements as a conductor.

The temperament which harboured a potential delinquent supports strong views on teacher characteristics which are vital to progress and attitude in all subjects. The most effective teachers have personality and a capacity for establishing personal relationships. They should have broad educational interests and be experienced in life as were the returned services personnel who took teaching positions after World War II. The teacher who had most influence on this subject and who fulfilled all the criteria listed above was his French Horn teacher. By contrast, a circle of resentment is established by those teachers who resent students' involvement with music. This resentment was possibly the cause of the division between the secondary and tertiary sections of the Conservatorium remembered in spirit if not in detail by this student when young. To this

¹⁴⁰ Thompson, G. (Ed.), 1988. Symphony Australia. Sydney: Australian Consolidated Press. p. 38.

division is also attributed the lack of concern to offer career advice to school students.

Although citing teacher-student relationships as the determining factor in his attitude to academic studies the fact that he neglected his academic studies is regarded as one of the pressures of being at the school. Certainly travel by ferry from Neutral Bay did not pose a problem, sailing provided some sort of balance and mixing with the opposite sex was a source of great stimulation. The areas of the curriculum perceived as "extras" were the ones which provided the most satisfaction - orchestra and chamber music classes, rehearsals and concerts. In the words of the subject himself: "That's all I wanted to do."

Case Study No. 2.

When Clarence entered second year of the Conservatorium High School in 1945 he aimed to become a commercial artist. However his musical talent was recognised and encouraged and he became Australia's leading orchestral French Horn player. His changed aspirations matched the expectations of a family whose members were distinguished brass players. It was his mother who took the advice of the Conservatorium's leading brass teacher to have her son taught French Horn rather than follow in his older brother's footsteps with the trombone. Although reluctant to start learning the French Horn he became caught up in the opportunities available and began to enjoy the whole experience.

What the musical environment of the Conservatorium High School offered was the benefit of peer stimulation and

competition. However it is interesting to note that career aims were not the subject of conversation at the high school in those days. Working with peers fostered a love of chamber music, although there were no formal classes conducted in this area. It offered scholarships for instrumental tuition. Playing in the Conservatorium Orchestra with his teacher provided a rigorous training in orchestral playing, players being expected to be able to perform not only their own part but each part in the section.

But above all it offered a committed teacher who was also the principal player in the Sydney Symphony Orchestra. This connection cannot be underestimated. Clarence did his first work with the Sydney Symphony Orchestra at the age of fourteen, his teacher beside him. This is not to imply that this relationship was without conflict. The teacher was also demanding in long lessons, dominating as a section leader while the boy was young and sometimes rebellious. However it was that teacher, a few years later who persuaded the young player to stay with him in the orchestra rather than to travel overseas with the other players in the section who were also his students. Clarence does not know even now to what heights he might have aspired had he taken the other path.

The entry into the profession is interesting and quite different from the path followed by most players now. Leaving school early to take up a professional position with a military band for twenty months before joining the Sydney Symphony Orchestra Clarence managed to continue his

instrumental studies receiving tuition in exchange for playing in the institution's most prestigious concerts without a fee.

Although his parents were keen for him to get a sound academic training at the school they did not stand in the way of his leaving before matriculation to take a playing job. The teacher who had most influence on him at the High School "got a shock" at his decision. Clarence had a positive and serious attitude to general subjects and was excelling. It is interesting that on reflection now he believes he should have taken courses at a technical college while he was a young professional musician to further his talents in art and printing.

Clarence liked and did well in all academic subjects. However he attributes his positive attitudes to the subjects to positive attitudes to teachers and that favourite subjects were taught by favourite teachers. He speaks of his peers also being academically inclined their inclination in this direction sometimes overriding their musical inclinations. Clarence presents a fascinating picture of life at the school in those times. The first three years of high school were taught in the same room and likewise the fourth and fifth years in another room. Failure to do homework became a disciplinary matter with the registrar of the Conservatorium.

Then as now instrumental lessons were conducted after school, the wind teachers being players from the Sydney Symphony Orchestra. Although Clarence had to leave Manly

early to arrive at school on time he is and has always been well organised and particularly conscientious about being on time. Nor did travelling at night after lessons and concerts present a problem. It was considered safe. Perhaps it is logical that someone living in Manly would be attracted to and do well at water sports as Clarence did. However there was an early recognition that football and cricket were potentially dangerous for aspiring brass players and had to be abandoned. Bike riding through French's Forest to visit his favourite teacher at Roseville gave him another outlet for relaxation and exercise.

Case Study No. 3.

Adrienne was attracted to the idea of being a musician during her first year of secondary school when she was miserable as a boarding student while her parents were overseas. However when she started lessons on the clarinet she had asked for her mind was set. That ambition stayed with her right through school and for some years after even though in some ways she had started to feel both humbled by the talents around her and inadequate to measure up to the levels of expertise and dedication required of the professional musician. The strength of her confidence in this career aim precluded her seeking advice on or even considering other options while she was at school. Moreover her clarinet teacher encouraged her becoming a professional musician, taking her for extra and long lessons, demanding much of her in order to fit her for the future.

Although surprised to be referred to recently by a fellow student as "one of the talented group" she felt a misfit at her first secondary school - a private girls' school. At the Conservatorium High School to which she transferred for the two senior years she "blossomed". This must have been gratifying to her parents who, while being tremendously supportive and encouraging, were not normally active in her educational life. They organised this transfer as a result of an intuitive recognition of her frustration and unhappiness rather from any expression of this state of heart and mind from their daughter.

Adrienne considers that the school provided the opportunity for students to do well academically as well as musically and although the high school teachers were most concerned with their individual subject areas there were no conflicts with those subjects and music studies. Indeed she has fond memories of an "enlightened" teacher of Art who fostered awareness across the curriculum. Like Barry and Clarence Adrienne's fondest memories are of a particular teacher who taught a number of subjects.

In spite of such a positive and, compared to her previous school, "free" atmosphere Adrienne believes that some of the most talented male students with what she describes as "very artistic temperaments" were misunderstood even by an otherwise "very fine" principal. This opinion was also expressed by other people involved with the institution at that time. These students were among the musically inspirational students at the school. However Adrienne's

perception of some of the other students is that they were possibly "burnt out" as she could not understand their being there without obvious dedication to music.

Nevertheless it was the interaction with students with the same interests which was one of the most exciting aspects of life at the Conservatorium High School for her. Also the high school program provided many opportunities for the students to hear each other perform. Those concerts and membership of the orchestra were the most stimulating activities provided. It should be noted again that the orchestra in which the students played at this time was not an orchestra made up of high school students as it is today, but one managed by the Conservatorium which included tertiary students and teachers.

Presumably the small population at the high school could not have supported an orchestra. For example there were only eight students in Adrienne's class. Because she has a daughter attending the school now Adrienne is in a position to compare situations when she was a student with situations now. Less students meant less competition for those valued places in the orchestra and less competition for scholarships. While less competition encouraged a more relaxed atmosphere she believes that performance standards were not as high as they are now. However her perspective on the competitive pressure which did exist is that it was a positive force in her ultimate decision to abandon a career in music to study Japanese language and culture and to seek a career using her background and training in that area.

Although abandoning a career in music she has not abandoned her love of music nor her involvement with it in a practical sense.

In terms of her lifestyle as a student at the Conservatorium High School Adrienne enjoyed the freedom and responsibility of travelling to school in the city. Being an intuitive organiser of her own time she used travel from Warrawee as productive study time which saw her come top of her class in examination rather than the third place she had gained when she only had the lesser distance from Killara to travel. The participatory rather than competitive perspective on school sport was also appreciated by her. Her years at the school have been the subject of much analytical reflection and are remembered with gratitude and pleasure.

Case Study No. 4.

Neither Robert nor his family knew people who worked or described themselves as musicians before he attended the Conservatorium High School. However his parents were always enthusiastic and encouraging as far as his interests were concerned and realised that playing the piano was going to be much easier for him as a student at the specialist school they had heard about in passing conversation than at the suburban Catholic boys' school he attended for the first three years of his secondary school education. Although they were concerned about his having to travel from Kogarah it was in fact less than an hour a day in total time and there was not a problem about his physical safety. His decision to

become a professional musician was made during his years at the Conservatorium High School.

While this decision was encouraged and supported by his enthusiastic parents their main educational concerns were about his moral education and his not being able to continue his Latin studies because of the limited subjects taught at the school. Those decisions were outside their influence. However the choice of a piano teacher was not, and their simple instinctive choice of a young Australian pianist recently returned to Sydney to whom their son might most easily relate provided him with a mentor who inspired and influenced him over a broad range of intellectual interests.

This relationship was supported and encouraged by the principal who showed much concern for the whole education of the students. The woman who was now the principal of the school was the teacher of whom Barry, Clarence and Adrienne spoke so highly in interview. She encouraged Robert to overcome ignorance with enthusiastic learning which aimed to reach beyond surface knowledge. This love of learning which was fostered by the school has been significant in his further study and career. It is no wonder then that while at school he was very angry to hear a session of talk-back radio which was critical of the school's academic standards. Robert aspired to "be an intellectual" and worked very hard in all subjects, particularly after not doing very well in the 4th form examinations. His Higher School Certificate examination results were outstanding. Because his parents did not finish school themselves and were not academically

inclined he needed to rely on his own efforts. However he does pay tribute to his peers who provided positive pressure in an academically competitive environment.

In fact one of his most significant discoveries about his new school was the literary interests of his peers. He also remembers the affection older and younger students had for each other and their attitude to sport which placed emphasis on enjoyment and participation without ridicule rather than competition. All of these were in marked contrast to his previous school.

Although he now realises that there were some conflicts within the institution while he was at school he was unaware of them at the time. The Conservatorium atmosphere itself was stimulating. Secondary school students could mix with tertiary students, meet practising musicians and sit in on rehearsals and recitals. Above all they felt "special".

Case Study No. 5

Daniel had almost completed Year 11 when he was interviewed for this study. He entered the Conservatorium High School in Year 9 having attended his local high school in an outlying suburb west of Sydney for the first two years of his secondary education. Although the principal at his local primary school had suggested that he apply for admission to the Conservatorium High School his parents were concerned about his having to travel to the city each day. However as music came to dominate his life more and more his mother used her social and professional networks to learn more about the specialist school and took the advice of the

church music directors with whom she came in contact through her husband's ministry.

It was religious conviction which influenced Daniel's early aspirations to work with church choirs and bands. However attending the Conservatorium High School has helped him to clarify that his true talent lies in the area of composition. The opportunities to hear his work played, to have it discussed and to take lessons with practising composers have been enormously stimulating and satisfying for him. He regards competition such as that with which he is surrounded at the Conservatorium High School as stimulating but recognises that this is not so for all students. Success in competition has given him the opportunity not only to have his work played by and for his peers but by the Sydney Symphony Orchestra to audiences throughout the metropolitan area. He has won a scholarship to travel to the United States and the City of Sydney Cultural Council has made it possible for him to study with his hero John Williams while he is there. He now sees his future in writing for film and television.

Although Daniel claims his parents are supportive without putting pressure on him and are less concerned about his Higher School Certificate than the parents of his classmates because he is achieving musically, his mother did express some concern that he did not win the first place in music because of new competition in Year 11. His academic record is good and he has always tried to organise doing his homework at school or on the train. However the

increased work load of the senior school and greater compositional demands have made time management difficult and he is now boarding closer to the city with friends of his family. Daniel has commented that teacher comments on his school reports in Year 11 are much more positive than they were in the junior school. It is difficult to know for certain if this is because changes in his lifestyle have changed his attitude and performance. His view of his peers' attitude to study is interesting: "I think everyone secretly strives to do fairly well, but there is no way they are going to admit that in public."

Daniel is observed to be involved in school life. He was elected to the school council, is active in the peer support program, often assists with the conducting of ensembles and finds choral work a source of joy. Furthermore he is aware of the need for physical release and regularly runs, swims and does gymnastics. He approaches everything he does with great vigour and his compositional talent cannot be disputed.

Case Study No. 6

Bridget is the elder daughter of parents who, though not involved in music in a practical sense, are delighted that their children show talent believed to be inherited from their paternal grandmother. Described by Bridget as "intellectuals" they are supportive and concerned and generate an unstated assumption that her career path will be preceded by tertiary education. While Bridget sees self motivation as a clear expectation of the school she also believes that parent, teacher and student anxiety about doing well in the Higher School Certificate is the root of conflicts which arise in students' lives.

However she concedes that most of her fellow students are handling the transition to Year 11 very well and working much harder than they did in the junior school. While she has not had any problem with travel arrangement, coming to school by ferry from a convenient suburb, she is learning to manage her time much better this year and is finding much satisfaction in setting small goals and meeting challenges. Her class music and academic results most often place her in the middle ranking of students though she often excels in particular aspects of her subjects.

She is particularly pleased with the progress she is making in her studies with a new flute teacher with whom she believes she is more compatible than she was with her former teacher. The teacher seems interested not only in her musical growth but also in her personal growth and has contacted Bridget's parents to suggest that she spend a year

studying with a particular teacher in France when she leaves school.

In spite of such encouragement and her intention to comply with this advice Bridget is no longer sure that she wants or has the necessary personal qualities to become a performing musician. As she has broadened her perspectives on music and grown in self awareness she has developed an interest in working with music in the field of psychology. However she knows that practical music making will always be an essential part of her life. It has always been an important part of her life, even in primary school where she says music was not "the thing to do". Her introduction to the flute was through a visiting teacher whose flute playing enchanted her and whose attention she demanded. There was another factor which also played a part in her taking flute lessons. She suffered from bronchitis as a young child and her mother, a physiotherapist, recognised the medical advantages of studying a wind instrument. Now she has a particular love of choral singing and orchestral and ensemble playing, activities which are a source of intense stimulation and satisfaction for her.

She recognises the pressure of musical competition within the school and does not believe that she responds well to it on a long term basis. However she is more concerned with what she sees as the social pressures operating in the school which are created by the geographical diversity of the areas from which the students are drawn and has started to seek companionship with people

who do not attend the school. However she has great respect for the maturity of her fellow students and believes that such simple acts as travelling to the city each day contribute to their self motivation and capacity to cope with pressure. Although she is not motivated to make a commitment to any regular sporting activity she recognises the need for a balanced life and follows sporting interests which are individual on an irregular basis.

MAPPING PROCEDURES

While the task of analysing qualitative data can seem overwhelming, most pertinent to any discussion of its presentation is the reminder:

"What counts in the long run is
not how the facts are dressed
but whether they make sense." 141

Nor should any mapping procedures deny the importance of the instinct of the well prepared researcher. Bliss et al admit that in developing categories "there will always be some idea, perhaps intuitive, of 'how things are'." 142 Walker also recognises that much of ethnographers' time is spent checking 'hunches' (hypotheses) against experience as they search for patterns in their data. 143

As discussed in the introduction to this section data was being analysed as part of the cyclic process by which this study was conducted. In the final analysis data from

141 Van Maanen, J. (Ed.), 1983. Qualitative Methodology. London: Sage. p. 34.

142 Bliss, J., Martin, M. and Ogborn, J., 1983. Qualitative Data Analysis for Educational Research. London: Croon Helm. p. 185.

143 Walker, op.cit., p. 186.

each case study was compared according to the four aspects of the subjects' worlds represented in the conceptual framework. While an attempt is made here to present the analysis similarly it will be apparent to the reader that those four areas are inter-related.

DATA ANALYSIS

Aspirations

Of the six subjects four changed their career aspirations , three during their years at school and one after leaving school. Two, Adrienne and Bridget, came to the school hoping to follow a musical career. It is interesting that in both cases changing aspirations were directly related to increasing self awareness partly based on an understanding of the extremely competitive nature of the performing profession. Both subjects also had the opportunity to broaden their perspectives on study and career possibilities through travel or association with family contacts from other professions. In neither case however has music itself, and the performing of music, lost its importance in their lives.

The change in career aspirations of both Clarence and Robert appears to be closely connected to the unique opportunities afforded by a school with such close locational and professional links with the tertiary institution. Although Clarence, unlike Robert, had plenty of role models for a musical career, like Robert he was strongly influenced by a mentor who was his instrumental

teacher. There is much evidence that both teachers were men of broad intellectual interests. This was particularly significant in the case of Robert who aspired to become "an intellectual". However also of particular significance in his case is the influence of his peers whose interests in contrast to the interests of students at his former school, included a passion for literature and who put sporting activities into a context of participation and enjoyment. Since Clarence is not a pianist but the player of an orchestral instrument notoriously difficult to master it is logical that the performance opportunities which abounded while he was at school afforded the enjoyment and satisfaction that lead to his decision to become a musician and in his reflections these are given a great deal of emphasis.

Barry and Daniel both entered the school with the idea that they would become musicians. As in the cases of all the subjects of this study the school provided what was lacking at their previous schools - a sympathetic environment in which they could develop their gifts. Barry confirmed his ambitions and abandoned the path of "delinquency". However Daniel found direction for his ambition once his talents became clarified in relation to those of his peers.

In both cases the confirmation of their aspirations was as allied to self awareness as was the change in aspirations of Adrienne and Bridget. However it is possible that the influence of the teacher - mentor stood in the way of Clarence and Robert reaching a greater self awareness while

still at school. Barry had the same teacher as Clarence and just as Robert and Bridget do of theirs, pays great tribute to the teacher's contribution to his intellectual as well as musical growth. However he was not deflected from his aim to go overseas as Clarence was. Robert found his teacher's encouragement flattering to his ego to the extent that he feels he developed an unrealistic expectation of his pianistic talent and had to take a broader look at possible career paths when he left Australia to study after graduation from the tertiary institution.

Expectations

Whatever differences there might have been in parental attitudes to musical and general education all subjects received enormous encouragement from their parents regardless of whether or not their parents were interested in music. More parental involvement in music is here equated with stronger assumptions that the child will follow a career in music. In the case of Barry and Clarence there was not only parental assumption but that of their social and family milieu which had strong roots in the musical world and through which advice on schooling and tuition was naturally available. Outside that milieu parents used other networks to gather information sometimes in reaction to signs of discontent in their children.

That more formal channels for advice through primary school principals have evolved is evident from Daniel's story. Bridget's story suggests that this information is

not always made known to relevant students. In such cases the advice of the individual instrumental teacher is vital.

However is it parental insecurity which motivates them to work more closely through their own social and professional networks in deciding to send their children to a school which is so different from a normal school?

Attitudes

Although the parents of the older subjects were keen for their children to do well academically they did not seem to have the same level of anxiety about doing well in the final public examinations as parents of present students generally do. Daniel tells us that his parents are exceptional in their being satisfied that he is doing well musically. Clarence's parents may have been disappointed that he left school early to take a job in the profession but it did not cause real conflict.

The attitude of teachers to musical and general education has some interesting facets. The evidence of Barry, Adrienne, Robert and Bridget suggests that the most effective teaching comes from those instrumental or school teachers who are interested in the development of the student beyond the boundaries of the subject. While all case study subjects show appreciation of responsive teaching styles Barry and Clarence link their attitude to academic subjects directly to the quality of the teaching. Some attention has been given in the literature on school

environment to the question of the role of the professional musician in the education of the musically gifted. Much less has been given to that of the role of the non-music professional educator. The influence of an outstanding teacher of the latter category is obvious from the tribute paid by four of the subjects of this study to one teacher whose influence on the Conservatorium High School student community spanned four decades.

As might be expected the younger the subject of this study the more detailed is the description of student attitudes to both music and general education. While the present students claim that they work much harder academically in the senior years they also claim that this is not necessarily admitted by their peers. Robert certainly admits to working very hard at school and Adrienne's perspective is that the school provided the opportunity to do well academically. While this aspect of school life is given less prominence in the reflections of the students from the 1940s it should be remembered that both left school to work in the profession. Nevertheless Barry admits that neglecting academic studies became a pressure and Clarence regards the academic interests and ability of his peers as a significant aspect of the school environment.

Lifestyles

Questions about stimulating and satisfying facets of school life were included in examining this aspect of the subjects' worlds. In all cases there is evidence of tremendous stimulation from what might be categorised as social forces. It is the interaction with peers through competition, ensemble playing and singing, concert going and giving which provides the most stimulation even when it is discussed and described as a pressure. However Adrienne's post-interview comment that peer concerts were more stimulating for her generation than they appear to be for the present generation should be considered.

Nor should the supportive relationships of older to younger students be underestimated. These case studies well exemplify the points made by both Nelson and Gallagher about this aspect of specialist schooling and reported in the review of literature included in this essay.

Subjects found it difficult to distinguish between activities which provided stimulation and those which provided satisfaction. Music making, the most potent force in stimulation, also provided the most satisfaction.

Questions about what activities provided balance in subjects' lives were interpreted in terms of physical or sporting activities. As has been noted the school perspective on sport was appreciated by most. However five of the subjects had or have sporting or physical interests and two, Clarence and Daniel, have been involved at a competition level.

Preliminary studies have shown that there is a trend for more students to travel greater distances in order to attend the Conservatorium High School. Many of the performance activities associated with a full musical education occur after school hours and travel at night is no longer considered safe in metropolitan and outer metropolitan Sydney for lone children. While travel has not been a problem for most subjects, and in fact Adrienne turned it to her advantage, Daniel has had to re-learn how to organise his time now that he is living closer to the city. However the need to organise time was seen as essential by most subjects even if they were naturally inclined to do so.

CONCLUSION

Some patterns do emerge from the data analysis. However as the earlier discussion on sampling procedures did suggest, it is not possible in a pilot study to know with certainty that the cases examined are "a reasonable sample of a larger universe."¹⁴⁴ Nevertheless that the case study subjects are "particularly important in the scheme of things" was influential in their being selected as the earlier discussion on sampling procedures also indicates. Therefore the following discussion of pilot study conclusions, presented here in terms of the general research questions posed at the start of this essay, includes questions which might be asked in a larger study and gives directions for further research.

1. How do musically gifted students develop their talents and prepare themselves for life after secondary school?

Three factors emerge as crucial to the development of musical talent and preparation of students for post secondary school life. Mentors are most often students' individual instrumental teachers. The most effective mentors have broad intellectual interests and a concern for the student which extends beyond the learning of a musical instrument. However this can also have an inhibiting effect on the pace at which a student develops self awareness and with it the ability to take responsibility for decisions about that student's own future. Future research should

¹⁴⁴ Miles and Huberman, op.cit., p. 15.

examine the student - mentor relationship in depth and ask the extent of its influence on the development of talent, particularly in relation to other factors such as the ones outlined in this concluding discussion.

Through peer interaction gifted students learn to view their talent in an appropriate context. This is a major factor in their pathway towards self awareness. It can give direction to their talent and it is possible that it is the factor which prompts them to broaden their horizons in terms of future career paths. Moreover it provides the stimulation of like minds and fosters appreciation of different individual talents. Future research should examine peer relationships in depth to find detailed evidence of their effect, particularly on study and career choices.

Musical talent must have opportunities for development. Fine teaching and peer interaction cannot exist in a vacuum. Opportunities must exist for gifted musicians to play in ensembles, to perform for an audience and to hear each other perform. These should not necessarily focus on formal competition since there is, as the literature review introducing this pilot study indicated, a body of informed opinion which regards formal competition as psychologically damaging and associates it with parental and teacher exploitation of students. However performance opportunities do give a specific context in which students can measure their talents against each others. Future research should examine the role of performance opportunities in the lives of students who make performing their career and in the

lives of students who do not. How important are those opportunities in students making that decision? How important are they to an individual's long term musical satisfaction and future involvement with the art? How significant are the professional engagements teachers secure for their students while still at school ?

2. What is the role of a specialist high school in preparing its students for a professional career, both ideally and "in fact?"

Available literature does not show the connection between school environments and the realisation of musical potential. However the case studies presented in this essay demonstrate that the specialist high school ideally provides a sympathetic environment in which individual talent can develop. While the three factors discussed in response to the first general question are of utmost importance the following additional factors appear significant.

In the same way that the most revered instrumental teachers show interest and understanding beyond their official teaching sphere so are revered and respected those school teachers whose positive attitudes to both the subject and the student foster a love of learning which becomes the basis of their lives in and beyond the classroom. There is ample evidence in these case studies that gifted students who have become successful adults have "in fact" been influenced by gifted teachers. Future research should seek evidence of this from a wider sample and should also examine

the effects of teachers' negative attitudes on musical development and career choice and success.

The case study material suggests that role models are important for students in developing career aspirations. Logically role models for students with the potential to enter the musical profession come from within the profession itself. The Conservatorium High School being attached to a tertiary institution with strong links to the performing and teaching arms of the profession has allowed the interaction through which such role models can be provided. The means by which this interaction has taken place seems to range from casual observation to the development of intense personal relations. Future research should clarify the nature of that interaction and how the interaction takes place since it is clear from the review of literature and indeed from interpreting the case study material that providing role models from or interaction with members of a wider music profession might be an important factor in the career training of young musicians.

The confirmation of these and any other environmental factors as having a direct relationship to musical development and career preparation would have important curriculum implications. It is clear that the term "professional career" as used in the general question might need to be broadly defined. The case study data supports evidence from the literature review that regardless of whether the student intends to follow the traditional performing or teaching paths there must be developed a

strong basis for future learning and a willingness to think broadly in terms of a future career. Future research should ask not only what subject choices should be offered but what teaching methods are best going to encourage the development of those qualities in the students attending specialist schools.

3. What changes have taken place in attitudes to specialist schooling among students, parents and the community in the decades between the 1940s and the 1980s ?

From this pilot study one is more aware of similarities in attitudes to specialist schooling than one is of the changes in attitude which have taken place since the 1940s. This is particularly true of parents of gifted musicians. Regardless of whether they are musicians, musically aware or musically ignorant parents of successful musicians offer tremendous support and encouragement. Regardless of the presence or absence of any formal channels of advice they seem inclined to use their own networks when gathering the information on which to base their decision to send their children to a specialist school. Their concerns for their children's psychological as well as musical welfare are of greater importance than concerns they might have about curriculum limitations or difficulties of travel. However anxiety about the final secondary school public examination, the Higher School Certificate, seems to be more apparent than it was in the 1940s. Future research would be needed to verify these observations.

Similar anxiety effects the students and their school teachers and is blamed for conflicts which arise in school life. However this would need to be seen in relation to other factors in future research. Certainly students seem less likely to leave school before attempting this final examination. Future case studies should include as many students as possible who have left school early and trace the effects of that move on their study and career paths.

Sampling for this pilot study did not deliberately seek subjects who had left other secondary schools to attend the Conservatorium High School. However five of the six subjects did do that and the other described herself as a "misfit" in her local suburban primary school. The extent to which this is true of entire Conservatorium High School populations over the decades since 1940 would be vital in any future research in this area.

Present Conservatorium High School students do not admit to working hard. Was this reluctance always part of the social mores of the school? Why were students reluctant to discuss career aspirations in the 1940s ? Are today's students similarly inclined?

Except for one case study subject's reaction to a negative talk-back radio session this pilot study has not gathered any data on attitudes of the wider community to specialist schooling. However information about attitudes from that wider community is important to curriculum planners, particularly since the whole field of career choices for gifted musicians appears to need some

contemporary research. That research should aim to identify and canvass the views of people with legitimate concerns with the education of the musically gifted. Also it should seek to articulate the attitudes of the early influences on the musically gifted, in particular their families and friends and the primary school teachers who are influential in deciding their secondary school choice and possibly their ultimate career entry.

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