Structuring the argument of a theoretical paper: A guideline and its reception by advanced undergraduate musicologists

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ABSTRACT

We develop a detailed general structure for theoretical papers in advanced undergraduate seminar courses on music psychology. In our seminars, papers are presented and written up by teams of 4-5 students. Each team member is assigned a given section (Introduction, a specific subtopic, or Conclusion) but also shares responsibility for the whole paper. Each section comprises specific ingredients in a given order, such as topics and subtopics, examples, questions and subquestions, theses and subtheses, arguments for and against, implications, suggestions for further research. The approach helps students to acquire basic skills in theoretical research and critical evaluation, upon which the quality of their later empirical and theoretical research projects will depend. However, it is demanding and encounters resistance from those expecting to learn and reproduce "facts".

BACKGROUND

Music psychology research abounds with questions for which no clear answers (yet) exist. In recent seminar courses at the University of Graz, students have posed questions such as the following. What is the evolutionary function of music? Is there such a thing as musical talent? What kind of musical practice routine yields the fastest progress in the shortest time? What is a musical emotion and how can it be described? In what sense do people listening to western tonal music perceive roots and tonics? Do musical activities improve general intelligence? What is the differ-ence between trance, ecstasy, peak experiences and flow states associated with music? Why is music universally associated with religion and spirituality? In what sense does (or can) music promote the integration of immigrant minorities in modern cities?

Difficult questions with uncertain answers may be a common feature of all academic disciplines. But the *proportion* of important questions for which no clear answers yet exist, by comparison to the proportion of relatively solid knowledge, does seem to be higher in music psychology than in related, more established disciplines such as (general) psychology, music history, or musical acoustics. For this reason one may question whether the term "handbook" is an appropriate title for the coming "Oxford Handbook of Music Psychology". It is therefore important for students in music psychology to receive specific guidance in the art of dealing with academic uncertainty.

For many controversial questions such as those in the above list, different schools of thoughts can be identified that promote different theses. Each such school may cite an abundance of good arguments and evidence in favour of their position. If the experts cannot decide, how should university teachers and their students deal with this uncertainty? Should teachers (i) arbitrarily choose one side of the argument – perhaps the side that they personally support – and teach only that? Or should they (ii) try to cover all sides? The first strategy has the advantage that students are given a clear set of so-called facts to learn. The task is clearly defined. Depending on the attitude to learning and knowledge that students have acquired in high school – which seems to differ considerably from one country to another – younger students may expect to learn "facts" in this way and to present for an examination (perhaps a multiple-choice test) whose result will measure the accuracy and extent of their "knowledge". The second strategy has the advantage that the uncertain contents of teaching correspond more closely and honestly to reality. But students may be discouraged and confused. Why learn about a problem for which there is no clear solution? What, in fact, do music psychologists *know*? Can they share their knowledge with us?

Probably the most rational and usual response to this dialectic is to focus on so-called facts in earlier stages of post-secondary education and later to gradually introduce more and more difficult questions with different possible answers, as well as to encourage older students to question material that they learned in previous years. This approach allows students to gradually become more independent and mature in their ability to deal with academic uncertainty. They gradually learn to evaluate the evidence and list the arguments for and against a given thesis, weigh the various points against each other, arrive at their own conclusion or thesis, and defend it convincingly.

AIMS

In this paper, we present a detailed, formal approach to writing a theoretical paper in music psychology. It is primarily intended for advanced undergraduate students, but may also be interesting for researchers and even for those preparing a submission to a high-level theoretical journal such as *Psychological Review*.

Our approach is overtly multi- and interdisciplinary. The students in our seminars generally have a reasonable background in both humanities and sciences: most have previously attended and passed courses on music theory and composition, music acoustics, academic writing, and empirical methods in musicology, as well as general introductions to ethnomusicology, historical musicology, systematic musicology, music psychology, and music sociology. Many are also practising musicians. In our seminars, students are expected to compare and contrast arguments and evidence from the humanities, the sciences and musical practice. While we generally regard empirical evidence as central, we encourage students not to limit their considerations to the empirical literature. Other literature can shed light on different possible meanings and contexts, which are essential for a thorough understanding of a given question.

We develop strategies that are intended to support undergraduate students as they make the transition from learning "facts" to independently formulating their own (uncertain) hypotheses. In the musicology degree course at the University of Graz, this process happens primarily within courses known as *Seminare*. In seminars at German-speaking universities, students generally present papers to each other and write them up at the end of the semester. By contrast to lecture courses (*Vorlesungen*), attendance at seminars is typically compulsory and there is no written or oral examination at the end of the semester. The final grade tends to be determined primarily by the quality of the written work. The grade can also be influenced by the quality of the oral presentation and by students' active participation in discussions.

The structure and content of typical seminars is largely determined by tradition, but differs from one discipline or professor to another. We try to base the structure and content of our seminars as far as practically possible on international research processes. For example, we want students to learn from first-hand experience that the "truth" is a rather slippery object. In the end, what is regarded as "true" (and what is not) is the outcome of a consensus (a kind of inter-subjectivity) among experts.

In modern music psychology, the peer-review procedure has considerable impact upon what is eventually regarded as "true". To the extent to which this process may be regarded as democratic, the "truth content" of music psychology journals is determined by a process of *academic democracy* that involves a complex interaction between evidence, argument, and consensus. In our seminars, we give students the opportunity to participate in a similar process and experience academic democracy for themselves. The specific procedures that they adopt as they search for "truth" in the area of their topic are modelled on the standard procedures of international conferences and journals.

The present contribution is part of a session on "music psychology pedagogy" at the ICMPC in Bologna, 2006. As such it is intended to give other music psychologists ideas that they can use in their teaching, even if they are working in a rather different pedagogical framework with no exact equivalent of the German "seminar" course. The text is also written in such a way that our own students can read it and find it useful, especially when we conduct a seminar entirely in English. We do this occasionally to give our students the skills they need to participate in international conferences and contribute to international journals.

COURSE STRUCTURE

A typical *Seminar* at the University of Graz lasts for one semester and involves 14 weekly sessions of 90 minutes each. In the first session, the coordinator explains the general topic of the seminar and provides a list of subtopics that could serve as topics for seminar papers. The students form groups of 4-5 people, and choose or formulate a general topic for the group. In the next few weeks, they search for and read the relevant literature and prepare the following documents: a tentative plan of their paper in tabular form, called a *tabular argument*; a list of references, all of which should be cited in the tabular argument; a draft of powerpoint slides for the presentation; and a self-evaluation that critically evaluates progress made so far, lists problems that have not yet been solved, and develops strategies for solving those problems.

These documents are submitted early in the semester and returned as quickly as possible with comments and suggestions so that the students have time to adjust their plans accordingly. The students soon become used to the idea that the plan for their talk – and, later, for their written paper – is in a constant state of flux: because the various sections of the plan are (or should be) closely related to each other, any change in one part of the plan makes changes in other parts necessary, which in turn generate further changes. The plan usually changes significantly both after the submission of

planning documents and after the spoken presentation. The students also get used to the idea that the course coordinator does not (and indeed should not) have a clear idea in advance of how each paper should be structured. Instead, s/he evaluates the current structure and content of the paper as it is presented to her or him at different times. Suggestions based on one version of the paper will not be the same as suggestions based on another version, and may even contradict each other. This hermeneutic, process-oriented approach involves repeated interaction between top-down elements (trying to fit the evidence to the theory) and bottom-up elements (adjusting the theory to suit the evidence). Because there is no such thing as a perfect paper (or, for that matter, absolute truth), any version of the paper or its planning can be improved.

For the remainder of the semester, students present their papers. Presentation style is similar to that of modern music-psychological conferences: material is mostly supported by *Powerpoint* or similar software, and verbal explanations are mainly improvised. After their talk, the presenters receive both verbal and written feedback from their peers and the coordinator. This stage is intended to give students a foretaste of both the question period following a paper at a conference and the peer review of a journal submission. Students are expected to document the main suggestions, and to explain how they responded to them in a cover letter than accompanies their written paper, similar to a revised submission to a journal. Just as researchers often have to wait until teaching is over before they can find time to write their research, the students in the seminars write their papers up during the vacation period following the semester.

Why do our students work in groups? The reason was originally practical: there is simply not enough time for all enrolled students to present their own individual detailed paper followed by a plenary discussion. But when students work in groups, they also learn what it is like to collaborate in a team of people with contrasting abilities and approaches. In the "real world" of international research, team research has become increasingly common – presumably due to improved communication technology and the constant expansion of the research literature, which makes it increasingly difficult for one person to keep track of the literature relevant to a given question in the various relevant disciplines. This is true both in general and in music psychology. Moreover, conflicts between university staff are prevalent and problematic, and could be avoided if academics received better training – why not undergraduate? – in the art of constructive collaboration. We regard the ability to collaborate constructively and effectively as an essential research skill that no less important than other skills like empirical methods and critical evaluation. We therefore expect every student to develop and demonstrate that ability during the seminars. When forming groups at the start of the semester, students with similar, unusual skills or background (such as students who are currently studying sociol-

ogy, concert performance or German literature) are split and placed in different groups to maximize the disciplinary diversity within each group.

Because team research is neither easy nor obvious, we give students specific guidance on how to support each other appropriately. Each student should take the initiative to plan meetings and solve problems of communication or academic content. It is important to make clear agreements and to give them high priority, but also to be tolerant of occasional unreliability on the part of other group members. The group should decide on the specific roles and duties of group members and revise these from time to time. Individuals should share responsibility for, and take pride in, the whole project, rather than only for what they perceive to be their part of it. If each student plans in advance to contribute more than their "fair share" to the group, the group is sure to function well; but one should also politely nudge any member of the group who is obviously not pulling her or his own weight. More generally, it is important to develop an atmosphere of open communication in which mutual constructive criticism is not only acceptable but also welcome. In all discussions, students should take each others' suggestions seriously, even when they feel they have good reasons for not doing so. Students should share their literature sources, deciding together which literature should be cited in which part of their paper and helping members of the group who are having difficulty finding good, relevant literature. Email communication between group members and the seminar coordinator should always be copied to all other group members so that they are informed of developments and the coordinator can easily reply to all group members.

THE ARGUMENT

We encourage the development of clear thinking and honest, effective scholarship by requiring students to clearly formulate a research question which serves as the basis for the entire talk (group presentation) and, later, for the entire written paper. They must also structure their talk and paper into *introduction*, *subtopics*, and *conclusion*. Each student presents one of these. In the spoken presentation, we allow about 7 minutes per student (i.e. 35 minutes for a group of 5), and in the write-up 2-3 pages per student. The subtopics, of which there are typically two or three, should independently shed light on the main question.

During the planning phase near the start of the semester, the students prepare a complete plan of their paper in tabular form (similar to the tables below). This serves as a basis for both the powerpoint slides and the written paper. Thus, in the end, the argument is realized in three different ways. However, the structure and content of all three versions should be essentially the same. Numerous examples of powerpoint files in this form can be found on the first author's homepage.

Our guideline for the structure of the argument is supposed to reflect the way that listeners or readers understand arguments. They need an introduction which moves from the general to the particular and prepares them for the question that the researchers are posing and the details of the evidence surrounding their thesis. They also need a conclusion that places the researchers' thesis in a broader context and considers its broader implications. Both the introduction and conclusion should be written in relatively general, holistic and outward-directed way (i.e. toward other disciplines and practical contexts). The central main section should be more specific, analytical and inward-directed.

In the introduction listeners and readers need to be shown real, specific examples of the problem in order to understand it and appreciate its relevance. They need a summary of background information relevant to the specific question, and an explanation of why the argument has been structured in a given way, before the detailed central section of the paper begins.

These points are important not only pedagogically, but also from the point of research training. Experience suggests that the quality of the students' thinking correlates with how well they communicate their ideas to others. Thinking may be regarded as a conversation with oneself. In order to understand a complex issue, one needs to be able to explain it to oneself. The best way to practice doing that is to explain the idea to others.

Table 1. Structure of the introduction

Element	Features
Speaker/author	Name
Main topic • explanation • definitions	5-10 words; directly addresses the course theme; is about music (not musicology) • What do *you* mean by the topic? • How *you* use specific technical terms throughout the paper?
Example • explanation	A specific person, situation or anecdote; illustrates and introduces the main question; links theory to reality • Embed it in the argument!
Background (one point per discipline)	Overview of specific, relevant, accepted knowledge in relevant disciplines; no individual studies
Main question • relevance • possible theses	5-10 words; corresponds to the main topic • Why is this question important and interesting? • Several plausible answers to the question (5-10 words each)
Your approach	How will you divide the topic into subtopics? Why this choice?

The introduction

An ideal structure for the introduction is presented in Table 1. It begins with a brief formulation and explanation of the *main topic*. This formulation should be clear and complete and serves to identify the paper, i.e. to distinguish it from other, similar papers.

To clarify their topic and anchor it in reality, students should then present a specific *example* based on an individual person (e.g. a case study), situation (anecdote), or musical passage. The example should be familiar and typical, it should make the importance and interest of their chosen topic clear, and it should be properly embedded into the argument (i.e. introduced beforehand, and explained afterwards). Students often have difficulty finding or inventing an example because they have never been presented with this task before and initially do not understand why it is important. It is important both for the quality of their argument, preventing it from becoming too abstract, and for the clarity of their presentation – listeners find a theoretical account easier to follow and critically evaluate when they can relate it back to a specific example.

The next point is *definition(s)*. Students are asked to define or explain any term used in the formulation of their topic that may be unclear or ambiguous, so that its meaning is clear throughout the rest of the paper. Since the students are working in groups, it is important that all agree to use these terms presented in the same way. These definitions should be presented relative to other known or current definitions of the same terms, and any differences explained.

The questions posed in music psychology, and hence in our music-psychological seminars, are generally relevant to other disciplines such as music sociology, music theory, music education, music history, ethnomusicology, music acoustics or music philosophy. Students are therefore asked to briefly describe the *multidisciplinary background* to their question. What are the main relevant disciplines, and what do representatives of that discipline know about the question? Since this is only an introduction and time/space is limited, it suffices here to briefly formulate one or two very basic points per discipline. The aim is to show the cross-disciplinary breadth of the question, to ensure that no important discipline is neglected, and to formulate some important points as concisely as possible.

After all this preparation, the listener or reader is cognitively prepared for a concise formulation of the paper's *main question*. The formulation may comprise essentially the same words as the topic, the only difference being grammatical. The function of the question is to clarify the aim of the paper: all details of the remainder of the paper, including all subtopics, should be clearly related to the question. The question should be formulated in such a way that it is possible to give a reasonable answer that is supported by a combination of empirical evidence and other

arguments. But the question should not be trivial, that is, the answer should not be obvious, nor should it simply be "yes" or "no".

The next point is the main question's *relevance*. Why is the question, as formulated, important? Why is it worth spending a lot of time and effort answering this question? Again, students often have difficulty with this point because they may never before have been given such an exercise. They are asked to consider the following scenario: Imagine that you are applying for a grant for €100000 to do research on this particular question. Is the question worth that much money? Why? What are the possible outcomes of the research and who are the possible beneficiaries? If students are unable to explain why their question is important, they should consider reformulating it or choosing a different topic.

Having formulated a research question, it is important to list its *possible answers* in advance. If there is only one possible answer to the question, or if other possible answers are obviously wrong, the question is too trivial. The possible answers can include extreme cases; for example, if the question is "To what extent are musical performance skills inborn?", possible answers include "not at all" and "completely". One can then list two or three possible answers that lie between those two extremes. Having made the extreme cases clear, it is then interesting to look for arguments and evidence that contradict them.

At this point one could identify one of the possible answers as the paper's main thesis, but we prefer to keep the audience in suspense until the conclusion section. Only then will the paper's main thesis be formulated. After all, there is not much difference between a "thesis" and a "conclusion" – both are formulated on the basis of an overview of available evidence and arguments relating to the different aspects of a problem.

The introduction concludes with a brief outline of the *approach* of the rest of the paper. How is the main topic divided up into subtopics? The idea is to briefly explain not only how the content of the rest of the paper is structured, but also how the arguments on which the paper is based are structured. The subtopics can generally be formulated very briefly. For example, if the paper is about the association between music and religion/spirituality, the subtopics could address the question from the point of view of three different disciplines (psychology, ethnomusicology, religious studies). Alternatively one could consider the topic from the point of view of everyday behaviours (such as concert and church rituals), key persons or agents (gods and priests on the one hand, composers and performers on the other), and peak experiences (in both music and religion). Each subtopic should be clearly linked to the main question, and the subtopics must as far as possible be independent of each other, so that there is a minimum of overlap among them.

The subtopics

The main, central section of the paper differs from the introduction and conclusion in that it is more detailed. The emphasis is usually on empirical evidence (methods and results), but non-empirical arguments and anecdotal observations can also play an important role. The main part of the paper is divided into two or more subtopics, as explained at the end of the introduction. A possible structure for each subtopic is presented in Table 2. Students begin by formulating their subtopic, explaining it briefly and making clear how it is related to the main question of the paper. They then formulate their subquestion and some possible answers to it. There follows a survey of relevant literature, of which most (but not all) should be empirical. This then leads to a formulation of the *subthesis*, which may correspond to one of the possible answers to the subquestion. The subthesis should be unitary in the sense that it makes just one claim (not a combination of two or more claims) – which serves to unify the diverse pieces of evidence. Finally, the main arguments for and against the subthesis are summarized; it should be clear that the arguments in favour of the subthesis outweigh the arguments against it. The arguments against the thesis should also make the limitations of the thesis clear – under what circumstances or in what limited domain does it apply? These arguments link the subthesis, which has an abstract quality, with external reality, which can be observed and empirically investigated. The limitations should be realistic; they ensure that the student does not overstate his or her case.

Table 2. Structure of each subtopic

Element	Features
Speaker/author	name
Subtopic • explanation • definitions	(in 5-10 words) • including link to main question • confined to this subtopic
Subquestion • possible subtheses	(in 5-10 words) • plausible answers to the subquestion
Detail	Relevant material from cited literature
Subthesis	Speaker's preferred answer to the subquestion; should support the main thesis
Evidence*	Summary of empirical, theoretical and logical evidence supporting the subthesis (refer to studies cited under "detail")
Counter-evidence* and limitations*	These undermine the subthesis or support other possible subtheses and are weaker than the "evidence"

* The points marked with an asterisk refer only to the subthesis!

The conclusion

The structure of the conclusion follows Table 3. It begins with a repetition of the main question, because the reader or

listener has just been exposed to a lot of detail and needs to be reminded of the central issue before proceeding. After that, it is finally time to present the paper's main thesis, which should be formulated as a possible answer to the main question and correspond more or less to one of the possible answers given in the introduction. The main thesis should satisfy the following criteria:

- It should be *unitary* – a single point and not simply a restatement and combination of the subtheses. The main thesis is what listeners and readers are most likely to remember about the paper – the "bottom line". If in the future the paper is published and cited, this should be the main reason why.

- It should be *original* in the sense that it goes beyond both the individual subtheses and the literature that was cited to support them. Often, a statement similar to the main thesis appears somewhere in the literature, which of course should then be cited. It may also have been anticipated in the main part of the paper.

Table 3. Structure of the conclusion

Element	Features
Speaker/author	Name
Main question	exactly as in the introduction
Main thesis	a plausible answer to the main question • common to all subtheses • original, going beyond cited sources
Evidence*	commonalities of evidence for subtheses • supports main thesis as a whole • avoids detail that could be in subtopics
Counter-evidence* and limitations*	commonalities of the counterevidence und limitations of the subtheses; further problems of main thesis
Example	new explanation of the introductory example involving the new thesis
Implications*	What if the thesis is really true? • Specific practical consequences
Suggestions*	specific ideas for further research that would shed light on the main question and confirm or question the main thesis

* The points marked with an asterisk refer only to the main thesis!

- Like the subtheses, main thesis should be *credible* but not *trivial*. On the basis of the detail already presented in the main part of the paper, it should be possible to formulate good arguments both for and against the main thesis and to demonstrate that the arguments for the thesis are stronger than the arguments against it.

- It should *unite the subtheses* (from the subtopics) and represent their common ground. In this way, it unites the whole paper. The subtheses should have

been formulated in such a way that this is possible. Usually, the students presenting the paper will need to meet and discuss the coordination between the main thesis and subtheses several times before arriving at a satisfactory solution. The extent to which this criterion is met is a measure of the group's collegiality, organisation and communicative skills.

It is the responsibility of the student assigned to the conclusion section to creatively explore different possible main theses and propose them to the other group members. They should in turn agree that the main thesis is plausible. Once a main thesis has been agreed upon, other members of the group may need to revise their sections accordingly. Each subsection should present material that is relevant to the main thesis and this material should include the most important supporting arguments.

Table 4. Examples of main questions and theses

Question	Thesis	Subtopics
What promotes a child's musical development?	the people closest to the child	• parents • teachers • peers
What does performance anxiety depend on?	cognitive factors	• preparation • trait anxiety • situation • learned thought patterns • self-efficacy
What is the psychological basis of sight-reading?	pattern recognition	• text versus music • memory • eye movements • creativity
What is the psychological basis of improvisation?	language	• language acquisition • improvisation as communication • group creativity
What does musical memory depend on?	understanding of musical structure	• style • analysis • audiation
How do performers communicate emotion?	by imitating language	• music as language • acoustic cues • communicative redundancy
What role do body movements play in performance?	support sonic communication of structure and emotion	• movement • structure • emotion

In a recent seminar on the psychology of music performance, students were offered specific suggestions for the formulation of their main questions and main theses as shown in Table 4. The table illustrates the following points:

- Questions and theses should be formulated as concisely as possible.

- A thesis need not account for *all* aspects of question; instead, it should attempt to cover the *main* aspects by means of a general term or formulation.

- The structure of the argument is illustrated most clearly when the subtopics are formulated as concisely as possible.

Once the main thesis has been stated, the main *supporting arguments* should be presented. These should not simply be repetitions of the arguments presented in the subsections. Instead, the author of this section should explore the common ground of those arguments and formulate that common ground in a new way. This is not a place to present new detail; if the author of the conclusion realises that additional new material is necessary to justify the main thesis, s/he should ask the author of one of the subtopics to include that material, refer to the relevant subtopic and remain at the level of generalities.

It is also important to list the main *arguments against* and *limitations of* the main thesis. Again, these can represent the common ground of arguments against and limitations of the individual subtheses. But since the main thesis goes beyond the subtheses, new, more general arguments against the main thesis should arise.

At this point it can be interesting to return to the *example* presented at the beginning of the introduction. What are the implications of the main thesis for this example? If the author of the conclusion finds that the main thesis is not relevant for the example or the example does not support the main thesis, then something has to be changed – either the example (in collaboration with the author of the introduction) or the main thesis. This reconnection to a concrete example is important because it links together the general and the specific and reminds us of the importance of maintaining a strong link between research and external reality. Even a theoretical paper should have a strong empirical basis.

The next point to address is the *general implications* of the thesis. The example showed one possible implication, but there are usually many more. The implications establish yet another link between the thesis and external reality. If the thesis is correct, which of course is not necessarily true (otherwise it would be too trivial), what does that mean for corresponding musical or psychological practice or for research or society as a whole? To answer this question, students need to think creatively and laterally. It is important to limit these considerations to the domain of the thesis and to keep in mind that the thesis may not necessarily be correct. For example (referring to Table 4), if it is true that the people closest to a child are the most important factor in their musical development, one can (and perhaps should) educate a child indirectly, by musically educating its parents, teachers and peers. If performance anxiety depends primarily on cognitive factors, it is changeable and everyone should be able to "unlearn" it. If sight-reading depends

primarily on pattern recognition, musicians can presumably learn interesting and useful things about sight-reading by studying the general psychology of pattern recognition.

Finally, it may be appropriate to make some *suggestions for future research* in this area. Again, a certain degree of creativity and lateral thinking is necessary to successfully complete this point. Which aspects of the paper's main question have not yet been adequately answered? What kind of empirical investigations might need to be carried out to confirm existing but tentative arguments for or against the main question, and bring about progress in answering that question? This point is particularly interesting for students who will soon undertake an empirical investigation of their own and write it up as a master's thesis. The topic of their master's thesis will probably not come up in this particular paper, but they will get ideas from the paper on how to find an appropriate topic for research, and may find their chosen topic in the conclusion section of a paper by another student group.

EVALUATION

Some students find the described procedure overly formalised and regulated. They point out that they can work more creatively if they are free to organise and formulate their material in whichever way they consider appropriate. It is true that all students should have the chance to work more freely in other seminars. In our case, most students are concurrently enrolled in seminars in the area of historical musicology or other electives. We nevertheless insist that, at least in the advanced undergraduate stage of their studies, students write *some* of their theoretical papers in the prescribed form, for the following reasons:

- Academics are often required to write in a specific form, and the ability to follow instructions of this kind is an important skill. Anyone who has applied for a grant from the European Union will understand this point. Every journal publishes guidelines for authors that must be followed. The Publication Manual of the American Psychological Association is a good example of such instructions (which our students should follow in addition to this guideline). As one adapts to different sets of instructions, one becomes more flexible (each new set of instructions becomes easier to accommodate) and also gets a clearer ideas of one's own about how best to structure a paper.

- The form in which we ask students to present their theoretical papers is not arbitrary. Every aspect of the form clearly reflects an important aspect of theoretical work, and there are good reasons for presenting these various ingredients in a given order (although variations are of course possible). Moreover, advanced students are invited to suggest how the content, order and structure could be improved. Students should not only be able to *explain* the concept of "thesis", "argument" or "implication"; they

should above all be able to *realise* these elements and present them coherently. This skill is best learned by repeated practice in the context of real research questions.

- The quality of literature in music psychology, like any other literature, varies considerably. The peer review procedure of leading journals guarantees a certain level, but is not perfect. Reviewers have limited time and expertise; relevant disciplines may be completely omitted from the review procedure; the authors of a paper may manage to push it through the review procedure without properly addressing the reviewers' concerns; and new research developments may make an older paper obsolete, which may not be evident to readers. If students are directly trained in the art of constructing a coherent argument, they will be in a good position to evaluate literature. If they go on to do research themselves, they will usually structure their papers differently from this seminar, but the quality of their work will benefit from the practical knowledge they gained about the structure and content of a good argument.

A recurring problem is that some of our students do not have enough basic knowledge of music psychology before they enter the seminar. Because the amount of time in the curriculum is limited, students often find themselves simultaneously learning methods and content. In this situation it is difficult for them to construct their own argument. This problem can be solved in part by ensuring that they pass a good introductory course in music psychology before entering the seminar. This should give them a good grounding in the "facts" of music psychology (insofar as they exist!). They should also have previous training in research methods (academic and scientific writing, quantitative and qualitative methods, critical evaluation).

CONCLUSION

We have presented a guideline for preparing a theoretical presentation or paper that contains what we consider to be the main elements of a convincing argument and places those elements in a logical order and a coherent structure. We believe that the incorporation of such a guideline into undergraduate teaching in music psychology improves students' abilities to write theoretically and to critically evaluate the writing of others.

Among other things, the guideline makes clear where material should be repeated, and where it should not. The abstract, for which a separate detailed guideline is available, is composed entirely of repetition of points that are explained in detail in the paper proper. The start of the conclusion repeats the main question that had been formulated in the introduction. Between and among the subtopics, there should be as little repetition as possible –with the exception that all materials should be clearly related to the paper's main question.

The spoken presentation and written paper should be universally understandable. Therefore, technical terms specific to this guideline, such as *subthesis* and *subquestion,* should not appear anywhere in the powerpoint slides, the improvised delivery, or the text. Even the more familiar expressions such as "main thesis" or "possible answers" should be avoided or used with caution.

Incidentally, our approach need not be limited to music psychology. Just quietly, we are thinking bigger than that. Our approach promotes clear, critical thinking in any scholarly discipline that poses difficult questions and seeks tentative answers. We have been unable to find a similar approach in the extensive literature on academic writing, and would be grateful for tips in this direction.