

## Developing Musical Structures

Text: Bamberger, *Developing Musical Intuitions* (DMI)  
Bamberger, J. *The Mind Behind the Musical Ear* (MBME)  
(on reserve in the Music Library)

When we go about the spontaneous, intuitive performance of the actions of everyday life, we show ourselves to be knowledgeable in a special way. Often we cannot say what it is that we know. When we try to describe it we find ourselves at a loss, or we produce descriptions that are obviously inappropriate. Our knowing is ordinarily tacit, implicit in our patterns of action and in our feel for the stuff with which we are dealing. It seems right to say that our knowledge is in our action.

Don Schön: *The Reflective Practitioner*

The secret of what anything means to us depends on how we've connected it to all the other things we know. That's why it's almost always wrong to seek the "real meaning" of anything. A thing with just one meaning has scarcely any meaning at all.

Rich meaning-networks, however, give you many different ways to go: if you can't solve a problem one way, you can try another. True, too many indiscriminate connections will turn your mind to mush. But well-connected meaning structures let you turn ideas around in your mind, to consider alternatives and envision things from many perspectives until you find one that works. And that's what we mean by thinking!

Marvin Minsky, *Society of Mind*

### Syllabus

#### Texts

Bamberger, *Developing Musical Intuitions* (DMI)  
Bamberger, J. *The Mind Behind the Musical Ear* (on reserve)

Note: Computers are available in the Computer Music Lab at any time with the use of your ID card. There is one Mac computer also available in the Music Library.

### Introduction

The goal of this class is practical: to interrogate, make explicit, and thus to develop the powerful musical intuitions that are at work as you make sense of the music all around you.

The title of the course is intended as a three-way pun. Developing Musical Structures means:

- **your own musical compositions as developing, emergent structures.**
- **complex musical compositions developing, evolving, becoming, structuring over time.**
- **mental musical structures developing and learning as they guide musical intuitions.**

**These developing musical structures will be pursued through four kinds of activities. While the primary focus may be on only one activity at any given moment, the others will always be hovering nearby:**

**To carry out this agenda, you will be involved in four closely interrelated activities and the questions they will raise. The process is modeled (as much as possible) on the kind of learning that occurs quite naturally in informal settings through observation, questioning, practicing and experimenting, probing for and trying to account for how and why an object, a system, or a living organism behaves as it does.**

**1. Experiments in musical composition:**

**Composition projects facilitated by the computer music environment, Impromptu, will be a source for interrogating your own musical intuitions. You will explore rhythmic structuring, melodic structuring, scales, intervals, harmony, structural hierarchy, and developmental transformations. Students' compositions will be discussed and performed in class.**

**2. Alternative approaches to musical analysis:**

**Differing approaches to analysis of complex musical works will be considered and actively tested.**

**What are musical objects of attention? How can you tell?**

**What features and relations shape the boundaries of musical entities? How are these influenced by context?**

**How can we account for why people hear "the same" piece differently?**

**How does analysis influence "hearings?"**

**Is there such a thing as an "appropriate hearing" of a given composition?**

**3. Musical cognition and development:**

**What does music cognition research tell us--for instance:**

**How does musical intuition/knowledge develop and change?  
Does musical development relate to development in other  
fields?**

**Is there a "musical intelligence?"**

**What musical parameters are given preference at differing  
stages of musical development and in differing styles of  
music?**

**How do the above concerns interact with/influence musical**

#### **4. Representation:**

**Notations, graphics, computer languages and procedural descriptions:**

**What kinds of entities and relations does each capture?**

**How does each reveal or conceal, what we hear-- even what  
we believe to exist as musical objects?**

**Why do descriptions (notations, analytic categories) often obscure what is  
intuitively heard and how we intuitively perform?**

**What are the differences between "units of perception" and  
"units of description?"**

**The semester culminates in a final project. Students may choose one of  
three types, a combination thereof, or propose an original design:**

- **An experimental research project (cognition, perception,  
meaning-making)**
- **A musical analysis project**
- **A performance and analysis of a composition**

#### **THE FINAL PROJECT**

**The Final Project will bring together all the other activities in the course.  
The project should be chosen early on in the semester with its evolution an  
essential part of the work. For instance:**

**If you choose an experimental research project, your questions and  
your methodology should be developed by mid-term leaving time to carry out  
the project during the second part of the semester.**

**If you choose to analyze and compare recorded performances of a  
piece, the piece should be chosen early in the semester, so that you can  
trace the development of questions that arise.**

**For students who choose to study and perform a piece, the piece you choose (in consultation with the instructor) should be one that you find interesting and challenging, and one that is sufficiently complex so as to require thoughtful analysis. Keeping a log of your progress in learning your piece, you will note the problems and puzzles you confront as you go along, how they are resolved, new insights that occur along the way, and how your "hearing" of the piece changes. This log together with an analysis of the piece will be the bases for your final paper.**

#### **LOG KEEPING**

**Throughout the semester you will be reminded to keep a running log of your work. It's purpose is to help you reflect on your work--for instance, to interrogate your decision-making in composing or re-composing, to pay attention to surprises, to question and try to account for your responses. T**

**Looking for patterns and generalizations as derived from observing the results of your work is particularly important when going on to the listening examples. For instance, paying attention to commonly recurring organizing patterns, you will begin to notice that larger and more complex works are elaborations of the same structural aspects you have found in the simple tunes you have been working with.**