Imagine this scenario: The teacher of a high school music appreciation class has just explained to her students that the day’s listening assignment will be to determine the form of a Mozart composition. The words are barely out of her mouth when a student asks, “Why do we have to listen to this junk?” Nonplussed, the teacher ignores the student’s query and proceeds with her lesson, thereby missing a golden opportunity to engage her class in critical thinking. But, you ask, (1) what is critical thinking in music, (2) why is it so important that we engage students in it, and (3) what does that unruly student’s interjection have to do with anything, anyway? The issue at hand is nothing less than whether students are mindfully engaged in musical experience and, thereby, in control of their own musical thinking and learning.

Types of Thinking Skills
The term “critical thinking” is often used in conjunction with problem solving, higher-order thinking skills, reasoning, abstract thinking, informal logic, or reflective thinking.

Indeed, as Carol Richardson and Nancy Whitaker point out, one of the problems confronting music teachers wishing to know more about critical thinking is the lack of agreement among educational philosophers and theorists as to its exact nature.1 Much of the recent debate in the critical thinking literature revolves around whether critical thinking should be viewed as a set of general, context-free thinking skills that are transferable or, instead, as diverse sets of thinking skills, each of which operates within a particular domain of experience.

In the game of chess, for example, theorists adhering to the generalist point of view argue for the efficacy and importance of general reasoning, analytical, and problem-solving abilities that apply not only to chess, but also to real-life situations such as war and the business world. Theorists who view critical thinking as being “context-specific,” on the other hand, argue that because each domain of
experience or subject area implies its own logic, there are no general intellectual skills or abilities of any consequence that can profitably be taught or transferred. Therefore, in order to be successful in the game of chess, or in any other form of activity, including music, students need only master the rules (i.e., logic) and strategies specific to that context.

Typically, in the sparse music education literature relating to critical thinking, writers and researchers ascribe to the generalist approach in which there is an emphasis on context-free problem solving and analytical skills. For example, Tim Brophy suggests that elementary music education develops critical-thinking skills that are useful in business and the workplace:

The job market that our students are entering is vastly different from one of years ago—today's workers are required to make decisions, choose among options, and solve problems through teamwork. Consequently, students must develop these skills in school. There is no better environment than the music room for these types of lessons.

Other music researchers and writers refer to such general-thinking skills as inferential reasoning and deductive reasoning: the weighing of alternative points of view; higher-order thinking skills such as analysis, synthesis, and evaluation; and such critical-thinking abilities as defining a problem, identifying the "point," recognizing underlying assumptions, and detecting inconsistencies.

Recent theoretical and conceptual research in critical thinking, however, suggests that general-thinking skills always function in contextualized ways—that is, they function only within specific contexts or subject areas. General cognitive skills and abilities are metaphorically conceived of as general gripping devices, or hands, for retrieving and examining domain-specific knowledge. However, before those skills can function in a particular domain or subject area, they must configure to the kind of knowledge in question. This view of general-thinking skills has important implications for music education.

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A general-thinking skill that David Perkins and Gavriel Salomon identify is called "the philosopher's habit of mind." This general-thinking skill involves the strategy of formulating counterexamples to test claims. Music philosophers use this strategy to develop their verbal arguments. Experienced performers, too, seem to be doing much the same kind of thing when they generate and weigh multiple musical interpretations of a composition. One way, then, that music performance teachers can inculcate this thinking skill in students is to challenge them to invent, listen to, and consider the relative merits of contrasting interpretations of selected musical works. Similarly, general music teachers wishing students to become more knowledgeable about the music of other cultures can ask students to identify, compare, and contrast selected aspects of the Western musical aesthetic (e.g., the purity of vocal tone quality associated with Western art music) with their non-Western equivalents (e.g., vocal tone quality as practiced in Ghana or the Republic of China). Pursued with an open mind, this strategy should lead to a better understanding of both Western and non-Western practices.

However, as Perkins and Salomon point out, before counterexamples can be identified or constructed, and in order to know what counts as a good counterexample in a particular domain, one must possess a good knowledge base in that domain. The argument is made that "different domains share many structures of argument, but bring with them somewhat different criteria for evidence." Thus, if students are to think critically in music to any significant extent, they will require depth of experience and a secure knowledge base in that domain.

Another implication for music education arising from this literature is that teachers cannot presume that critical-thinking skills and knowledge acquired and developed in the musical domain will automatically transfer to other domains. Although the transfer of thinking skills and knowledge between different contexts is theoretically possible, research suggests that in order for this transfer to take place successfully, teachers must encourage students to apply critical-thinking skills across a range of disciplines using examples and counterexamples of increasing complexity and subtlety. Music teachers, therefore, will need to work with teachers from other subject areas to ensure that students are afforded the opportunity to practice applying critical-thinking skills to different contexts. Thus, for example, when the goal is to have students transfer knowledge of baroque principles of style and structure between, say, music and visual arts classes, teachers will need to coordinate subject matter. The important thing, however, is not to hand that knowledge ready-made to students, but rather, to encourage them to construct it on their own by seeking out, identifying, analyzing, comparing, and contrasting musical and artistic works epitomizing those principles. If students are to do this on their own, they will require instruction in critical thinking. In addition to coordinating subject matter, teachers will need to collaborate on developing and implementing a critical-thinking curriculum.

Given sufficient experience and practice, the transfer of certain critical-thinking skills and strategies may
become habitual and automatic. However, unless students are convinced of the importance, or value, of this form of intellectual activity, transfer is still unlikely to happen. In other words, if students are to transfer critical-thinking skills acquired in music classes to nonmusical contexts (i.e., art and mathematics classes and the business world), they will need motivation, instruction, and practice to that end.

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Developing Individuality

An alternative view of critical-thinking instruction in music suggests that such instruction is less about teaching general and/or specific thinking skills and knowledge than it is about fostering in students a disposition to develop their musical individuality. Defined as the extent to which one's own musical beliefs differ from those of the group (or groups) to which one belongs, musical individuality is developed by continually reconstructing, or revising, one's musical beliefs in light of constantly changing and expanding social and musical experience.12

Implicit to this understanding of critical thinking is the realization that beliefs are social phenomena. That is, they exist because groups of people have collectively shaped them and have become committed to them. Critical thinking in music, therefore, is essentially social in nature. One thinks critically in music in order to reconstruct the musical self (i.e., one's musical individuality) in relation to the musical belief systems that one encounters and to the social groups that carry, maintain, and proselytize them. Of particular interest here are the constraints that those beliefs and belief systems place on one's musical thinking. According to this sociological perspective, the musical world is inherently political in the sense that many overlapping, competing, and even conflicting musical belief systems and groups exist.

Critical thinkers in music are disposed to explore and try to make sense of the world's musical beliefs and belief systems with a view to consciously deciding which musical beliefs, associated practices, and groups to adopt as their own. In other words, they are empowered to choose the music they prefer (e.g., jazz, folk, concert) and the groups of musicians or other individuals with whom they wish to associate (e.g., amateur or professional jazz, folk, or concert artists).

Once a musical group and belief system has been adopted, though, critical thinkers in music are not content to merely conform to group norms, expectations, and modes of behavior. Rather, they are determined to develop their musical individuality by distinguishing themselves in thought and action from the group. Critical thinkers in music are not only aware that their musical beliefs are similar to, yet different from, those of the group, but actively strive to develop their own musical points of view. In other words, while sharing many beliefs with the groups with which they associate, critical thinkers wish to formulate their own ideas and thereby grow in musical beliefs and knowledge.

Everyone has the capacity to think critically to some extent.13 The question, then, is not whether critical thinking in music can take place, but, rather, to what degree. However, music teachers need to be aware of at least two characteristics of social and musical beliefs that discourage critical thinking and that may prove insurmountable for many children.

First, research into the sociology of belief indicates that, although necessary for effective communication within a cultural group (beliefs provide a foundation for thought and action within a community), many beliefs, because they have been acquired through repeated social experience in the past, are overly familiar and, therefore, automatic in the sense that they control thought and action at a level beneath conscious awareness.14 Thus, much of what we think, feel, and do in relation to music is governed by unconscious, or tacit, musical beliefs, some of which are possibly self-serv ing and irrational (e.g., the beliefs that classical music is for an intellectual elite, that boys don't sing, and that only girls play the flute). In other words, some tacit musical beliefs are mere prejudices (e.g., the belief that music of cultures other than one's own is not music).

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The trouble with tacit musical prejudices and biases is that they impede musical reasoning, thereby making it more difficult for students to approach the music of other groups and cultures with an open mind. Unable to consider and to empathize with other musical points of view, students often fail to recognize and take advantage of opportunities for personal and musical growth to be found in other musical belief systems, groups, and cultures. As a result, their exploration and understanding of the musical world is needlessly curtailed.

A second, related problem associat-
ed with social belief systems is that they tend to be orthodox in nature. That is, not only are social groups conservative, but they exert tremendous pressure (albeit often unconsciously) upon each member and subgroup of the society to conform to collective norms and expectations. Musical belief systems, in other words, are normative in nature. But, of course, if each person conforms to the norm, there can be no social progress. Moreover, if members of the group are content to slavishly conform to the group’s musical beliefs, the development of their musical individuality will be stymied. Critical thinkers in music seek to counteract these impediments to personal and musical growth by making their musical beliefs explicit and by subjecting them to critical examination. Among other things, they are disposed to (1) raise their musical beliefs to conscious awareness, (2) inquire into the nature of their musical beliefs in order to examine the grounds upon which they rest, (3) identify and nullify prejudices and biases that may impede musical reasoning, (4) test their beliefs by applying them to new musical experiences (hence the need to explore the musical world), and (5) determine the extent to which the beliefs of the group satisfy their own musical needs and desires with respect to personal and musical growth.

Critical thinking in music, therefore, requires courage insomuch as one must be capable of taking risks, thinking for oneself, and choosing one’s own musical course of action.

With continued growth, students may need to abandon one musical group and belief system in favor of another holding greater promise for realizing their potential as individuals. For example, high school students contemplating a career in music performance will probably opt to take private lessons, attend live performances, and associate with professional musicians and performers. In so doing, they are attempting to reconstruct their beliefs about music performance as well as their knowledge of performance standards. They are also, so to speak, testing the waters to determine whether they can commit to those new musical beliefs and standards and to the musical groups that hold them. Critical thinking in music, therefore, requires courage insomuch as one must be capable of taking risks, thinking for oneself, and choosing one’s own musical course of action. Also required is intellectual humility and honesty, since one must be able to admit mistakes.

Teaching for Critical Thinking

Music teachers are probably wondering how all this can be translated into teaching practice. To begin with, research suggests that because students acquire their beliefs through the observation of social practices (i.e., musical practice within a community or group) and from individuals who are important to them (e.g., parents and friends), teachers must be enthusiastic and caring individuals. They must also model critical thinking. Indeed, critical thinkers in music are a group unto themselves. Thus, if students are to become critical thinkers in music, they must socialize with music teachers and other professionals who possess knowledge of musical standards and practices, but who are also disposed to think critically.

In addition, high school students should know that there are different schools of thought as to what constitutes good musical practice. Not only are musical belief systems shaped by the group and culture, but they change and evolve over time. Therefore, students will need to be flexible in their thinking. For example, whereas orchestral performances of works by Johann Sebastian Bach were once heavily romanticized, many modern orchestras performing his music now strive to obtain what they believe to be an authentic baroque sound and performance style. Quite possibly, the pendulum may again swing the other way. Perhaps it is better, then, that students—and teachers—think of musi-
cal practices and the belief systems that they represent in terms of communities of agreement.

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While teachers must provide students with an array of appropriate musical models representing the diversity of existing musical belief systems, their ultimate goal should be to encourage students to think for themselves and to make their own informed judgments as to the quality or desirability of what is performed, composed, or listened to. In so doing, teachers are helping students to intelligently decide their own musical beliefs and values as well as, in the case of those wishing to pursue a musical career, what kind of musician they wish to become. For this reason, teachers should discuss with high school students what it means to be an individual and to think for oneself. Indeed, this should be a recurring theme in the music classroom and rehearsal room. Unless students develop the disposition to grow in musical belief and knowledge and to develop their musical individuality by exerting control over their own musical thinking and learning, they will remain subject to the dictates of the group.

Music students and teachers need to know that the alternative to critical thinking in music is often indoctrination or slavish conformity to the norms and expectations of the group such that they are unable to think for themselves, to decide their own musical tastes and enthusiasms, or to assert some measure of control over their own musical growth. Students in particular need to realize that, without the disposition to think critically in music, they may be unduly influenced by their peers. They may also be more susceptible to social pressure from groups such as teachers, parents, and the media. Music teachers and students would do well to remember that indoctrination is inimical to the development of musical individuality.

So how do we teach children to think critically in music? Because the nature and form of critical thinking vary according to the interests, enthusiasms, needs, and desires of the individual, it is probably not practical to teach children *how* to think critically in music, although some understanding of certain general-thinking skills may help older students to think metacognitively (i.e., to be aware of and to assert some measure of control over one’s thinking). Nevertheless, teachers can—and should—monitor students’ thought processes and offer helpful advice when needed. For example, when students get in a rut, when they can’t find solutions to problems of musical interpretation or technique, they should be reminded to review, organize logically, and consolidate what they already know and believe. One way that music performance students can do this is to simply tape record and then analyze their individual and collective efforts in terms of musical and technical strengths and weaknesses. The objective here is that they become actively engaged in the decision-making process by coming up with their own strategies or potential solutions for dealing with musical problems or inadequacies. Music teachers can help students do this by providing positive feedback and, sometimes, by pointing out errors, omissions, and inconsistencies in their thinking.

Similarly, in music listening classes, students can be encouraged to turn their thinking back upon itself, to make explicit and to critically examine their musical beliefs. For instance, when studying music that is threatening or unpalatable to them, students should be encouraged to think about and to share with the class their views of the particular musical composition, genre, or culture in question. Of course, some of the views expressed will be reflections of musical biases and prejudices. The important thing at this stage is that musical beliefs that were previously vague and ill-defined are given form. Once that objective has been achieved, those beliefs should then be subjected to critical scrutiny. Teachers can encourage students to do this by asking them to explain and justify their beliefs or, alternatively, to consider and possibly defend conflicting musical points of view (e.g., rap versus jazz or classical music).

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Ultimately, the best advice for music teachers is that they teach for critical thinking. This means that they must help students explore the world of musical beliefs and practices by continually exposing them to new musical experiences and ideas that present some reasonable degree of challenge to what they already believe. The key word here is “reasonable” since either too little or too much musical challenge will fail to motivate children. Moreover, teachers must provide students with ample opportunity to explain, discuss, and logically justify their musical beliefs. The more critical thinking is successfully initiated and carried through to its logical conclusion, the more likely it is to become a habitual and enduring part
At no time should the teacher criticize students' beliefs about music, particularly those pertaining to musics that students consider their own.