Do You Hear What I Hear?

Musical Maps and Felt Pathways of Musical Understanding

by

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Abstract

This study focuses on the nature of students' musical expressions as they make meaning while listening. Based on the students' natural and valued use of enactive strategies and visual representations of musical sounds, lessons were designed to enable their musical understanding while listening, culminating in a student-created musical mapping experience. Throughout this process, data were collected through audio- and videotape, teacher-researcher logs and journals, and artifacts. Findings a) provided insight into the nature of student interaction with music, with each other, and with the maps as evolving representations of the music they heard, and b) furthered the notion of listening as creative with musical maps as a viable tool for developing "felt pathways" of feeling and knowing experienced while creating musical maps and relived during the sharing of maps.

Keywords: music listening, musical maps, kinesthetic and visual strategies, felt pathways, embodied cognition

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On the board is a simple, colorful, yet highly descriptive musical map. Squares and rectangles are strategically placed in relationship to each other—some higher, some lower, some shorter, some longer, some closer, some farther apart. Occasional stars are located adjacent to the squares, indicating that something extra is happening in that particular spot. Wavy lines indicate a section with a different articulation; zigzag lines show a connection between pitches in a moving line; arrows show where two sections sound simultaneously. Very small ascending squares, carefully counted out to match the number of sounds, are placed closely together, indicating a rapidly ascending melodic line (Figure 1).

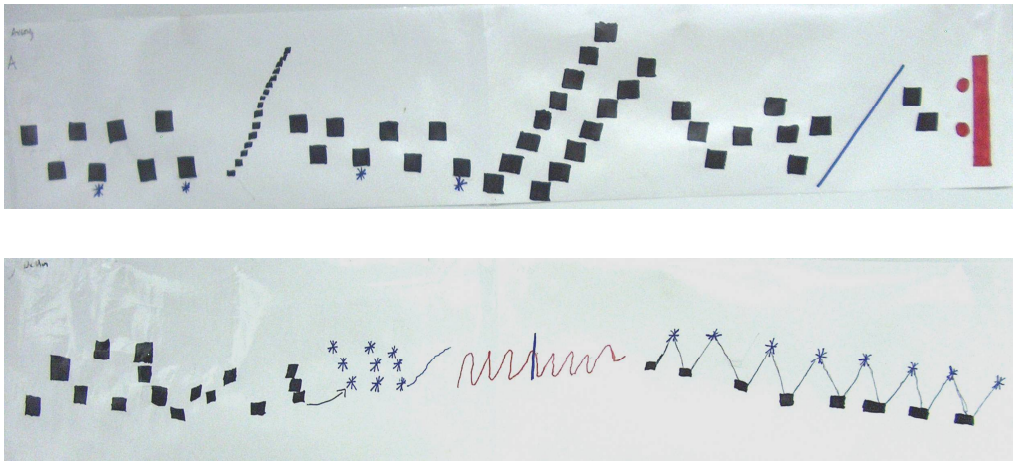

Figure 1. A Student-Created Musical Map

Danny, Abby, Nathan, and Roger worked together to make this graphic representation and are about to share their map with the class. Danny and Abby have been elected by their group members to be the "pointers," and as Mussourgsky's "Ballet of the Unhatched Chicks" is heard, they trace the map for their classmates with impeccable accuracy. They were part of the process of creating the map, of feeling its contour, of designing its representation. They know the music and the map inside and out, literally from within, so that when they hear it, they can follow the map—this object they have created that expresses what they have come to know about the music. When the music is finished, all four students look expectantly at me, their teacher. The class bursts into applause and immediately

students raise their hands to begin their discussion of the music and the student-created map—the visible articulation of their musical understanding.

The "musical map" project was designed as a part of the student music curriculum that evolved while I was engaged in a qualitative study (Denzin & Lincoln, 2000) of my students' and my lived experience (Lincoln & Guba, 1985; van Manen, 1990) in the naturalistic setting of our music classroom. In my role as teacher-researcher, I was able to informally observe as the students interacted with music throughout the school year, with a particular interest in the ways they were able to solve musical problems while listening to music. Analysis of data gleaned from multiple video- and audiotapes, classroom artifacts, interviews, and my personal log and journal was conducted in tandem with continual forays into related literature as themes emerged and findings were reflectively interpreted.

This article develops the nature of kinesthetic learning in music and its relationship to "felt pathways" of musical understanding. The data represented here, drawn from a larger study (Blair, 2006), were collected during regularly scheduled sessions of my own fifth-grade general music classes over a period of three years. In another related article, the metaphorical relationship of narrative and musical mapping as a form of narrative musical expression is explored (Blair, 2007).

The emergent nature of the study was closely connected to the emergent nature of the curriculum experienced by these students. Strategies they naturally employed during earlier curricular experiences inspired the design of the lessons that became the focus of this study: a series of listening lessons designed to value the nature of their strategies, their need and ability to share what they know or come to know within the experience, and to find ways that would stretch their understanding of a musical work.

Exploring Meaning-Making While Listening

In a lesson designed to provide support for the final mapping project, students were asked to solve a music listening problem by mapping melodic contour using iconic puzzle cards[1] (Figure 2).

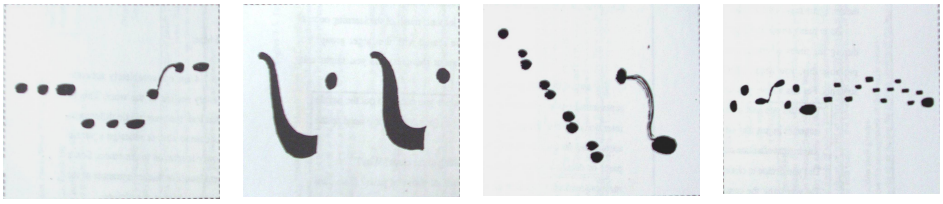

Figure 2. Puzzle Cards for Kabalevsky's "March" from The Comedians

Danny, Abby, and Keith are sitting cross-legged, in close proximity to the small set of contour cards. As the music begins to play for the first listening, Keith points to a card while Danny and Abby watch. Danny finds the appropriate card and sets it aside to begin the chain of cards that will map the contour of the music. Immediately Abby begins pointing very close to the card. Completely engaged in the musical problem they are solving, they are listening, moving, singing, pointing, watching, conferring—solving the puzzle. The music stops yet Keith and Danny continue to move cards around, singing the second phrase and pointing to the cards. Realizing through their singing of the music that they have made a mistake, Danny says, "Oh, whoops! It's only one of those." The descending phrase appears twice on a single card.

As the piece is played again, Abby again touches the paper directly with her finger as she points until Danny starts maneuvering the cards. Keith is watching the cards closely and adds a gesture at the second phrase that exactly mirrors the contour. On the third listening, with their cards in what they consider to be the correct order, all three are watching and pointing, matching their movements to the shapes on the cards in sync with the music. Keith begins pointing closely, then changes his gestures. They become more figural, like an artist's sweep of a paintbrush or a conductor's gesture indicating the motion of a phrase. These

[1] Espeland, in Wiggins (2001), *Teaching for Musical Understanding*, McGraw-Hill. Material is reproduced with permission of the McGraw-Hill Companies.

gestures are "musical" in their representation, rather than the pitch-to-pitch pointing needed earlier to figure out the puzzle cards.

These students were formulating and representing their understanding of the music they were experiencing through strategies such as moving, creating gestures to represent the music, singing and other vocalizations, and utilizing strong connections to visual, graphic representations of music. When analyzing this and similar occurrences throughout the data, I was intrigued by the interdependence of the students' visual and enactive strategies and the ways their *combination* further supported the development of their musical understanding. The graphic representation of the music provided a visual metaphor of the music as well as a stationary frame for its exploration. Its synergistic combination with gesture—particularly the tracing of the shapes of the graphic representation—enabled the students to successfully solve the musical problems at hand and to make meaning of the music in a personal way.

Enabling Musicianship through Musical Mapping

Bamberger (1991), Barrett (1997, 2001, 2002, 2004), Davidson and Scripp (1988), Gromko (1994), Gromko and Poorman (1998), and Upitis (1987, 1990a, 1990b, 1992) have studied the nature of children's invented notation, providing insight into the ways that children's "representations of music are critical 'windows' for viewing their musical cognitive development" (Davidson & Scripp, 1988, p. 196). Cohen (1997, 2001), Dunn (1997, 2004), Espeland (1987) and Kerchner (1996, 2000) have investigated student response to music listening, exploring their verbal, visual, and kinesthetic modes of representation when expressing musical ideas.

Cohen's (1997, 2001) use of kinesthetic analogues in a teacher supported environment supported the ways I had seen my students express themselves musically through gesture. To

begin, Cohen created a "musical mirror" which she modeled for her students, providing them with a window into her musical understanding and allowing them, by inviting them to perform it with her, to enter into the experience—*her* listening experience. It was her goal to "let the children mirror [her] movements and—by entering into [her] movement analogue—enter into [her] head, to experience [her] musical thought process" (1997, p. 2). Working with a new piece of music, the students created their own musical mirrors by listening repeatedly to the selection, reflecting on its many aspects, and by attending to the ones most salient to each listener, created movements to represent their musical understanding.

Dunn (1997, 2004, 2005) describes the maps his college students created as "figural maps" that include graphic representations of their mental images formulated while listening, a "visual representation of an individual's intuitive, musical sense of the piece" (p. 4).

The Cohen (1997) kinesthetic analogues and Dunn (1997) figural maps became models for the mapping unit I designed for my fifth grade students. Like Cohen and Dunn, I prepared a teacher model, a map using an excerpt from "Love for Two Cats" by Ravel, allowing them to enter my own musical experience and see what another musician might create to represent musical ideas. In the following lesson, students were presented with a partially completed map of an excerpt from Haydn's "Surprise" Symphony. During repeated listenings, students were invited to draw on the incomplete map, making changes and additions as necessary to represent their differing musical ideas and providing a forum for discussion.

Next, we began our study of Mussourgsky's "Ballet of the Unhatched Chicks," the music to be used for the student-created maps, with first listenings used to determine the form. I then drew upon Cohen's (1997) kinesthetic analogues, with the hope that by enacting the music through singing and gesture, students would begin to internalize the music, forming the

beginnings of their musical ideas for what would become their visual representations of the music.

> *Before beginning the third listening, I ask the students to pretend their fingers are pencils and to draw the music in the air, so they can figure out "how the music goes." As students listen, hands are moving—up and down or left and right, climbing at the ascending pattern, or using extended motions for the ending sustained pitch. Some students have stopped gesturing by the end of the piece. I ask, "How could you draw the ending?" Bethany volunteers and extends her right hand with her second finger pointing, drawing a long horizontal line in the air. Simultaneously, Shelly, sitting next to her, draws an arch over her head with a fully extended arm. Interestingly, both are showing the forward movement of the sound, even though it is one sustained tone.*
>
> *Across the room, Danny is "drawing" the high and low notes of the A section and is correctly drawing two different ascending lines—one longer and the other as two shorter lines. For him, the long sustained note is drawn vertically, from low to high like a rocket ascending. We listen to the music several more times, with students pointing in the air, motions becoming more purposeful as the music becomes more familiar. As I hear students begin to sing or hum to themselves along with the music, I know they have begun to internalize the music and with the assistance of their gestures, may be more successful when attempting to draw their graphic representation of the music.*

While not complete kinesthetic analogues like those created by Cohen's (1997) students, these students were representing their musical ideas kinesthetically as a result of their interaction with the music. Their movements were temporal graphics in the air, the beginnings of pathways of feeling and knowing—personal ways of responding to the music, of interacting with the music, and expressing the resultant musical ideas.

The next step in the project was for students to draw rough drafts of their maps. I reminded them that they needed to know what their maps meant and that, when they were finished, they had to be able to demonstrate their ideas to the rest of the class by pointing to their

maps as the music played. Students were sprawled on the floor as they worked to transfer sound and gesture to paper. Phrases of the A section were played repeatedly until the students told me they were finished, then moving on to the next section.

Lauren and Jessica are working together. Lauren has the pencil and Jessica watches carefully as Lauren draws and then points along to what she has drawn. They are finished with the first phrase before the others and are frustrated because they want to hear the next phrase, the ascending line. I suggest that they go ahead and just sing it. Lauren begins to draw, but cannot remember it precisely. Jessica sings it with her and they continue. Later, Lauren turns the pencil over to Jessica indicating that drawing the rest of the map will be her responsibility, sharing the work fairly. They are at the point of the two shorter ascending lines and are working out the steps on their fingers. They get to the penultimate phrase, listen to it without drawing, and as soon as it stops, look at each other, sing it accurately in unison, and both bend over to draw it on their map, this time singing it slowly as Jessica draws the shapes that represent these difficult intervals, with Lauren frequently pointing to where the next pitch should be placed. They anticipate the long sustained note, sing it and draw a long horizontal line, placed higher up on their paper (Figure 3).

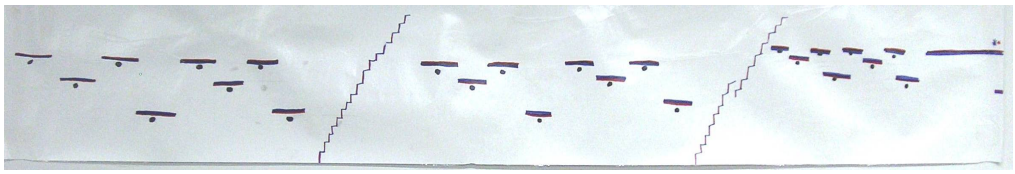

Figure 3. *Jessica and Lauren's Map*

Working nearby are Danny, Abby, and Roger. Abby has the pencil and is trying to draw the first phrase of the A section. She looks up at Danny and asks "Like that? Down-up-down-up?" He sings the phrase, accenting the 4th and 8th pitches, and with his hand open, gestures the higher and lower pitches accurately (Figure 4).

Roger and Abby point to what she has drawn while Danny continues to sing and gesture the shape of the phrase. Danny says, "No, up-down, not down-up" and Abby adjusts the map.

I have been playing the first phrase over again and when it stops, Danny continues singing the piece where the recording has left off. He continually repeats this ascending pattern, as do other students around him. Amidst all this, Danny indicates to Abby that she forgot to draw the pitches of the first pattern; she sings and points to her map, then adds the missing marks.

Abby is doing most of the drawing, and points to the map with her pencil as the music is playing. Danny sings and gestures constantly and can give Abby immediate feedback to help her with the map. When the music comes to the place where the long ascending line is split into two sections, Danny actually points to the paper, drawing imaginary lines with his hand to express his idea. "It's not the same," he tells her, referring to the first ascending pattern. The music is playing and he sings along when the split phrase is heard. "It goes up twice. The second one starts down." He is still singing and counting the steps on his fingers. "Eight for the first one," he tells her. He listens again. "Eight the first time, seven the second time."

The music is repeated from the beginning and Danny continually sings along, while Abby once again points to the puzzle with her pencil. The whole class has not worked on the last phrase yet, but Danny sings it during the transitions between listening and working on the map. "Here's the next one," he says as he "draws" it with his hand on the paper, accurately indicating the melodic contour of the phrase, then draws the long sustained pitch in the air, as he runs out of paper. She draws the first pitch and cannot remember where to draw the next one, so he again, more slowly, draws the imaginary marks for her. He is quite specific about the pitch relationships, "And then it goes one lower," singing it slowly (Figure 4).

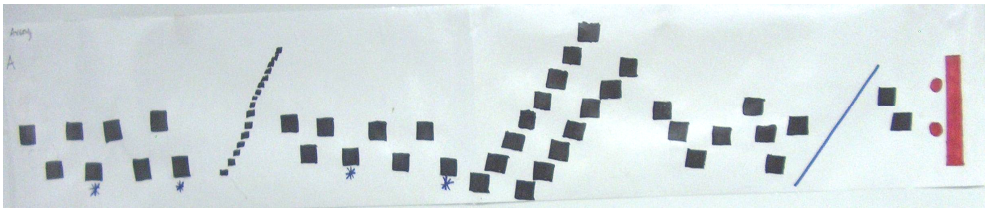

Figure 4. *Danny, Abby, Nathan, and Roger's Map*

"Look at What I Heard!"

The final part of the mapping process was for students from each group to trace their musical maps for the class, pointing to them through time as the music was heard, followed by

class discussion. Class procedure was to put each map on the board, listen to the music, and see whether classmates were able to follow the map. Then the creators of the map would trace the map for us while we all listened to the music again. Spontaneous and unsolicited applause followed the viewing of every map. Students celebrated the efforts of their peers but also seemed to clap for the sheer enjoyment of listening and watching. Free discussion would follow, generally with very little need for me to generate discussion with questions.

Students were incredibly anxious to share their maps with the class. It did not matter if their maps were simple or complex; they were anxious and even impatient to have their turns. Students near me would tap my arm and say, "Can I go next? Can I go next?" It seemed to me that it was very important for them to share with everyone what they had created, what they had heard, and how they had represented it. While they had experienced listening to the whole piece of music, the maps represented those aspects of the music that each listener had attended to and chosen to make explicit. Other aspects of the music were certainly heard as well and may have been understood tacitly. Like a geographic map that shows landmarks of a certain place without being able to capture its essence, these maps indicate salient features of the students' listening experiences, yet do not represent everything known and felt. However, the special nature of mapping allows everyone a chance to show what they have come to know about a piece of music, what they perceived to be interesting or important, and what they were able to represent graphically (Gromko, 2003). Mapping allows opportunities for learners to share musical ideas that represent their musical thinking in a creative and personally expressive way.

By the end of this listening experience, it became apparent that students knew this music from within, evident in the amazingly accurate way they could point to their maps as the music played. If someone lost his or her place on the map, group members would rush in to help, or

step in to take over, or point together with hands practically on top of each other. When students did lose their place when tracing their maps, they easily found musical landmarks—music that they now knew so well joined with their own specifically created marks to represent it.

Musical Maps as Tools for Enabling Felt Pathways of Musical Understanding

Observing the students' process as they created and shared their maps, I realized the enormous potential for enabling students to form *felt pathways* during a listening experience, similar to the "felt paths" experienced in performance settings. Bamberger (1991), suggests that

> the *sequences of motions* that we practice and internalize in the process of carrying out familiar activities—most particularly sequences of actions that we internalize in learning to perform on an instrument, sequences that we both make and follow with each new performance—that these action-paths become our most intimate ways of knowing that piece. I call these internalized action-paths "felt paths" (pp. 9-10, emphasis in original).

I have extended this term to *felt pathways* and believe that through tools like musical maps, students can form pathways of knowing and feeling while *listening* to music, in addition to paths that Bamberger describes that are formed when performing music. Several student strategies come together to make this possible: a) the use of movement to enable drawing and to confirm ideas while tracing the drawing; b) the use of inner hearing to create the graphic representation; c) the use of singing or humming that accompanies the entire creative process; and d) the use of creativity with the perspective of one's own lens to design, look at, analyze, evaluate, and edit the graphic representation. What is unique about felt pathways is that these kinesthetic personal knowings are not a result of movements learned in order to elicit sound physically from a musical instrument, as are Bamberger's "felt paths." Rather, these felt pathways are internally produced pathways of feeling and knowing that are a result of the imaginative response of body and mind when listening.

The students' gestures, while recurrent, were also continually developing. Gestures became more sophisticated, singing became more accurate, and visual graphics were continually edited or being given more detail. Confirming one's work or simply following the map for one's own pursuit were common occurrences. In addition, even after time had past, students could and would easily and accurately trace their maps, enact the music vocally, and focus on the visual representation that they had created. The procedural strategies used to create the map were similarly employed when later reliving the map or describing it for others. Like the muscle memory of an instrumentalist who can easily run through a piece learned long ago, these students had created "felt pathways" for a piece of music experienced through listening. The map served as a frame for discussion with others, for enabling others to enter into one's musical experience and into the meaning one had made of the experience, but it also served as a frame for the reliving of one's own musical experience. The "landmarks" and "road signs" that students created on their musical maps provided the outline *for themselves* of a deeply felt musical experience and the opportunity to relive that experience by recreating the "felt pathways" created when making the map. These students were making meaning through listening—through "felt pathways" of musical thinking felt internally and expressed externally (Figure 5).

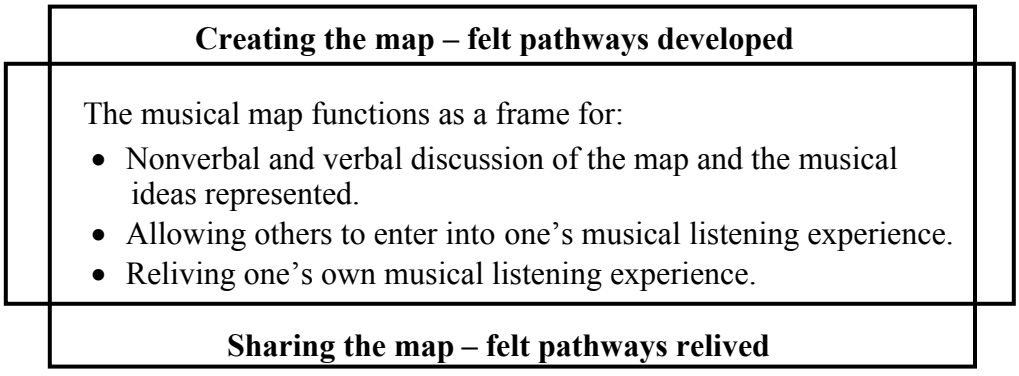

Figure 5. Map as a Frame for the Lived Musical Experience

Cohen (2001), too, observed that the kinesthetic analogues created by her students served as a frame for musical dialogue.

> Here the movement gestures (mirrors) serve as a meeting point between intuition and analysis as movement gestures serve as a common reference point for verbal analysis. This is the case both when the pupil is analyzing his own hearing of a piece as he/she works at evolving an appropriate mirror for it, or when he is absorbing analytical information from the teacher's mirror….Mirrors not only provide entry to the musical experience but also provide a concrete reference point from which one can connect easily to a study of compositional processes at work in creating the experience (p. 15).

"I never heard it until I saw it on his map!"

Oliver has drawn a particularly clear and detailed map (Figure 6). His classmates are duly impressed with his ability to both hear and graphically articulate what he understood about the music.

> Shelly (referring to Oliver's map): I thought it was neat how he really listened to the music and they saw that the, I don't know what you would call it, the weirder part of the music kept going. You know, I thought it was hard. (She is referring to the extra layers he has drawn in two places.)

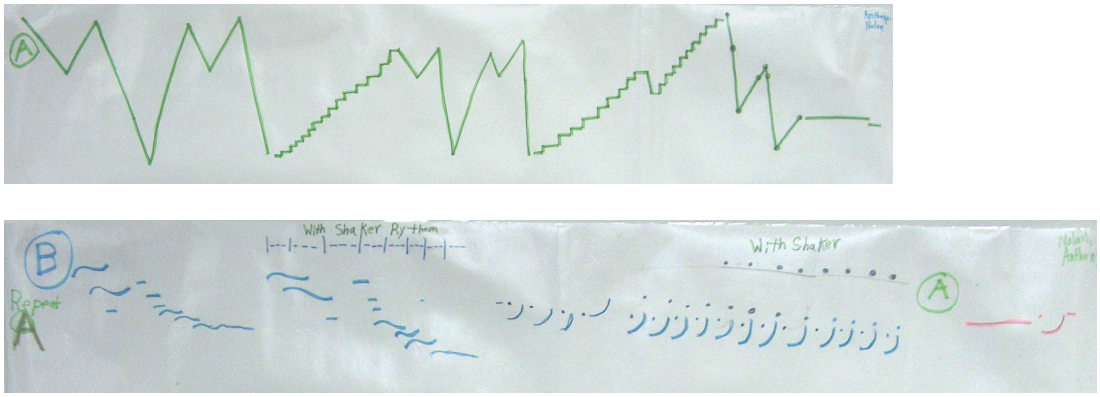

Figure 6. Oliver's Map

I asked Oliver to point to the extra layers this time as we listened to it again. When it was over, I asked the class, "Did you hear it?" "Yeah!" they answered emphatically.

> Cathy: I thought it was pretty neat that they use different shapes for the different sounds. Like using dots instead of just lines.

John: I have a question. Why did you use those dots on the lines?

Oliver: 'Cause it would be just big lines, but I'm showing where the pitches stop (points to phrase at the end of the A section).

We listened again so that Oliver could point and show us what he meant.

Kelly: I thought…I thought that their map was neat because it showed all the different little things, little things that were added. Nobody…*I don't think that anybody else really heard those things until they saw it on the map* (emphasis added).

Mrs. B: Oh, what a good point!

Several students were intrigued by the multiple layers that Oliver had drawn and continued to ask questions about it, saying it was "neat" how he had done that. We finally asked Oliver to trace his map again, and he pointed to as many layers as he was able.

By listening to the music while tracing the maps, these students were sharing their musical listening experience. Indeed, as supported by the notion of embodied cognition (Bowman, 2004), the maps "came alive" when students physically traced them. By tracing the map's graphics, one could understand the students' intentions, their intuition about the music as represented by the nuance of their gestures. The map was the frame for the creation of the map and now served again as a frame while students relived the felt pathways formed during the creation of the map. Because the other students had also developed felt pathways while creating their own maps, their understanding of the music was richer and the watching of another's map had new meaning. Students were easily able to recognize similarities, realized by the ease with which they were able to follow other students' maps. Yet when something was new or different, they were intrigued, noticing nuance that they had not previously noted or subtlety in another's interpretation. This is similar to the nuances that performers feel when the felt path of their musical knowings are shift with each new performance of a well-loved and well-rehearsed piece of music.

It is this deeply personal interaction with the music and personally expressed response to the music through mapping that allows others to enter into our listening experience and enables students to notice the common and unique ways that people respond to music. “I never heard it before until I saw it on his map!” is a particularly insightful comment for a youngster, and yet indicative of the ways that students responded to this experience. Each map brought a new musical idea to the forefront, or offered insight about a fellow musician that had not been noticed or celebrated before. The sharing of maps allowed a unique opportunity to share musical ideas, but even more importantly allowed each student to be valued as a member of this musical community.

“The motion of it. It helped me know what to draw.”

Some students were able to verbally articulate the way that movement enabled the design of their map and their understanding of the music. When asked, “How did you figure out what to draw? What helped you figure out what to draw?”

Sandy replied, “Listening.” She paused, then added, “The motion of it (gesturing). It helped me know what to draw.” (Figure 7).

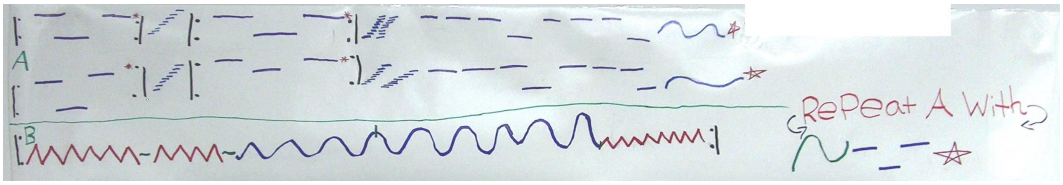

Figure 7. Sandy’s Map

Bowman (2000) states that “whatever else music is about, it is inevitably about the body: it is invariably an embodied practice” (p. 50). He suggests that we do not just think or hear music, “we participate with our whole bodies. We enact it. We feel melodies in our muscles as

much as we process them in our brains—or perhaps more accurately, our brains process them as melodies only to the extent our corporeal schemata render that possible" (p. 50).

Cohen (2001, p. 3) suggests that "musical schemas…appear to have sensory motor, kinaesthetic roots." She refers to Piaget (1970) and the Pillsbury study (Moorhead & Pond, 1941) for support of this notion, including her own research (Cohen, 1980), which "has led her to see movement as the source of musical thinking" (2001, p. 6). The data presented here also reflect that as musical ideas are forming, children use a variety of strategies to work out these ideas, and that the musical ideas are supported by physical gesture. The use of movement or singing or visual representations enables students to work through musical ideas, and their interaction with thinking becomes the foundation of musical ideas.

Because of what I learned from the data and the literature (Bowman, 2004; Bresler, 2004; Powell, 2004; Walsh, 2004), I would suggest that this is a synergistic interplay, deeply embedded in our embodied minds. The metaphorical images (Bruner, 1966; Swanwick, 1999; Lakoff & Johnson, 1980/2003,1999) that we create as we listen to music both enable and are enabled by the kinesthetic response to music. Visual representations, which require the integration of eye, hand, ear, and mind, are also inextricably linked to musical knowings and construction of those knowings. When students respond and interact with music, explore and experiment with physical and visual metaphors while listening, they construct meaning when they discover familiarities and variations—sounds and shapes and movements that are similar, different, unique, or intriguing; and which ones, for each person, best represent what one is feeling and hearing. The notion of embodied cognition supports what I observed in the lived experience of my music students as they worked through of these metaphors—visually and physically negotiating musical sound and finding meaning as they made sense of it.

"When you do the map thing, everyone can express themselves."

Cindy and Bethany seem particularly communicative when expressing the personal nature of mapping and the importance of the shared experience. Bethany, who is very articulate, traced the map first, following it perfectly.

Mrs. B: What can you tell me about making the map? Was it hard or easy to do?

Bethany: It was sort of easy and sort of hard. It was harder when we did the first copy because we had to listen to the music and think out the stuff. It was easier when we did the final copy because we actually knew what to do for that but we had some problems like here (points to the A section, Figure 8).

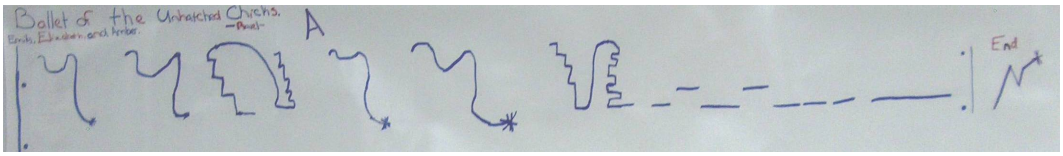

Figure 8. Cindy and Bethany's Map, the A Section

Mrs. B: What was hard about deciding what to draw for what the music sounded like?

Cindy: Because of the choices we had to make and the music went so fast. And we didn't know what to draw.

Bethany: Yeah, it came so fast. We didn't know what to do for it.

Mrs. B: So then how did you finally decide?

Cindy: Because we listened really closely. (Cindy points to their map) Like, it just started and then went down and then up and then down (tracing her map).

Mrs. B: Did you have to sing it out loud or in your head to draw it or could you just draw it by listening?

Bethany: I could draw this (A section) just by listening, but this was hard (points to B section, Figure 9). I had to sing it to draw it.

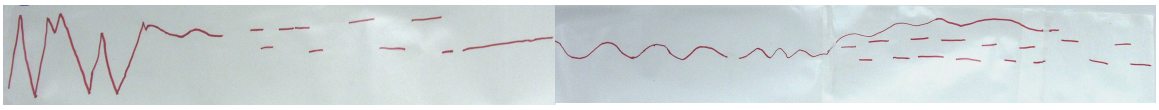

Figure 9. Cindy, Madison, and Bethany's Map, the B Section

Cindy: We could listen to it but we also had to sing it. It helped with the rhythm of it. By singing it, we know the motion of it and we'd know what to draw.

Mrs. B: Did you like doing this? Do you think drawing the map helps show what you know about the music?

Both: Both smile, nod emphatically, and say, "yes" at the same time.

Mrs. B: Yeah, me too. I think sometimes it's hard to talk about music, but a map is a cool way to…

Cindy: You can show what you're thinking.

Bethany: When you do the map thing, everyone can express themselves.

It is in creating felt pathways while listening that students form their own personal journey through the music and through repeated listenings become familiar with the pathway and begin to notice those things which surround the path. For me, this provides some explanation of why students, when listening to the music and watching another person's map, would say with astonishment, "I never heard that before I saw it on his map!" Without their personal felt pathway, this novelty would not have been noticed. Without Oliver's map and his presentation of it, his peers would not have attended to the aspects of the music that were present, which they did hear but did not *attend to* when creating their own maps. Oliver's unique perspective allowed them to perceive the music in a new way.

Entering Another's Listening Experience

The completed musical map—the graphic representation of musical understanding—serves as a frame, providing the lens for reflection upon the lived experience. Each map is unique, revealing the distinctive nature of each listener and his personal encounter with the music. Yet, the shared listening experience provides points of commonality both in graphic representation and in the meanings discovered through listening. Thus, the map provides a frame for reliving the experience, for further exploration, for sharing of ideas. It may not represent

everything someone experienced when listening to the music, but it is a frame, featuring salient points or things to which the listener especially attended.

When students share their musical maps with the class, the maps become a powerful frame for entering into another's listening experience. As they trace the path of their musical experience, others have the opportunity to witness their response to the music, in the way they have selected to represent it visually, but also in the way they gesture through the map. When finished, other students will use the map as a way to locate the music (for example, with questions like, "in the B, what is that green thing?") but the communication invariably remains musical, reenacting the sound and their own process as they sing and gesture, and responding with, "oh, that means…" (and then point to the map, singing the corresponding phrase), followed by nodding heads as if all involved understand this type of communication. While some answers may be verbal, they are almost never completely verbal. Singing and gesture, with reference to the visual map, augment what words and the map cannot completely express.

I would suggest that musical maps allow us to participate in a unique world that would otherwise be closed to us—the world of our students' listening experiences. Cohen (1997) shared that one of the purposes of creating her own kinesthetic analogue and having her students watch her perform the analogue and later learn it themselves, was that it offered an opportunity for her students to enter into her musical experience. The visual nature of musical maps and the kinesthetic tracing of them—including, for me as the teacher, the observation of the process of creating a musical map—provide a window into another's musical experience.

Equally important, the sharing of the maps provides the opportunity for peers (who have been busy making their own maps) to enter into another's musical experience and for the creators of the maps to allow others to enter into their own experience. This, too, is mediated by

each students' own personal lens, but the level of shared understanding from also creating a map for the same music offers valuable common ground for the development of musical ideas.

Common and Unique Musical Felt Pathways

Through the shared experience of creating the final maps for the same piece of music, the students developed similar "felt pathways" for the sounds of this piece. When heard again while watching another person's map, the familiar pathway of feeling and knowing this music is recognized; yet a map's new or different features might cause the listener-observer to pause, to notice something new in what was considered "known."

Because another listener may notice something different or choose to represent the music in a unique way, the variations of another listener's response to the music are noticed. But it is in the commonality of the maps, the basic felt pathway, and now traveling it with someone else that we notice their unique perspective. All that we thought was familiar is now new because it is shared with someone who is seeing it with a different point of view.

The discussion of the maps, with the scaffolding of watching the maps while the creators traced them, provided the forum for discovering the common and unique. Musical representations were varied, yet because of the shared listening experience with felt pathways of knowing and feeling well developed, each could enter into the listening experience of another, to find their way along the map, recognizing familiar musical paths and landmarks. Each map also provided new perspectives, nuances now noticed because familiarity provided the groundwork for discerning the unique among the shared musical expressions. By noticing the various and similar ways that we each respond to music, we notice that we, as people, have commonalities that we share, yet each with our own unique perspective. Settings such as these provide the

opportunities for students to mutually explore, affirm, and celebrate the inherent musician in ones' self and in others.

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