



Instruments of Power.
The affective power of sound design in American music education

Instrumentos de Poder.
O poder afetivo do design de som no ensino de música nos Estados Unidos

Instrumentos de poder.
El poder afectivo del diseño sonoro en la educación musical estadounidense

Noah Karvelis
University of Wisconsin-Madison (United States)
<https://orcid.org/0000-0003-1730-2104>
noahkarvelis@gmail.com

Thomas S. Popkewitz
University of Wisconsin-Madison (United States)
<https://orcid.org/0000-0002-5058-2235>
thomas.popkewitz@wisc.edu

Abstract

Music education in the United States has increasingly focused upon student creativity and practices such as improvisation. While such practices and changes are often conceptualized as flexible, inclusive reforms about making kinds of children, historically the curriculum has little to do with music and is instead concerned with taming uncertainty in the governing of child. We examine the Orff-Schulwerk pedagogy in the teaching of music, thought of as a progressive reform which emphasized improvisation and creativity. Exploring briefly Orff-Schulwerk's production in the Weimar Republic as it travels and translated into the post-war United States, we consider the curriculum as formed through psychological research about rationality, choice, and creativity. The focus is on the system of reasoning embodied in the curriculum as generating principles about desired kind of persons in a stable, secure future related to salvation narratives- principles different in the Weimar Republic and US. The shifting design of people in Orff-Schulwerk curriculum and classroom instruments for learning of sound are, we argue, practices in governing of the body and soul. The fabricating and mapping in the music curriculum is about kinds of populations required as evidence of the progressive desires that simultaneously distributes differences.

Keywords: Music education. The political sociology of knowledge. Alchemies. Exclusions.

Resumo

O ensino de música nos Estados Unidos tem cada vez mais focado na criatividade do aluno e em práticas como improvisação. Enquanto tais práticas e mudanças são frequentemente conceitualizadas como reformas flexíveis e inclusivas na formação de diferentes tipos de crianças, historicamente o currículo tem pouco a ver com música e, em vez disso, se preocupa em domar as incertezas no que se refere à supervisão de crianças. Examinamos aqui a pedagogia Orff-Schulwerk aplicada ao ensino de música, considerada uma reforma progressista que enfatiza improvisação e criatividade. Explorando brevemente a produção da Orff-Schulwerk na República de Weimar e o seu traslado e tradução para os EUA pós-Guerra, consideramos o currículo como (in)formado por uma pesquisa psicológica sobre racionalidade, escolha e criatividade. O foco incide sobre o sistema de raciocínio incorporado ao currículo como princípios geradores de tipos desejáveis de pessoas em um futuro estável e seguro, relacionados às narrativas de salvação – princípios distintos na República de Weimar e nos EUA. O posicionamento móvel das pessoas no currículo Orff-Schulwerk e os instrumentos de sala de aula usados para o aprendizado de som são, segundo nossa argumentação, práticas de governar o corpo e a alma. A fabricação e mapeamento no currículo musical estão relacionadas com os tipos de populações requeridas e são evidência dos desejos progressistas que simultaneamente distribuem diferenças.

Palavras-chave: Ensino de Música. Sociologia Política do Conhecimento. Alquimias. Exclusões.

Resumen

La educación musical en Estados Unidos se ha centrado cada vez más en la creatividad de los alumnos y en prácticas como la improvisación. Aunque tales prácticas y cambios se conceptualizan a menudo como reformas flexibles e inclusivas sobre la creación de tipos de niños, históricamente el currículo tiene poco que ver con la música y se preocupa más bien por domar la incertidumbre en el gobierno del niño. Examinamos la pedagogía Orff-Schulwerk en la enseñanza de la música, considerada como una reforma progresista que hacía hincapié en la improvisación y la creatividad. Explorando brevemente la producción de Orff-Schulwerk en la República de Weimar en su viaje y traducción a los Estados Unidos de la posguerra, consideramos el plan de estudios como formado a través de la investigación psicológica sobre la racionalidad, la elección y la creatividad. La atención se centra en el sistema de razonamiento incorporado en el plan de estudios como generador de principios sobre el tipo de personas deseadas en un futuro estable y seguro relacionado con las narrativas de salvación, principios diferentes en la República de Weimar y en Estados Unidos. El diseño cambiante de las personas en el plan de estudios de la Orff-Schulwerk y los instrumentos de clase para el aprendizaje del sonido son, argumentamos, prácticas de gobierno del cuerpo y del alma. La fabricación y el mapeo en el plan de estudios de música se trata de tipos de poblaciones requeridas como evidencia de los deseos progresistas que distribuye simultáneamente las diferencias.

Palabras clave: Educación musical. Sociología política del conocimiento. Alquimias. Exclusiones.

Introducion

The landscape of U.S. music education in the post-war period, particularly in the late 1960s, is one marked by a rethinking of what it means to teach music in schools. Events such as the Tanglewood Symposium of 1967 which tasked itself with reconceptualizing music teaching, and the Manhattanville Music Curriculum Project which took up a four-year study to redefine the fundamental principles of music and their teaching, serve as examples of the American efforts to produce new outlooks on music teaching. Yet, these events did not simply develop out of a spontaneous desire to reimagine music curriculum. Rather, these events developed out of notions of uncertainty of the post-War that were perceived and constructed educationally in specific ways in the United States (see, e.g., Popkewitz, Petterson & Ksiao, 2021). In US music education, for example, the Tanglewood Symposium spoke of the revisioning of curriculum design to respond to racial tensions and urban unrest as well as the internal rhetoric of the threat of communism. Attendees spoke about the new curriculum as responding to the uncertainty and the imperative of education to operate with the knowledge that “the future will depend upon what you do and say here” (Choate, 1968, p. 33).

The reform efforts of the Tanglewood Symposium drew upon post-war notions of creativity that envisioned the creative child as the desired child-citizen who would establish a secure, prosperous national future. One central curriculum thought as embodying this desired child was “Orff” or Orff-Schulwerk pedagogy. Originating in the Weimar Republic in the early 20th century and using a previously little-known xylophone, the “Orff-Schulwerk xylophone” and its corresponding curriculum, *Schulwerk: Musik fur Kinder*, Orff-Schulwerk focused upon the idea of activating children’s inherent creativity in the U.S. Today, it is one of the most common pedagogies at the primary level of music education.

This article looks to Orff-Schulwerk to understand how ideas surrounding uncertainty and futurity become embodied in the design of objects such as music curriculum and classroom xylophones. Further, this article traces the ways in which such ideas became linked to notions of creativity and operationalized through cognitive science in the post-war US. To do so, this article considers how the event that is Orff-Schulwerk becomes possible. That is, how does this pedagogy, steeped in notions of German body culture and utilizing instruments inspired by Bauhaus elementalism and Javanese gamelan, with founding members in the German National Socialist Party, become one of the most common music education pedagogies in the 21st century United States? To develop such an understanding, this article, follows a curriculum studies approach concerned with the alchemy or translation of disciplinary knowledge into school subjects¹ that intellectually (re)visions Foucault’s notion of the history of the present and eventualization as “a breach of self-evidence” (Foucault, 1991, p. 76). We move Orff-Schulwerk from a place of assumed “natural-ness” and “good-ness” in producing creative children to ask about the conditions of intelligibility, “rediscovering the connections, encounters, supports, blockages, plays of forces, strategies and so on which at a given moment establish what subsequently counts as being self-evident, universal and necessary.” (Foucault, 1991, p. 76).

This article historicizes Orff-Schulwerk’s development in the U.S., focusing primarily upon the second half of the 20th century when Orff-Schulwerk gradually became a commonplace discussion at American professional association music education conferences,

¹ There are a range of studies done cross-nationally that this article contributes, such as (see, Lesko, 2001; Popkewitz, 2008; Popkewitz, & Kirchgasser; Diaz; Ligia López, 2017; Yolcu, 2019; Zheng, 2019).

and published method books specifically for U.S. teachers. This historicization, however, is less interested in the individuals behind these associations, conferences, and books. Further, the article is uninterested in designating a clear “origin”. Instead, following Foucault, of central interest is a “pluralization of causes” (Foucault, 1991, p. 76) which looks to various ideas, spaces, and times as it considers how Orff-Schulwerk becomes produced in specific ways in the U.S in relation to conceptions of primitivism, post-war creativity, and notions of the accessible body, among other ideas. To do so, this history focuses on the design of Orff-Schulwerk pedagogy and instruments which are developed in new ways across various sites, discourses, and events in the post-war era. Building upon research considering, for example, the design of schools in relation to the post-war creativity discourse (Ogata, 2013) and the production of affect through the design of schools (Sobe, 2018), this article centralizes design as a vital element of schooling which makes visible the epistemologies and ontologies within the alchemy of curriculum (Popkewitz, 2004). In the process, the article positions the history of the design of Orff-Schulwerk xylophones, the shifting approaches to the design of Orff-Schulwerk pedagogy throughout the post-war era, and contemporary Orff-Schulwerk lesson design from organizations such as the American Orff-Schulwerk Schulwerk Association as an archive through which such understandings can be developed.

Through such a focus on design, Orff-Schulwerk becomes visible as not simply concerned with developing improvisational skills or the accessibility of a wooden xylophone. We argue that the Orff-Schulwerk xylophone operates as a designed object under a particular system of reason that becomes visible in the post-war related to (ir)rationality, choice, creativity, and the possibility of “governing from afar” the soul and body (Turner, 2013). In the process, cognitive psychology, rather than music, becomes the architecture through which the curriculum is developed. The practice of Orff-Schulwerk is connected to constructions of idealized psychological qualities such as creativity assembled within images and narratives of collective belonging and the distribution of differences in the post-war years. This shifting U.S. approach to Orff-Schulwerk pedagogy ultimately allows for Orff-Schulwerk to locate itself within many of the desires of the United States and its forms of music education both then and now such as the hope of producing confident, creative child-citizens who it is assumed can develop a certain, stable future for the nation.

As Orff-Schulwerk fabricates this idealized child it also fabricates its opposite. Its practices, as this article traces, are concerned with fabricating differences and enacting governance in response to such differences. Orff-Schulwerk acts in the present but as an anticipatory technology of the potentialities of the future. Creativity becomes a governing practice related to an unstable future through the production of the desired, creative kinds of people of an imagined security and harmony.

Beginning in the contemporary U.S. Orff-Schulwerk classroom and then traveling back to the Weimar Republic where Orff-Schulwerk was originally developed, this article makes visible how this process is enacted. Tracing this process ultimately develops understandings surrounding the ways in which the utilization of Orff-Schulwerk pedagogy in schools across the U.S. becomes produced through ideas that have little to do with music while also mapping such ideas onto specific populations as it mobilizes sound as a form of governance in new ways in the post-war era. Further, it offers insight into the ways in which post-war music education and cognitive science helped create music education as a distinct technology interested in cultivating specific affective states, for example *feeling* rather than being creative, through the design of objects such as curriculum and xylophones.

Contemporary Orff-Schulwerk, Sound Design, and Affectivity

The American Orff-Schulwerk Schulwerk Association (AOSA) states: “In Orff-Schulwerk Schulwerk classrooms, children begin with what they do instinctively: play! Imitation, experimentation, and personal expression occur naturally as students become confident, life-long musicians and creative problem solvers.” (What is Orff-Schulwerk?, n.d.). The pedagogical knowledge is organized as a process of students improvising on xylophones, engaging in body movements, and rote learning. Through this, the AOSA states, the child naturally becomes more confident and creative as they develop intellectual, social, emotional, and aesthetic skills (More on Orff-Schulwerk Schulwerk, n.d.).

To demonstrate how such a process is enacted in the classroom, the AOSA offers a video: “An Orff-Schulwerk Classroom in Action” [<https://aosa.org/about/what-is-orff-schulwerk/>] At the start of the video, a class of 14 children are dancing, with the Orff-Schulwerk xylophones arranged in the back of an open room. The teacher describes an open-ended pedagogy in which movement and children have their opportunity to create their own melodies for students to “release” their inherent creativity. As the video progresses, we see the children engaged in the improvisational elements of Orff-Schulwerk pedagogy through small class. With children improvising on their individual xylophones the teacher asks: “Do you have to stick with the same rhythm?” The teacher answers her own question, responding: “Yeah.” and then asks, “Does it have to be eight beats?”. This time with a student, the teacher again responds, “Yeah” and reiterates these “parameters” of music while adding that the improvisation must also start and end on the same note across the entire group.

The video then shifts to the teacher explaining the reasoning for what they refer to as “parameters”. She explains, “We set them up with parameters that we know they’re going to be successful in”. The pedagogy assembles the development of skills that are 5mportant for affective states; not simply emotion but “the forces (intensities, energies, flows, etc.) that register on/with-in/across bodies to produce and shape personal/emotional experiences” (Dernikos et. al., 2020, p. 5). The register of music education is developing the confidence to share their work and “to feel successful”. Following this, 14 students engage in a remarkably unified improvisation as the teacher marks the pulse of the music on a large, single xylophone bar at the front of the room. The performance sounds as though not a single note is out of place. Immediately after the short exercise is completed, the teacher excitedly remarks, “Now you sound like you’re more confident!”.

What is of interest across this example and the AOSA as a whole is the repeated focus on the affect of the curriculum and children’s feeling and not simply on the skills and aesthetics of music. Repeatedly stated is that the child should not simply become a more skilled musician or develop a musical knowledge but that they should *feel* a particular way. Children should, as the teacher in the video put it, *feel* successful, creative, and confident. To produce such feelings, agency of the student (as well as the teacher) is placed with “parameters” in which creative expression is limiting what notes can be played, when to start, when to finish, and what note to begin and end on. These parameters are spoken of as a designed environment where the student will not fail, made to feel artistically and creatively capable in playing the xylophone. The affective state which results is not about being creative but, instead, feeling and understanding oneself as a successful and creative person.

Historicizing the Sound Design of Orff-Schulwerk Pedagogy as Fabrication Kinds of People

The structuring of the lesson, the organization of experience, and the relation of the physical activities of the child in playing the instruments is less about music and more about desires of the potentialities in the making kinds of people. The improvisation and parameters performed in the classroom function as an affective economy in governing the body and soul. It is this governing that we now turn to, and the principles acted upon in ordering the conduct of the child. We speak about this making of kinds of people as it entails two nuances of the notion of fabrication: fictions in the curriculum about the desires of who children should be and practices of the classroom and its models of the curriculum and teaching that are to actualize the phenomenon of creativity and improvisation a \ materiality.² Hacking (2007) has approached this double quality of fabrication philosophically as a dynamic nominalism or critical realism.

As Spitz (2019) details, this structured form of improvisation called “parameters” is a unique to Orff-Schulwerk developed in the U.S. This use of parameters in Orff-Schulwerk was part of the US curriculum standards movement of the second half of the 21st century. It was more generally an effort to introduce management theories for greater efficiency and effectiveness in education and drawn from more generally in public policy and social welfare institutions. But this notion of parameters as standards requires to understand it as a grid of historical practices in which its cultural principles are produced. Part of this grid is the design of Orff-Schulwerk developed in the Weimar Republic that travels and gets translated into the US curriculum

In the newly formed Weimar Republic in the 1920s, the composer Carl Orff, alongside the dance educator Dorothee Günther, developed what would become known as Orff-Schulwerk and the primary instrument, the Orff xylophone. Joined later by former student turned Orff-Schulwerk educator, Gunild Keetman who helped to popularize Orff-Schulwerk throughout the 1950s, the pedagogy focused on developing the innate creativity that both Orff and Günther believed all humans, including children had. Günther, drawing on her background in German body culture and feminism, also supplied a focus upon movement as a way of further developing a modern human spirit that it was thought would help actualize the potential of the modern human (Toepfer, 2005; also, see Geuss, 1996; Koselleck, 2002; Horlacher, 2015). Orff conceptualized the role of music in a similar way. Inspired by the developing Gebrauchsmusik movement which emphasized amateur composition as a way of achieving purposes outside of the normative aesthetic value of music, such as instilling national pride, (Spitz, 2019).

The curriculum conceptualized art as developing the modern, ideal individual, and located primitivism³ as a way for accomplishing children’s development. Children were viewed as similar to primitive people in the work of Orff. Günther viewed, for example, tribal dances as a primitive expression for children to meaningfully engage in. The primitive musical forms positioned the young child in this normative logic of development and social hierarchies. The primitivism, often referred to as “elementalism”, resonates closely with German Bauhaus methods of tactile pedagogies (Dussel, 2021). The idea of the human was embraced as naturally, inherently creative and that this creativity was developed through engaging with the fundamental elements of art. For Orff, this was embodied by what he viewed as primitive people and periods whose art utilized a drum, singing, and movement (Spitz, 2019). It was here that children developed their artistic capacities.

² This notion of fabrication in social and educational studies is discussed in Popkewitz, 2020.

³ This notion of art and creativity in governing the soul and body in the curriculum was historically embodied in the formation of art education as well. See Martins, 2015, 2017, 2018.

The idea of primitivism was integrated into the design of the Orff-Schulwerk instruments. Drawing upon the desire for primitivism, the instruments were styled after Javanese gamelan instruments, created with Brazilian rosewood which was thought to be an exotic and primitive wood. The bodily movements of the curriculum captured this development logic of primitivity. The xylophone bars were held together simply by a string that ran across the instrument, and the instruments were made by hand (Velásquez, 1990).

Within Orff-Schulwerk curriculum, the teleological certainty given to social development was enmeshed with uncertainty in which creativity was named within the hierarchy of the development of the child and inscribed a continuum of value that normatively differentiated the civilized self. The child would start at the elemental, primitive foundation and through instruction would eventually actualize their soul and body as fully developed, modern, and contemporary. The trajectory was similar to the recapitulation theory of development created in the previous century.

Standardizing the New Orff-Schulwerk Xylophone

On the surface, the traveling of the Orff-Schulwerk xylophones seem to settle in the US as a material object rather than as cultural assemblage. Yet, this instrument is not exactly the one that enters the U.S. as an educational object. This is evident in the physical qualities of the xylophones. As Orff-Schulwerk becomes increasingly popular, its German manufacturing is replaced with commercialized products produced by companies such as Studio 49 and Sonor. The Orff-Schulwerk xylophone retains the “primitive” rosewood bars but is modified to include removeable bars. This change was not merely mechanical but related to the epistemic construction of music as a governing practice. According to the AOSA video, the removeable bars enabled the teacher to remove the “wrong notes”. The bars were out of the key signature or scale of a particular classroom musical exercise. Consequently, they produced discordant, “bad” sounds when struck and thus to remove the bars entirely was to remove the “bad” notes to affectively generate feelings of being creative and artistic. But this notion of feeling and being creative was not merely about music but embodied cultural narratives and images that we explore in this section of the idealized citizen of the post-war U.S.

By 1960, as Orff-Schulwerk removable keys of “German xylophones” become a feature mentioned in the widely read *Music Educators Journal* (Krone, 1960). The removable keys become a central selling point for similar musical instruments and were linked directly to the development of affective states (Fig. 1). The advertisement celebrates how the new version of music education is for the child to learn harmony through registers of sensitivity to sound produced on the xylophone. The new xylophone allows the teacher to accompany young children without mistakes and the opportunity for the child to develop confidence.

Fig. 1 A 1968 advertisement in *Music Educators Journal*

Now it's the NEW MUSIC!...

**WITH HARMONY ENTERING THE PROGRAM
FROM THE VERY START**

when a child has greatest pitch-sensitivity

Newly invented **Major⁺Minor⁻ Triad Mallet⁺**
plays all 24 chords on **Tone Educator[®] Bells**



Explosion hammer and string method which produced only 12 or 13 chords—eliminate backbone teaching.

Music Rack Available. Write for price.

Now available are new teaching aids that make music a rewarding subject for elementary grades, even in schools where no "career" music teacher is on the staff. This is possible due to a new concept in teaching music—a way that supplements simple class singing with Tone Educator[®] Bells. Each note is mounted in its own tone chamber so students may participate individually by sounding a separate bell. The accurate pitch and mobility of the bells adds interest to classroom singing. The child's personal use of a bell helps take him from the sheltered security of group singing to independent musical confidence. Off pitch singing is almost completely overcome. Moreover, a newly developed accessory for

You simply arrange the Tone Educator Bells in chromatic sequence. Then use the new Major-Minor Mallet which is specifically designed to play major chords when held in its first position, and minor chords when rotated 180° into its second position. In many areas, U.S. Government funds (Titles I & III) are available for the purchase of Tone Educator Bells to implement your music program. All items unconditionally guaranteed.

**EDUCATORS REPORT ON SUCCESS WITH
TONE EDUCATOR BELLS**

DR. ERNEST JUSTICE, Director Music Education at *Adelphi University, Adolphus, Delaware, says:* "The Tone Educator Bells will make it possible to more readily show the relationship of notes within a scale, chord structure of a new song, etc. They are used for scale building and training the ear to hear chord changes, thus developing

use them for a great music learning situation, which are not possible when the simple concrete bell of the acoustic or telephone with the bars permanently attached are used."

MISS WATKINS, Music Teacher, *Wiley, Louisiana, says:*

25 BELL SET IN DELUXE CASE ILLUSTRATED

SPECIAL LOW SCHOOL PRICES!

25 Bell Set with Fibers Case Retail ... \$179.50 ea.	Less Than 1 Set ea. \$53.55	5 to 24 Sets ea. \$46.11	12 to 99 Sets ea. \$44.63	100 Sets or More ea. \$39.67
--	-----------------------------	--------------------------	---------------------------	------------------------------

A VALUABLE TEACHING MANUAL COMES WITH EACH TONE EDUCATOR BELL SET. THIS MANUAL COVERS:

- How to begin.
- Use of simple notes.
- Playing songs by sight reading.
- Following the staff without notation.
- Composing melodies.
- Building elementary chords.
- Dissonance exercises.
- Introduction to improvisation.

The curriculum design is concerned with affect, not developing the creative child but, more so, the child who *feels* creative within a space of certainty. The removal of the “wrong notes” and structuring of improvisational practice are ordered through established parameters defining starting and ending notes and rhythms. The structuring of the space of acting “musically” creates, as the AOSA video asserts, the necessary order for the child to feel creative as a criterion of experiencing success. The accessible design of the instrument is assembled and connected as the parameters of the curriculum as the curriculum design becomes an engineering problem. It is to ensure the production of an aesthetically warm, pleasant sound. The engineering of feeling confident and creative is brought into the mundane practices of a child striking the xylophone with a yarn mallet to produce a “good” sound. The desired affective response seemed guaranteed by the conditions of its production!

This shift in design in the structured form of Orff-Schulwerk improvisation provides entrance to explore how standards movement connected and formed a fold in social and cultural grids. Within the US, for example, the (re)visions of the curriculum are related to the cultivation of a desired affective state that embodied philosophical ideals of the child-citizen related to an American exceptionalism, and its cosmopolitanism of the potentialities emphasized in the post War reforms.⁴

The placing of “parameters” on improvisational practice and to quite literally remove the possibility of a “wrong note” is to engineer a school space and production of sound as a way to design people through affect in creating a feeling of confidence and creativity in the child. Such ideas are not simply about music but, more so, about forms of reasoning about the perceived insecurity of the post-war U.S. and the creative child as the idealized, desired child-citizen who can one day bring security to the nation. It is to act in the present but only in anticipation of the future.

⁴ This imaginary is explored in, for example, Cohen-Cole, 2014; Heyck, 2015; Solovey & Cravens, 2012; in education, Lesko & Niccolini (2017); Popkewitz, 2021.

How Orff-Schulwerk Pedagogy Learned to Stop Worrying and Design the Creative, Confident Child: Post-War Social Science

Materializing this affective response is, in a certain sense, paradoxical. Of course, the elimination of the possibility of bad sounds is not difficult to imagine as helping to enact the affectivity of feeling like a developed artist and confident, creative person. Yet, the paradox lies within the notion of developing creativity through the elimination of wrong notes, fundamentally creating boundaries of the (impossibilities of the) palette of musical expression and choice. How did U.S. Orff-Schulwerk pedagogy enact the affective state with folds related to a cognitive structure of pedagogy to create the cultural conditions as creativity?

This distinct U.S. adaptation to Orff-Schulwerk pedagogy, we suggest, draws heavily upon post-war cognitive science. As Erickson (et. al., 2013) detail, throughout the post-war era, the idea of reason and human rationality was reimagined. Increasingly, what Erickson (et. al., 2013) calls “Cold War rationality” became a way of thinking about the human mind and rationality. In such a conceptualization, human rationality became fundamentally questioned as algorithmic forms such as locating rationality in the relations of inputs and outputs became dominant. This conceptualization related to prior theories of social life as rational which could no longer be defended in relation to the atrocities committed during the past decades and world war.

Theories began to emerge across the social sciences which conceptualized humans as fundamentally irrational. As Hunter Heyck (2012) suggests, “social scientists from the turn of the [20th] century onward increasingly argued that human behavior was strongly influenced by nonrational beliefs and habits, most notably, by religion and local cultural traditions” (Heyck, 2012, p. 101). In response, social scientists began to shift from a focus upon the human, understood as the “chooser” and instead on the notion of “choice”. The problem of the social sciences was to control choice to ensure rational behavior. The problem of science became controlling that irrationality through governing the everyday practices of decision making and choice. Human rationality was rethought as, through an algorithmic approach, “complex tasks and episodes were analyzed into simple, sequential steps” (Erickson, et. al., 2013, p. 3), sidestepping the irrationality of human minds.

The organizing of the process of “being” rational” was linked to ideas about the desired citizen. In the post-war era, as those such as Cohen-Cole (2014) have detailed, creativity became a defining characteristic of such conceptions of the rational, desired citizen who, it was hoped, would be capable of securing a stable, “good life” for the United States. As Heyck (2012, p. 111) points out, post-war thought surrounding choice impacted these ideas, particularly in relation to how creativity was conceptualized and attempts at cultivating it were designed:

“To the sciences of choice, creativity involved the generation of new alternatives from which the chooser could select (making it a kind of metaselection process), and emotions were either givens (like values or preferences) to be input into decision processes (as specifications of parameters, say) or they were intrusions that short-circuited the normal processes of decision (for good or, more commonly, for ill)...”

What Heyck and Erickson make visible are the ways in which post-war social science created a focus on structuring spaces of action. Choice is enacted within designed environment which limit the intrusion of human irrationality. Creativity was, paradoxically, one of the distinctions to tame irrationality. To develop creativity, in the eyes of post-war social science was to fundamentally limit choice through the reason in which creativity was given its possibilities.

These historical conditions are embodied within the US design of Orff-Schulwerk instruments and pedagogy. As the AOSA video and texts discussed earlier show, limiting choice becomes the manner in which creativity is enacted. Restricting things such as rhythms, starting and ending notes, improvisation length, and even physically removing “wrong” notes become thinkable not through ideas about music. Rather, they are possible in relation to post-war notions of irrationality and the problem of governability in which creativity, rationality, and choice become social phenomena to manage. To remove wrong notes and place parameters upon musical practice is a way of managing irrationality as being rational. Mistakes are sensible as practices to remove in order to ensure and engineer the conditions assumed necessary for the desired child-citizen’s development.

Yet this managing of irrationalities is also about the fabrication of a kind of child that did not exist. Orff-Schulwerk is concerned with developing particular modes of sensing and understanding oneself in which the expectations of the experiences of feeling creative and successful are given registers as affective states. Central to the ways such affective states were understood within cognitive psychologies that gave the US Orff-Schulwerk curriculum its pedagogical focus. As Danziger (1997) demonstrates, how a person understands and expresses themselves, conceptualized often through the psychology of personality, became a central site of concern in the intra and post-war period. Increasingly, the domain of a person’s expression and self-understanding became intimately entangled in conceptualizations of the potential of both personal and national prosperity as well as degeneracy. Personality became “the site where the seeds of future individual and social problems were sown and germinated” (Danziger, 1997, p. 127).

Thus, for Orff-Schulwerk to intervene and shift one’s sense of self and expression was to act upon the future in the present to anticipate the potentialities of individuals and the larger social body of the nation. The site of intervention, for the psychology of personality of the intra-war period (e.g., Dollard & Davis, 1944; Murphy, 1947), was often environmental conditions, for example the home, conceptualized as key factors in the development of personality and emotional states of being. Controlling and engineering environments thus became a way of cultivating specific affective states and forms of self-expression, for example feeling creative, and such modes of feeling and understanding oneself became directly linked with notions of development, degeneracy, and (un)certainly.

It is this thinking which connected affective states and the design of particular environments to the making of desired kinds of people that helps to understand how different practices of affect and cognitive structuring form a grid of practices for the child’s interiority, self-understanding, and feeling in the pedagogical constructions of Orff-Schulwerk.

Fabricating Differences and Sound Governance from Afar

The system of reasoning that ordered and classified Orff-Schulwerk, as we have argued, mapped specific kinds of people that the curriculum was to activate. These kinds of people were fabrications embodied in the curriculum rather than empirically derived or empirical descriptions of “what is”. The desired child, however, also embodies its opposite, the generation of “the other” in the curriculum. This relation of normality/pathology in the curriculum can be viewed as double gestures of inclusion and exclusion, gestures of hope to create the potentialities of the child for the general health and prosperity of the future (Popkewitz, 2022). The gesture of hope engendered fears within its constructions of phenomena of the dangers and dangerous populations. The latter was both a space of redemption in the curriculum as well as a space of exclusion and abjection. While up to this point, we have been

focusing of the kind of child whose potentialities embodied the anticipate future success and well-being that captured the desires of collective belonging and national progress. with this gesture of hope were its others, the kind of child who falls outside the boundaries of normalcy. Social and educational policy and reform-oriented research develop new sets of distinctions and the creation of new kinds of people as the phenomena of its “others”, distinctions of difference, rescue, and abjection expressed in the focus often on urban education of the poor, African-American and Latin American populations in the U.S. as well as rural populations, such as the socially disadvantaged and psychological “lacking” categories expressed in notions of lacking motivation and low self-esteem (Popkewitz, 2021).

These double gestures of inclusion and exclusion were embodied in Orff-Schulwerk. A 1969 edition of *Music Educators Journal* published two articles side-by-side about redemptive themes about two kinds of people: one about “the exceptional child” and the other about “the urban child”. The differences embodied through these kinds of children differentiated the normal and the pathological, the latter as a narrative of redemption that simultaneously excluded and abjected.

“The Exceptional Child and Orff-Schulwerk” (Bevans, 1969) explained how the curriculum is particularly well-suited for the “exceptional” child because of the flexibility given to the “multiply disabled” child. The curriculum avoids the repetitive practices of other curricula and, notably, “unnecessary tone bars can be removed to minimize discordant tone combinations” (Bevans, 1969, p. 43). The flexibility of instruction allows opportunities to express children’s inherent creativity by placing the “multiply disabled child” in an environment suitable for them. The possibility for mistakes has been eliminated and they can have the opportunity to find success and recognize themselves as creative. The learning of the xylophone was a particular affective structuring of the self in which the “exceptional”, “creative” child the generated “thoughts and feelings” that moved the child out of a state of “egotistical existence” and, instead, develops a “healthy and realistic” self-image where they become redeemed and see themselves as creative members of society (Bevans, 1969, p. 127).

Next to the “The Exceptional Child and Orff-Schulwerk” is a related article “Orff-Schulwerk and the Urban Child” (Mittleman, 1969). Here, the “urban child” is presented as the child who:

has learned to live for *now*. He doesn’t know what will happen in ten minutes. The house might burn down, the police might come, or maybe nothing will happen. He can’t think back. He might remember that Momma wishes she could move to a house where there weren’t any rats. This child has no experiences in thinking. He only lives and reacts.” (Mittleman, 1969, p. 41-42, emphasis in original).

The urban child is one who lives in pathological conditions that runs against the order, harmony, and stabilities that define the successful, creative child. The urban child is a kind of person abjected as one who lacks the experience and capacity to think and solve problems. Orff-Schulwerk becomes a redemptive site by governing the body through developing particular physical sensations and affects through sound and movement as opposed to through language, and -- in an interesting departure from the “multiply disabled” child-- repetition. The curriculum is to access the urban body through engaging it repeatedly through the cultivation of an environment where “He [the child] cannot avoid being involved. He cannot fail. He cannot tune out because his body is involved” (Mittleman, 1969, p. 43). The child becomes placed in a designed environment where physical sensations are to actualize their inherent creativity-

If we compare it to the elementalism of the Weimar Orff-Schulwerk which conceptualized the child through Bildung-inspired notions of organic development, the US curriculum embodies a different kind of child as its object of governing. The physiological discourse is concerned with accessing the body through sound. No longer was Orff-Schulwerk a practice concerned with “free” improvisation and the movement of bodies as a form of liberation in a Bildung process of becoming in the Weimar Republic. Instead, creativity was inherent in the “nature” of the child and its potentiality would be enabled by the curriculum through its design.

Orff-Schulwerk is a practice and technology for redesigning interiorities, the child’s soul and body. Across these literature and programs is a system of reason in which notions of primitivism, creativity, choice, and failure map onto specific populations and, more specifically, their souls and bodies. For example, positioning the “urban child” as a different body from the potentialities given as creativity in music. It is a child without the ability to reason and in which sheer physical repetition and bodily sensation access and redesign interiorities. Unspoken is the fear of not intervening on the bodies and soul of these children. That fear is of degeneracy, the state of thoughtlessness and a lack of creative capacity.

The Study of Schooling, Its School Subjects and The Politics of Knowledge: Some Concluding Thoughts

Of primary interest was the way improvisation within Orff-Schulwerk becomes heavily structured in the U.S. and concerned with the production of the affective state of feeling: the child who is confident, successful, and creative. This kind of child whose improvisation and cultivation of affectivity was the design problem of the Orff-Schulwerk pedagogy as both the instrument and method retained certain elements of its original “primitivist” design that was (re)visioned in the US curriculum in the second half of the 20th century. We sought to explore the design of Orff-Schulwerk instruments and its curriculum in music education as a case of the school and its subjects as a governing that entails double gestures. It was a gesture of producing a “progressive” or “flexible” child, a kind of child related to imaginary notions of the potentialities that education is to produce that have little to do with their assumed interest, such as music.

The alchemy of Orff-Schulwerk had multiple trajectories. The translation of music into music education was to make kinds of people in different time/spaces. But that making of kinds of people was produced and mobilized as not simply as practices concerned with inclusion or change. Its salvation themes were also about redemption, exclusion, and abjection; registers about people that overlapped in the curriculum even if they utilized concepts seemingly exclusive of each other.

Importantly, this alchemy was not concerned with the present but, instead, with the future. The object of Orff-Schulwerk was the interiority of the child that embodied philosophical ideals of an anticipated future. In the intervention to create “exceptional”, “creative”, desired children, the curriculum becomes a material “actor” of the present anticipation of the potentialities of a kind of person that embodied a comparative reasoning that distributed differences.

It is important to note as well that these modes of thought surrounding difference and the focus upon affective states are not historical relics. While Orff-Schulwerk retains, much like Orff himself originally envisioned and practiced, a predominant interest in teaching and

accessing young children, the focus upon racialized, populations also persists. Recent work has drawn on these notions, even using the exact language of “urban child” as a way of thinking about Orff-Schulwerk’s value and potential in intervening upon the interiority and affects of children of specific populations. For example, positioning Orff-Schulwerk as a form of social-emotional learning in the “urban classroom” (Pitt-Smith, 2017).

Recognizing this relation of the past in the present is a way of clearing the space required to think about how school subjects are imagined, its models of acting and the possibilities for reimagine the potentiality of schooling in disrupting its mode of governance. Orff-Schulwerk and its history presents a case about schooling and the production of kinds of people, differences and the distributions of differences, and the ways that they are produced through ideas that have little to do with music.

References

- Choate, R. A. (Ed.). (1968, November). Documentary report of the Tanglewood Symposium. Washington, DC: Music educators national conference.
- Cohen-Cole, J. (2014). The open mind. In *The Open Mind*. University of Chicago Press. DOI: <https://doi.org/10.7208/chicago/9780226092331.001.0001>
- Dernikos, D, Lesko, N, McCall, S & Niccolini, A.; eds. (2020). *Mapping the Affective Turn in Education Theory, Research, and Pedagogies*. New York: Routledge. DOI: <https://doi.org/10.4324/9781003004219>
- Danziger, K. (1997). *Naming the mind: How psychology found its language*. Sage. DOI: <https://doi.org/10.4135/9781446221815>
- Dernikos, B. P., Lesko, N., McCall, S. D., & Niccolini, A. D. (2020). Feeling education. In *Mapping the affective turn in education* (pp. 3-27). Routledge. DOI: <https://doi.org/10.4324/9781003004219-2>
- Dollard, J., & Davis, A. (1940). *Children of bondage: The personality development of Negro youth in the urban South*. American Council on Education.
- Dussel, I. (2021). Tactile Pedagogies in the Postwar Cybernetics, Art, and the Production of a New Educational Rationale. In Popkewitz, T., Pettersson, D., & Hsiao, K. (Eds.). *The international emergence of educational sciences in the post-World War Two years: Quantification, visualization, and making kinds of people*. (pp.51-70). New York: Routledge.
- Erickson, P., Klein, J. L., Daston, L., Lemov, R., Sturm, T., & Gordin, M. D. (2013). *How Reason Almost Lost Its Mind*. University of Chicago Press. DOI: <https://doi.org/10.7208/chicago/9780226046778.001.0001>
- Foucault, M. (1991). *The Foucault effect: Studies in governmentality*. University of Chicago Press.
- Geuss, R. (1996). Kultur, Bildung, Geist. *History and Theory*, Vol. 35, No. 2, (May, 1996), pp. 151-164. DOI: <https://doi.org/10.2307/2505359>
- Gustafson, R. (2009). *Race and curriculum: Music in childhood education*. Springer. DOI: <https://doi.org/10.1057/9780230622449>

- Hacking, I. (2007, 11 April). Kinds of people: Moving targets. 10th British Academy Lecture. Proceedings-British Academy (Vol. 151, pp. 1-18). London: British Academy. DOI: <https://doi.org/10.5871/bacad/9780197264249.003.0010>
- Hacking, I. (2004). Historical ontology. Cambridge, MA: Harvard University Press. DOI: <https://doi.org/10.2307/j.ctv1n3x198>
- Heyck, H. (2012). Producing reason. In Cold war social science (pp. 99-116). Palgrave Macmillan, New York. DOI: https://doi.org/10.1057/9781137013224_6
- Heyck, H. 2015. Age of system: Understanding the development of modern social science. Baltimore: Johns Hopkins University Press.
- Horlacher, R. (2015). The educated subject and the German concept of Bildung: A comparative cultural history. New York: Routledge. DOI: <https://doi.org/10.4324/9781315814667>
- Koselleck, R. (2002) On the Anthropological and Semantic Structure of Bildung. The Practice Of Conceptual History Timing History, Spacing Concepts. (pp. 170-207). Stanford, Ca: Stanford University Press. DOI: <https://doi.org/10.1515/9781503619104-013>
- Ideland, M. 2019. The eco-certified child: Citizenship and education for sustainability and environment. Palgrave Studies in Education and the Environment. New York: Palgrave Macmillan. DOI: <https://doi.org/10.1007/978-3-030-00199-5>
- Krone, M. T. (1960). Guides to Musical Experiences. Music Educators Journal, 47(2), 48-55. DOI: <https://doi.org/10.2307/3393594>
- Kugler, M. 2013. "School and Teaching." In Elemental Dance - Elemental Music: The Munich Günther School 1924-1944, Kugler, M. (Ed.), 213-241. New York: Schott Music Corporation.
- Lesko, N. (2001). Act your age: A cultural construction of adolescence. New York: Routledge.
- Lesko, N. & Niccolini, A. (2017). Feeling progressive: Historicizing affect in education. T. Popkewitz, J. Diaz, & C. Kirchgasler, (Eds.). (2017). A political sociology of educational knowledge: Studies of exclusions and difference. (pp. 69-84). New York: Routledge/McMillan. DOI: <https://doi.org/10.4324/9781315528533-5>
- López, L. (2017). The Making of Indigeneity, Curriculum History, and the Liits of Diversity. New York: Routledge. DOI: <https://doi.org/10.4324/9781315392424>
- Martins, C. S. 2015. Disrupting the consensus: Creativity in European educational discourses as a technology of government. In The "reason" of schooling: Historicizing curriculum studies, pedagogy, and teacher education, edited by T. Popkewitz, 99-114. New York: Routledge.
- Martins, C. S. 2017. From scribbles to details: The invention of stages of development in drawing and the government of the child. In A political sociology of educational knowledge: Studies of exclusions and difference, edited by T. S. Popkewitz, J. Diaz, and C. Kirchgasler, 105-18. New York: Routledge.

- Martins, C. S. 2018. The alchemies of the arts in education: Problematizing some of the ingredients of the recipe. In *Spectra of transformation*, edited by B. Jörissen, L. Unterberg, L. Klepacki, J. Engel, V. Flasche, and T. Klepacki, 51-67. Munster: Waxmann.
- More on Orff-Schulwerk Schulwerk. (n.d.). American Orff-Schulwerk Association. DOI: <https://aosa.org/about/more-on-Orff-Schulwerk/>
- Murphy, G. (1947). *Personality: A biosocial approach to origins and structure*. Harper & Brothers. DOI: <https://doi.org/10.1037/10759-000>
- Odata Marketing. (2013, December 5). Orff-Schulwerk Schulwerk A Classroom in Action [Video]. <https://www.youtube.com/watch?v=GIg57hqBYqY&t=24s>
- Ogata, A. F. (2013). *Designing the creative child: Playthings and places in midcentury America*. U of Minnesota Press. DOI: <https://doi.org/10.5749/minnesota/9780816679607.001.0001>
- Pitt-Smith, Z. (2017). *Orff-Schulwerk in the urban middle school classroom* (Doctoral dissertation, San Francisco State University).
- Popkewitz, T. (2004). The alchemy of the mathematics curriculum: Inscriptions and the fabrication of the child. *American educational research journal*, 41(1), 3-34. DOI: <https://doi.org/10.3102/00028312041001003>
- Popkewitz, T. S. (2012). La sociologie de L'Éducation em perspective historique: fabrication, difference et "abjection". *Éducation et Société. Revue Internationale de Sociologie L'Éducation*. 30(2), 13-32.] DOI: <https://doi.org/10.3917/es.030.0013>
- Popkewitz, T. (2020). *The impracticality of practical research: A history of sciences of change that conserve*. Ann Arbor: The University of Michigan Press. (Also translated into Chinese and Spanish: *La impracticabilidad de la investigación práctica. Unas ciencias del cambio que nada cambian*. (2021) Traducción del inglés Roc Filella. Barcelona: Ediciones Octaedro. DOI: <https://doi.org/10.3998/mpub.11354413>
- Popkewitz, T., Diaz, J., & Kirchgasser, C. (Eds.). (2017). *A political sociology of educational knowledge: Studies of exclusions and difference*. New York: Routledge/McMillan. DOI: <https://doi.org/10.4324/9781315528533>
- Popkewitz, T. (2021). Science as "the beacon" for social change: The reason of systems in American educational research and development. In T. S. Popkewitz, D. Pettersson, & K.-J. Hsiao (Eds.), *The post-World War Two international educational sciences: Quantification, visualization, and making kinds of people*. (pp. 27-50) New York: Routledge.
- Popkewitz, T., Pettersson, D., & Hsiao, K. (Eds.). (2021). *The international emergence of educational sciences in the post-World War Two years: Quantification, visualization, and making kinds of people*. New York: Routledge.
- Sobe, N. W. (2018). Boredom and classroom design: the affective economies of school engagement. In *Making education: Material school design and educational governance* (pp. 157-169). Springer. DOI: https://doi.org/10.1007/978-3-319-97019-6_8

- Solovey, Mark & Cravens, Hamilton (2012). *Cold War Social Science: Knowledge Production, Liberal Democracy, and Human Nature*. New York: PalgraveMacMillan. DOI: <https://doi.org/10.1057/9781137013224>
- Spitz, E. (2019). *From Idea to Institution: The Development and Dissemination of the Orff-Schulwerk from Germany to the United States*. *Current Musicology*, (104).
- Toepfer, K. (2005). *The Aristocratic City: The Dance Aesthetic of Dorothee Gunther and the Political Legacy of Francois Delsarte*. *Mime Journal*, 23(1), 152-183. DOI: <https://doi.org/10.5642/mimejournal.20052301.10>
- Turner, F. (2013). *The democratic surround: Multimedia and American liberalism from World War II to the psychedelic sixties*. University of Chicago Press. DOI: <https://doi.org/10.7208/chicago/9780226064147.001.0001>
- Velásquez, V. (1990). *Tuned idiophones in the music education of children: The history of Orff-Schulwerk instruments*. *The Bulletin of Historical Research in Music Education*, 11(2), 93-109. DOI: <https://doi.org/10.1177/153660069001100203>
- What is Orff-Schulwerk Schulwerk? (n.d.). American Orff-Schulwerk Association. <https://aosa.org/about/what-is-Orff-Schulwerk/>
- Yolcu, A., & Popkewitz, T.S. (2019). *Making the able body: School mathematics as a cultural practice*. *ZDM Mathematics Education* (Advance online publication). DOI: <https://doi.org/10.1007/s11858-018-1003-8>
- Zheng, L. (2019). *A performative history of STEM crisis discourse: the co-constitution of crisis sensibility and systems analysis around 1970*. *Discourse: Studies in the Cultural Politics of Education*, 1-16. DOI: <https://doi.org/10.1080/01596306.2019.1637332>