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The Cultivation of Students' Metaphoric Imagination of Peace in a Creative Photography Program

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Abstract

The purpose of *Picturing Peace*, a digital photography program conducted in 4th and 5th grade classrooms in the U. S. and Northern Ireland, was to enhance students' photographic skills to create visual metaphors of the concept of peace. Two principal research questions were addressed: (a) Could 9-10 year-old students create apt and imaginative photographic metaphors of peace? (b) Would students in diverse cultures produce comparable photographs of peace? A model of peace, metaphoric imagination, and metaphoric interpretation was researched to test the effectiveness of metaphors in promoting visual understanding of peace. Barthes' (1981) critical framework of connotative procedures and linguistic metaphors were used to judge the aptness and imaginativeness of student photographs. Analysis of an archive of approximately 2500 photographs revealed several typical images of peace common to the following three settings: nature, sun/light, community, diversity, place, peace signs, children play, children care, spirituality, and body/hands as subjects.

Implications were drawn for the status of the student photographs as metaphors, pictorial concepts, and/or allegories.

Using the Arts to Foster Students' Understandings of Peace

Picturing Peace took place after 9/11 and before the war in Iraq and was provoked by these fearful events at the turn of the 21st century. There was no doubt that K-12 students were aware of the attacks at home and the war in the Middle East. The hope was that a school arts curriculum directed at the cultivation of an understanding of peace would provide both an immediate source of comfort and an enduring value of peace-loving and peace-making among its young participants. This aim has remained over some eight years of programs in 15 K-12 school classrooms.

The program emphasized peace rather than war and peace. This was a deliberate choice. Ample exposure to war in the media and as filtered through family uncertainties about the war was already available to our students. We were concerned that the set up photography of war, or even school-based conflict equivalencies such as peer hostilities, might not be manageable in a school setting. Nevertheless, in one of the setting, Belfast, Northern Ireland, the program was conducted against the immediate background of the "Troubles" and some student photographs expressed the tension between conflict and peace. We also anticipated that students might represent institutional "peace protest" or "peace movement" imagery derived from the media. Peace itself was to prove extraordinarily complex and a challenge for conceptual instruction. Because our intention was to enhance students' conceptual understandings and personal values of peace, we encouraged young photographers to conduct a series of photographic shoots that approached peace from different perspectives and sources of meaning.

This study would not be feasible if the 9-10 year-olds in our sample could not understand or produce metaphors. According to research conducted by Winner & Gardner (1977) and Gardner (1973), pre-adolescents are on the cusp of an adult understanding of metaphors. These researchers asked participants to paraphrase metaphoric sentences and match adjectives and domains. They concluded that while the basic components of metaphoric thought were already present upon entrance to school, it is not until pre-adolescence that there is adequate knowledge of the real world, conventions, and the capacity to think analogically. These are precursors not only for understanding subtle metaphors, but also for producing them. Winner and Gardner indicated that "...the more context that is provided (pictorial, linguistic, etc.), the greater the likelihood that children will alight on the correct interpretation"

(p. 11). The researchers found that successful comprehension of metaphor does not apparently require knowledge of the core meanings of the relevant key words. Nonetheless, the need for an enriched context is probably greater for the production of visual metaphors. For *Picturing Peace* to succeed, we assumed that a rich context of pictorial and linguistic information was required.

How might educators promote students' understanding of peace? Several empirical and theoretical approaches drawn from political economy, pedagogy, cognitive science, conceptual metaphor theory, and picture theory suggested that the best way to understand concepts - - from simple words and definitions to more complex constructions as theories and narratives - - is to transform them into images. Marx (cited in Mitchell, 1994) argued that because concepts are formed from perceptions and images they might best be understood by turning them back into images. The image making "retraces the steps from the abstract concept back to its concrete origin" (Mitchell, 1992). According to Vygotsky's pedagogic model of concept formation, focusing learners' attentions on the functional use of words creates meaning, along with helping them select distinctive features for analysis and synthesis (Kozulin, 1990). When we analyze peace as a function, the focus on activities related to the concept, whether individual, social, or cultural might more readily be represented by visual images. This structures the process of understanding as *seeing*, for example, imagining peace as a solitary peaceful state during a walk in the woods or a close social relationship.

Paivio (1971, 1986) conceived of a dual-code model of information processing, in which verbal and visual information is encoded by separate cognitive subsystems. They are interconnected when concepts represented as words are converted to visual images or vice versa. Paivio claimed that memory and learning are enhanced through dual-code cognitive processing, involving visual and verbal modes of perception and memory processing, compared with verbal learning alone. Thus, image making enhances the verbal code of thinking, perhaps by concretizing and visualizing the functions of the concept.

Conceptual Metaphor Theory (Deignan, 2005) supports the premise formulated by Lakoff and Johnson (1980) that most if not all concepts may be understood by finding the basic spatial, sensory, and social metaphors that provide insights into their structure. Deignan argued that identification of the linguistic metaphors used to talk about a topic could inform the underlying conceptual metaphors. While metaphors of peace in ordinary language are not as obvious as those of war, dictionary definitions and students' personal associations of peace may provide a bridge to the creation of multiple metaphors. Multiple metaphors are needed to

highlight the diverse meanings of peace, because any one metaphor might hide certain meanings (Lakoff & Johnson, 1980).

Creating art is an act of concept formation. By translating ideas into images, art creates pictures. Pictures, however, integrate implicit or explicit texts. In *Picture Theory* Mitchell (1994) claimed, “The interaction of pictures and texts is constitutive of representation as such: all media are mixed media, and all representations are heterogeneous; there are no ‘purely’ visual or verbal arts... (p. 5).” Further, Mitchell asserts, “In short, all arts are ‘composite’ arts (both text and image); all media are mixed media, combining different codes, discursive conventions, channels, sensory and cognitive modes” (pp. 94-95).

Arnheim (1969) also argued against putting verbal language in a class of its own. Because all media are perceptual in nature both verbal and visual images exist in a ratio in representations depending on which elements in images do most of the work (p. 251). Mitchell suggested that the linkages of visual and verbal expression are related to power, value and human interest, including issues of knowledge (true representations), ethics (responsible representations) and power (effective representations such as in propaganda). Fried argued that art is a ...”performative or persuasive act directed toward and conscious of a beholder” (cited in Mitchell, 1994, 216). Those engaged in facilitating students’ representations of peace in this program rely upon the text, explicit or interpretable, to point us toward the underlying issues of power and propaganda, toward the communication of the artist’s ideology of peace in the photographs. The textual meanings in the pictures are understood as both rhetorical (promoting peace) and personal (reflecting personal experiences of peaceful behaviors).

Photography occupies a unique niche in the firmament of the arts in providing a minimally distorting blank screen (*tabula rasa*) or Platonic cave through which the camera captures images. Marx’s choice of metaphor to imagine the process of understanding concepts was, in fact, “the *camera obscura*, a dark room or box in which images are projected” (as cited in Mitchell, 1986, p. 162). In the photographic camera not only do we have a metaphoric figure but also an actual instrument for creating understanding of the basic meanings of concepts. It is interesting that the camera was invented and revolutionized art during the development of Marx’s ideas (p. 179). The critic Walter Benjamin regarded the camera as the “material incarnation of ideology” (as cited in Mitchell, p. 181). Because the camera is prized as an instrument for the accurate recording of visual phenomena we gain access, potentially, to a full range of the photographer’s aesthetic and rhetorical intentions. In *Picturing Peace*, the camera was used to

project both linguistic (peace meanings) and responsible ethical intentions (peace-loving and peace-making values) into material art objects. I conclude that multiple linguistic and visual metaphors might be used to advantage in creating images/texts that picture peace.

Creating Visual Metaphors in a Photography Program

In this section, I will describe the model of metaphoric imagination and describe its application in a *Picturing Peace*, a creative photography program that was designed to enhance students' comprehension and imagination of feelings, values and actions related to the concept of peace.

Defining Metaphor

As Efland (2002) suggests, the arts enable us to understand concepts through metaphor:

The arts are educationally important when they equip individuals with the relevant tools to interpret their lifeworlds. The tools or cognitive strategies that are entailed in this learning process include imagination as a schematizing function and its extensions by metaphoric projection. Metaphor, in particular, constructs linkages that enable us to understand and structure one domain of knowledge in terms of the knowledge of a different domain; thus, it establishes connections among seemingly unrelated things (p. 770).

Lakoff and Johnson (1980) explain metaphors: "The essence of metaphor is understanding and experiencing one kind of thing in terms of another" (5). Kittay (1987) offered a more technical definition: "Every metaphor involves [at least] two conceptual contents which function as two simultaneous perspectives or categories in which some entity is viewed" (p. 29). The two conceptual contents are the *topic* and the *vehicle* (see also I. A. Richards, 1936, from whom Kittay's position is adapted). The *vehicle* is the semantic field which, for example, in the metaphor ARGUMENT is WAR, is represented by WAR, and the *topic* is the semantic field represented by ARGUMENT. Winner (1988) points out that in making a metaphor the vehicle is used interactively to create alternative meanings. The emergent meanings comprise the "ground" between the topic and vehicle (Richards, 1936).

The two semantic fields or domains are, in fact, *systems* (Black, 1962). Argument, for example, has rules, characteristic rhetorical strategies and tactics, and, usually, definitive outcomes. War also has rules, characteristic rhetorical strategies and tactics, and, usually, definitive outcomes. Thus, when war as the *vehicle* is used to

create meanings about the *topic*, argument, several dimensions may be employed, or deployed! Lakoff and Johnson (1980) cite the following expressions to show the offensive and defensive battling aspects of arguing (4):

He attacked every weak point in my argument.

I demolished his argument.

His criticisms were right on target.

Elements of the war system may be projected or mapped onto different elements of the topic of argument. I suggest that the mapping operation used in creating and assessing metaphors refers to imaginative cognitive processes used to make connections between the vehicle system and the topic system. Think of both domains of the metaphor as maps of sub-domains. “Thus metaphoric mapping is not reduced to, and inadequately described as, a matter of feature correspondences, but rather is understood as one domain abstractly structuring another to the full extent compatibility permits” (Eubanks, 1999, p. 421). Moreover, it is clear that the two systems of a metaphor operate *asymmetrically*; the vehicle is used to understand the topic and not vice versa. The term “vehicle,” in fact, is a metaphor itself, which signifies that it is a directional mechanism. The topic is a concept whose meanings will be elaborated by the many pathways taken by the vehicle. In the ARGUMENT IS WAR example, the vehicle, war, has much more visual potency and potential than the topic. Think of war and one imagines action on the field of battle, whether land, sea or air. The topic, argument, is preoccupied with words, logic and emotional states (text). Thus, the metaphor affords the transformation of text into visual images.

The Functions of Imagination in the Creation of Photographic Metaphors

How does artistic imagination function for students creating photographic metaphors in *Picturing Peace*? Aristotle conceived imagination as the ability “to envisage alternative worlds, worlds conceived as differing from present actuality in certain interesting particulars but otherwise assumed to be like the world we know” (Sparshott, 1990, p. 7). Pertinent to the theoretical connections we are trying to establish between imagination, metaphor, and the arts, Sparshott concludes that the “fine arts are essentially arts of imagination, imagination here being the ability to “envisage things otherwise than as they are merely observed to be” (p. 2). Models of metaphor fit into this framework, the objective being, again, to envisage an alternative world [e.g., war] so that we might better understand a topic [e.g., argument]. Most (1987) interprets Aristotle to mean that “imagination does not depend passively upon the simultaneous presence of an active sensible object, but is

instead itself active and provides an image in the absence of the object to which it belongs” (pp. 28-29). Imagination refers to “all those forms of mental activity that provide us with appearances of absent objects” (p. 29), such as the production of mental images accompanying concepts. From this perspective the peace concept is an absent object that imagination will make visible.

Imaginative thinking employs imagery. As Thomas (1999, p. 208) explains: “*Prima facie* imagery and imagination are intimately related – certainly ‘imagination’ is often used to name the faculty of image production (or the mental arena in which images appear). Sparshott points out that the imagination does not logically need to produce visual images alone. But visual imagery is often associated with the kinds of vivid concepts used in metaphors. While we need not picture war in the metaphor ARGUMENT is WAR, it is helpful to imagine, visually, the concrete actions of war in understanding arguments. “The application of ‘imagine’ and its cognates to the arts is the result of a parallel, and equally conventional, metaphorical extension of meaning...’imagination’...just *is* our name for the faculty of *seeing as*, and its metaphorical extensions cover a similar range (Thomas, p. 24). As Hamlyn (1994) observes: “what seems crucial to the imagination is that it involves perspectives, new ways of seeing things...”. Ryle (1949) also explains why *seeing* is such a powerful cognate of the imagination:

As visual observation has pre-eminence over observation by the other senses, so with most people visual imagination is stronger than auditory, tactual, kinesthetic, olfactory and gustatory imagination, and consequently the language in which we discuss these matters is largely drawn from the language of seeing. People speak, for example of ‘picturing’ or ‘visualizing’ things, but they have no corresponding generic verbs for imagery of the other sorts (p. 247).

In making a metaphor in *Picturing Peace*, students needed to imagine a visual vehicle, a mental picture that could function to reveal meanings of peace. In a fully realized vehicle, the imagination is employed artistically to replace the “absent object” with an appearance: a photograph that represents peace. Because imagining a vehicle for peace is difficult for young students, we needed to find methods to support such complex cognition. Paivio’s (1986) dual-code theory suggested that curricular activities were needed that supported the functional connections between both verbal and visual imaginative processes. To intentionally create a visual metaphor of peace, a student artist, presumably, needs to recall and comprehend personal peaceful and media peace advocacy experiences, or to recognize a ready-made scene as representative of peace. We theorized that access to such memories

might be aided by thinking of verbal sub-domains of peace (e.g., friendship, nature) and other contexts of peaceful feelings and places. Together, these methods may prompt the imaginative recall of such personal experiences as relaxing in natural settings or enjoying harmonious social associations. While drawing on memories of experiences, students then need to employ additional powers of imagination to plan and create new settings for the photography of pictures of peace. Thus meta-imagination, visual imagination reflecting on verbal imagination, is employed in making photographic metaphors.

Efland (2002) points out why the arts are ideal contexts for fostering both the use of imagination and a metacognitive awareness of imagination:

Let me emphasize this point once more--the arts are places where the constructions of the imagination can and should become the principal object of study, where it is necessary to understand that the visual image or verbal expression are not literal facts but embodiments of meanings to be taken in some other light. It is *only in the arts where the imagination is encountered and explored in full consciousness—where it becomes the object of inquiry.*” (...) Moreover, an art education that fails to recognize the metaphoric character of meanings in the arts is without serious educational purpose (pp. 769-770).

During the photography program, the metaphoric vehicle emerges from its theoretical subjective mental state and is consciously employed in actions needed to carry out various photographic activities. The vehicle of imagination is now a series of intentional, self-conscious and overt artistic steps: organizing the photography group; planning the picture; selecting a genre - - portrait, abstract; landscape; building the set, locating a backdrop or external location; choosing the models, the materials, the lighting, etc. These artistic steps result in the production of photographs. We think these overt processes meet Efland's (2004) criteria of active cultivation of the imagination and the series of activities bring imagination "out into the open."

It is also important to recognize that awakening the imaginative aspect of cognition does not happen in a vacuum but must be actively cultivated. Freeing the child from the rigid structures of traditional subjects was thought to be sufficient generations earlier. It now appears that it also involves the intentional preparation of curriculum plans and resources. The content of the curriculum becomes the strategies one uses to cultivate the imaginative (p. 770).

Following Efland's (2004) suggestions, the curriculum method of the *Picturing Peace* program used a series of explicit steps to move from verbal to visual metaphors in imagining peace through photography.

Method: The *Picturing Peace* Program

Sites and Participants

In the *Picturing Peace* program, college and university art majors together with classroom teachers taught upper elementary, middle school, and one high school class during class time in the use of digital cameras to make photographs about peace. The program was administered through ArtsBridge America, a consortium of 21 universities that offered scholarships to students for teaching in local schools. In the following seven classrooms, 159 students participated.

Southern California

The curriculum was directed by three undergraduates at the University of California, Irvine and implemented in three classrooms in Orange County, California, a populous but largely suburban county. The program was administered in one 4th grade class and two upper middle school classes. These schools were selected soon after 9/11 by the author because the teacher had a strong interest in visual arts and the student teachers had worked previously in these schools.

Belfast, Northern Ireland

Lecturer Jonathon Cummins and two graduate students from the University of Belfast directed two 4th grade classes in Belfast, Northern Ireland, a large metropolitan area. These schools were selected because the university instructor and graduate students had strong expertise in the visual arts and the schools, Protestant and Catholic, were in an area of Belfast still experiencing "troubles" at the time of the program.

Appleton, Wisconsin

Three undergraduates at Lawrence University in Appleton, Wisconsin directed the program. The program was implemented in two charter school classrooms for gifted and talented students, 5th and 6th grades, and one performing arts high school classroom in a small town of 75,000 people. These schools were selected by the author because of strong interest on the part of participating teachers who thought the program could help with tensions between gifted and talented students and other students.

The sample, therefore, consisted primarily of 4th and 5th grade students, aged 9-10 years.

Research Questions

Two principal research questions were addressed: (1) Could 9-10 year-old students create apt and imaginative visual metaphors of peace? (2) Would students in diverse cultures produce comparable photographs of peace?

Picturing Peace Curriculum

The charge to teachers and university students who directed the program underscored both the development of students' conceptual understanding and their values:

The theme of our project is peace. Teachers will justify the importance of peace in their own ways. Children should have the opportunity to present their words and images expressing their feelings, ideas and impressions of peace. Convey the idea that children can contribute to peace by exhibiting and sharing their photographs.

To prepare a curriculum guide to direct children's verbal discussion of the diverse meanings of peace we first established some preliminary dictionary and intuitive definitions to clarify and explore our own concept of peace. Peace is a feeling and a value, an individual state, a social concept and a cultural movement. To feel peaceful is to be quiet, calm and tranquil and free of trouble. Peace is a state or condition: formerly at war, we are in a state of peace. As a value, peace implies a positive disposition of being peaceable and avoiding conflict. As a motive, the concept of peace materializes in the role of the peacemaker, one who helps others reconcile when the peace is breached. Used as an interjection, "Peace!" with hand raised, means "I come in peace." Social dimensions of peace include the solidarity implied by friendship and community and acceptance of diversity. Peace is often characterized by particular sensory conditions: light, particularly in a spiritual sense implies peace; quiet or silence suggests peaceful conditions and places; and tactual closeness implies peace as togetherness. As an institutional cultural form peace is manifest through peace protests and movements. The visual language of marches and protest signs indicates the intentions of peace advocates. Finally, peace may be represented as a spatial abstraction, such as through the geometric forms of openness, balance and harmony. In the implementation of the program these conceptions of peace were used to stimulate young students' personal

understandings: How is peace a feeling? What leads to peace between people? Can places be peaceful? Why should people be peacemakers?

The Photographic Metaphor Curriculum

We used three strategies for supporting students' development of metaphors of peace: (1) brainstorming in a "language game"; (2) practice in photographic genres; (3) set up photography to organize dramatic scenes of peace situations.

Brainstorming the Peace Concept in a Language Game

In *Picturing Peace*, students are asked, in effect, to transform a verbal, abstract concept into concrete visual representations. Because Peace is a multidimensional concept involving personal feelings, values, motives and social actions, it is expected that students will have had different experiences of peace; therefore, their meanings and images would vary considerably. We concluded, therefore, that multiple metaphors would be required to fully understand peace. We saw no conflict between our understanding of pictures as image/texts and the use of verbal metaphors to scaffold the process for students. If the verbal meanings of peace could be expanded this afforded students a wider range of possibilities for creating visual images. As image/texts, the photographs would embed these verbal meanings.

In his *Philosophical Investigations*, Wittgenstein (1958) disabuses us of the supposition that there is an essential core in which the meaning of a word is located and generalized. Rather, when considering the meaning of a word, Wittgenstein points to 'family resemblance' as the more suitable analogy for categorizing and connecting particular uses of the same word. Wittgenstein states that we should, instead, travel with the word's uses through "a complicated network of similarities, overlapping and criss-crossing" (p. 66). Family resemblance also serves to exhibit the lack of boundaries and the distance from exactness that characterize different uses of the same concept. If concepts have whole families of meanings, then they will afford many metaphors. "The cognitive reality is that our concepts have multiple metaphorical structurings" (Lakoff & Turner, 1989, p. 71).

This suggested that students could imagine concepts by investigating different words that stand for the concept and the associated distinctive features that embody different functions of the concept. And this implied, in turn, that we needed to support students' understandings of the functions of various sub-domains of peace. To begin with, therefore, a verbal "language game" was used in the *Picturing Peace* program to develop a *set* of verbal metaphors for the vehicle that could be projected

onto the peace *topic*. Students brainstormed words they associated with peace in whole class discussion. This created multiple verbal metaphors such as: PEACE IS NATURE; PEACE IS SOLITUDE; PEACE IS FRIENDSHIP, etc. The ensemble of verbal metaphors created by students resulted in a set of “family resemblances” of the concept of peace. These verbal metaphors were used, ultimately, as part of the scaffolding for the vehicle to create photographic metaphors, that is, pictures of nature, solitude, friendship, etc.

Use of Photography Genres to Visually Equip the “Vehicle”

After playing language games with students’ verbal understandings of peace vocabulary, the curriculum provided students with methods to practice freely the visual photographic genres of *portraits*, *landscapes*, and *abstracts* without regard to peace. This approach was suggested by theories of imagination emphasizing the production of visual images: photography employs visual genres; dual-code theory argues that verbal and visual integration might be more effective than verbal or visual information processing alone; therefore, students need to understand both the words and visual forms for portrait, landscape and abstract genres. Then, we encouraged students to run their “vehicles” using these genres to represent peace. This was accomplished by integrating the “language game” words associated with peaceful feelings, places, etc., as prompts for taking photographs. Photography genres are codes or conventions that organize and frame the visual field of view and alter the relative importance of social and physical elements. For example, portraits require close-ups of social subjects, while landscapes entail long/wide shots of physical environments. By using different genres the photographers needed to frame their field of view in particular ways. Using different vocabulary terms or codes associated with peace also influenced how photographers would frame their fields of view and select content. Student photographers chose to make portraits, for example, of peace concepts like diversity and community; and, they took landscape photographs of concepts like nature and solitude. Abstract photographs were made to communicate sensory and geometric dimensions of peace, such as, light, balance, and openness. Thus, both visual and verbal codes were employed to equip the vehicle to create multiple visual metaphors of peace.

Creating the Metaphors Through Dramatically Staged Setup Photography

Davydov (1972) speculated that to understand concepts one must experiment with curricula: “The task of educators and psychologists is to design special scenarios of learning activity that can lead to theoretical reasoning” (Kozulin, 1990, p. 259). Fried (1977) suggested that: “What lies between the arts is theatre” (p. 457). Because modernist art tends to resist language (to the point of labeling pictures

“untitled”, cf. Mitchell, 1994), Fried judged theater to be a counterweight. We recognized that the photography of peace was particularly amenable to interaction with the dramatic arts. Therefore, students were asked, subsequently, to use staged setup photography to organize dramatic situations in the studio or exterior locations that might communicate peace. In these situations, the photographer (taking turns) assumed a role in which he or she was to direct other students to communicate peaceful feelings, motives and impressions through taking positions, posing, and otherwise acting out scenes signifying peace. The photographers also directed the organization of the various paraphernalia of the scene including costumes, props, backdrops and lighting, to communicate different aspects of peace. Some photographers created abstract assemblages and collages of natural materials such as flowers, stones, and leaves and placed them in landscape settings. By experimentally constructing and photographing dramatic scenes of peace in which different social positions and gestures were organized at both human and miniature scale, students immersed themselves in the creation of multiple meanings of peace.

Research Design

Two principal research questions were addressed in this study: (a) Could 9-10 year-old students create apt and imaginative visual metaphors of peace? (b) Would students in diverse cultures produce comparable photographs of peace? One of the anonymous reviewers of this paper characterized this study as a “large action research project.” While the project exhibited some aspects of action research in that it used teachers’ disciplined inquiry in their own natural environment, the curriculum was imported rather than indigenous. It did not solve problems already identified in the classrooms, nor did it necessarily lead to changes in teaching practice. And even though it is not unknown for action research to be conducted in a geographically large setting, it is often limited to district-wide efforts. Moreover, I cannot claim that precisely the same project was implemented in each of the three settings in the present study due to variations in the program directors, how it was slotted into the local curriculum, and differences in the time allotted to the activities. The author was not present consistently during the administration of each program, although he visited all schools and observed the teaching on numerous occasions.

It would be proper to characterize the study as curriculum development research undertaken by a decentralized group of local teachers and investigators using a common program developed by the author in collaboration with these colleagues. We know that the seven classrooms performed the basic sequence of three activities, verbal brainstorming (language games), practice in photographic genres, and dramatically structured set up photography as described above. Although we

can identify individual students and photographs in most cases, we did not collect process data on individuals, that is, how they performed in the various stages of the program. Nor did we administer any outcome tests to measure understandings, feelings, values or the love of peace as a consequence of the program. Thus, we only have individual student photographs as outcomes in assessing their artistic and imaginative representations of peace. The other principal objective was to test the overall strength of the curriculum to generate pictures of peace that would inform the acquisition of general knowledge about the teaching of concepts through metaphor. In spite of the variance introduced by the settings, the content and form of the photographs appeared to be highly comparable across the geographic settings in the research as we shall argue following. The results were examined using both individual findings and aggregate analysis of the photographs.

Results

The participating students created nearly 1,000 photographs. Subsequently, *Picturing Peace* was administered in 10 additional schools in Wisconsin and California. To date, approximately, students in 17 classrooms have produced 2500 photographs. The photographs have been exhibited in museums (Chicago, Madison and Appleton, Wisconsin), an art gallery (Beall Center for Art and Technology, Irvine, California) and the Belfast City Hall (Belfast, Northern Ireland). The full archive was examined to reach the following conclusions.

Critical Interpretation of Individual Metaphoric Imagination

Once the picture is created, we become concerned with how a critical viewer creates meaning. Just as textual meanings in the form of linguistic definitions of peace were used to develop multiple metaphors for creating photographs (image/texts), a critic needs to interpret the visual metaphors by recovering meanings built into the art and discovering emergent meanings. Feinstein (1982) points out that “we are obliged to use words to talk about images...[but]...we do not have an agreed-upon standardized vocabulary with which to discuss art works” (p. 50). Mitchell (1994) uses the view of the artwork as an image/text for critical purposes “as a wedge to pry open the heterogeneity of media and specific representations” (p. 100). But the textual meanings of the photographs in *Picturing Peace* are more elaborate than the family of words used to construct them. “The image/text is not a template to reduce these things to the same form, but a lever to pry them open” (p. 106).

Barthes (1977, 1981) views photographs as having two messages: one without code (photo as analogue) and one with a code (the art or treatment or rhetoric). The

former is denotation and the latter connotation. The connoted develops from the denoted. The critic's imagination is used to develop connotations from the denoted meaning of the photograph. The connoted qualities of the student photographs are paramount in *Picturing Peace*. The critic, who may be a teacher or fellow student or visitor in an exhibition, will surely be concerned with judgment of the excellence of the photograph relative to the program goals: How well do the photographs communicate peace? Barthes (1977) described a set of *connotation procedures* to support the critic's interpretations: trick effects (not relevant to our project); poses (such as hands clasped together); selection of objects with intrinsic meanings (such as light coming through trees); photogenia (technical effects); aestheticism (such as making a photograph look like a painting); and syntax (a sequence of photographs). We suggest that the critic will judge the aptness, cultural relevance, and imaginativeness of the photographs using such connotative procedures

First, the critic will judge how *apt* the image is (Currie & Ravenscroft, 2002). In *Picturing Peace* we try to minimize judgments based on standards of beauty alone, but consider that artistic merit is a combination of meaningfulness as well as formal design. The aptness, or meaningfulness of the image will be measured, we think, by cultural criteria that are the source of connotative meanings referred to by Barthes. For example, any culturally competent adult or middle school student can instantly recognize that photographs that use light effectively to communicate peace are certainly apt images of peace. Why? Pepper argued that the visual qualities prompting the interpretation must be "referentially adequate" (as cited in Feinstein, 1982, p. 51). Is *light* referentially adequate? Light communicates peace, presumably, because it signifies enlightenment and understanding and hence is a force promoting mutual understanding; light also has spiritual significance that might be a resource to oppose forces of conflict; and light is associated with the sun, which supports life. These are only some possible, but generally acknowledged, cultural/symbolic meanings of light.

Second, because the *Picturing Peace* program generates several photographs from the students in a class, a rich archive accrues, enabling a critic to conduct a systematic assessment of how culturally relevant particular classes of photographs are. Thus, it was apparent that several students from different cultures all used photographs of brilliant light or sunlight to represent peace. Another common method for photographs of peace used joined hands or arms (poses) as a means of representation. One student used several connotative procedures including such poses (hands/arms joined) in a series of pictures (syntax), whose color variations were introduced through photogenia (PhotoShop) making the triptych resemble a

painting (aestheticism) (see Image 2, below, Body/hands). These connotative procedures make up what Barthes refers to as the *studium* of the picture, the cultural study that indicates “a kind of general, enthusiastic commitment” in response to the “figures, the faces, the gestures, the settings, the actions” (1981, p. 26). A second element is the *punctum* or punctuation by small details.

Third, I propose that the critic also needs to decide not only whether the image is culturally apt, but also whether the image is imaginative. The critic uses metaphor to interpret the metaphor. “The viewer puts imagination to work and reasons by analogy, accepting the invitation to perceive resemblances of forms in an unconventional way that reshapes their identities” (Feinstein, 1982, p. 53, see Verbrugge & McCarrell, 1977, p. 530). To judge a photograph as imaginative, we argue that the image needs to move a critic to project his own metaphoric imagination back into the picture. Here the task confronting the critic is to imagine what is going on in the picture. In a picture of light without social content, the question arises whether the artwork moves the critic spiritually and, hence, whether the light is coming from a higher power such as a deity, nature, or the sun. In pictures with social content, such as those communicating diversity or community, the critic judges the photograph’s potency in provoking her hypothetical, imagined scenarios among the characters and her imagination in thinking about what the characters might do before or might have done after the picture was taken. After all, a photograph is a still frame picture that may be viewed as a moment in a sequence of actions that might be possible (i.e., could be imagined). Thus, it is proposed that one test of the artist’s use of metaphoric imagination in the creation of a photograph is whether it stimulates and otherwise supports the critic’s own skilled metaphoric imagination. We suggest that the *ground* emerging from topic and vehicle is; in fact, some kind of *narrative* that draws on culturally standard meanings attached to images, such as those I will describe for *light* or *diversity*.

The interpretation of the two photographic metaphors below illustrates how critical imagination can be used to create the ground.



Image 1: Diversity Photographs of Peace

In these two photographs from Belfast (1) and California (2), respectively, students have represented peace as diversity. The idea of diversity has frequently been associated with peace in all the cultures and classrooms studied in our program. Students apparently believe that if different people would get along, this would contribute to peace. In a picture from Belfast, diversity is communicated abstractly by referring to “apples and oranges” a common saying that normally expresses differences. In Photo 1 we see that the apples and oranges have been cut into halves and joined visually, at least, to form a hybrid diverse fruit. The use of fruit to express peace seems intuitively satisfying. But, in Northern Ireland the meaning is additionally carried by the colors orange and green. These are the historical and enduring colors of the Orangemen, the Protestants, and of the Irish Republicans, the Catholics, respectively. The fact that these colors are joined could mean that the picture expresses hope that these antagonists could be reconciled and no longer wish to engage in hostilities. An anonymous reviewer reasonably suggested that the hybrid fruit could also represent “conflict and, therefore, a situation that can never be solved because both parts can never really be united.” Yet, the presence of the small daisies placed by the photographer (or assistant) next to the fruit is, perhaps, the kind of detail that Barthes called the *punctum*, a stray detail that adds, in this case, additional positive meaning to the basic subjects (hybrid fruit) dominating the picture. Does this *punctum* edge our interpretation into a more positive view of the photographer's intention? Enhancing this idea are the leaves and grass in the background that carry other nature-related meanings of peace. This, then, is a subtly expressed photographic representation of peace based on multiple metaphors and multiple connotation procedures. In offering this criticism of metaphor 1, I have told diversity stories based on both local history and nature. The interpretive stories exemplify the ground linking vehicle and topic.

While photo 2 clearly communicates the idea of diversity, it does so using other cultural objects. Sneakers are very typical of California footwear given the good weather and outdoor life. In this picture we see the legs of three different individuals wearing different kinds of sneakers. Diverse in appearance, the students' feet are nonetheless placed together in solidarity. The photograph shows that while people have different styles and tastes, these differences do not prevent closeness – the three feet are touching. The pose dominates the connotation procedures as does the selection of the sneakers as objects. This is a relevant form of diversity for ten year-old Californians who, we think, have not yet developed ethnic prejudice. Rather, they are beginning to observe each other closely for all kinds of visible signs of difference including what they are wearing. The closeness indicated by the touching is reinforced by a parallel alignment that suggests a unified stance -- everyone is faced together in the same direction. The arrangement,

which took some youthful contortion to achieve, communicates "playfulness," "togetherness," and "peaceful." The differences in their sneakers signify freedom of personal choice, but this individuality does not lead to competitiveness: being an individual is compatible with social solidarity and, hence, peace. In our criticism, we have again constructed a ground linking the visual metaphor to the topic based on possible diversity stories of the meanings of a cultural object, sneakers, and the social unity communicated by the models' individual differences yet closeness. In this photograph the student photographer perfectly communicates a current curricular mantra: unity through diversity.

Assessing Family Resemblances of Peace Meanings in Photographic Metaphors

A second research question was: How comparable are photographs of peace across the diverse ethnic and geographic settings? To reiterate, Wittgenstein argued that concepts, like peace, had no essential core meaning, but rather had different kinds of "family resemblances" that connected up in the same word. As we examined pictures from the different classrooms and cultures in which *Picturing Peace* programs were conducted, it became apparent that there were recurring types of images that were used to represent peace. The investigators conducted multiple informal reviews of the collection. This led to nominations of exemplars of different types of peace images and, finally, selection of those that appeared frequently. The set of images presented here includes children's *play* and *care* that were previously ascribed to local cultures in the U.S., but were also found, subsequently, among photographs produced by young students in Northern Ireland.

Ten principal types of peace images were found in the archive:



Image 2: A Family of Photographic Images of Peace

By the age of 9-10, both American and Northern Irish children have cognitive abilities and cultural understandings that enable them to communicate, collectively, a family of visual images representing various social actions, materials, and contexts signifying peace. Thus, to show nature and vegetation is to communicate peace associated with the natural world. Photographs of peaceful gestures of embraced arms showing solidarity, and symmetrical or diverse social groupings are also cultural signifying systems for peace. As the giver of life through light and warmth, the sun is used to symbolize peace. In showing children at play, these young photographers recognize that the innocent must be protected against any breach of peace. Their use of spiritual forms signifies their hopes and wishes that peace might need to be aided by a higher power. They also comprehend abstract signs, such as the "peace sign," and can create their own signs of peace. The analysis revealed, therefore, a family of visual images of peace that were constructed by middle-school children, including nature, sun/light, community, diversity, place, peace signs, children-play, children-care, spiritual, and body/hands subjects.

No photographs were made that drew on institutional peace imagery. Why did we not see staged protest marches with signs of "Peace Now!" and the like? My impression is that this cultural meaning of peace did not appear in the brainstorming of peace ideas. One factor might be that this age group, although exposed to media images of peace protests, was not yet politically conscious or prepared to engage the concept at societal scale. A second more practical reason might be that the photo working groups of students might have been too small (4-5 typically) to organize the large-scale groups needed to represent such ideas. Some students did photograph the iconic peace sign, but that was as far as it went.

Discussion

How do the results of this study inform *Conceptual Metaphor Theory*? In particular, there remain some unresolved issues concerning the use of linguistic metaphors as vehicles in creating visual metaphors, whether the peace topic ought to be expanded to include war, and the metaphoric status of students' photographs of peace. Treating these issues may suggest ways to improve the research design employed in the present study.

Using Linguistic Metaphors to Create Visual Metaphors

Have we relied unduly on the use of linguistic metaphors as vehicles in the curriculum to support students' visual conceptualizations of peace? Casasanto (2007) states: "The central claim of Conceptual Metaphor Theory is that people

conceptualize many abstract domains metaphorically, in terms of domains of knowledge that are relatively concrete or well understood... yet the overwhelming majority of evidence for conceptual metaphor *is* linguistic in nature” (p. 3). This would imply that people are able to conceptualize abstract concepts without the use of language. How, therefore, to reveal this mental function. Because it is difficult to measure how people process concepts without language, Casasanto and Boroditsky (2008) developed experimental methods for researching metaphors of time. Exploring these experiments in some detail will reveal an argument against excluding linguistic metaphors in creating and interpreting photographic metaphors.

Ordinarily, English speakers refer to time in terms of space, e.g., a *long* vacation or a *short* meeting, but not vice versa. We don't usually speak of space in terms of time. In the experiments, subjects watched nonverbal stimuli, a line growing on a computer screen and clicked to estimate time remaining or spatial displacement, the distance of the line from end to end. “Lines that traveled a shorter distance were judged to take a shorter time, and lines that traveled a longer distance were judged to take a longer time - - even though, in reality, all lines had the same average duration, regardless of the distance they traveled” (p. 4). Casasanto and Boroditsky (2008) concluded that “the asymmetric relationship between space and time is found both in linguistic and non-linguistic representations of distance and duration.” But speakers of other languages like Greek use metaphors such as *amount of a substance* to represent time, such as *much time* and *much water*. Greek speakers were tested with the same kinds of duration/line experiments as well as estimating the duration of a container filling up with liquid. Greek speakers had very different results from English speakers. Greeks were greatly affected by container fullness in estimating duration, while English speakers only weakly. For Greek speakers TIME IS SUBSTANCE, while for English speakers TIME IS DISTANCE suggesting that linguistic metaphors may “reflect the structure of speakers' non-linguistic duration representations” (p. 4). The authors conducted other experiments on Similarity and Time and concluded, overall, that linguistic metaphors “point to important links between the source (vehicle) and target (topic) domains of metaphors” but because they do not always predict the exact relationships revealed by behavioral tests, “linguistic metaphors should be treated as a source of *hypotheses* about the structure of abstract concepts” (p. 18).

While hardly conclusive these experiments suggest that linguistic metaphors such as PEACE IS DIVERSITY AND PEACE IS LIGHT, etc. could be authentic means of supporting artists' imaginations in creating photographic metaphors if they represent culturally appropriate linguistic metaphors. Once the photographs are made, the same metaphors may be used as hypotheses to interpret the meanings of

visual metaphors and to classify pictures. Linguistic metaphors are necessary but not sufficient either in creating or interpreting visual metaphors. In the former case, photographic visual genres, landscapes, portraits, and abstracts, were also needed to make photographic metaphors, while in the latter case connotation procedures were used to support the hypotheses structured through linguistic metaphors but went beyond the hypotheses in discovering more nuanced meanings. We should neither exclude nor depend upon linguistic metaphors in making or interpreting visual metaphors.

Should our topic have been peace and war rather than peace alone? While we cited practical reasons for excluding war, for example, behavioral issues that might arise in creating photographs of fighting and hostility, we could have brought “war” down to local level by casting it as *argument* as in the metaphor ARGUMENT IS WAR. We simply failed to realize that war could be brought down to earth in the classroom in the way peace could. In fact, by excluding argument, which these middle-schoolers would have appreciated as the opposite of but related to peace, we missed the chance to teach the idea of metaphor itself. In *Picturing Peace* we did not try and explain or teach metaphors *per se*. But we do realize now that we ought to teach what metaphors are and thereby bring the students in on all of the goals of the program.

Toward an Understanding of Linguistic and Visual Metaphors

The visual metaphors created by young photographers in *Picturing Peace* contribute to our understanding of metaphors. We have stressed that the vehicle function of metaphors is the focus of interest in supporting students' imagination of peace. We described the productive functions of linguistic and photographic (visual) genres of vehicles as playing roles in operating the metaphor. While the topic, peace, is a highly abstract idea and therefore difficult to imagine visually, the vehicle functions are relatively concrete. It is difficult to generalize about metaphors but we note that many of the kinds of vehicles described by Lakoff and Johnson (1980) such as in ARGUMENT IS WAR are more *concrete* than the topics they seek to elucidate. “...we would suggest that concepts [vehicles] that are used in metaphorical definitions *to define* other concepts [topics] ...provide the right kind of structure to allow us to get a handle on those natural kinds of experience that are less concrete or less clearly delineated in their own terms” (p. 118). WAR, for example, is conducted in a spatial field and has conduit and resource properties used in many metaphors referred to by Lakoff and Johnson. Whereas the topic, ARGUMENT, is clearly less concrete, less spatially extensive, and hence affords less visualization. Without being able to generalize this assumption to all metaphors, we conclude that vehicles are relatively more concrete, vivid, and visual

than topics. TIME FLIES is a good example of our proposal in this regard. This might also explain why visual art is so applicable to metaphor making and why the camera supported students' metaphoric imagination in *Picturing Peace*.

All of the categories of photographs of peace described above in the "family of photographic images of peace" are concrete, vivid and visual. Nature, light, community, place, and child play and care are visual metaphors that provide either spatial or sensory representations of peace. The body-hands and diversity images are socially concrete while remaining deeply symbolic of peace, the hands, particularly, usually shown in a prayerful attitude. The spiritual pictures embody and concretize the peacemaker role. Only the peace signs seem as abstract as the peace topic. Yet, by transforming peace into circles and crosses, these photographs transform the concept into geometric and religious symbolism. In interpreting the complex meanings of all these kinds of photographs we conclude that they are not straightforward one to one translations of the linguistic meanings of peace alone. For example, although at first view the nature picture would seem to be a strict translation of PEACE IS NATURE, yet the presence of the circle created by the artist in the landscape shows both the influence of a second linguistic metaphor (geometric circle) and the introduction of a man-made element, an assemblage of natural materials (art within art), in a natural setting. I suggest that the students' photographs exhibited both linguistic meanings derived from the family resemblances created in the language games as well as emergent meanings that were created through the photographic medium.

But are the student pictures of peace metaphors? Perhaps, we ought to think of the student photographs as conceptual works of art that are the *product* of vehicle-topic interactions in metaphor making. As works of art these photographs are image/texts (Mitchell, 1994) and, hence, capable of cultural and aesthetic interpretation. In this case the photographs are no longer metaphors. Metaphors, we think, require an asymmetrical relationship between vehicle and topic, with the former used to explore the latter and not vice versa. In images 1 and 2 above both topic and vehicle are integrated indissolubly in the photograph. In terms of the primary linguistic vehicle, diversity and the topic, peace, are ubiquitous in the picture and cannot be found separately. Vehicle and topic are symmetric, therefore. From this perspective, the student photographs would seem to fit Sonneson's (1989) theory of *pictorial concepts*. Pictorial concepts are found in pictures that represent concepts, often multiple concepts. Some surrealist paintings, photographs, and graphic advertisements display such properties. Feinstein (1982) interpreted a photograph of a water hydrant as a metaphor for androgyny as it connoted both female and male anatomy. But in analyzing the metaphor of the hydrant Feinstein concluded that the

image contained a vehicle but no topic. Sonneson provides an example of a pictorial concept in a Swedish supermarket chain's newspaper ad showing a king's crown of fruits (see Figure VII p. 57) in which the fruits, bananas, apples and grapes are artfully arranged in the form of a crown on a velvet cushion. This pictorial concept communicates both the topic (the fruits for sale) and the idea of participating in high living (like royalty) expressed by the crown (vehicle) obtainable by shopping at the market. But topic and vehicle are symmetric. Both concepts mutually inform each other and there is no directionality. In the two foregoing examples we have not found the asymmetry of vehicle and topic present in linguistic metaphors.

On the other hand, in using Barthes' (1981) interpretive frame, the *punctum*, in our interpretation of Image 1, above, we suggested that the small flowers represented a second linguistic metaphor, nature. This metaphoric vehicle seemingly augmented the primary vehicle of diversity. If this reasoning is accepted then asymmetrical relations between two vehicles can be imagined in this photograph. In this case it is possible to conclude that the photograph is a metaphor or, at least, a new *metaphoric vehicle* for creating additional narrative ground to the interpretation.

Or are the student photographs allegories? Benjamin proposed that the interaction of text and image results in a third term, *allegory* (Seyhan, 1996). Allegories are often found in mimetic media such as painting and therefore, plausibly, in conceptual photographs intended to portray an abstract idea. Much as a metaphor, the allegory translates and transforms the text into an image. "An allegory is sustained longer and more fully than a metaphor, and appeals to imagination..." (Wikipedia). For Benjamin, the allegorical trope, although principally used to interpret history, provides a means for the "completion and perfection" (p. 231) of a work of art. In particular, Benjamin argues that photographs, while mimetic, are neither complete nor impartial. "What fascinates the beholder of the photograph, argues Benjamin, is not the captured 'reality' but the telltale signs that signify contingency and link the photographic image dialectically to the beholders present" (p. 231). The viewer may imaginatively interpret the allegory because it provides a more coherent image of "frozen unrest" in Benjamin's evocative definition. This connects with our reasoning above in suggesting that the student photographs in this project may be new metaphoric vehicles in that they afford the interpretation of a new ground linking text and image beyond the mapping of vehicle and topic systems.

Our inability to settle, definitively, on the status of the current set of photographs as translations of linguistic metaphors, pictorial concepts, or allegories, or our use of different critical frameworks for interpreting metaphors, may speak as much to the

instability and friction intrinsic to a process of bringing different conceptual domains together as the evolving intellectual discussion of metaphors. Swanwick (2007) emphasized the dissonance characterizing artistic metaphor: “We remember though that metaphorical likeness is always partial. Our lives are obviously in so many other ways not like those of trees [referring to Crapsey’s poem comparing human lives to weather-beaten trees], and this unlikeness generates an ironic friction” (p. 498). Swanwick wisely counsels us to consider the playfulness of metaphors and to estimate the metaphoric impact of works rather than reach for “verifiable scientific knowledge” (p. 498).

Future Research Directions

Nevertheless, an improved research design might elucidate the foregoing issues we have discussed in imagining and interpreting photographs of peace and conflict. Given the controversy between using linguistic metaphors to build and interpret visual metaphors, we might compare *Picturing Peace* groups that did not employ multiple linguistic metaphors with those receiving the full treatment as in the present design. The design could also include linguistic metaphors only and remove the photographic genres. We would then examine the range of peace photographs under each condition: both linguistic and photographic genre; linguistic only; and photographic genre only as experimental conditions. Such an experimental design would also require a control group that did not receive any preparatory activities, other than technical instruction in digital photography, but plunged immediately into the task of picturing peace. We might also analyze whether individual photographs achieved the same levels of artistic success and cultural meaning under each condition. Such an experimental design would imply the collection and identification of each photographer’s portfolio of pictures.

I have described the present research program as one of curriculum development, but it included only a post-test design. Moreover, the outcomes consisted only of photographs not measures of subject behaviors. With this design we could only determine that most student participants had achieved some degree of artistic success; *i.e.*, had succeeded in creating photographic metaphors. Nor was there any attempt to critically assess all students’ work. However, we do not know whether participants acquired increased understandings of peace as a result of the program. This would entail collecting both pre-test (baseline) and post-test behavioral measures. It is likely we would have to create a standardized assessment of peace understanding, values, and advocacy. Finally, we think that an experimental design requires more systematic interpretation to assess each student’s pictures for cultural aptness and powers to arouse critical imagination. A panel of expert judges could be

trained to analyze the different kinds of picture metaphors and reflect on the evocative power of the photographs. Judges could be trained in interpretive frameworks using the linguistic metaphors, connotation procedures, pictorial concepts and allegorical tropes that have been discussed. To assure the production of representative meanings, expert readings might be triangulated with criticisms produced by the artists, peers, and teachers.

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