This paper proposes a model for learning in the art museum setting that has broader relevance to school-based learning in informal environments. Developed from a completed doctoral investigation, the model applies a socio-cognitive approach that recognizes the social basis of educational experiences and the cognitive demands of learning in informal settings. The model will be articulated and interpreted in relation to school-based curriculum and syllabus directives through its application to a s ...
A Model for School-Based Learning in Informal Settings

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This paper proposes a model for learning in the art museum setting that has broader relevance to school-based learning in informal environments. Developed from a completed doctoral investigation, the model applies a socio-cognitive approach that recognizes the social basis of educational experiences and the cognitive demands of learning in informal settings. The model will be articulated and interpreted in relation to school-based curriculum and syllabus directives through its application to a secondary school-based art educational experience at the Bathurst Regional Art Gallery. Implications for the development of strategies that provide students with the skills, knowledge, capacities and distinctive sensibilities to negotiate alternative settings for learning in meaningful and developmentally appropriate ways will be outlined using the organising structure of the model.

Introduction
Interest in the area of informal learning has increased greatly as technology has challenged what constitutes places and spaces for learning (Sefton-Green, 2006). While traditionally, learning has been conceived as occurring within the confines of schools and in a planned, sequenced and intentional manner, it is now recognized that learning occurs in a variety of settings and in diverse ways. Such new conceptions of learning, along with acknowledgement that context impacts on the structure and organisation of learning, and influences how learners see themselves as pedagogic subjects (Griffin, 2004), requires renewed consideration of sites for learning and subsequent pedagogical approaches.

Museums present unique learning environments and are a commonly visited and highly valued venue for school excursions. As such they present informal settings for school-based learning that exist outside the confines of a traditional school environment. While much research has focused on museums as educational settings, little focus has been placed on how the existence of museums as informal settings relate to formal school-based education. In focusing on museums as informal settings for school-based learning, this paper acknowledges the numerous definitions of the term “informal” that are apparent in the literature. The particular concern of this paper is the site in which learning occurs. The notion of “informal learning”, as learning that happens in an unplanned or “accidental” way (Sefton-Green, 2006: 2), is accepted as part of the museum experience. However, it is important to note that when a museum visit occurs within the parameters of a school excursion, it is considered a formal activity, governed by school rules and expectations. This introduces significant complexities to any investigation of museums as informal settings for school-based activities.

For schools the importance of utilizing informal settings is for developing skills, knowledge and experience of relevance to lifelong learning. It is a relationship that is
emphasized at syllabus level through statements such as those found in the NSW Board of Studies Visual Arts Stage 6 syllabus (1999). This document states that the purpose of the program of study is to enable students to “manage their own learning”, “continue learning in formal and informal settings after school” and prepare for “full and active participation as citizens” (Board of Studies NSW, 1999, p. 5; p. 37). It is also implicitly acknowledged in recent syllabus reforms in NSW Visual Arts that emphasize the provision of skills, knowledge and attitudes to enable autonomous participation in cultural practice beyond the school years. These reforms have involved a move away from a dominant studio focus on the making of art and a reconceptualization of engagement with the visual arts to emphasize the importance of skilled and knowledgeable viewing (Board of Studies NSW, 1999, 2000, 2003). However, it is significant that the challenges of transferability to informal settings, within and/or beyond schooling are rarely acknowledged or addressed at this level.

The Characteristic of School-Based Museum Learning
The contribution of school visits to the development of museum audiences is an area that has been acknowledged but remains largely unexplored. Studies that illustrate the social basis of museum visiting recognize the acquired nature of the capacities required to take advantage of cultural provisions and acknowledge the importance of school-based education in laying the foundation for the development of these capacities (Anderson, 1997; Bourdieu and Darbel, 1991; McDonald and Alsford, 1996; Newsom and Silver, 1978; Stone 1992, 1993). In relation to art museums, Pierre Bourdieu identified the potential role schooling has in “…mass-producing competent individuals endowed with the schemes of perception, thought and expression which are the condition for the appropriation of cultural goods…” (Bourdieu and Darbel, 1991, p. 67). He further stated that schooling “…could compensate (partially at least) for the initial disadvantage of those who do not receive in their family environment any encouragement of cultural practice or of the development of familiarity with works of art.” (Bourdieu and Darbel, 1991, p. 67).

Despite a commonality of educational orientation and obvious potential learning relationship, studies indicate that school-based education has experienced difficulties in exploiting the distinctive learning environment and opportunities provided by museums in optimal ways (Berry, 1998; Eisner and Dobbs, 1986; Griffin, 1998, 1999b; Grinder and McCoy, 1985; Hooper-Greenhill, 1991; Mathewson, 1994; Stone, 1992a, 1992b, 1993). The problematic nature of engagement is evident in research that demonstrates that museum utilization by school-based teachers is characterized by:

- a minimal investment of effort (Mathewson, 1994; Stone, 1992a,1993)
- general use that is not specifically tailored to curricular needs (Griffin, 1998; Stone, 1992a, 1993)
- an inability to integrate museum experiences into classroom learning (Griffin, 1998, 1999b; Hooper-Greenhill, 1991; Stone, 1992a, 1993)
- a focus on the acquisition of information rather than the development of processes of learning (Griffin, 1998, 1999b; Hooper-Greenhill, 1991)
- ill-defined educational objectives (Griffin, 1998, 1999b; Hooper-Greenhill, 1991)
• a concentration on enrichment and social interaction (Brigham and Robinson, 1992; Gottfried, 1980; Laetsch, Diamond, Gottfried and Rosenfeld, 1980)
• a passive, ‘consumer like’ stance (Griffin, 1998; Liu, 2000; Stone, 1992b)
• lack of mutuality and an absence of dialogue (Commission on Museums for a New Century, 1984; Eisner and Dobbs, 1986; Grinder and McCoy, 1985; Mathewson, 1994; National Research Center for the Arts, 1975; Newsom and Silver, 1978; Stone, 1992b)
• a lack of self-recognition (Griffin, 1998; Stone, 1992a, 1993; Mathewson, 1994)

Analysis of the characteristics of museum utilization suggests a number of underlying assumptions. Firstly, practices suggest that teachers believe that museums will initiate and maintain relationships with schools and that the museum environment will provide conditions necessary for learning. An assumption that the museum experience will be inherently of value and that the actions of teachers have minimal impact on the realization or value of museum experiences is also evident. In the particular case of art museums, artworks and experiences are treated uncritically and there appears to be a belief that meanings will be transmitted in a naturalistic manner. Little intervention on the part of teachers is evident.

These assumptions and the practices that reflect them are contradictory to the professional practice of contemporary educators, particularly in light of the growing number of quality teaching frameworks and standards of professional practice that have gained in prominence recently (Hayes, Mills, Christie and Lingard, 2006; NSW Department of Education and Training 2003; NSW Institute of Teachers, 2001). Such frameworks emphasize an objectification of teaching and learning strategies and outcomes and a reflective and critical educational practice. While it is acknowledged that recent initiatives are specifically designed for implementation within traditional classroom environments, the underpinning notions of intentional pedagogy that dominate discussions of effective teaching for learning, appear to be absent from educational practices in museums. The approaches observed also challenge policy and discourse within the museum field that encourage the active involvement of teachers, and show the potential of teachers to enhance learning in museums to be considerable (Griffin, 1999b; Housen and Duke, 1998; Newsom and Silver, 1978; Pitman-Gelles, 1982).

In addition, the practices identified contradict research that identifies effective museum learning as a developmental process involving the acquisition of specific skills and competences (Anderson, 1997; Hooper-Greenhill, 1994; Housen and Duke, 1998; Mitchell, 1996; Rice, 1988; Sheppard, 1993; Smith, R.A., 1985; Stapp, 1984). Research specifically acknowledges that art museum visitors are at different levels of development in terms of their ability to utilize art museums, and meaningful engagement with artworks within this context is dependent on experience and opportunities. Such perspectives on learning have implications for the development of art museum audiences as they make links between differing access to museums, unequally distributed skills in utilizing art museums and the specific instruction and practice necessary to acquire skills. It is recognized that “the notion that people are drawn to museums out of a natural need or hunger for knowledge is perhaps more of a
Reconceptualising the Problem

While research indicates efforts to enable visitors to enact and engage in meaningful museum experiences, investigations from a school-based perspective appear to be constrained by disjunctions between schools and museums, and a lack of any cognitive framework for implementation (Mathewson, 2003). The doctoral study from which this paper is drawn, moved beyond the identification of problems to present different explanatory orientations that sought to examine and account for the social origins of problems and apparent contradictions in museum/school relationships (Mathewson, 2006). A conceptual framework based on the social theories of Pierre Bourdieu was used as a means of reconceptualising and examining the issues implicated within the broader context of the history, philosophies and practices of art museums and art education. This sociological approach enabled the author to engage with the largely unexamined issues that impact upon the ability of school-based art education to optimally utilize art museum-based learning opportunities. Both the art museum and art education fields rarely broach the sub textual, unexamined or unintended dimensions of exchanges and are less motivated to do so in the demanding, economic rationalist climate of current institutional agendas. Consequently, the study aimed to augment the limited conceptualization of this issue that currently exists.

The study utilized procedures of analysis and critical review to apply the social theories of Bourdieu to the research problem. Theories of relevance were identified, derived and schematized to form two methodological constructs. These two schemas explicated social and educational practices in relation to art museums, providing a means of organizing and understanding the cultural practice of art museum visiting in the context of school-based art education. In the development of the two schemas, Bourdieu’s concepts of practice, field, habitus and capital were used as research concepts to investigate the social world of art museums and art education and most importantly, the points of their convergence. The ultimate purpose of the study was to generate a model for learning in the museum setting, which is appropriate to secondary school-based art education.

The final socio-cognitive model for learning in the art museum setting that was an outcome of the study is shown in Figure 1. The model is a stable structure that complements and enhances secondary school-based art education, while being appropriate to the art museum setting. Unlike previous research, which omits the art teacher’s agency from what is acknowledged within relationships between art museums and art education, the interventionist focus of the model promotes the significant role that art teachers have to play in enacting change. The model also embraces recent research in the field of museum education that, in advocating a developmental perspective and incorporating a narrative approach to learning, supports current thinking in the art education field (Bourdon Caston 1989; Davis and Gardner 1993; Hein 1998; McCarthy, 1990; Roberts, 1997; Silverman, 1995). The model acknowledges that negotiating meaning making is central to the museum experience and that all individuals construct meaning in different ways. The process of construction is seen as encompassing development from simple, subjective response
based on immediate feelings, experiences and responses to the more sophisticated and complex construction of narrative that incorporates the use of framing concepts, awareness of relationships, increased autonomy and the recognition of alternative interpretations.

The model is articulated as a nine cell matrix, the configuration of which ensures that all elements of the model can be inclusively engaged and related to each other. The structure of the model, with three organizing categories along the horizontal axis and three categories along the vertical axis, recognizes that both objective structures and subjective experiences contribute to museum-based learning in ways that cannot be separated. These elements combine within each cell, with the proposition in each cell including two statements. Each statement is drawn from the horizontal axis and the vertical axis, respectively. Cells have been numbered for ease of reference.

The matrix is a construct which is intended to facilitate the development of experiences in the art museum setting that address a variety of needs and allow for engagement at different and particularized levels. Any educational experience can be structured in terms of some or all of the nine cells of the model. The scope, depth and particularization of engagement can be altered depending on the educational context in which the model is applied and activated and dependent on the developmental needs of the students involved. Elements of the model can be identified in any one cell and are apprehensible in the integrated relationships amongst cells. An initial experience may be constructed using only the definitional cells of the model. A more extended focus may be placed on certain components of the model by tracking a path using a particular column or row. Alternatively, more sustained and sophisticated explorations may use a descriptive set. Descriptive sets combine five cells where column and row intersect to provide a more expansive approach.

The model is not intended to substitute experiences with art museums. Rather it has been designed to be used as a guide for developing experiences. Students would continue to engage in activities that are already part of art educational practice including the recording of immediate encounters, the development of explanations, the use of secondary sources, and involvement in discussions. The propositions focus attention and the principles that are included are valued for the enabling capacities they provide, for future experiences. Thus the model provides the foundation for emergent rather than prescriptive approaches.

The influence of both Pierre Bourdieu’s social theories and Elliott Eisner’s studies of cognitive engagement in the arts is indicated in the use of the term “socio-cognitive” to define the educational foundation of the model. A sociological perspective is provided through the strategic application of the social theories of Bourdieu and consideration of the social foundation of art museum visiting and education. Cognitive engagement, as defined by Eisner (2002), is established as crucial to both experiencing the visual arts and being able to create an expression of that experience and thus underpins all aspects of the model. The work of the two authors is viewed as complementary in establishing the social and intellectual requirements of meaningful engagement in the cultural practice of art museum visiting. The term socio-cognitive
thus defines the transaction between the social aspects of cultural practice and the acts of mind that occur in the art museum setting, contributing to, and determining, the learning experience.

### OBJECTIVE STRUCTURES

<table>
<thead>
<tr>
<th>Artworks</th>
<th>The Visual Arts</th>
<th>Art Museums</th>
<th>Representation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>The visual arts is a cultural field with an established structure and meaning system, in which artworks are produced. Artworks are visual expressions in a range of physical forms that have symbolic meanings and functions.</td>
<td>2.1 Art museums present artworks to audiences according to an established but contested system. The presentation of artworks in art museums alters their meaning and restricts their accessibility.</td>
<td>3.1 Artworks are represented in art museums according to an institutional classification system. Institutional representations in art museums mediate relationships between individuals and artworks</td>
</tr>
</tbody>
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| Audience | 1.2 Attitudes and preferences in the visual arts are linked to sustained cultural access gained through family and education. Sustained contact with original works of art establishes a relationship to the visual arts. | 2.2 Access to art museums is unevenly distributed. Art museum participation is dependent on recognition of and familiarity with the systems of the art museum sub-field | 3.2 Practice in the visual arts is represented as requiring specialized skills and knowledge. Institutional representations in art museums symbolize worthiness and signal audiences to adopt a reverential approach |

| Cultural Competence | 1.3 The visual arts require the application of interpretative frameworks of varying sophistication and complexity, to disclose culturally competent meanings. Individuals experience and understand the visual arts differentially through the application of interpretative frameworks | 2.3 Interpretation and appreciation of the meanings of artworks in art museums requires cultural competence. Regular art museum audiences have internalized the cultural competence to decipher and appreciate the meaning of art museum exhibitions | 3.3 Institutional representations of the visual arts in art museums assume prior knowledge and experience. Cultural competence is a field specific disposition that allows representations to be integrated with previous experiences, knowledge and understandings |

*Figure 1. A socio-cognitive model for secondary art educational learning in art museums*
Interpreting the Model in Practice

The model will now be interpreted as a limited case study to illustrate how it could be applied in practice. The case study will consider secondary art educational learning experiences within the specific environment of the Bathurst Regional Art Gallery in Australia. For the purposes of the research the term art gallery can be considered synonymous with art museum.

Bathurst Regional Art Gallery is a small art museum, which services the regional area of Bathurst and the surrounding district of the Central West of New South Wales. Bathurst is a regional city with a population of approximately 30,100. It is located 207 kilometres west of Sydney. Built in 1957, the Bathurst Regional Art Gallery was the first purpose built regional gallery in NSW. It is funded and operated by the Bathurst Regional Council and is supported by the NSW Government-Ministry for the Arts.

The Bathurst Regional Art Gallery is an example of an art museum that is available and differentially used by art teachers working in surrounding schools. Although Bathurst Regional Art Gallery does employ a Public Programs and Education Officer many regional art galleries do not. In the absence of museum-based education staff, art teachers take responsibility for art museum visits. For those art teachers, the model provides a potential tool for ensuring focused and educationally integrated experiences.

The exhibition that will be examined was randomly chosen from the 2005 exhibition program at the Bathurst Regional Art Gallery. Its selection was facilitated only by its timeliness in relation to the research process. Entitled “Suspended Moment”, the exhibition displayed the work of contemporary Sydney-based, Australian artist Katthy Cavaliere. An excerpt from the “What’s On at the Gallery” flyer introduced Cavaliere’s work in this way:

“Katthy’s work is about memories and experiences. Take a walk into Katthy’s room and enjoy the memories of your childroom (sic) bedroom. Hear the sounds that have inspired the artist and see the objects that tell the artist’s story. Katthy works in a number of art forms including performance, photography, video, installation, drawing and sculpture.”

The exhibition was illustrative of a contemporary art practice that is not easily accessible for secondary students, particularly those who have limited first hand experience of contemporary visual arts. As stated in the excerpt the exhibition included installation artworks, drawings, photographs, sculpture and the documentation of performance art through video. Within the artworks, Cavaliere explored domestic objects and environments. Meanings were not representationally straight forward and multi-layered allusions were made to notions of intimacy, privacy, voyeurism and the persistence and manipulation of memory.

In this case study, an extended and specific example of how the definitional cells can be used in relation to “Suspended Moment” will be provided along with an introduction to the use of rows, columns and descriptive sets.
Using the Definitional Cells
The definitional cells are cells 1.1, 2.2 and 3.3. These cells define the key concepts placed along the horizontal and vertical axes. The strategic use of the definitional cells provides a basic, foundational introduction that enables all students to gain an equal grounding from which they can then progress. For some students, particularly those in their first year of high school, the application of one single definitional cell alone is satisfactory for an initial experience. Alternatively, depending on the judgement of the teacher, the application of all three definitional cells may constitute an initial experience.

Definitional cell 1.1
The first cell is focused on the visual arts and artworks. Application of the cell requires consideration of the art museum visit in relation to learning about the visual arts. The aim of the cell is to introduce learners to the field of the visual arts, develop an understanding of the relationships and purposes of the field and ensure an understanding of what artworks are and how they operate in the Visual Arts. A clear definition of these terms allows the learner to interpret the experiences they have according to a clear, collective understanding. In addition, the cell aims to enable learners to participate in the field of the Visual Arts and identify, access and interpret artworks in a variety of forms.

In the particular example under scrutiny, the Katthy Cavaliere exhibition provides an opportunity to focus on contemporary art as it exists within the contemporary visual arts. During a visit to the exhibition, the relationship of the exhibition to the visual arts field can be explored through identification of the artist, the curator, the artworks and the ideas about the world. The nature of contemporary art involving video, performance and installation art can be introduced. The physical forms of such artworks can be identified and considered in relation to the symbolic meanings and function such artworks explore and how they are produced and valued by the agents and agencies that are stakeholders within the visual arts field. Questions of what has been produced, who has produced it, how has it been produced and why has it been produced can be introduced and answered to create a solid, basic foundation of understanding about the purposes and functions of art.

Definitional cell 2.2
Cell 2.2 addresses art museums and audiences. It enables the investigation to specifically address art museums and consider how audiences access artworks and the visual arts in that setting. The aim of this cell is to provide an introduction to the social situatedness of art museums and an understanding of audience participation. The cell also aims to provide learners with familiarity with art museums to enable active participation as audiences.

In the context of the Katthy Cavaliere exhibition, application involves the introduction of a foundational understanding of what art museums, in general, are and do, leading to identification of who audiences are, how they access art museums and why. This may be contextualised in terms of the specific exhibition, with questions focusing on audiences for this art museum and the specific exhibition as an example of innovative, contemporary art. The role of the audience in interacting with the exhibition can be
addressed through particular focus on how the audience accesses the artworks, given the presentation of installation artworks, photographs and the documentation of performance art. Methods to involve and inform audiences, such as information panels, can be identified as systems designed to provide access and familiarity. As learners move through the exhibition, strategies would focus on engaging learners as active participants. This would entail physical involvement, the generation of questions and the exploration of multiple approaches, perspectives and interpretations that represent differing experiences as audiences. Ambiguities, areas of uncertainty and the unexpected should be emphasized as characteristic of participation in art museums, and exhibitions of contemporary art in particular, and strategies employed to assist learners in creating personal meaning.

**Definitional cell 3.3**

Cell 3.3 focuses on representation and cultural competence. It thus entails a consideration of the experience of the visual arts and artworks within art museums as part of the broader learning process. The aim of the cell is to provide knowledge about the effects and requirements of art museum representations in terms of ability and intelligence. It further aims to develop the ability of learners to relate representations to their existing knowledge, experiences and understandings.

In the Kathy Cavaliere exhibition, application of this cell this might involve placement of the visit within a program focused on installation and performance art. Learners would identify what forms of representation are used in the exhibition, what ideas are communicated and identify how those ideas are expressed. They may then be guided through exercises that connect the representation of Cavaliere’s work to previous learning about installation and performance art or to notions of the domestic or the private. They might extend their learning after the visit by constructing their own representations of an artists’ work or their own or by investigating other representations as evidenced in texts or other exhibitions. In the absence of previous learning, personal experiences can be focused on as a means of relating representations to individuals.

**Investigations using rows**

An investigation using a row enables emphasis to be placed on the subjective ways individuals experience artworks through the use of three linked propositions across a row. Thus it is considered a means of introducing art museum experiences to learners who are operating at a largely subjective level. While personal experiences can be used as a starting point, attention to the entire proposition within the cell requires subjective responses be extended, elaborated and contextualised in relation to structures, systems and shared meanings.

**Investigations using columns**

An investigation using a column enables emphasis to be placed on the structures that are involved in art museum experiences. Thus it is considered a means of structuring art museum experiences from an objective starting point. An investigation using a single column is able to focus closely on one structure in relation to other factors. The intersection with rows enables reference to the three subjective aspects of experience.
Extended investigations using descriptive sets
Descriptive sets involve five connected cells that intersect both a column and a row. The use of 5 cells in this way enables the investigation to cover all areas of the model, while focusing on one category generated from the horizontal axis and one category generated from the vertical axis. This creates a balance between the examination of objective structures and the consideration of subjective experiences. One example of a descriptive set is cells 1.1, 2.1, 3.1, 3.2 and 3.3. This descriptive set combines the first row with the third column.

Conclusion: The Significance and Potential of the Model
Analysis of the research confirms that much discourse stresses the constructive and co-operative nature of relationships between museums and schools, while underplaying tension and conflict. Literature on art museums also tends to focus on experiences with artworks as the focus of the art museum experience. Engagement with the physical, social and intellectual space of art museums is often ignored and the complexities and constraints of relationships are generally seen as extraneous. Consequently, this research presents a significant departure from the traditional conception of relationships between schools and museums, which is appropriate in the light of changing conceptions of museums and emerging models of museum education, along with changes in education more broadly.

The model that has been the outcome of the research is not seen as an end but rather a means to achieve an optimal educational experience in the art museum setting. It potentially provides teachers, curriculum planners and art museum professionals with a schema within which content may be structured and teaching and learning experiences developed. It provides intentional pedagogical strategies that aim to assist teachers in orienting activities and learner participation in a manner that is consistent with the principles and philosophies of contemporary educational practice, while integrating current and emerging knowledge from the museum field. In addressing the social issues of museum visiting and providing a cognitive framework, past experiences and perceptions are recognized, connections are made with prior learning and areas of wider significance addressed to facilitate an integration with classroom-based learning that enhances future learning and establishes a foundation for ongoing cultural practice.

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