Course Portfolio

ARCH 716/816:
Understanding Sustainable Architecture

Spring 2010

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Peer Review of
Teaching Program

Academic Year 2009-2010

Center for the
Advancement of Teaching
and Learning

Kansas State University

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I. Intentions

Peer Review Goals

In general, I chose to analyze ARCH 716/816: *Understanding Sustainable Architecture* through peer review to aid in its development and the assessment of its effectiveness. I first taught this course Spring 2009 with a reading/discussion component and a written/graphic argument component running in parallel. Of necessity, the development of students' written/graphic arguments to promote critical thinking in relation to course topics took precedence. During the Spring 2010 semester, I planned to address the following questions through the peer review process:

- How can I better integrate the reading/discussion component with the written/graphic argument component of the class?
- What assessment methods should I employ to determine whether various teaching methods have achieved the learning objectives as well as my overall teaching effectiveness?

Ultimately, I intend to turn the results of this teaching development activity into a series of articles for submission to peer reviewed journals such as the *Journal of Architectural Education* and the *Journal on Excellence in College Teaching*.

Course Goals and Approaches

The overarching goal of this seminar is for students to learn to think critically about the concept of sustainability as it relates to architecture. My approach to teaching in the context of this seminar centers on the development of critical thinking skills through reading and discussion and the development of a written and graphic argument. The overarching goal can be subdivided into the following two goals each related to one of the two major components of the course:

- Understand and evaluate readings (written arguments) related to sustainable architecture through critical reading and discussion.
- Develop a written and subsequently graphic argument related to sustainable architecture, present the argument to the class, and exhibit the argument as a poster with a supporting publication.

In terms of approach, weekly readings and discussion, primarily focused on the historical and theoretical underpinnings of sustainable architecture, form the core of the class. Concurrently, each student develops an argument: an answer to a significant question or exploration of a research problem, germane to the theme of the seminar, in relation to a specific work of architecture. Students begin by developing written arguments with supporting graphics. Each student then re-presents his or her argument graphically in a poster with supporting text. Each argument is developed through a process of revision and critique. Ideas are shared with and evaluated by the instructor, in pairs and, at times, by the entire class. The class then shares the results of their endeavor through a poster exhibition with an accompanying publication. Ultimately, students develop an awareness of the broad context of sustainable architecture through reading and discussion while critically exploring specific issues through the development of an argument.

II. Course Design

Course Description and Context

ARCH 716/816: *Understanding Sustainable Architecture* is a 3 credit hour seminar offered by the Department of Architecture for up to 16 students and is taken primarily by Master of Architecture (MArch) students in their fifth and final year of the program and Master of Science in Architecture (MSArch) students. MArch students usually take this course to fulfill an elective seminar requirement. For MSArch students with the Ecological and Sustainable Design emphasis, one course under the heading Topics in Environmental Systems in Architecture is required. Given that this course is one of only a few seminars offered under this heading, it is a de facto required course for MSArch students. The course's classification is a bit of a misnomer, though, due mainly to the fact that the course focuses on sustainable architecture, which is considered the purview of environmental systems. The course is actually broadly theoretical in approach rather than narrowly technical, and so could appeal to a wider cross-section of the student population than it currently serves if it were not so classified.

The course content and structure present both pedagogical challenges as well as advantages. In terms of content, the main challenge to overcome is the desire to develop a consensus definition of sustainability and, by extension, sustainable architecture. These definitions are highly contested and in flux. Rather than bemoaning this fact, I use it as a means of expanding the dialog. The course explores sustainable architecture in all of its facets from the role of technology to the aesthetic implications.

The main structural challenge lies in trying to strike a balance between the reading/discussion component and the written/graphic argument component. There clearly is a need for students to work on developing their skills for argumentation, but this skill development cannot be done at the expense of reading and discussion, in my mind an integral part of any topical seminar. At times, it is as if I am trying to teach two classes simultaneously. However, the small class size, ideally 12 students with a maximum of 16, allows for the individual attention necessary to achieve the course goals. Lastly, one advantage to the course structure that I've established is that it allows me to vary course content quite easily.

Student Characteristics

The MArch students and MSArch students each present their own pedagogical advantages and challenges as well. The MArch students are predominantly white, upper-middle class students from Kansas and surrounding states. The homogeneity of this group can be seen as advantageous in that their strengths and weaknesses as a group are well understood and relatively consistent from year to year. This makes it easier to plan and execute teaching methods, assess learning outcomes, and make incremental adjustments from year to year. Given that this course is an elective seminar, the MArch students usually take it out of an interest in the subject matter and approach the class with enthusiasm.

This group presents two major pedagogical challenges: they are often uncomfortable with the seminar format and lack the skills necessary to develop well reasoned and critical arguments. In addition to the design studio, which is at the core of the architectural curriculum, there are many required lecture format courses structured similarly to the students' secondary school classes. These courses are largely passive in nature with the students taking notes while the instructor as expert speaks from the front of the classroom. In contrast, students are required to take few seminar format courses, most of which are not taken until the final year of the program. Consequently, students are unfamiliar with and ill-prepared for the interactive nature of the seminar where open-ended questions are explored through

class discussion with the instructor often acting primarily as facilitator.

My direct experience finds that the MArch students are not prepared to engage in the development of written/graphic arguments. They often lack a basic understanding of how arguments are structured and have not been required to explicitly construct an argument for quite some time. In many cases, students have not been required to write an essay of any type or length since high school, having tested out of college-level English classes.

In contrast to the MArch students, the MSArch students are an ethnically diverse group. In addition to a few American students, the program draws many students from India, as well as Saudi Arabia and Central and South America. Also, due to Kansas State University's relationship with Kabul University, we now have many students from Afghanistan as well. This ethnic diversity brings a diversity of experience, which often enriches the classroom discussions. The MSArch students are also here to engage exclusively in research so their attentions are not divided like those of the MArch students. Like the MArch students, the MSArch students usually take this elective seminar out of an interest in the subject matter and approach the class with enthusiasm.

This group presents pedagogical challenges as well, some similar to those of the MArch students, but for different reasons. In this case, heterogeneity, talked about as an advantage above, is not without its difficulties. The diversity of experience can be so broad that it can be difficult to adapt the course to meet the needs of all students. Cultural differences combined with the fact that English is usually spoken as a second language can easily lead to misunderstandings and probably prevent some students from fully participating in class discussions at times.

The MSArch students also struggle with developing written/graphic arguments possibly for many of the same reasons as the MArch students, but their struggles are compounded by the language issue. Frankly, I do not have the time nor the expertise to deal appropriately with these language issues and refer the students to English tutors and copy editors. It can be difficult for me to discern the nature of their problems given the diverse and complex nature of their situations.

Course Goals and Learning Objectives

The course goals and learning objectives are tied to the Individual Development and Educational Assessment (IDEA) Center's Student Ratings of Instruction system. From the system's 12 learning objectives, I have designated 3 objectives as "essential" and 2 objectives as "important". The following is a list of these 5 general learning objectives followed by a list of the more specific goals and learning objectives for this seminar. Each goal or learning objective is followed by a number or numbers in parentheses indicating the IDEA Center learning objective(s) to which it relates.

Essential:

1. Learning fundamental principles, generalizations, or theories.

2. Developing skills in expressing oneself orally or in writing.

3. Learning to analyze and critically evaluate ideas, arguments, and points of view.

Important:

4. Learning how to find and use resources for answering questions or solving problems.

5. Acquiring an interest in learning more by asking questions and seeking answers.

Goal: Understand and evaluate readings (written arguments) related to sustainable architecture through critical reading and discussion. (1) (3)

Learning Objectives:

1. Given a reading, students will be able to identify the major claim types being used by the author to structure his or her argument from among the six major claim types as outlined by Ramage, Bean, and Johnson in Writing Arguments. (1) (3)

2. Given a reading, students will be able to outline or summarize the author's major claims as well as the evidence in support of each. (1) (3)

3. Given a reading, students will be able to formulate questions, including their rationale, for in-class discussion. (5)

4. Given a discussion topic and related questions and through participation in discussion, students will be able to analyze and critically evaluate the ideas, arguments, and points of view found in the readings. (1) (2) (3)

Goal: Develop a written and subsequently graphic argument related to sustainable architecture, present the argument to the class, and exhibit the argument as a poster with a supporting publication. (1) (2) (3) (4) (5)

Learning Objectives:

5. Given a sustainable architecture assessment framework, students will be able to choose a work of architecture and outline a categorical evaluation argument using a criteria-match structure. (1) (2) (3) (5)

6. Given a specific topic and a work of architecture, students will be able to develop related significant questions or research problems for further inquiry. (2) (3) (5)

7. Given a significant question or research problem, students will be able to develop a literature map as an aid in determining and organizing relevant categories and associated literature. (2) (3) (4) (5)

8. Given a significant question or research problem, students will be able to outline an argument using one of the six claim types as outlined by Ramage, Bean, and Johnson in *Writing Arguments.* (2) (3)

9. Given a significant question or research problem, students will be able to write an argument through a process of revision and critique with major and minor claims supported by evidence. (1) (2) (3) (4) (5)

10. Given a written argument, students will be able to graphically re-present the argument in a poster format adhering to 8 organizational criteria. (1) (2) (3) (4) (5)

11. Given a written and graphic argument, students will present their arguments to the class. (2)

12. Given a written and graphic argument, students will present their posters in a public exhibition. (2)

13. Given a written and graphic argument, students will publish a book documenting the results. (2)

III. Teaching and Assessment Methods

I have subdivided my teaching and assessment methods in this section according to the course goal and major course component to which each is related. What follows is a two-part explication of the teaching methods, assignments, and activities employed to achieve those goals. First, I discuss how each relates to a course goal and associated learning objectives. Secondly, I outline the assessment method used to determine learning outcomes, including evaluative criteria.

Goal: Understand and evaluate readings (written arguments) related to sustainable architecture through critical reading and discussion.

Reading and Discussion

Readings and Reading/Discussion Assignments

The readings focus mainly on the historical and theoretical underpinnings of sustainable architecture (see Appendix B: Course Schedule). Students are encouraged to read critically and engage in a dialog, asking questions of and seeking answers from the author. The reading/discussion assignments are intended to assist students in understanding and evaluating the readings and preparing for class discussions, and are directly related to learning objectives 1-3 (see Appendix C: Assignments and Rubrics). The focus is on overall comprehension of the author's argument as well as its underlying structure. Students are required to outline or summarize the author's major claims as well as the evidence in support of each. They are also required to formulate two questions, including a rationale for each question, for possible inclusion in the discussion session.

Since the reading/discussion assignments are used by the students in class, they are typically collected after the class period on Tuesday and returned at the beginning of the next class period on Thursday. Up to 5 points are awarded for each assignment mainly as an incentive for students to complete the assignment. Scores are awarded following a cursory examination and are usually between 4 and 5 points reflecting the amount of effort expended by the student. Lower scores between 1 and 3 points are only awarded when the assignment is clearly incomplete.

Discussions

Instructor-facilitated discussion centered on assigned readings forms the core of the seminar, although only a little more than half of the class sessions (17 out of 28) are devoted to this. Students are expected to come prepared to actively participate in the discussion. In fact, I encourage the students to carry the conversation by asking questions in relation to the readings that they have prepared in advance. Discussions are directly related to learning objective 4. It is through participation in discussion that students collectively analyze and critically evaluate the ideas, arguments, and points of view found in the readings.

Currently, I do not employ any formal assessment methods in regard to discussions to determine learning outcomes. In the past, I have tracked participation, but found that this either unfairly penalized the more reserved students who were otherwise actively engaged in the class or led to perfunctory responses on their part, often interrupting the flow of the conversation. Given the central importance of discussions to the seminar, though, I will continue to look for methods that encourage participation and its assessment.

Goal: Develop a written and subsequently graphic argument related to sustainable architecture, present the argument to the class, and exhibit the argument as a poster with a supporting publication.

Written Argument

Case Study Assignments 1-3

In order to facilitate the development of a written argument, I divide the term assignment into three case study assignments directly related to learning objectives 5-8. In Case Study Assignment 1, students choose a work of architecture, the case study, against which they provisionally apply the two sustainable architecture frameworks that they have been reading about. The students effectively outline a categorical evaluation argument using a criteria-match structure. In Case Study Assignment 2, students use templates developed by Booth, Colomb, and Williams in *The Craft of Research* to generate significant questions or research problems related to their chosen case study for further inquiry. Additionally, students develop a literature map as an aid in determining and organizing relevant categories and associated literature. In Case Study Assignment 3, students hand-in a draft of their written argument for review by the instructor and two of their peers (see Appendix C: Assignments and Rubrics).

Students present and discuss the results of Case Study Assignment 1 in class. This exposes students to the work of their peers, beginning a dialog about the work that will continue throughout the semester. The results of Case Study Assignment 2 are also discussed and presented in class. Students discuss the results of the template exercises in pairs while I move around the room briefly interacting with each group. This year, students also presented and discussed the results of the literature mapping exercise. Case Study Assignment 3 is intended to emphasize that written arguments are developed through a process of revision and critique. Students answer a series of questions that I provide for them in relation to the work of their peers. This is returned to the students along with my written assessment, which includes a mark-up and a summary of the strengths and weaknesses of the developing argument. Up to 10 points are awarded for each assignment mainly as an incentive for students to complete the assignment. Scores for Case Study Assignments 1 and 2 are awarded following a cursory examination and are usually between 8 and 10 points reflecting the amount of effort expended by the student. Lower scores between 1 and 7 points are only awarded when the assignment is clearly incomplete. Case Study 3, as mentioned above, is assessed more in-depth, but points are still awarded based primarily on effort.

Final Written Argument

The final, 3,000-4,000 word written argument with supporting graphics is handed-in four weeks before the end of the semester. The written argument is directly related to learning objective 9. Having generated a significant question or research problem, students write an argument through a process of revision and critique with major and minor claims supported by evidence.

I assess student's final written arguments using a rubric with three categories scored across 5 levels (see Appendix C: Assignments and Rubrics). The rubric categories are "Organization" (Is the argument properly structured?), "Development" (Is the argument convincing?), and "Style" (Is the argument clearly communicated?). The levels are "Exceptional", "Strong", "Average", "Below Average", and "Unacceptable". Under each category, I ask a series of questions, which serve as prompts when writing comments. The comments serve as the main form of feedback with the grade determined by the level achieved within each category. The rubric categories and subsequent questions relate to the learning objectives for this assignment allowing me to assess the extent to which they have been achieved.

Graphic Argument

Case Study Assignment 4

After the draft of the written argument is complete, students begin to develop a graphic re-presentation of the same argument. Reinforcing the iterative nature of argument development, Case Study Assignment 4 requires students to present a draft of their graphic arguments to the class for instructor and peer evaluation (see Appendix C: Assignments and Rubrics). This assignment relates directly to learning objective 10.

I provide the students with the same rubric that I use for final assessment. Each student presents his or her work in a poster format, usually by projecting it on screen, while the class comments on the form of the poster using the 8 organizational criteria from the rubric. One peer takes notes during the in-class assessment and then completes the assessment outside of class prior to the next class session. Like the previous Case Study Assignments, up to 10 points are awarded for each assignment mainly as an incentive for students to complete the assignment. Scores are awarded following a cursory examination and are usually between 8 and 10 points reflecting the amount of effort expended by the student. Lower scores between 1 and 7 points are only awarded when the assignment is clearly incomplete.

Presentation

During the final weeks of the semester and prior to handing-in the final graphic argument, each student makes a presentation of his or her graphic argument to the class followed by a discussion. My intention is to provide students with a final opportunity to share their ideas with their peers and connect these ideas to the themes of the seminar. This also provides them with an opportunity to develop their public presentation skills. This assignment relates directly to learning objective 11.

I assess student's presentations using a scoring guide rubric with 4 categories scored across 3 levels (see Appendix C: Assignments and Rubrics). The rubric categories are "Organization", "Content", "Presentation", and "Engagement" and the levels are "Accomplished", "Competent", and "Developing". I provide a series of statements for each category under each level that define the performance characteristics necessary to achieve that level. During the presentation, I check off the statement that most closely aligns with the student's performance, while underlining for emphasis or crossing-out if irrelevant. The rubric categories and subsequent statements relate to the learning objectives for this assignment allowing me to assess the extent to which they have been achieved.

Final Graphic Argument/Poster Exhibition

Students present their final graphic argument, as a 30"x42" portrait-style poster, in a public exhibition during final exam week per learning objective 12. My intention is to emphasize that arguments are not developed in a vacuum, but are part of an ongoing dialog between the author and his or her audience. Hence, the arguments must be publicly disseminated.

I assess the final graphic argument using the same rubric that the students used for their Case Study Assignment 4 peer review (see Appendix C: Assignments and Rubrics). The rubric uses 2 categories scored across 4 levels. The rubric categories are "Organization" and "Content" and the levels are "Strong", "Developing", "Marginal", and "Absent". Similar to the rubric for the assessment of the final written argument, I ask a series of questions under each category. Each question is then scored against the levels and a final grade is determined based on the level achieved across all questions. I provide a section at the end of the rubric for comments regarding particular strengths and weaknesses of the poster presentation. Again, the rubric categories and subsequent questions relate to the learning objectives for this assignment allowing me to assess the extent to which they have been achieved.

Book Publication

In concert with the poster exhibition, the students assemble and publish a book that includes all of the written and graphic arguments developed throughout the course of the semester. This book serves as a culmination of the student's efforts and is another method of public dissemination as the book is made available for download in PDF format or purchase as a paperback from lulu.com. The following is the link to the Spring 2009 publication as this year's publication is not yet available:

www.lulu.com/content/paperback-book/understanding-sustainable-architecture/7173248

This link is not publicly available as permission to publish many of the images was not received. I hope to correct this for future publications so that the book can be more widely disseminated.

I do not formally assess the book publication, although up to 10 points are awarded for participating in the process. Scores are usually between 8 and 10 points reflecting the amount of effort expended by the student. Lower scores between 1 and 7 points are only awarded when a student clearly did not participate.

IV. Assessment

Background

The seminar that I taught in Spring 2008, ARCH 716/816: *Regionalism and Sustainable Architecture,* taught me much about student's writing ability, or lack thereof, and how *not* to approach writing in the seminar context. Having assigned the students a case study paper to be completed in pairs, I met with each pair outside of class to aid them in defining and refining their topic. However, I provided the students with little or no guidance in regard to structuring their papers, assuming that they had mastered the necessary techniques in high school or college English. This proved to be a major miscalculation on my part as the writing was abysmal. To compound the issue, the assignment was worth 50% of the course grade. The following year, I revamped this seminar into the one currently under assessment for many reasons, not the least of which was the writing component.

The former writing assignment became the written/graphic argument component of this seminar and is, in actuality, a term project composed of several vertical assignments as outlined in the previous section. These assignments are intended to provide the necessary structure for the term project that was absent in the former assignment, and are the method by which the course's second goal is accomplished, stitching together learning objectives 5-13. The issue now, though, is that the term project can easily overwhelm the equally if not more important reading/discussion component of the class. This is what occurred when I first implemented the term project in Spring 2009 and one aspect of the course that I was specifically working to improve upon in Spring 2010.

Assessment of Student Learning

Having discussed in the previous section how each assignment relates to course goals and objectives as well as the assessment method used to determine learning outcomes, I will now assess the writing/graphic argument component's overall effectiveness at achieving course goals and learning objectives.

In an effort to improve the quality of student writing, I created Case Study Assignments 1-3 to aid the student in structuring his or her written/graphic argument. Many students, particularly fifth-year MArch students, struggle to develop significant questions for further inquiry, so Case Study Assignment 1 is intended to provide them with an approach that they can implement for their written/graphic arguments. Originally, my intention was for all students to critically assess a work of architecture in a collective attempt to broaden existing sustainable architecture assessment frameworks. This proved impractical and many students, particularly MSArch students, wanted more flexibility to explore significant questions or research problems germane to their interests. As it stands, this assignment is now a bit of an orphan. Although the assignment accomplishes its objectives, it may have little effect on the student's written/graphic argument aside from requiring him or her to choose a case for further critical analysis. In fact, in discussion with the students at the end of the term, I found that many students felt constrained by their chosen case after developing significant questions.

I will need to reconsider the purpose and place of this assignment for next year. It would probably be best to flip it with Case Study Assignment 2, so that students begin by generating significant questions or research problems and then choose an appropriate case for analysis. It should also be revised to more explicitly lead to the development of an outline for a categorical evaluation argument with a criteria-match structure. In this way, it would still prove useful for students who need more structure.

Getting to a significant question, one that is of interest and value to the author as well as an audience,

is no easy task. The first part of Case Study Assignment 2 facilitates this effort. The templates definitely helped the students to structure their thinking and properly limit the scope of their arguments, something with which they all seemed to struggle. I added the second part of the assignment, the literature map, this year. I wasn't quite sure how best to use the technique with this assignment, so this year was a bit of an experiment. Students interpreted the assignment in many different, and sometimes unexpected, ways (see Appendix D: Student Work). Some students reported that they found creating the literature map useful and continued to use the technique while developing their argument.

I will definitely retain this assignment, but will most likely move it earlier in the schedule so that students initial focus will be on generating significant questions and research problems rather than on choosing a case for further inquiry. I will also make the literature mapping exercise more explicit, based on this year's results. I will ask students to begin by placing their significant question in the middle of the map, then branch off to relevant categories from there, followed by the literature that will aid them in understanding each category.

Case Study Assignment 3 is helpful in that it forces the students to produce rough drafts of their written arguments and, through peer review, learn from other students' approaches to constructing arguments. Despite our focus on the six claim types as outlined by Ramage, Bean, and Johnson, the students' work at this point had a disappointing lack of structure. Instead of reading a well organized argument in need of development, I found myself struggling to determine what claim type would be best to structure the student's thinking. In essence, I was reverse engineering the student's draft into an outline (see Appendix D: Student Work).

So, the question becomes: how can I improve student learning in regard to claim types so as to improve the quality of the written argument rough drafts? I am considering adding another case study assignment to address this issue. The assignment would require students to outline their arguments prior to writing rough drafts. I will most likely have them structure outlines based on the most appropriate claim types for the arguments that they are trying to construct. I will assist students in developing these outlines and then use these for reference while reviewing the argument rough drafts.

The students made progress developing their arguments in the four weeks between receiving the comments regarding their rough draft and when the final written argument was due. I think that, in many ways, the rough draft was more difficult in that it can be hard for them to get their initial thoughts on paper. Once that is accomplished, they can take a step back, evaluate the work, and make changes as necessary. I met with a few of the students outside of class to clarify my comments and help them to improve their arguments. In the final analysis, the results were mixed. Among the 11 students, the maximum score was 92% while the minimum was 72% with the average at 83% and the median at 82%. While I find the grade distribution to be reasonable, I was disappointed with the results. Over half of the students (6) received an 82% or lower. As graduate students, they should be capable of higher achievement.

Of course, the grades are only one measure and do little on their own to assist in improving teaching and learning. The paper rubric is undoubtedly more helpful as an assessment of both the student's work as well as the degree to which the course goals and learning objectives have been achieved. As I stated in the previous section, the rubric is divided into 3 categories, "Organization", "Development", and "Style", effectively answering the question - is the argument properly structured, convincing, and clearly communicated?

The separate categories offer me an opportunity to delve deeply into distinct, yet still interrelated, dimensions of the written argument. I found in five of the arguments that a lack of organization hindered the development of the argument as is reflected in the following comment, "The development of your argument is thwarted by the structure, though. Why not group the various shades/logics under the

headings Environment, People, Place, to lend them more coherence? That's the real value of the table." (see Appendix D: Student Work). The reverse is true in one argument where a strong underlying organization is never developed to its full potential. Seven of the arguments were fairly clear in their communication. All students had ample time to address the issues covered by this category, although the native English speakers fared best for obvious reasons. I only found one instance, though, where stylistic issues were a significant hindrance. Given the fact that much of our effort was spent on organization, I find these results disconcerting. Although incremental improvement has been made, I am hopeful that the changes noted above that I plan to implement will significantly improve learning outcomes.

An assessment of the results of the graphic argument are revealing as well. Among the 11 students, the maximum score was 95% while the minimum was 78% with the average at 85% and the median at 88%. Although the numbers are an improvement over those for the written argument, I was again disappointed by the results. The graphic argument grading is more liberal as the related teaching methodology is not as well developed as that for the written argument. I have also found that I biased the rubric toward poster form over content, so a weak argument that is well-presented can still score well.

The rubric is composed of two categories, "Organization" and "Content". The former covers 8 organizational criteria that I adapted from the work of Hess, Tosney, and Liegel, while the latter focuses on the degree to which the author has conveyed his or her argument. The included poster and rubric are from the same student as the included written argument (see Appendix D: Student Work). Although this student received a low grade for the written argument, he scored well on the graphic argument. This may be due in part to the previously mentioned rubric bias, but in his case he used the poster development as an opportunity to respond to criticism. In any event, it is clear that I either need to strengthen the "Content" category or possibly fuse the two categories into one. The latter option is appealing in that it acknowledges *how* we communicate is integrally related to *what* we communicate.

V. Reflection

Overall, I found the Peer Review of Teaching Program to be highly rewarding. My mentor, Prof Michelle Janette, and my peer, Prof A. Abby Knoblauch, provided insightful advice throughout the term. The roundtable discussions, moderated by Prof Kurt Gartner, were also engaging and informative. The following are my reflections in regard to these interactions and the influence they may have over the direction of this course in the coming years.

My initial conversation with Prof Janette in regard to the structure and underlying goals of the course led to substantial revisions of the schedule. So, from the beginning of the term, the schedule reflected my attempt to streamline the written/graphic argument component so as not to overwhelm the reading/discussion component. This attempt met with reasonable success and the schedule is now in need of only minor adjustments.

My peer interactions were beneficial as well. First of all, our interactions served to validate many of the teaching methods that I am currently employing. The value of this confidence boost for a new instructor cannot be understated as it often seems as if my teaching is occurring within a vacuum. On a couple of occasions, Prof Knoblauch recognized that my particular teaching approach is that of facilitator as opposed to sole authority. This is something that I consciously strive to promote as I believe that this fosters the development of student's critical thinking skills.

Prof Knoblauch's advice in regard to my teaching as well as her example in the classroom has led me to consider a number of alternatives to my teaching approach as well. I will likely ask my students at times to engage in additional, specific exercises outside of class to prepare for in-class discussions. Also, we will break into small groups for discussion on occasion to foster participation on the part of those students that are less comfortable speaking in the large group. Lastly, I am interested in emulating her successful approach to leading-off and conducting discussions by writing a series of questions and keywords on a whiteboard to serve as a touchstone.

VI. Appendices

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ARCH 716: Understanding Sustainable Architecture

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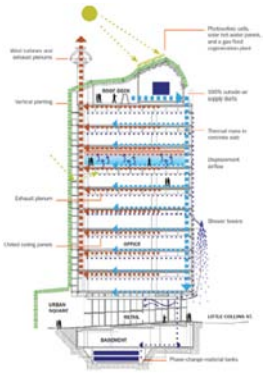

Overview

Sustainable architecture is a revised conceptualization of architecture in response to a myriad of contemporary concerns about the effects of human activity.

- Williamson, T.J., Radford, A. & Bennetts, H. 2003, *Understanding Sustainable Architecture*

Sustainability needs to be seen in our profession less as a technological fix reserved for the spec writers and engineers. Instead, it should be seen as our responsibility to society in exchange for the state-licensed monopoly we enjoy. If we don't hold both beauty and sustainability as equal cultural commitments, then we might as well hand over our licenses and call ourselves aesthetic consultants.

- Rebecca Henn, AIA (Juror, 2008 AIA/COTE Top Ten Green Projects)

Sustainable architecture is too often thought of only in terms of the technology that can be applied as a 'fix' to existing architectural approaches. In ARCH 716: *Understanding Sustainable Architecture*, we will engage in a broad-based approach that encompasses issues related to ecology and site integration, socio-cultural factors, building technics, and assessment frameworks. Preconceptions will be left at the door as we uncover a multiplicity of approach to creating a meaningful architecture with minimal impact to the environment.

Weekly readings and discussion, primarily focused on the historical and theoretical underpinnings of sustainable architecture, form the core of the class. Concurrently, each student will develop an argument: answer a significant question or explore a research problem, germane to the theme of the seminar, in relation to a specific work of architecture. You will begin by developing a written argument with supporting graphics. Each student will then re-present his or her argument graphically in a poster with supporting text. Each argument will be developed through a process of revision and critique. Ideas will be shared and evaluated by the instructor, in pairs and, at times, by the entire class. The class will then share the results of this endeavor through a poster exhibition with an accompanying publication. Ultimately, you will develop an awareness of the broad context of sustainable architecture through reading and discussion while critically exploring specific issues through the development of an argument.

1/14/10

ARCH 716: Understanding Sustainable Architecture
Spring 2010

Learning Objectives

Each student will:

Develop a broad perspective regarding sustainable architecture.

Develop both verbal (written) and visual (graphic) argumentation skills.

Develop the skills necessary for critical analysis.

Expectations and Assessment

Reading/Discussion Assignments	10%
Case Study Assignments	15%
Case Study Paper	25%
Case Study Poster	25%
Case Study Presentation	15%
Final Exhibition and Publication	10%
Total	100%

Reading/Discussion Assignments (10%)

This class is taught as a seminar with topical reading/discussion sessions forming the core of the class. As such, a high degree of commitment and participation is required of each student if this class is to be successful. Prior to class, each student must read the required readings and answer a series of questions in writing. These assignments will aid you in developing the skills for critical analysis and will prepare you to actively participate in class discussions. The readings for each week along with the Reading/Discussion Assignment will be posted to KSOL in PDF format one week prior.

Case Study Assignments (15%)

A series of assignments will be issued throughout the semester to aid you in the development of your written and graphic argument.

Case Study Paper (25%)

You will develop a written argument, 3,000-4,000 words in length with supporting illustrations, on an issue related to your chosen case study. See *The Craft of Research* and *Writing Arguments*, both on reserve in Weigel Library, for help in structuring your argument. A handout will be provided at a later date with more detailed information.

Case Study Poster (25%)

Following the development of your written argument, you will graphically re-present this argument with supporting text in a poster format.

Case Study Poster Presentation (15%)

During the final weeks of the semester, each student will present the results of his or her critical analysis to the class and then lead the class in a discussion.

Final Exhibition and Book (10%)

The entire class will participate in a poster exhibition and the creation of an accompanying publication documenting the results of the seminar.

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Readings

All required readings will be posted to KSOL in PDF format one week prior to class.

Reserve Texts (Weigel Library)

ARCH 716/816 Spring 2009 (ed) 2009, *Understanding sustainable architecture: a critical analysis of 16 case studies*, Lulu.

Booth, W.C. 1995, *The craft of research*, University of Chicago Press, Chicago.

Buchanan, P. 2005, *Ten shades of green: architecture and the natural world*, Architectural League of New York: Distributed by W.W. Norton, New York, NY.

Hagan, S. 2001, *Taking shape: a new contract between architecture and nature*, Architectural Press, Oxford; Boston.

Ramage, J.D., Bean, J.C. & Johnson, J. 2004, *Writing arguments: a rhetoric with readings*, Pearson/Longman, New York.

Williamson, T.J., Radford, A. & Bennetts, H. 2003, *Understanding sustainable architecture*, Spon Press, London; New York.

Academic Honesty

Kansas State University has an Honor System based on personal integrity, which is presumed to be sufficient assurance in academic matters one's work is performed honestly and without unauthorized assistance. Undergraduate and graduate students, by registration, acknowledge the jurisdiction of the Honor System. The policies and procedures of the Honor System apply to all full and part-time students enrolled in undergraduate and graduate courses on-campus, off-campus, and via distance learning. The honor system website can be reached via the following URL: www.ksu.edu/honor.

A component vital to the Honor System is the inclusion of the Honor Pledge, which applies to all assignments, examinations, or other course work undertaken by students. The Honor Pledge is implied, whether or not it is stated: "On my honor, as a student, I have neither given nor received unauthorized aid on this academic work." A grade of XF can result from a breach of academic honesty. The F indicates failure in the course; the X indicates the reason is an Honor Pledge violation.

Expectations for Classroom Conduct

All student activities in the University, including this course, are governed by the Student Judicial Conduct Code as outlined in the Student Governing Association By Laws, Article VI, Section 3, number 2. Students who engage in behavior that disrupts the learning environment may be asked to leave the class.

Academic Accommodations for Students with Disabilities

Any student with a disability who needs an accommodation or other assistance in this course should make an appointment to speak with me as soon as possible.

Intellectual Property Policy

Student academic creations are subject to Kansas State University and Kansas Board of Regents (BOR) Intellectual Property Policies. The BOR policy states:

“The ownership of student works submitted in fulfillment of academic requirements shall be with the creator(s). The student, by enrolling in the institution, gives the institution a non-exclusive royalty-free license to mark on, modify, retain the work as may be required by the process of instruction, or otherwise handle the work as set out in the institution’s Intellectual Property Policy or in the course syllabus. The institution shall not have the right to use work in any other manner without the written consent of the creator(s).”

“Otherwise handle,” as referenced in the BOR Intellectual Property Policy, includes display of student work in various media and use for accreditation purposes. The Kansas State University Intellectual Property Policy can be found at:
http://www.ksu.edu/academicservices/intprop/policies.htm.

Copyright Notification

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Department of Architecture

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Michael McGlynn

ARCH 716: Understanding Sustainable Architecture

Schedule (subject to change)

1	**T 01.14**	**Course Introduction** Attend: *RefWorks: The Coolest Thing Ever,* Hale Library, Room 408	
Unit One:			
2	**T 01.19**	**Sustainability and Sustainable Design** Orr, D.W. 1992, "Chapter 1: the problem of sustainability" in *Ecological literacy: education and the transition to a postmodern world,* State University of New York Press, Albany, pp. 3-21. Orr, D.W. 1992, "Chapter 2: two meanings of sustainability" in *Ecological literacy: education and the transition to a postmodern world,* State University of New York Press, Albany, pp. 23-40. McLennan, J.F. 2004, “Chapter 1: the philosophy of sustainable design” in *The philosophy of sustainable design: the future of architecture*, Ecotone, Kansas City, MO, pp. 1-8.	
	U 01.21		
3	**T 01.26**	**Sustainable Architecture** Williamson, T.J., Radford, A. & Bennetts, H. 2003, “Chapter 1: sustainability” in *Understanding sustainable architecture*, Spon Press, London; New York, pp. 1-17. Hagan, S. 2001, “Chapter 1: defining environmental architecture” in *Taking shape: a new contract between architecture and nature*, Architectural Press, Oxford; Boston, pp. 3-15.	
	U 01.28		
4	**T 02.02**	**Conceptual Frameworks: Images and Logics** Williamson, T.J., Radford, A. & Bennetts, H. 2003, “Chapter 2: images” in *Understanding sustainable architecture*, Spon Press, London; New York, pp. 19-41. Guy, S. & Farmer, G. 2001, "Reinterpreting sustainable architecture: the place of technology", *Journal of architectural education*, vol. 54, no. 3, pp. 140-148.	**Issue: Case Study Assignment 1**
	U 02.04		

5	**T 02.09**	**Assessment Frameworks: Levels and Shades** McLennan, J.F. 2004, “Chapter 10: shades of green-the levels of sustainability” in *The philosophy of sustainable design: the future of architecture*, Ecotone, Kansas City, MO, pp. 1-8. Genevro, R. 2005, “Preface” in *Ten shades of green: architecture and the natural world*, Architectural League of New York: Distributed by W.W. Norton, New York, NY, pp. 4-5. Frampton, K. 2005, “Forward” in *Ten shades of green: architecture and the natural world*, Architectural League of New York: Distributed by W.W. Norton, New York, NY, pp. 6-9.	**Due: Case Study Assignment 1** **Issue: Case Study Assignment 2**
	U 02.11	Buchanan, P. 2005, “Green Culture and the Evolution of Architecture” in *Ten shades of green: architecture and the natural world*, Architectural League of New York: Distributed by W.W. Norton, New York, NY, pp. 10-29. Buchanan, P. 2005, “The Ten Shades” in *Ten shades of green: architecture and the natural world*, Architectural League of New York: Distributed by W.W. Norton, New York, NY, pp. 30-39.	
Unit Two:			
6	**T 02.16**	**No Class - Design Principles and Practices Conference, Chicago, IL**	
	U 02.18	**Arguments: Verbal and Visual** Booth, W.C., Colomb, G.G. & Williams, J.M. 1995, "Chapter 3: from topics to questions" in *The craft of research*, University of Chicago Press, Chicago, pp. 35-45. Booth, W.C., Colomb, G.G. & Williams, J.M. 1995, "Chapter 4: from questions to problems" in *The craft of research*, University of Chicago Press, Chicago, pp. 48-63. Ramage, J.D., Bean, J.C. & Johnson, J. 2004, “Chapter 10: an introduction to the types of claims” in *Writing arguments: a rhetoric with readings*, Pearson/Longman, New York, pp. 199-207.	**Due: Case Study Assignment 2**
7	**T 02.23**	**Environmental Ethics** Hagan, S. 1998, "The good, the bad and the juggled: the new ethics of building materials", *Journal of architecture*, vol. 3, no. 2, pp. 107-115.	
	U 02.25		

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8	**T 03.02**	**Environmental Ethics** Williamson, T.J., Radford, A. & Bennetts, H. 2003, "Chapter 3: ethics" in *Understanding sustainable architecture*, Spon Press, London; New York, pp. 42-63. Williamson, T.J., Radford, A. & Bennetts, H. 2003, "Chapter 7: cohesion" in *Understanding sustainable architecture*, Spon Press, London; New York, pp. 127-137.	
	U 03.04		**Due: Preliminary Draft Paper** **Issue: Case Study Assignment 3**
9	**T 03.09**	**No Class - ADS IV: New York City Study Tour**	
	U 03.11		
A	**M 03.15 – F 03.19**	**Spring Break**	
Unit Three:			
10	**T 03.23**	**Re-envisioning Nature and Modernism** Hagan, S. 2001, "Chapter 2: the 'new' nature and a new architecture" in *Taking shape: a new contract between architecture and nature*, Architectural Press, Oxford; Boston, pp. 16-44. Hagan, S. 2001, "Chapter 3: a post-imperial modernism?" in *Taking shape: a new contract between architecture and nature*, Architectural Press, Oxford; Boston, pp. 45-61.	**Due: Case Study Assignment 3**
	U 03.25		**Return: Preliminary Draft Paper with Comments**
11	**T 03.30**	**Graphic Arguments: Presentation/Discussion**	
	U 04.01	**Culture and Technology** Findley, L.R. 2007, "Architectural invention and the postcolonial era: the Tjibaou Cultural Center in New Caledonia by the Renzo Piano Building Workshop" in *The green braid: towards an architecture of ecology, economy, and equity*, eds. K. Tanzer & R. Longoria, The A.C.S.A. architectural education series edn, Routledge, London; New York, pp. 311-328.	
12	**T 04.06**	**Graphic Arguments: Poster Pin-up**	**Due: Preliminary Draft Poster** **Issue: Case Study Assignment 4**
	U 04.08		

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13	**T 04.13**	**Technology and Environmental Design** Hawkes, D. 1996, “Chapter 6: Space for services: the architectural dimension” in *The environmental tradition: studies in the architecture of environment,* 1st edn, E&FN Spon; Chapman & Hall, London; New York, pp. 72-87. Hawkes, D. 1996, “Chapter 7: The language barrier” in *The environmental tradition: studies in the architecture of environment,* 1st edn, E&FN Spon; Chapman & Hall, London; New York, pp. 88-97. Hawkes, D. 1996, “Chapter 8: Environment at the threshold” in *The environmental tradition: studies in the architecture of environment,* 1st edn, E&FN Spon; Chapman & Hall, London; New York, pp. 98-105. Hawkes, D. 1996, "The technical imagination: thoughts on the relation of technique and design in architecture", *The Journal of Architecture,* vol. 1, no. 4, pp. 335-346. Fisher, P. 2004, "Chapter 13: experiencing climate: architecture and environmental diversity" in *Environmental diversity in architecture*, eds. K. Steemers & M.A. Steane, Spon Press, London; New York, pp. 217-237.	**Due: Case Study Assignment 4** Students issue readings for T 04.20 and U 04.22
	U 04.15		
Unit Four:			
14	**T 04.20**	**Case Study Presentations/Discussion**	**Due: Final Paper** Students issue readings for T 04.27 and U 04.29
	U 04.22		
15	**T 04.27**	**Case Study Presentations/Discussion**	
	U 04.29		
16	**T 05.04**	**Review of Reasoned Arguments and Course Assessment**	
	U 05.06		
17	**U 05.13 2:00-3:50 PM**	**Exhibition**	**Due: Final Poster** Students place posters and publication on display in hall outside Seaton 104

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Reading/Discussion Assignment – 01.26.10

3 Sustainable Architecture

Required Readings

Williamson, T.J., Radford, A. & Bennetts, H. 2003, "Chapter 1: sustainability" in *Understanding sustainable architecture*, Spon Press, London; New York, pp. 1-17.

Hagan, S. 2001, "Chapter 1: defining environmental architecture" in *Taking shape: a new contract between architecture and nature*, Architectural Press, Oxford; Boston, pp. 3-15.

Outline or Summarize the Argument

For each of the required readings, complete one of the following:

1. Make a list of the main points (major claims). Under each main point, list the reasons (evidence) given in support. In lieu of a list, you could paraphrase (restate in your own words) the author's reasoning.

2. Briefly summarize the overall issues presented by each author. Then, highlight or make bold the main points (major claims) and underline the reasons (evidence) given in support of each.

We will use our outlines or summaries in class on Tuesday to both understand and evaluate the arguments being presented.

Pose Discussion Questions

For each of the required readings, bring two provocative, intriguing discussion questions to class, along with one or two sentences describing why you would like to hear the question discussed. These questions will be collected on Tuesday for possible inclusion in the discussion on Thursday.

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Case Study Assignment – 02.09.10

5 Assessment Frameworks: Levels and Shades

Required Readings

McLennan, J.F. 2004, "Chapter 10: shades of green-the levels of sustainability" in *The philosophy of sustainable design: the future of architecture*, Ecotone, Kansas City, MO, pp. 1-8.

Genevro, R. 2005, "Preface" in *Ten shades of green: architecture and the natural world*, Architectural League of New York: Distributed by W.W. Norton, New York, NY, pp. 4-5.

Frampton, K. 2005, "Forward" in *Ten shades of green: architecture and the natural world*, Architectural League of New York: Distributed by W.W. Norton, New York, NY, pp. 6-9.

Buchanan, P. 2005, "Green Culture and the Evolution of Architecture" in *Ten shades of green: architecture and the natural world*, Architectural League of New York: Distributed by W.W. Norton, New York, NY, pp. 10-29.

Buchanan, P. 2005, "The Ten Shades" in *Ten shades of green: architecture and the natural world*, Architectural League of New York: Distributed by W.W. Norton, New York, NY, pp. 30-39.

Basic Information

Begin by providing the following information related to your chosen project:

Name:
Architect:
Building Type:
No. Stories:
Square Footage:
Location (City, State, Country):
Latitude/Longitude:
Climate Zone:
Image(s):

Rationale

Based upon your understanding of the course objectives, briefly describe (one or two paragraphs) your reasoning behind choosing this particular project for further study.

Dominant Logics

Of the six "logics of sustainable architecture" proposed by Guy and Farmer (Guy, Farmer 2001), which do you suppose are dominant in your specific case? For each "logic" selected, briefly describe why you consider this "logic" to be particularly relevant to your chosen building? You may choose to test these provisional observations throughout the remainder of the semester.

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Characteristic Shades

Of the ten “shades of green” proposed by Buchanan (Buchanan 2005), which do you suppose are applicable in your specific case? For each “shade” selected, briefly describe why you consider this “shade” to be particularly characteristic of your chosen building? You may choose to test these provisional observations throughout the remainder of the semester.

Discussion

Upload your document along with 3-5 images of your chosen project to the “Case Study Drop Box” on KSOL. Be prepared to speak on Tuesday about your rationale for choosing this particular project for further study. I will bring my computer so that we will have access to the images. We will then discuss the “logics” and “shades” in relation to these projects for the latter half of the class.

We will continue this discussion on Thursday, focusing primarily on Buchanan’s article “Green Culture and the Evolution of Architecture”. I strongly recommend that you prepare for this discussion as you have for previous discussions, although I will not issue nor collect a separate reading/discussion assignment.

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Case Study Assignment – 02.18.10

6 Arguments: Verbal and Visual

Required Readings

Booth, W.C., Colomb, G.G. & Williams, J.M. 1995, "Chapter 3: from topics to questions" in *The craft of research*, University of Chicago Press, Chicago, pp. 35-45.

Booth, W.C., Colomb, G.G. & Williams, J.M. 1995, "Chapter 4: from questions to problems" in *The craft of research*, University of Chicago Press, Chicago, pp. 48-63.

Ramage, J.D., Bean, J.C. & Johnson, J. 2004, “Chapter 10: an introduction to the types of claims” in *Writing arguments: a rhetoric with readings*, Pearson/Longman, New York, pp. 199-207.

Part 1: From Topics to Questions

You already have a topic, broadly defined as “understanding sustainable architecture”. You’ve narrowed that topic through the selection of a particular building for further study and the consideration of this building in relation to the six “logics” (Guy and Farmer 2001) and ten “shades” (Buchanan 2005). Now, continue to follow the process as outlined by Booth, et al. in chapter 3 (Booth, Colomb & Williams 1995).

Questions...

Provide a categorized list of all of the questions that you’ve generated after reading section 3.4. The categories may include those in section 3.4, but will likely include others. Then, highlight the questions that ask *how* or *why*.

... and their Significance

Next, apply the three steps in section 3.5 to the questions that you highlighted. If you highlighted several, apply these steps to the two or three questions you are most interested in pursuing.

From Questions to Problems

Read chapter 4 to gain some understanding of the difference between worthwhile questions and research problems. You may not be able to get to this point yet, but push yourself to transform the three steps from section 3.5 into the three steps outlined in section 4.4.

Part 2: Annotated Literature Map

An annotated literature map is intended to aid you in organizing and synthesizing the key texts of your research. You will gain an understanding of the broader context, topical categories and subcategories, theoretical terminology, and influential people associated with your line of inquiry.

Discussion

Upload your results to the “Case Study Drop Box” on KSOL. We will discuss the results of this assignment collectively and in pairs on Thursday.

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Case Study Assignment – 03.23.10

Peer Review

The objective of this assignment is to assess the efforts of two of your classmates to aid them in the development of their ideas in writing. I want you to focus on content rather than editing.

Questions

To guide you in your assessment, I ask that you answer the following questions:

Does the author clearly state a significant question or research problem?

Is it clear how the question or problem relates to the theme(s) of the class?

Is it clear how the question or problem relates to the case study?

What claim types are being utilized to develop the argument?

Are the claim types appropriate to the question or problem?

Is the argument well structured, supported with sufficient evidence, and convincing?

What would you like to know more about?

What did you find confusing?

Due

Submit your paper assessments to me on Tuesday, March 23rd, in class. I will review and return them along with my assessment on Thursday, March 25th, in class.

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Paper Rubric

Name	**Exceptional**	**Strong**	**Average**	**Below Average**	**Unacceptable**
Organization (Is the argument properly structured?)					
Is a significant question or research problem posed in the introduction? Does the introduction establish the major claim type and outline the structure of the argument that is to follow? Does the body of the paper follow the argument and the outline established in the introduction? Does the conclusion succinctly tie together the major claims of the argument? Is the written argument supported graphically?	**Comments:**				
Development (Is the argument convincing?)					
Does the paper establish the context for the proposed argument while avoiding extraneous background or summary information? Are all of the argument's claims supported with relevant and sufficient evidence? Is the chosen case, or aspects thereof, explicitly used as evidence in support of the argument? Does the paper offer insightful observations and connections that demonstrate a thorough understanding of the material? Does the paper provide a convincing, insightful interpretation of the evidence?	**Comments:**				

Style (Is the argument clearly communicated?)					
Does the paper meet the length requirement of the assignment? Is the paper free of grammar, punctuation, and spelling mistakes? Does each paragraph begin with a clear topic sentence, contain one clear point, and connect to other paragraphs with smooth transitional sentences? Does the paper avoid the passive voice, convoluted words and phrases, and overly lengthy sentences and paragraphs? Does the paper properly use the Harvard (author-date) citation style for citing works?	**Comments:**				

Grading Scale

A = Excellent in all or nearly all aspects. The interest of the reader is engaged by the ideas and presentation. Style and organization seem natural and easy. Paper marked by originality of ideas.

B = Technically competent, with a lapse here and there. The thesis is clear, properly limited, and reasonable, and the prose is generally effective without rising to sustained distinction.

C = A competent piece of work but not yet good. C papers are more or less organized along obvious lines and the thesis tends to be oversimple or imprudent without being wildly implausible. Monotony of sentence structure is apparent and errors are sprinkled throughout. In some C papers, excellent ideas are marred by poor presentation-either development, organization, or technical errors. In other C papers, the organization, structure, and grammar are not flawed, but the ideas and how they are developed need work. In yet other C papers, there are only a few technical errors and the organization and ideas are adequate but not noteworthy.

D = A piece of work that demonstrates some effort on the author's part but that is too marred by technical problems or flaws in thinking and development of ideas to be considered competent work.

F = This is a failing grade, usually reserved for pieces of work that demonstrate minimal effort on the author's part. The writer has drastically misinterpreted the assignment and written half as many words/pages as requested. Paragraph breaks are random; subjects and verbs, pronouns and antecedent turn against one another in wild discord.

adapted from Davis, 1993

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Case Study Assignment – 04.06.10

Peer Review

The objective of this assignment is to assess the efforts of one of your classmates to aid him/her in the development of his/her graphic argument. Please begin to fill out the following rubric during the in-class assessment, recording your thoughts as well as the thoughts of others. Then, complete your assessment outside of class and submit by the deadline indicated below.

Due

Submit your poster assessments to me no later than in class Tuesday, April 13th. You may also submit your peer review earlier and electronically via the Case Study Drop Box on KSOL.

Author: Reviewer:

Organization (Design)

Does the **Title and Subtitle** indicate the topic and serve as a launching point into the argument?

Do you use **Headings and Subheadings** to structure the argument based on the major claim type?

Do you use **Navigational Cues**, such as numbers, letters, and arrows, to guide the reader through your poster?

Do you develop a **Graphic Hierarchy** to assist the reader in determining the relative importance of various elements?

Do you format the poster in **Columns or Rows** to facilitate the flow of information?

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Does the poster read from top-to-bottom and left to right, working with **Reader Gravity** (Wheildon 1995)?

Does the poster have a good **Visual Balance** of figures and text separated by white space along an axis of symmetry?

Do you use **Color and Pattern** subtly to attract, but not overwhelm, the reader and consistently so as not to confuse the reader?

Content (Argument)

Are the significant question or research problem and major claims readily apparent?

Is the poster primarily graphic in content, using text as necessary for support?

Are the graphics clear and appropriate to the argument?

Is the text concise or are important points highlighted within blocks of text?

Do you include a conclusion that succinctly ties together the major claims of the argument?

Do you clearly identify yourself as the author, along with the name of the class and instructor?

Is the poster free of grammar, punctuation, and spelling mistakes?

Comments

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Presentation Rubric

	Accomplished	Competent	Developing	Comments
Organization	❑ The presentation was well organized with an introduction, body, and conclusion. ❑ The presentation demonstrated an analytical structure centered on a thesis, which showed a highly developed awareness of the issues and a high level of conceptual ability.	❑ The presentation was organized, but there were problems with the introduction, body, or conclusion. ❑ The presentation demonstrated an analytical structure centered on a thesis, but the analysis was not always fully developed or linked to the thesis.	❑ The presentation was poorly organized with little evidence of an introduction, body, or conclusion. ❑ The presentation demonstrated little or no analytical structure and/or no central thesis.	
Content	❑ The presentation demonstrated a depth of understanding by using appropriate, accurate, and detailed facts and examples to support the central thesis. ❑ Research appeared thorough and went beyond what was discussed in class or in the assigned readings. ❑ Theories referenced were accurately described and appropriately used.	❑ The presentation demonstrated some degree of understanding by using appropriate, accurate, and detailed facts and examples to support the central thesis, but there were lapses. ❑ Research appeared adequate, but did not go much beyond what was discussed in class or in the assigned readings. ❑ Theories referenced were either inaccurately described or inappropriately used.	❑ The presentation demonstrated a lack of understanding by using facts and examples that were inappropriate, inaccurate, and/or lacking in detail to support the central thesis. ❑ Research appeared inadequate, not going beyond what was discussed in class or in the assigned readings. ❑ Theories referenced were inaccurately described and inappropriately used or not described or used at all.	

	❑ Analyses and conclusions were explicitly linked by facts, examples, and theories.	❑ The connection between analyses and conclusions is evident or implied, but is not explicitly linked by facts, examples, and theories.	❑ Analyses and conclusions were not linked by facts, examples, and theories.	
Presentation	❑ The presenter used an appropriate amount of time to convey the argument, was succinct, and avoided unnecessary redundancy. ❑ The presentation included appropriate and easily understood images and diagrams, which the presenter referred to and explained at appropriate moments during the presentation. ❑ The presentation method was appropriate for conveying the argument and the technology was competently handled and not distracting.	❑ The presenter used an appropriate amount of time to convey the argument, but was terse or verbose, and/or redundant at times. ❑ The presentation included appropriate images and diagrams, but these were difficult to understand, too few, or the presenter did not refer to or explain them during the presentation. ❑ The presentation method was appropriate for conveying the argument, but the technology was poorly handled and was somewhat distracting.	❑ The presenter used too much or too little time to convey the argument, was terse or verbose, and/or redundant. ❑ The presentation included inappropriate images and diagrams or no images and diagrams were presented. ❑ The presentation method was inappropriate for conveying the argument and/or the technology was poorly handled and extremely distracting.	
Engagement	❑ The presenter readily engaged with the audience, maintaining eye contact while occasionally referring to his/her notes. ❑ The presenter spoke clearly, audibly, and in a lively tone, using gestures and body language to engage the audience.	❑ The presenter engaged with the audience, occasionally making eye contact while tending to focus on his/her notes. ❑ The presenter spoke clearly and audibly, but in a flat tone, occasionally using gestures and body language to engage the audience.	❑ The presenter did not engage with the audience, rarely making eye contact while almost exclusively focusing on his/her notes. ❑ The presenter spoke unclearly, inaudibly, and/or in a flat tone, rarely or never using gestures and body language to engage the audience.	

	❑ The presenter effectively responded to audience reactions and questions by reviewing material to clarify concepts, occasionally deferring an answer to a later date.	❑ The presenter responded to audience reactions and questions, but only occasionally reviewed material to clarify concepts and often deferred an answer to a later date.	❑ The presenter ineffectively responded to audience reactions and questions, failing to review material to clarify concepts while leaving many questions unanswered or deferred to a later date.	

adapted from Stevens and Levi, 2005

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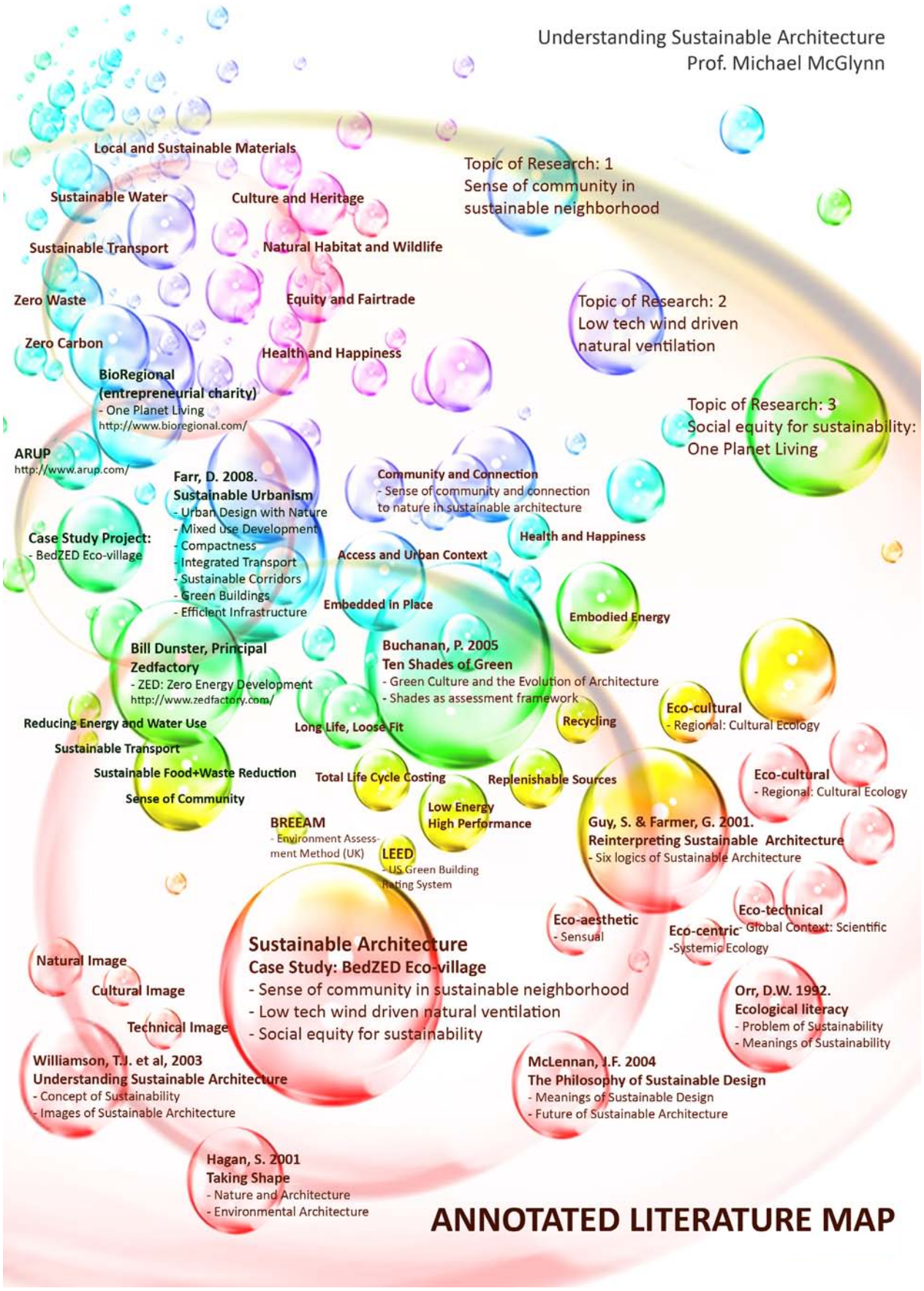
Poster Rubric (A re-presentation of your written argument)

Name	**Strong**	**Developing**	**Marginal**	**Absent**
Organization (Design)				
Does the **Title and Subtitle** indicate the topic and serve as a launching point into the argument?				
Do you use **Headings and Subheadings** to structure the argument based on the major claim type?				
Do you use **Navigational Cues**, such as numbers, letters, and arrows, to guide the reader through your poster?				
Do you develop a **Graphic Hierarchy** to assist the reader in determining the relative importance of various elements?				
Do you format the poster in **Columns or Rows** to facilitate the flow of information?				
Does the poster read from top-to-bottom and left to right, working with **Reader Gravity** (Wheildon 1995)?				
Does the poster have a good **Visual Balance** of figures and text separated by white space along an axis of symmetry?				
Do you use **Color and Pattern** subtly to attract, but not overwhelm, the reader and consistently so as not to confuse the reader?				
Content (Argument)				
Are the significant question or research problem and major claims readily apparent?				
Is the poster primarily graphic in content, using text as necessary for support?				
Are the graphics clear and appropriate to the argument?				
Is the text concise or are important points highlighted within blocks of text?				
Did you use the development of the poster to restructure, refine, or otherwise advance the argument?				

Do you include a conclusion that succinctly ties together the major claims of the argument?				
Do you clearly identify yourself as the author, along with the name of the class and instructor?				
Is the poster free of grammar, punctuation, and spelling mistakes?				
Comments:				


Understanding Sustainable Architecture
Prof. Michael McGlynn
Local and Sustainable Materials
Sustainable Water
Culture and Heritage
Sustainable Transport
Natural Habitat and Wildlife
Zero Waste
Equity and Fairtrade
Zero Carbon
Health and Happiness
BioRegional
(entrepreneurial charity)
- One Planet Living
http://www.bioregional.com/
ARUP
http://www.arup.com/
Case Study Project:
- BedZED Eco-village
Farr, D. 2008.
Sustainable Urbanism
- Urban Design with Nature
- Mixed use Development
- Compactness
- Integrated Transport
- Sustainable Corridors
- Green Buildings
- Efficient Infrastructure
Topic of Research: 1
Sense of community in
sustainable neighborhood
Topic of Research: 2
Low tech wind driven
natural ventilation
Topic of Research: 3
Social equity for sustainability:
One Planet Living
Community and Connection
- Sense of community and connection
to nature in sustainable architecture
Health and Happiness
Access and Urban Context
Embedded in Place
Embodied Energy
Bill Dunster, Principal
Zedfactory
- ZED: Zero Energy Development
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Long Life, Loose Fit
Recycling
Sustainable Transport
Sustainable Food+Waste Reduction
Total Life Cycle Costing
Replenishable Sources
Sense of Community
Low Energy
High Performance
BREEAM
- Environment Assess-
ment Method (UK)
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- US Green Building
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Reinterpreting Sustainable Architecture
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- Regional: Cultural Ecology
Eco-aesthetic
- Sensual
Eco-technical
Eco-centric - Global Context: Scientific
-Systemic Ecology
Sustainable Architecture
Case Study: BedZED Eco-village
- Sense of community in sustainable neighborhood
- Low tech wind driven natural ventilation
- Social equity for sustainability
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Cultural Image
Technical Image
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- Meanings of Sustainability
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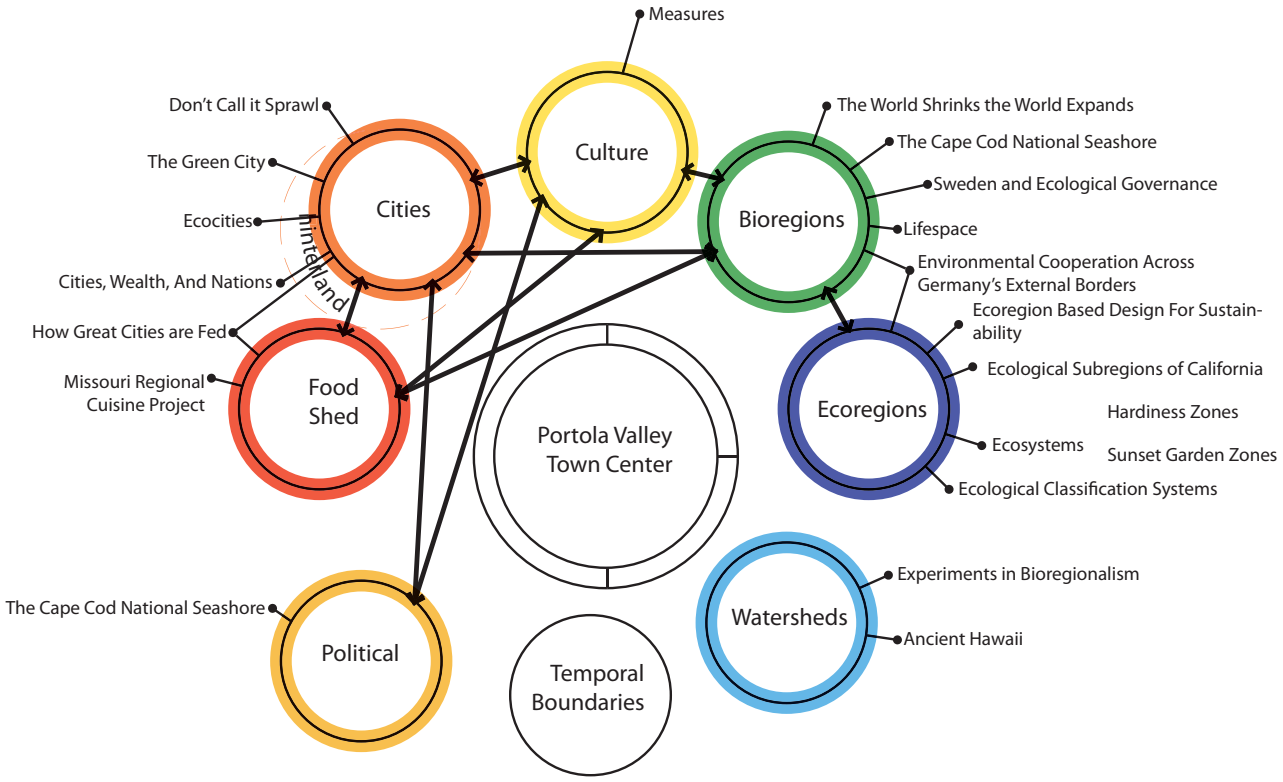
- Images of Sustainable Architecture
McLennan, J.F. 2004
The Philosophy of Sustainable Design
- Meanings of Sustainable Design
- Future of Sustainable Architecture
Hagan, S. 2001
Taking Shape
- Nature and Architecture
- Environmental Architecture
ANNOTATED LITERATURE MAP


Pool from Le Corbusier's "Ear Shaped" curves in the Mill Owner's Building
Amphitheatre Steps echo Wright's Taliesin
TRADITION
Broken China recalls Gaudi's Guell Park
The Architecture of Corbusier and Kahn in the East, Anupam Banerji
INTELLIGENT REWORKING OF MODERN ELEMENTS
Synthesis of two traditions: Reformist Urbanism of Le Corbusier with its emphasis on nature, circulation and hygiene and the other was the ancient urbanism of India with its tight knit streets, urban courts and mixed uses.
The main Water Splash inspired by Salk Labs in California by Louis kahn.
BalKrishna Doshi-An Architecture for India, William Jr. Curtis
TRADITION
Tying the low base and the high roof vaults evokes a sense of seeing the proportions of the deity's face with the crown and the tall shikhara of a temple with its low base.
Vaastu-Shilpa Consultants,Balakrishna Doshi
He explores the mythical and poetic dimensions of nature-flow of breeze and water, contrast of light and shade and relation between ground and sky.
INCLUSION
SUSTAINABILITY
Light into the interior : through normal windows punctured in the wall, another through a skylight, through direct penetration from the flat roof through the glass brick.
"The building consists of vaulted, interlinked structures on various levels. the tones are warm, the space is open."
THEORY OF CITY AS AN ACCRETION OF LAYERS AND OVERLAYS
B V DOSHI
ECO CENTRIC VS ECO AESTHETICS
SANGATH,INDIA
Scientific Labs at University of Gujurat in 1959.
"Served" and "Serving" spaces
Adaptive quality of the built environment.
COLLECTIVISM
COLLABORATION
Richard's Medical Labs
Louis I Kahn
http://www.bdonline.co.uk/story.asp?storycode=3151075
IS THIS THE WAY FORWARD?
http://www.artand culture.com/users/530-balkrishna-doshi
Le Corbusier
Blending with rather than subsuming natural.
"I learned from Le Corbusier to observe and react to climate, to to function, to structure, to economy, and to the landscape.
B.V.Doshi, Contemporary Architects, 1987, p.236


Measures
Culture
Don't Call it Sprawl
The Green City
Ecocities
Cities, Wealth, And Nations
How Great Cities are Fed
Missouri Regional Cuisine Project
Cities
hinterland
Food Shed
The World Shrinks the World Expands
The Cape Cod National Seashore
Sweden and Ecological Governance
Lifespace
Environmental Cooperation Across Germany's External Borders
Bioregions
Ecoregion Based Design For Sustain-ability
Ecological Subregions of California
Hardiness Zones
Ecosystems
Sunset Garden Zones
Ecological Classification Systems
Ecoregions
Portola Valley Town Center
Experiments in Bioregionalism
Watersheds
Ancient Hawaii
The Cape Cod National Seashore
Political
Temporal Boundaries

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YOU'VE CHOSEN AN APPROPRIATE CASE TO SUBSTANTIATE YOUR ARGUMENT. YOUR WRITING IS REASONABLY CLEAR.

GO THROUGH THE FOLLOWING EXERCISE:

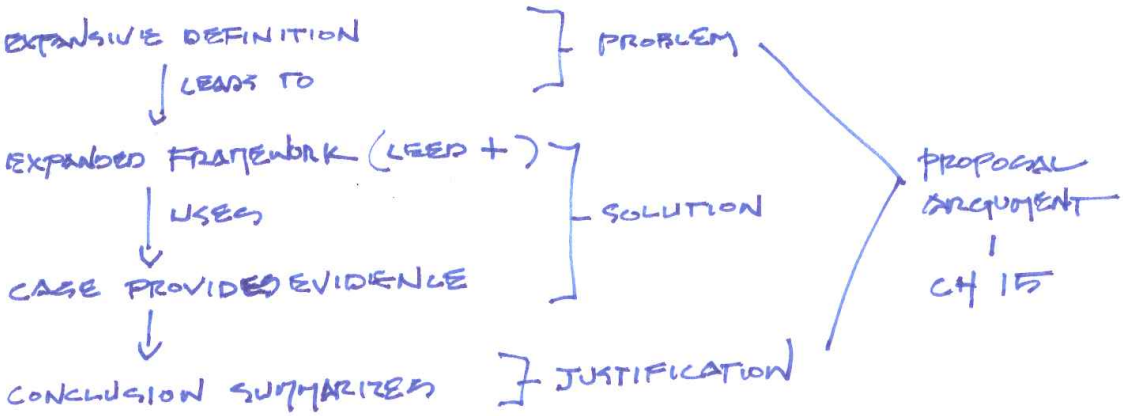
- CLEARLY STATE YOUR INTENTIONS, IN GENERAL, & HOW THIS RELATES TO THE CASE
- YOU'RE USING THIS CASE BECAUSE OF DOSHI'S DESIGN PRINCIPLES – LIST THESE & ENVISION HOW YOU CAN USE THEM TO STRUCTURE YOUR ARGUMENT.

ALL OF THIS MUST BE CONVEYED IN YOUR INTRO.

- WORK THROUGH YOUR PAPER, PLACING SUBHEADINGS WHERE APPROPRIATE
- THESE SUBHEADINGS SHOULD FOLLOW THE STRUCTURE LAID OUT IN THE INTRO. REVISE UNTIL THEY DO.
- REFER TO "EVALUATION" & "PROPOSAL" ARGUMENTS IN WRITING ARGUMENTS TO ASSIST W/ STRUCTURE.

We want the newest, brightest, biggest everything. Because of this, we have issues of climate change, greenhouse gases, and energy consumption. As a tool towards a new trend of sustainable architecture, LEED has provided a system that has had more followers than any other organization of its type and purpose. LEED is not perfect. But as time goes by, newer versions of LEED will become available that are revised and refined to be a better form of sustainability. LEED may not be the best path to a more sustainable future, but at least it gave us a jumping off point and showed the citizens that sustainability can be beautiful.

- YOUR WRITING IS CLEAR & ACCESSIBLE, BE CAREFUL NOT TO GET TOO INFORMAL, THOUGH.
- SO, YOU WANT TO CRITIQUE LEED USING THE 10 SHADES AS A BASIS OF COMPARISON. BEGIN WITH THIS. CONSIDER CREATING A MATRIX THAT HIGHLIGHTS OVERARCHING SIMILARITIES & DIFFERENCES. THIS COULD RESULT IN ADDITIONAL LEED CATEGORIES.
- THESE COMBINED CATEGORIES CAN THEN BE USED TO STRUCTURE YOUR EVALUATION OF THE CASE — MAYBE 7 SUBHEADINGS, FOR INSTANCE. (BY THE WAY, YOUR JUSTIFICATION FOR EXPANSION SHOULD STEM FROM YOUR DEFINITION OF SUSTAINABILITY STATED IN THE INTRODUCTION :)
- UNPACK ALL OF YOUR INFO ABOUT THE CASE & PLACE UNDER CATEGORIES. CASE ILLUMINATES EXPANDED FRAMEWORK.
- CONCLUSION SUMMARIZES FINDINGS — EXPANDED CRITERIA JUSTIFIED BY STRENGTHS & WEAKNESSES OF CASE



ARCH 716/816: Understanding Sustainable Architecture
Professor Michael McGlynn

Culture and Natural Environment in Architecture:
A Regional Approach to Sustainable Design

Kansas State University:
College of Architecture, Planning, and Design
Department of Architecture
4/20/2010

ARCH 716/816: Understanding Sustainable Architecture
Professor Michael McGlynn

Kansas State University - College of Architecture, Planning, and Design
Department of Architecture

ABSTRACT

Sustainability has become an essential part of maintaining a good quality of life, more so in the built environment, where sustainable architecture is now considered to have a major role in shaping our future. Yet the concept of sustainability is so broad that in order to create a work of truly sustainable architecture, one must focus its significance and relevance according to context of place. The importance of using renewable sources, low embodied energy, energy conservation strategies, etc. is outlined in most works referring to sustainability, but it is also the integration of human culture to the natural environment that is an essential part of representing an ecological balance between manmade habitat and nature. With this particular approach in mind *architectural expression should then present sustainability not only in performance but also reflect the integration between the landscape and the history and culture of man in his environment*. But **can a regional integration of culture and environment be an adequate route to reach a sustainable built environment?** Not just in a superficial way, but to create a built environment that respects nature and reflects culture, while providing a high level of comfort for its users. *This also provides deeper insight into the use of regional design as a more feasible approach to sustainable architecture in developing countries rather than a more high-technology based solution.*

The issues of nature and culture are often reflected in the works of Sri Lankan architect Geoffrey Bawa. One project that specially showcases the terrain and natural assets of site, while keeping the integrity of tradition is the Kandalama Hotel, Dambulla, Sri Lanka. The unique design of this building provides the opportunity to examine if this particular approach to sustainability is feasible*, in this case study it may be determined whether the integration of culture and environment can be done in a coherent way according to the specific characteristics of the area, such as climate, socio-economics, culture and environment.*

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INTRODUCTION:

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The first point in trying to solve the question of how environment and culture can be combined through a regional approach to form a sustainable built environment is to define the meaning of *sustainable architecture*. The meaning will be found in relation to the Kandalama Hotel in Sri Lanka by architect Geoffrey Bawa. It's important to establish a relevant definition, even if the subject is too complex to conclude a definitive one. This is done to compare and contrast the different criteria and principles needed to evaluate the sustainability of this work of architecture.

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Once this is established, an introduction is made of different logics or world views presented by Guy and Farmer in their article "Reinterpreting Sustainable Architecture: The Place of Technology" (Farmer, 2001), they are analyzed as an approach to sustainable architecture. Then an overview of the ten shades of green by Peter Buchanan is made, these shades are focused on the technical functions that support sustainability (Buchanan, 2005). Both the Logics and the Shades need to be considered within the context of the region, focusing on culture, climate and landscape. This can be made by looking at the specific characteristics of the case study.

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Once these arguments for sustainability have been defined, a synthesis is made of how the Logics and Shades can be combined to provide a regional solution, the overlap is found through common factors they share such as its priority on environment, people and/or place which will be later analyzed in greater detail. Finally this cohesion creates an evaluation criterion that is applied to the case study in order to find if it's an adequate architectural response that integrates culture and environment in a sustainable manner.

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ECOLOGY AND DESIGN:
Defining Sustainable Architecture.

Sustainability is a wide and complex subject, and its place in architecture is a source of large debate and research. Sustainable architecture can't be defined in one single concept, since it may depend on a particular approach, philosophy of place or strategies for creating a sustainable built environment. As Cook and Golton put it, "the designation 'green' is extremely wide ranging, encompassing many viewpoints and open to broad interpretation," with sustainable architecture embodying an essentially contestable concept." (Golton, 1994)

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Sustainable architecture then, has many different perspectives, which are determined by a particular social interest or a unique perception of the problem, resulting in a wide range of possible solutions. "Environmental architecture, in other words, is environmental architectures, a plurality of approaches with some emphasizing performance over appearance and some, appearance over performance." (Hagan, 2001)

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Peter Buchanan states that "there can be no single route to sustainable architecture" (Buchanan, 2005). Yet if this is true then how do we choose an appropriate route? And **how can we find an adequate representation of sustainable architecture that integrates nature and culture?** When searching for a proper definition, it is important to take into account that the value is not in finding a one size fits all formula, but rather finding a combination of relevant solutions in the context of a particular place. Addressing the triple bottom line of social, environmental and economic aspects in the design of not only the building, but also of place, relating to the specific attributes of the region and historical background where the building will be placed.

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For this particular study it is important to realize that sustainable architecture that is relevant to a developing country such as Sri Lanka can be seen as integrating **PEOPLE** and **ENVIRONMENT** to create a built environment or **PLACE** that is constantly responsive to the ambient and ecological conditions while maintaining a cultural identity.

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ECO- LOGICS:
Competing for the Right Approach

While there are various ways of addressing the problem of unsustainability, it is important to categorize and define certain tendencies in philosophical approaches to sustainable architecture. This is useful in giving more insight into how environment and culture should be integrated. Guy and Farmer in their article "Reinterpreting Sustainable Architecture: The Place of Technology" (Farmer, 2001) provide logics as a philosophical approach to sustainability. These logics are a group of ideas, concepts and practices that transcend to physical manifestations in the form of architecture.

Eco-Technic Logic: this logic has an emphasis of technology, human policy and management as the main source of solving unsustainability.
Eco-Centric: Its focus is on low or no ecological footprint over the environment, with nature as the dominating and most important aspect.
Eco-aesthetic: A metaphorical expression of the importance of environmental conservation through architectural language. It seeks to create iconic representation of societal values towards sustainability in its built environment through pleasing visual integration of man and nature.
Eco-Cultural: It values the importance of human culture integrated to the natural environment. This logic focuses on the importance of preserving cultural diversity as well as an ecological diversity.
Eco-Medical: It seeks to address issues of **human** well-being through architectural integration to the natural environment. This logic intends to create a very habitable built environment in sync with its natural surroundings, which then presents a healthy balanced way of life for man within the environment.
Eco-social: In this logic sustainability is part of the common needs and goals of the community that inhabits the area. This approach is based on the shift from large industrial society to a smaller local self-sustaining unit, a unit that works towards maintaining and preserving their way of life as well as their immediate depending ecosystem.

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The use of logics is explored in this argument not as evaluation criteria to establish how sustainable a work of architecture may be, but rather **to define the philosophical approach of the design**. The strength of any given design, as Guy and Farmer conclude, is not of a single dominating logic or world view but a consideration of all issues and possible solutions, creating a subtle blend of several of them according to the specific needs of place, which would then produce a better degree of sustainability.

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TEN SHADES:
Performance Criteria

Having defined the philosophical approach to a project, and how exactly it seeks to become a sustainable work of architecture, it is also important to analyze more specific ways in which a building may become sustainable. In his book, *Ten Shades of Green*, Peter Buchanan gives an insightful and more focused framework for determining the degree of sustainability of a building based on its *performance*. He also states that, while something may function in a sustainable manner, it should also be culturally relevant.

"There is no reason why sustainable design should not be compatible with culturally stimulating and expressively vital results." (Buchanan, 2005)

1. **Low Energy/ high performance:** Optimizing the use of its natural resources and maintaining low energy consumption, use of natural light, ventilation etc.
2. **Replenishable Sources:** Harvesting renewable ambient energies such as sun, wind, waves, gravity and geothermal power.
3. **Recycling: Eliminating Waste and Pollution:** Re-use of materials, as well as managing waste and avoiding pollution of the natural environment.
4. **Embodied Energy:** Energy and resources consumed in the materials used for building.
5. **Long Life, Loose Fit:** Built with enduring materials, yet with an adequate adaptability of the building for future needs, as well as a pleasant timeless image.
6. **Total Life Cycle Costing**: Continuing expense of the building, capital cost to environment and society.
7. **Embedded in Place:** Integration to its surroundings, creating a connection to the region through sustainable values.
8. **Access to Urban Context:** Its connection to the existing infrastructure is important, such as roads, pedestrian streets of public transport.
9. **Health and Happiness:** Absence of toxic materials, healthy environment for man with fresh air, natural light, etc.
10. **Community and connection:** Must provide a sense of community and connection to the natural world. Sense of belonging to its people.

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Regional Design:
Designing with Nature and Place

David E. Miller in his book *Toward a New Regionalism* proposes: "How does a designer determine the overall conception and realization of architectural form that captures the spirit and quality of place and at the same time addresses the propelling issue of our day the world of ecological dysfunction?" (Miller, 2005)

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This is a key question in determining how to bring culture and environment with a clear concept of ecological placemaking and sustainable architecture. Geoffrey Bawa has a deep understanding of the importance of place, of culture, and of the sanctity of nature.

"We have a marvelous tradition of building in this country that has got lost. It got lost because people followed outside influences over their own good instincts. They never built right "through" the landscape. You must "run" with the site; after all, you don't want to push nature out with the building"
Geoffrey Bawa [1919-2003] (Robson, 2002))

Figure 1)Malwatte Vihare, Mawanella. View into the rice fields from upper main level of the shrine room

figure 2)Back of Ewiliekke Devale.-Drawing by Barbara Sansoni

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Bawa makes a strong statement regarding the importance of local building tradition. *Yet the value of the vernacular lies not only in the cultural and historical significance, but also in its acknowledgement of the specific characteristics of site and climate, to which it creates an adequate response.* This is evident in Sri Lanka´s traditional architecture as it makes use of the natural environment, using regional material, adapting to climatic conditions through roof shape, wide views to open spaces that permit ample natural light and ventilation, corridors on the outside that serve to connect interior to exterior and interior spaces with opening in the ceiling.

Ronald Lewcock, Barbara Sansoni and Laki Senanayake, in their book *The Architecture of an Island: The Living Legacy of Sri Lanka*, state "The study of traditional architecture is in its infancy; much more needs to be collected so that methods of classifying our knowledge can be developed, and we can reach a more perfect understanding of its implications and the lessons we might learn from it." (R. Lewcock, 1998) In their view the lessons from the past are ways to improve our future, in the case of architecture by respecting the importance of location, climate and culture; it will not only give the built environment a more symbiotic relationship with nature, but also enrich the architectural formal response.

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Figure3) Embekke Devale. Tower of the sanctuary and the roof of the small devale seen across the rice fields.

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When looking more closely at this relationship, It´s important to address the performance of the building and at the same time retain the ideals of its approach to sustainable design. Architecture must have a physical and spiritual connection to the region, which provides it not only with feasible solutions of performance (use of natural climatic conditions such as wind, light and landscape) but also a less superficial and more profound sense of place, giving the building identity and creating cohesion between culture and environment.

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KANDALAMA HOTEL:
Case Study in the Context of Place

Sri Lanka is a country of great ecological diversity as well as rich history, the union of both is reflected in the traditional vernacular architecture in various regions around the nation. The country is an jsland to the south of India, separated by a small ocean. The climate is mostly humid, sub-tropical, and some particular areas dry climate. (R. Lewcock, 1998)

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Figure 4)http://www.geographicguide.net /asia/maps/sri-lanka.jpg

figure 5)Wattegakama Shrine, Distant View.

In 1991 Geoffrey Bawa was commissioned to design a hotel close to King Kasyapa's rock citadel at Sigiriya. Bawa rejected the proposed site and persuaded the clients to move the hotel about fifteen kilometers to the south to a rocky outcrop above the ancient Kandalama Tank. The hotel was to be located at the crossroads of several ecological zones that contain a wide range of wildlife in the center of the cultural triangle. The area has a Dry Zone climate.

The hotel was the first environmental hotel project in Sri Lanka at the time, it also touched upon the social sensibility of the design in its conceptual stage, to which there was significant consultation with the local community. The initial conception of the project was surrounded by controversy, due to the fact that the area had many inhabitants of a relatively undeveloped region who had a very traditional way of life, and a project of this magnitude would certainly have a deep impact on the people of the

region. There was also a strong resistance to tourism development because of the diverse wildlife in the region.

Yet all these issues were addressed by using the hotel as an economic anchor with eco-tourism, and at the same time the preservation of natural environment. The appreciation of nature and its direct connection of the built environment would be playing a major role in the concept of the building. Bawa´s vision for the building was to use the unique characteristics of the landscape to create a sequence of experiences for the user, where the work of architecture would not just be a monumental landmark towering over the cliffs, but rather a part of the natural environment and something to be experienced rather than just looked at, its final design the 160-bedroom hotel is wrapped around the two sides of the rock with rooms facing across the tank towards Sigiriya and Dambulla. (Robson, 2002)

Figure 6) Foliage in the main façade.
http://www.geoffreybawa.com/work/Contextual_Modernism.html

The deep concern for place, conserving traditional culture, and at the same time creating a work of ecologically responsible built environment is often reflected in the works of Sri Lankan architect Geoffrey Bawa. This project specially showcases the terrain and natural assets of site, while keeping the integrity of tradition. The unique design of this building provides the opportunity to examine if this particular approach to sustainability is feasible*, in this case study it may be determined whether the integration of culture and environment is done in a coherent way according to the specific characteristics of the area, such as climate, socio-economics, culture and environment.*

SYNTHESIZED ANALYSIS:
Reaching Cohesion

When evaluating the accuracy of the ten shades of green and the logics, it's important to recognize the validity of both individually. Yet to define if it is truly a sustainable building, the overlap must be identified as well as the relevance of solutions according to the region. While the Ten Shades evaluate performance and context, the Logics define its focus in terms of ideology. If we analyze and synthesize both, it can be determined the priority in which the issues of environmental design will be addressed. These priorities are divided into 3 main points of focus.

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- **ENVIRONMENT:** The priority of this solution in either the ten shades, or the ideology of the logic, is to put the natural environment as the main concern.

- **PEOPLE:** This refers to the priority of improving the human quality of life. Its main goal is to modify the natural environment so it adjusts to satisfy the basic needs of society and its members. This will range from cultural, economic, psychological and/or physiological necessities.

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- **PLACE:** When addressing place, it means the priority of this particular point will be to enhance the specific attributes of the area; it may be topographical, local cultural, or specific regional qualities. This is where the focus is on integrating man and nature to CREATE a habitable place. The focus is on the built environment (building, block, city, or general artificial habitat.)

The project uses the natural landscape to its advantage, making it part of its image, which adds to the uniqueness of architectural form. The architecture is also culturally relevant to the place and gives it quite a distinct identity. Although not an epitome of modern green architecture in terms of high technology, there is a clear concept of responsible regionalism in its use of building system and materials. There is also the sensibility to the surrounding ecosystems as part of the very philosophy of the project. There are a number of adequate solutions that combine the shades and logics through prioritizing Environment, People or Place.

It's important to state that these points (Environment, People or Place) don't seek to oversimplify sustainable architecture into addressing only these 3 points, but

rather using them as a common denominator or connecting factor for evaluation using both logics and shades.

Point 1: Low energy

Because of the particular climate, this building has advantages in energy conservation; not needing to have the whole building heated is a big advantage for the use of natural ventilation and integration to nature. There are various openings in the form of an outer exposed skeleton composed of timber sun-breakers, covered by a skin of green wall made up of vegetation that serves to shade and keep cool the inside. There is also a use of flat roofs and a concrete frame that are relevant to the site and the dry zone climate.

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The design cools the buildings naturally with stack and cross ventilation, verandahs and overhanging eaves, except for the bedrooms, restaurants and conference rooms that use air conditioning. There are tall pillars that are spaced apart in a way as to create spacious corridors, while the lack of walls allows natural light to flood the interior, saving on the use of electricity during the day. The design helps reduce energy consumption.

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Figure 7) Exterior view showing planted façade

Figure8) View from upper terrace across landscape

Low energy performance is something that is very important in areas of low economic development, because there are a wide number of developing nations whose climate is of extreme temperatures, be it heat or cold. People adapting and dealing with hazardous weather conditions is embedded in culture and history, which is reflected in the architecture of the region, eco-cultural logic can be felt with an emphasis on creation of culturally relevant place.

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It has a unique aesthetic feel of integration to nature through its openings and green facades that seem to be part of the mountains, with an environmental concern through use of natural landscape, it uses eco-aesthetic logic from its use of vegetation

found in the environment as part of the buildings image. It also provides visual access to the outside addressing peoples contemplation of nature and fresh air flow, its eco-medical by focusing on People´s philological need for the outdoors and fresh air.

Point 2: Replenishable Sources:

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At the base of the building, Bawa used the existing rock as base for his constructions, visible in some parts of the building. Not only has the natural environment been used, but also the project seeks to restore balance of the ecological footprint the building has had in its foundation, using the rock formation to shape its form. With some redundancies from the previous point, it has a clear concept in the use of wind as natural ventilation, sun as natural light, and vegetation to help cool the building. It certainly uses natural renewable sources to enhance the performance of the building. It uses the history of traditional architecture focusing on the relationship of **people** with the exterior, which can be read as **Eco-Cultural logic**. Also Its **Eco-Aesthetic** tendencies can be seen in its use of vegetation as a source of natural cooling system, clear respect for the **Environment**.

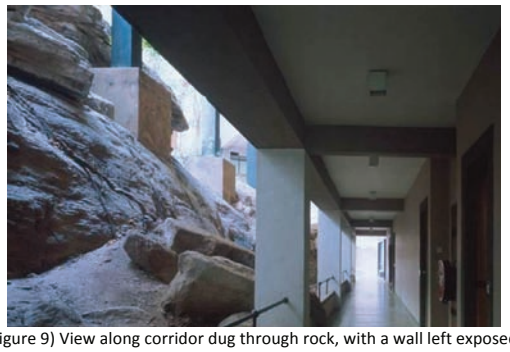

Figure 9) View along corridor dug through rock, with a wall left exposed

Point 3: Eliminating Waste and Pollution

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Although not immediately perceivable, the building does have waste management. A study was conducted by Green Globe Company, where they state that waste water generated by the hotel is treated and recycled within a modern and well maintained and operated system. This is then recycled for watering of the hotel compound. Other attempts by the hotel to reduce waste and conserve resources include rain water collection tanks and use Grey water from filters and softeners in the water treatment plant is collected and used to spray the gravel to reduce the distribution of dust. (Kimberly Christopher, Dr.Johannes Bauer, 2001)

As the study shows Kandalama hotel also encourages its suppliers to reuse glass bottles and jars for their products. The use of clay pots instead of plastic containers is done whenever possible, as well as sending waste paper for producing recycled paper which is used for hotel stationery. They integrate into the culture of the buildings (Eco-cultural logic) user with the need for environmental conservation. The building seeks a low ecological footprint through managing its waste and resource consumption.

Point 4: Long Life, Loose Fit

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The look and feel is ageless in terms of the architecture, its modern style serving as infra-skeleton that is covered by vegetation, it provides this look focusing on having the building rise up from the ground, with an **eco-aesthetic** logic at its base and exterior showing it has used its landscape to create a very distinctive **place**. Although the hotel has a very particular use, the place may provide other uses in some of the spaces, such as cultural gatherings, academic conferences, etc. It integrates to the landscape in a very unique way, adapting to the shape of the topology, becoming a visual icon that the people of the region would want to promote and preserve.

Figure 10) Pool with view over tank towards Sigiriya

Point 5: Embedded in Place:

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Although the ecological footprint may be greater than it seems (mostly due to the sheer size of the hotel), the design of the building seems to provide the user with the impression of integration to nature. The concept of the building is to provide identity for that particular place through the use of the natural landscape; the building gives the impression of coming out of the rock, and then growing to produce vegetation.

Figure 11) General view showing sitting with mountain and views in mind.

Figure 12) Exterior view showing planted façade

It uses the concepts of wide corridors and illustrious view from within the building towards the exterior, with clearly defined columns to frame the structure; this is taken from the various vernacular architectures that exist on the island. Yet although it pays homage to traditional vernacular architecture of the region, and uses its principles for optimization of climatic conditions and resources (natural lighting, ventilation, passive cooling) it also creates a place that adapts to the landscape and retains its image. This way it has clear roots to both its culture and environment.

Its connection to place can be seen in its **eco-aesthetic** tendencies, using distinct visual characteristics such as foliage to integrate to the jungle (*environment*) and an **Eco-Cultural** logic by using the principles of traditional architecture that people of the region recognize, creating a proper balance of environment and culture.

Point 6: Health and happiness.

The subtle integration of the building to its natural surroundings, which gives it a very palpable connection to nature. It provides spectacular views from within the building; which then creates an impressive sequence of experiences presented to the user. There is a constant contact with the outdoors, yet at the same time the security provided by the structure and attachment to the rock. There is a good use of natural lighting and quality of air, all this integrated in a very aesthetic manner creates a very healthy and happy environment. It uses the **eco-aesthetic** logic by reshaping the landscape to create a very distinct sense of **Place,** while taking into account elements of **Eco-Medical** by using the beauty of the natural **environment** to provide a peace, tranquility and happiness to those that experience the building.

Deleted: re

Figure 13) Interior view showing glazing.

Figure 14) Rooms with natural ventilation and light

Point 7: Community and Connection

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The hotel strives to benefit the local communities and preserve the cultural and natural heritage of the area. It uses **Eco-Culture** by focusing the traditional indigenous way of life to attract tourism, creating income for **people** of the region. It uses **Eco-**

Aesthetic logic by making the building seem like an extension of nature through its image (**environment**). There is also an Eco-Park on 5 acres of land within the grounds of the Hotel (Kimberly Christopher, Dr.Johannes Bauer, 2001) to further state the importance of preserving the ecosystems adjacent to the building. This provides access to the cultural and ecological diversity in the area. There is an acute awareness of an area's geography and culture.

If Green architecture or Sustainable architecture are simply different terms for designing with nature (Yeang, 1995) then by extending that parameter to include designing with location, culture and climate, it may be possible to integrate performance and philosophy to create a built environment that is continually responsive to the changing ambient conditions and cultural background of place. The connections between the Ten Shades, the Logics, and importance of regional context may be redundant in some points, but there is a clear distinction in the priority of addressing the issues of Environment, People or Place for each overlap of shades and logics.

Deleted: logics

Deleted: Regional

		6 LOGICS					
		1.Eco-Technic	2. Eco-Centric	3. Eco-Aesthetic	4. Eco-Cultural	5. Eco-Medical	6. Eco-Social
TEN SHADES	1. Low Energy/ high performance:			Envirnoment	Place	People	
	2. Replenishable Sources:			Envirnoment	People		
	3. Recycling:				Envirnoment		
	4. Embodied Energy:				Envirnoment		
	5. Long Life Loose fit:				Place		
	6. Total Life Cycle Costing: .						
	7. Embedded in Place:			Envirnoment	People		
	8. Access to Urban Context:						
	9. Health and Happiness:			Place		Environment	
	10. Community and connection:			Envirnoment	People		

Comment: Environment is misspelled.

Figure 15) Evaluation table

Comment: You should have placed this table immediately after you discussed Environment, People, and Place. This would then serve as a key for the rest of the paper.

CONCLUSION:

As a result of the analysis and search for cohesion, a connection between logics and shades can be found in the Kandalama Hotel in the form of people, environment and place. The Kandalama Hotel shows that there can be an integration of culture and environment.

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It became evident that by utilizing certain aspects of both logics and shades, the result is a viable response to unsustainability, David E. Miller suggests that "Architects need to work toward a rational and timeless architecture that sustains the qualities of place" (Miller, 2005). By directly establishing how to address Environment, People and Place, it becomes more efficient to integrate performance and ideology. In the end the true value of the building lies not only in providing a few specific attributes of sustainability, but rather in the whole integrated concept of the design, relevant to the context of a particular region.

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Figure 16) Hotel entrance - Use of green roofs that help cooling and contribute to environmental image.

Bawa has a very distinct sense of one with nature and belonging to place, he shows both sensitivity of the cultural background, while acknowledging the importance of environmental sustainability. He reflects the local vernacular tendencies in his architecture mimicking technical solutions but also uses the landscape as a means of architectural expression. He addresses this particular building as a building to look from and not to look at, implying that architecture is not only an object of aesthetic pleasure

but also of experience and interaction. This shows that he has a wide concept of philosophical approaches as well as knowledge of technologies for providing a comfortable environment. He demonstrates how environment and culture can be mixed to give the user a unique experience and establishing a deep connection with place.

The Kandalama Hotel uses the vernacular tendencies of the region in its materials and construction principles, the local ecological diversity, and the unique topography of the site to enhance its architectural image. Not only this but it also provides the people of the region with an economic income through eco-tourism, making culture and environment valuable assets to protect and promote. This creates a symbiotic relationship between the economic development, social equity and environmental management, becoming a model for sustainability in the built environment.

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Figure 17) View from interior through glass walls

The Kandalama Hotel has a clear ecological placemaking philosophy and an effective functionality in terms of sustainability; it takes the specific environmental attributes and needs of people of the region, and manages to create a unique PLACE. All of this in an economically and technologically underdeveloped part of the world, which provides a model of how sustainable architecture can be introduced in a coherent and relevant manner. The importance of place, enhancing, respecting and SUSTAINING the natural environment is imperative in providing not only an ecologically responsible built environment, but also improving quality of life for all the members of the regional ecosystem.

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Deleted: place

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Figures

Figures 1,-3,5) Architecture, Source Aga Khan Trust for Culture Caption. R. Lewcock, B. S. (1998). *The architecture of an Island - The living Legacy of Sri Lanka state.* Barefoot LTD.
Figure 4) www.geographicguide.net/asia/maps/sri-lanka.jpg
Figure 6) www.geoffreybawa.com/work/Contextual_Modernism.html
Figure 7-14,16,17) Photographer Christian Richters, 2001 Copyright Aga Khan Award for Architecture, Source Aga Khan Trust for Culture Caption.

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Kansas State University
College of Architecture Planning and Design
Department of Architecture

ARCH 716/816: Understanding Sustainable Architecture
Spring 2010
Professor Michael McGlynn

Paper Rubric

(82%)	Exceptional	Strong	Average	Below Average	Unacceptable
Organization (Is the argument properly structured?)			•		
Is a significant question or research problem posed in the introduction? Does the introduction establish the major claim type and outline the structure of the argument that is to follow? Does the body of the paper follow the argument and the outline established in the introduction? Does the conclusion succinctly tie together the major claims of the argument? Is the written argument supported graphically?	**Comments:** You pose a significant question in the introduction and the major claim type (evaluation) is established, while the structure of the argument is generally outlined. The structure is revealed as the body unfolds, Logics and Shades in relation to the case, but there are significant flaws in how you have ordered the information. The table should be placed immediately after you discuss Environment, People, and Place. Then, the reader will understand the relationship between the Shades and Logics and you introduce the structure for the remainder of the paper.. The conclusion is rather weak. This is where you should pull together the various threads of your argument. Instead, the conclusion is too general and repetitive. The argument is reasonably well supported graphically.				
Development (Is the argument convincing?)		•			
Does the paper establish the context for the proposed argument while avoiding extraneous background or summary information? Are all of the argument's claims supported with relevant and sufficient evidence? Is the chosen case, or aspects thereof, explicitly used as evidence in support of the argument? Does the paper offer insightful observations and connections that demonstrate a thorough understanding of the material? Does the paper provide a convincing, insightful interpretation of the evidence?	**Comments:** The paper establishes the context for the proposed argument while avoiding extraneous background or summary information and the chosen case is explicitly used as evidence in support of the argument. The development of your argument is thwarted by the structure, though. Why not group the various shades/logics under the headings Environment, People, and Place to lend them more coherence? That's the real value of the table. The paper offers reasonable observations and connections that demonstrate an understanding of the material and the interpretation of the evidence is convincing, as far as it goes.				

Style (Is the argument clearly communicated?)		•			
Does the paper meet the length requirement of the assignment? Is the paper free of grammar, punctuation, and spelling mistakes? Does each paragraph begin with a clear topic sentence, contain one clear point, and connect to other paragraphs with smooth transitional sentences? Does the paper avoid the passive voice, convoluted words and phrases, and overly lengthy sentences and paragraphs? Does the paper properly use the Harvard (author-date) citation style for citing works?	**Comments:** The paper exceeds the length requirement of the assignment. Grammar, punctuation, and spelling mistakes are sprinkled throughout the paper. You should have found yourself a good proofreader as many of these mistakes were easily corrected. You also have a tendency to create run-on sentences. A proofreader can help in this regard as well. Citations are consistently applied, but you should cite your figures in-line for consistency.				

Grading Scale

A = Excellent in all or nearly all aspects. The interest of the reader is engaged by the ideas and presentation. Style and organization seem natural and easy. Paper marked by originality of ideas.

B = Technically competent, with a lapse here and there. The thesis is clear, properly limited, and reasonable, and the prose is generally effective without rising to sustained distinction.

C = A competent piece of work but not yet good. C papers are more or less organized along obvious lines and the thesis tends to be oversimple or imprudent without being wildly implausible. Monotony of sentence structure is apparent and errors are sprinkled throughout. In some C papers, excellent ideas are marred by poor presentation-either development, organization, or technical errors. In other C papers, the organization, structure, and grammar are not flawed, but the ideas and how they are developed need work. In yet other C papers, there are only a few technical errors and the organization and ideas are adequate but not noteworthy.

D = A piece of work that demonstrates some effort on the author's part but that is too marred by technical problems or flaws in thinking and development of ideas to be considered competent work.

F = This is a failing grade, usually reserved for pieces of work that demonstrate minimal effort on the author's part. The writer has drastically misinterpreted the assignment and written half as many words/pages as requested. Paragraph breaks are random; subjects and verbs, pronouns and antecedent turn against one another in wild discord.

adapted from Davis, 1993

Culture and Natural Environment in Architecture: A Regional Aproach to Sustainable Design

Can a Regional Integration of culture and natural environment be an adequate route to creating sustainable Architecture?

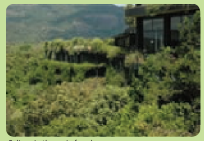
COLLEGE OF ARCHITECTURE PLANNING & DESIGN
KANSAS STATE UNIVERSITY

Understanding Sustainable Architecture
Professor Michael McGlynn

Kansas State University
College of Architecture, Planning, and Design
Department of Architecture

Ecology and Design: Defining Sustainable Architecture

"There can be no single route to sustainable architecture" (Buchanan, 2005) yet if this is true then how do we choose an appropriate route? And how can we find an adequate representation of sustainable architecture that integrates nature and culture? When searching for a proper definition, it is important to take into account that the value is not in finding a one size fits all formula, but rather finding a combination of relevant proposals in the context of a particular place. Addressing the triple bottom line of Social, Environmental and Economic Factors where the building will be placed.


Foliage in the main façade.


Exterior view of façade

An aproach that involves adequate management of local resources provides deeper insight into the use of regional design as more feasible approach to sustainable architecture in developing countries.

Sustainable architecture can then be seen as integrating PEOPLE(culture) and ENVIRONMENT(nature) to create a PLACE that is constantly responsive to the natural conditions of its region and location, utilizing its resources within the boundaries of its ecological capacity.

TEN SHADES: The adequate evaluation criteria?

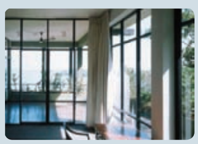
In his book, Ten Shades of Green, Peter Buchanan gives an insightful and more focused framework to determining the degree of sustainability of a building. The ten shades are used as performanced based guidelines and strategies to establish a criteria to further understand the connections between environment and culture represented in the case study.

Although a work of sustainable architecture is about the integration and balance of the economic, social and environmental components, it is also about an ideal technical performance in the context of place.

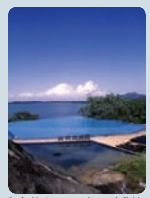
The particular characteristics of how the sustainable building differs from regular buildings serve as a quantitative measure of the building´s commitment to sustainability

1. Low Energy/ high performance
2. Replenishable Source
3. Recycling
4. Embodied Energy
5. Long Life / Lose Fit
6. Total Lifecycle Costing
7. Embedded in Place
8. Acces and Urban Context
9. Health and Happiness
10. Community and Connection


Exterior view showing corridors connecting guest rooms


Interior view showing glazing

LOGICS: Competing for the right approach.


Pool with view over tank towards Sigiriya

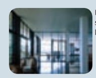
LOGICS:
1. Eco-technic
2. Eco-Centric
3. Eco-Aesthetic
4. Eco-Cultural
5. Eco-medical
6. Eco-Social

Guy and Farmer in their article "Reinterpreting Sustainable Architecture; The Place of Technology" provide logics as a philosophical approach to sustainability, they are a specific group of ideas, concepts and practices that transcend to physical constructs in the form of architecture.

Its important to awknoledge that these logics are competing world views, yet their strenght is not as evaluation criteria to establish how sustainable a building actually is, but rather to define the philosophical approach of the design.

The success of sustainable design is not based on a single dominating logic but a coherent blend of several of them relevant to región and specific characteristics of place.

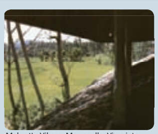

Exterior view showing dramatic projecting covering over entrance


Interior view showing natural lighting

Regional Design: Designing with Nature and Place

"We have a marvelous tradition of building in this country that has got lost. It got lost because people followed outside influences over their own good instincts. They never built right "through" the landscape. You must "run" with the site; after all, you don't want to push nature out with the building"
Geoffrey Bawa [1919-2003] (Robson, 2002)

Bawa has a deep understanding of the importance of place, of culture, and of the sanctity of nature, But his concept of using tradition to integrate to the natural environment proposes the idea that **the value of the vernacular lies not only in the cultural and historical significance, but also in its acknowledgement of the specific characteristics of site and climate, to which it creates an adequate response.**

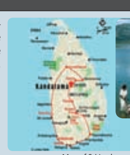

Malwatte Vihare, Mawanella. Viwe into the rice fields from upper main level of the srhine room

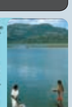

Back of Ewilıekke Devale.-Drawing by Barbara Sansan

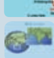
Kandalama Hotel: Case Study in the Context of Place

The country is an Island to the south of India, separated by a small ocean. The climate is mostly humid, sub-tropical, and some particular areas dry climate. (R. Lewcock, 1998)

In 1991 Geoffrey Bawa was commissioned to design a hotel close to King Kasyapa's rock citadel at Sigiriya. Bawa rejected the proposed site and persuaded the clients to move the hotel to a rocky outcrop above the ancient Kandalama Tank. The hotel was to be located at the crossroads of several ecological zones that contain a wide range of wildlife in the center of the cultural triangle. The area has a Dry Zone climate zone.




View of project

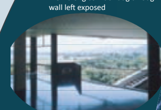

Map of Sri Lanka - Focus on location of Kandkalama hotel

Synthesized Analysis: Reaching Cohesion


Exterior view showing planted façade

When evaluating the accuracy of the ten shades of green and the logics, it's important to recognize the validity of both individually. Yet to define a sustainable building, the overlap between shades and logics must be identified, as well as the relevance of solutions according to the region. While the Ten shades evaluate performance and context, the logics define its focus in terms of ideology, If we analyze and synthesize both, it can be determined the priority in which the issues of environmental design will be addressed. These priorities are divided into 3 main points of focus.


View along corridor dug through rock, with a wall left exposed


View from upper terrace across landscape


View from interior through glass walls

It's important to state that these 3 priorities don't seek to oversimplify sustainable architecture into addressing only these 3 points, but rather using them as a common denominator or connecting factor for evaluation using both logics and shades.

- Environment
- Place
- People

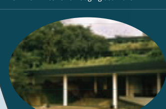
The Connection between the shades and logics is about Quality, not Quantity in terms of sustainability.

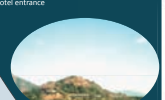
The project is within Economic and Technological Capacities while showcasing environment and culture

Philosophy of the design has a symbolic representation of sustainability that strengthens ecological responsibility in the region.

Model for developing countries: philosophical approach and technical data.

Contributes to cultural preservation and symbiotic relationship with the natural environment to create PLACE.


Hotel entrance


General view showing sitting with mountain and views in mind

TEN SHADES	1. Eco-Technic	2. Eco-Centric	3. Eco-Aesthetic	4. Eco-Cultural	5. Eco-Medical	6. Eco-Social
1. Low Energy/ high performance			[illegible]	[illegible]	[illegible]	
2. Replenishable Source			[illegible]	[illegible]		
3. Recycling				[illegible]		
4. Embodied Energy						
5. Long Life Loose Fit				[illegible]		
6. Total Life Cycle Costing						
7. Embedded in Place			[illegible]	[illegible]		
8. Access and Urban Context						
9. Health and Happiness			[illegible]		[illegible]	
10. Community and connection			[illegible]	[illegible]		

References
(n.d.).
Buchanan, P. (2005). Ten Shades of Green: Architecture and the Natural World. New York: Architectural League.
Farmer, G. a. (2001). Reinterpreting Sustainable Architecture: The place of Technology. Journal of Architectural Education, 140-148.
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Figures
Figures in Regional Design section, traditional buildings: Architecture, Source Aga Khan Trust for Culture Caption. R. Lewcock, B. S. (1998). The architecture of an Island - The living Legacy of Sri Lanka state. Barefoot LTD.
Figure of Sri Lanka map: www.heritancehotels.com/kandalama/browse.php?catId=120
Foliage in the facade of kandalama hotel: www.geoffreybawa.com/work/Contextual_Modernism.html
All pictures of Kandalama hotel: Photographer Christian Richters, 2001 Copyright Aga Khan Award for Architecture, Source Aga Khan Trust for Culture Caption. - http://archnet.org/library/sites/one-site.jsp?site_id=7321

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- www.yourhomeplanet.com/ecolodgical/ggkandalama.pdf
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Kansas State University
College of Architecture Planning and Design
Department of Architecture

ARCH 716/816: Understanding Sustainable Architecture
Spring 2010
Professor Michael McGlynn

Poster Rubric (A re-presentation of your written argument)

Name (95%)	**Strong**	**Developing**	**Marginal**	**Absent**
Organization (Design)				
Does the **Title and Subtitle** indicate the topic and serve as a launching point into the argument?	•			
Do you use **Headings and Subheadings** to structure the argument based on the major claim type?	•			
Do you use **Navigational Cues**, such as numbers, letters, and arrows, to guide the reader through your poster?		•		
Do you develop a **Graphic Hierarchy** to assist the reader in determining the relative importance of various elements?	•			
Do you format the poster in **Columns or Rows** to facilitate the flow of information?	•			
Does the poster read from top-to-bottom and left to right, working with **Reader Gravity** (Wheildon 1995)?	•			
Does the poster have a good **Visual Balance** of figures and text separated by white space along an axis of symmetry?	•			
Do you use **Color and Pattern** subtly to attract, but not overwhelm, the reader and consistently so as not to confuse the reader?	•			
Content (Argument)				
Are the significant question or research problem and major claims readily apparent?	•			
Is the poster primarily graphic in content, using text as necessary for support?		•		
Are the graphics clear and appropriate to the argument?	•			
Is the text concise or are important points highlighted within blocks of text?		•		
Did you use the development of the poster to restructure, refine, or otherwise advance the argument?		•		

Do you include a conclusion that succinctly ties together the major claims of the argument?	•			
Do you clearly identify yourself as the author, along with the name of the class and instructor?	•			
Is the poster free of grammar, punctuation, and spelling mistakes?	•			
Comments: This poster is very well developed. You followed the basic rules without becoming a slave to them. For instance, the poster doesn't strictly read from top to bottom, but the reader is visually guided through the poster, ending at the uniquely round "Synthesized Analysis" section. Good use of color. It is perhaps a little text heavy. Highlighting or otherwise emphasizing text within larger blocks of text would be helpful. I also wish the matrix could be larger for clarity.				

Kansas State University
Peer Review of Teaching Program
Spring 2010

MEMO

Date: February 1, 2010
To: Abby Knoblauch
Cc: Michele Janette, Kurt Gartner
From: Michael McGlynn
Re: Revision of syllabus and schedule for ARCH 716/816: *Understanding Sustainable Architecture*

Introduction

On November 21st, 2009, I met with Professor Janette to discuss my syllabus for the above-mentioned course. We talked only briefly about the actual syllabus document, mainly focusing on the structure and underlying goals of the course and possibilities for improvement.

Purpose of Syllabus

I intend my course syllabus to provide students with an overview of the course, an outline of the learning objectives, a description of the course requirements, a listing of assignment weighting, and required policy statements. My syllabus is rather minimal, intended to convey only essential information necessary to orient students during the first week of class. I provide more specific information as the course unfolds throughout the semester.

Syllabus Revisions and Rationale

I first taught this course Spring Semester 2009. I made significant revisions to the course as the semester ensued, rendering much of the syllabus obsolete by the end of the term. In addition, the syllabus was too skeletal, lacking an outline of the learning objectives and adequate descriptions of the course requirements.

I began by substantially revising the overview of the course to reflect the nature of the course as actually taught. A student who reads this section will now come away with a good understanding of my overall aims and objectives. Following this is a new section titled “Learning Objectives”, intended to make explicit what had previously been only implicit. The various descriptions of course requirements were also revised and extended and minor adjustments were made to assignment weighting.

Previously, I had included a schedule as part of the syllabus. This is now a stand-alone document that I issued along with the syllabus on the first day of class. The schedule can now be revised and reissued without having to reissue the entire syllabus. As previously stated, Professor Janette and I spent our time primarily discussing the structure and underlying goals of the course, which led to substantial revisions of the schedule. The course is two-pronged with both reading/discussion and visual/verbal argument components. Of necessity, the development of visual/verbal arguments took precedence last year. Although still an essential component of the course, the schedule now reflects an attempt to streamline this component so as not to overwhelm the reading/discussion component.

Kansas State University
Peer Review of Teaching Program
Spring 2010

MEMO

Date: February 9, 2010
To: Abby Knoblauch
Cc: Michele Janette, Kurt Gartner
From: Michael McGlynn
Re: Preparation for first class visit to ARCH 716/816: *Understanding Sustainable Architecture*

Teaching Methods, Expectations, and Activities

Although we usually engage in a directed discussion centered on assigned readings, this class session will be slightly different. We will still engage in an active discussion, but the topic of discussion will be the results of the first case study assignment (see attached). I've asked the students to be prepared to speak about their rationales for choosing particular projects for further study. Images of the chosen projects will be projected throughout the discussion. The assigned readings provide the framework for an initial critique of the chosen project and the projects serve as a jumping-off point for discussion of the assigned readings.

Rationale and Class Objectives

My rationale behind the teaching method and activities mentioned above is to fuse the primary reading/discussion component of the course with the term project component. The intent is for students to better understand the connection between the ideas we discuss in class and their potential for application in critical analysis. Also, this is the first of several assignments that break the term project down into manageable pieces. I've seen a vast improvement in the quality of students' work with this approach and I think this is due to the following: the term project is more manageable when broken down into a series of tasks, students are motivated because they must be prepared to participate, and the interactive feedback is more valuable than comments I would generate in isolation.

Relation to Overall Course Objectives

For reference, the course objectives are primarily tied to the following two IDEA objectives:

- Learning to analyze and critically evaluate ideas, arguments, and points of view.
- Developing skills in expressing oneself orally or in writing.

As stated previously, the students' rationales for choosing particular projects will be discussed in class. In line with the first objective, students are asked to analyze and provisionally evaluate their chosen case in relation to sustainability frameworks outlined in the required readings. In regard to the second objective, this is the first step in the development of a written and graphic argument that will span the remainder of the term.

Potential Problems/Challenges

Discussions have been reasonably active and engaging up to this point in the term. The challenge from this point forward will be to maintain the caliber of these discussions, while intermittently (and sometimes simultaneously) providing opportunities for students to develop and share their critical analyses. This juggling act proved too difficult last year. The focus largely shifted to the development of written and graphic arguments and away from group discussion.

Kansas State University
College of Architecture, Planning, and Design
Department of Architecture

ARCH 716/816: Understanding Sustainable Architecture
Spring 2010
Professor Michael McGlynn

Case Study Assignment – 02.09.10

5 Assessment Frameworks: Levels and Shades

Required Readings

McLennan, J.F. 2004, "Chapter 10: shades of green-the levels of sustainability" in *The philosophy of sustainable design: the future of architecture*, Ecotone, Kansas City, MO, pp. 1-8.

Genevro, R. 2005, "Preface" in *Ten shades of green: architecture and the natural world*, Architectural League of New York: Distributed by W.W. Norton, New York, NY, pp. 4-5.

Frampton, K. 2005, "Forward" in *Ten shades of green: architecture and the natural world*, Architectural League of New York: Distributed by W.W. Norton, New York, NY, pp. 6-9.

Buchanan, P. 2005, "Green Culture and the Evolution of Architecture" in *Ten shades of green: architecture and the natural world*, Architectural League of New York: Distributed by W.W. Norton, New York, NY, pp. 10-29.

Buchanan, P. 2005, "The Ten Shades" in *Ten shades of green: architecture and the natural world*, Architectural League of New York: Distributed by W.W. Norton, New York, NY, pp. 30-39.

Basic Information

Begin by providing the following information related to your chosen project:

Name:
Architect:
Building Type:
No. Stories:
Square Footage:
Location (City, State, Country):
Latitude/Longitude:
Climate Zone:
Image(s):

Rationale

Based upon your understanding of the course objectives, briefly describe (one or two paragraphs) your reasoning behind choosing this particular project for further study.

Dominant Logics

Of the six "logics of sustainable architecture" proposed by Guy and Farmer (Guy, Farmer 2001), which do you suppose are dominant in your specific case? For each "logic" selected, briefly describe why you consider this "logic" to be particularly relevant to your chosen building? You may choose to test these provisional observations throughout the remainder of the semester.

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Characteristic Shades

Of the ten “shades of green” proposed by Buchanan (Buchanan 2005), which do you suppose are applicable in your specific case? For each “shade” selected, briefly describe why you consider this “shade” to be particularly characteristic of your chosen building? You may choose to test these provisional observations throughout the remainder of the semester.

Discussion

Upload your document along with 3-5 images of your chosen project to the “Case Study Drop Box” on KSOL. Be prepared to speak on Tuesday about your rationale for choosing this particular project for further study. I will bring my computer so that we will have access to the images. We will then discuss the “logics” and “shades” in relation to these projects for the latter half of the class.

We will continue this discussion on Thursday, focusing primarily on Buchanan’s article “Green Culture and the Evolution of Architecture”. I strongly recommend that you prepare for this discussion as you have for previous discussions, although I will not issue nor collect a separate reading/discussion assignment.

Kansas State University
Peer Review of Teaching Program
Spring 2010

MEMO
To: Michael McGlynn, Michele Janette
From: A. Abby Knoblauch
Re: ARCH 716/816 Post Observation

Course Description
During the class that I observed, students were in the initial phases of deciding upon and presenting the choices for their final projects. Each student gave a description of the structure/project that he or she had chosen for a final project, explained what was significant about that structure/project, especially in terms of sustainability, touched on any controversy or conversation that surrounded the issues of sustainability in terms of that structure/project, and reasons why that student had chosen that particular structure/project. Presentations included visual images that the students explained. Michael then gave feedback on the viability of each final project as well as some texts or works that the student might consult.

Strengths
Given your stated objective of getting a sense of everyone's proposed final project, I believe the format worked relatively well. Students were able to see everyone else's plans for final projects and hear a bit about why that project might be interesting. You, too, were able to provide some feedback—including concerns, suggestions, and a bit of guidance—to each student following his or her brief presentation. Finally, you were able to see an overlap in projects and quickly take care of that issue.

Suggestions/Responses
You and I spoke afterwards about the time constraints of the class and how some students ended up having to rush their presentations (because some took more time at the beginning of the class), and that the lack of time also meant that students couldn't really ask questions of each other. You noted, though, that they'd have time to do so later in the course, and that this was simply the first introduction to their potential final projects.

Given the time constraints, I'm wondering if it would be worthwhile to have students be required to look at each others' projects on KSOL before class, as it seems that students did have to upload their project presentations in some way. Perhaps students would need to write out a brief paragraph in which they describe the project and why they chose it, and then class time could be used asking questions and responding to those paragraphs and online presentations. They might, too, be put into smaller groups so that they don't have to respond to every project, but would know a few projects well and could get into discussion groups to talk about those potential projects.

Part of your goal, I know, was to make sure that students were practicing their presentation skills. Given that, it's possible that instead of having students upload their presentations and *not* present, simply holding students to a time limit would allow for more time for questions and discussions. You certainly tried to interject a few times, but some students' personalities make this difficult.

I was wondering, too, if this presentation is graded in any way, and, if so, what the evaluation criteria were/are. If it is graded in some way, sticking to the time constraints might be one of those criteria. Perhaps students who are *not* presenting might have some sort of feedback sheet they could fill out during the presentation that would go to you and then to the student-presenter as a way to keep all of the students in the class engaged in the presentation at hand.

Conclusion

Overall, it's clear to me that your students are interested in the topics and are working toward really engaging and challenging topics. I look forward to my next observation and our discussion(s).

Kansas State University
Peer Review of Teaching Program
Spring 2010

MEMO

Date: February 25, 2010
To: Abby Knoblauch
Cc: Michele Janette, Kurt Gartner
From: Michael McGlynn
Re: Preparation for second class visit to ARCH 716/816: *Understanding Sustainable Architecture*

Teaching Methods, Expectations, and Activities

Unlike the previous class visit, this class will be representative of the type of directed discussion centered on assigned readings that form the core of this course. For this Thursday's class, I've asked the students to read Susannah Hagan's article entitled "The good, the bad, and the juggled: the new ethics of building materials" in which she argues that we are confronted by a new ethical imperative in regard to our selection and use of building materials do to our current environmental crisis. This new ethic is bound up in the measurable notion of embodied energy, which is directly related to climate change, arguably of concern to us all. This is in juxtaposition to notions that are arguably only of concern to architects, such as always making use of materials in ways that are true to their nature. Hagan argues that the former ethical imperative has the potential to reinvigorate architecture with a relevance that it has not possessed since the beginning of the modern movement.

In addition to facilitating a discussion centered on the content of the article, we will also discuss how she structures her arguments. I've asked the students to identify the main claims and supporting subclaims in the article answering the question: What claim types does Hagan make use of to "organize and develop" her argument?

Rationale and Class Objectives

Again, my rationale behind the teaching method and activities mentioned above is to fuse the primary reading/discussion component of the course with the term project component. The primary intent is for the students to engage in a critical discussion of the article's content. Developing an understanding of the article's structure will aid the students in unraveling the various threads of her argument. Secondarily, I hope that this focus on argumentative structure will aid the students in the development of their own arguments.

Relation to Overall Course Objectives

The class objectives relate directly to the three essential IDEA course objectives:

- Learning fundamental principles, generalizations, or theories.
- Learning to analyze and critically evaluate ideas, arguments, and points of view.
- Developing skills in expressing oneself orally or in writing.

Hagan's article presents a fundamental theoretical position of which the students should be aware. Rather than simply accepting this position at face value, the students are challenged to analyze and critically evaluate the argument individually via a reading/discussion assignment and collectively via discussion. Participating in class discussions contributes to developing skills in expressing oneself orally, while the focus on argumentative structure indirectly supports developing writing skills.

Potential Problems/Challenges

The main challenge remains how to maintain the caliber of the discussion, while aiding students with the development of their written arguments. If the focus is primarily on the argumentative structure, the class could easily devolve into a lecture, while an engaging discussion of the content may render the underlying structure opaque. One approach might be to subdivide the class period, beginning with a critical discussion and ending with a dissection of the underlying argumentative structure. On the other hand, it may simply be too much for one class period. The particular reading may also be an issue. Although I find Hagan's writing interesting and provocative, an examination of her argumentative structure reveals that she may be trying to do too much in a single article. This realization is leading me to reconsider whether this article is the most appropriate vehicle for achieving the class objectives.

Kansas State University
College of Architecture, Planning, and Design
Department of Architecture

ARCH 716/816: Understanding Sustainable Architecture
Spring 2010
Professor Michael McGlynn

Reading/Discussion Assignment – 02.23.10

7 Environmental Ethics

Required Readings

Williamson, T.J., Radford, A. & Bennetts, H. 2003, “Chapter 3: ethics” in *Understanding sustainable architecture*, Spon Press, London; New York, pp. 42-63.

Williamson, T.J., Radford, A. & Bennetts, H. 2003, “Chapter 7: cohesion” in *Understanding sustainable architecture*, Spon Press, London; New York, pp. 127-137.

Hagan, S. 1998, "The good, the bad and the juggled: the new ethics of building materials", *Journal of architecture*, vol. 3, no. 2, pp. 107-115.

Claim Types

According to Ramage et al., there are two main benefits to studying claim types: “understanding the types of claims will help you focus an argument and generate ideas for it” and it “teaches you characteristic patterns of support for each type, thereby helping you organize and develop your arguments.” Keeping these benefits in mind, complete the following assignment:

1. Refer to your results for Case Study Assignment 2. Of the six claim types, which best represents the structure of the question that you have posed? Are there secondary claims within your argument that follow different claim types? What are they? We will begin on Tuesday by reviewing and discussing your answers.

2. Identify the main claim(s) and supporting subclaim(s) in the Hagan (1998) article. What claim types does Hagan make use of to “organize and develop” her argument? Did you find her arguments convincing? Be prepared to discuss why or why not in class on Thursday.

Depending upon the amount of time that we have available, we will also discuss the two chapters from Williamson, et al. on Tuesday and Thursday. Again, I strongly recommend that you prepare for this discussion as you have for previous discussions, although I will not issue nor collect a separate reading/discussion assignment related to these two chapters.

Kansas State University
Peer Review of Teaching Program
Spring 2010

MEMO
To: Michael McGlynn, Michele Janette
From: A. Abby Knoblauch
Re: ARCH 716/816 Post Observation

Course Description
The second class that I visited was much more discussion-based than the first. Students discussed an article dealing with two schools of thought in relation to technology, environmentalism, and design. These were described by one student as the "technological envelope-pushers" and the "anti-modern environmentalists." Students discussed not only the two schools, but also the structure of the argument itself. The class also discussed the Hegelian dialectic and contemplated how Hagan used the thesis-antithesis structure to lead toward a synthesis position.

Strengths
I think, for the most part, this discussion worked really well. One of your strengths as a leader of discussion is that you don't tend to simply repeat what the students are saying, but instead build off of those statements. Given that you have a mix of Native English Speaking and Non-native English Speaking students, it can be easy to feel the need to repeat what the NNES students say, but you resist this urge and just invite all voices into the conversation equally.

We talked later about how not all of the students spoke (7 of the 11 students spoke, but 3-4 spoke most frequently), all students seemed engaged in the conversation. While not often speaking, these students were sending messages with facial and bodily expressions that they were paying close attention to the conversation and would often nod in response to a student's comment.

You also provided two primary discussion points for students, noting that the class might talk about the content of the article as well as the structure of the article, thus setting up some parameters for the discussion without completely dictating the direction of the discussion. You were clearly a facilitator, but not the only possible facilitator.

Suggestions/Responses
The only potential suggestion I have is to perhaps tie discussions of argument structure back to the arguments that students will be making, have made, and/or are currently making. Time constraints make this difficult, however, and it's also possible that you have done this in other classes and simply not in this one because the discussion was so lively.

Trying to get those few quiet students engaged in discussion somehow might be useful. I wonder if you might incorporate a few minutes of small group (3-4 students) before the

large group discussion so that the shy students might voice a few opinions in a less intimidating session. This might also allow them to become more comfortable hearing their own voices in that space. Again, time constraints make it difficult, but doing a few small group discussions for 5-7 minutes once or twice a month might be worth the added time pressure.

My overall response, though, is whole-heartedly positive. Students' willingness to recognize their own biases as they read arguments, their ability to discern different kinds of arguments and their effectiveness on specific audiences, and their ability and willingness to listen to and build off of each others' comments is really heartening. Students seem comfortable with you and with each other, and yet clearly see you as the authority. You perform that role by being able to suggest possible texts they might consult, by making connections within the discussion, and by appearing (and being) knowledgeable about the subject material. But your authority is one that does not shut down conversation between students. That's a difficult balance to strike, but one that you have struck here.

Conclusion

Overall, I thought that this was a very successful class. You met your objectives for the day, the students were engaged, and the students were able to question both the article author as well as their own positions in relation to the argument itself.

Kansas State University
Peer Review of Teaching Program
Spring 2010

MEMO

Date: April 8, 2010
To: Abby Knoblauch
Cc: Michele Janette, Kurt Gartner
From: Michael McGlynn
Re: Preparation for third class visit to ARCH 716/816: *Understanding Sustainable Architecture*

Teaching Methods, Expectations, and Activities

I need to begin with an overview of the term project to situate the teaching methods, expectations, and activities of today's class. The term project consists of two parts. The first part is a written argument 3,000-4,000 words in length. The students are working on the final drafts of the written argument, which is due April 20th. The second part now running in parallel with the written argument is the re-presentation of this argument graphically. In other words, the students are developing their written arguments in a poster format, which should be primarily graphic with supporting text. Today's class is intended to assist students in this effort. We will conduct what is known in architectural circles as a pin-up. Students will display and present their posters and the class as a whole will give an assessment intended to aid in the development and completion of the posters.

The students will be provided with a rubric and each student will conduct a peer review of the work of two students. The rubric will be used to structure the discussion and guide the assessment of the work. They will be asked to take notes during the pin-up and then turn-in their final assessments at the beginning of the next class period. I will provide my assessment during the pin-up and each peer reviewer is asked to incorporate all relevant comments from the session into his or her peer review.

Rationale and Class Objectives

Two questions that might arise for you: why a pin-up and why have the students conduct peer reviews? Although I could simply collect the draft posters and use the rubric to write an assessment, I don't believe that this would be as effective in accomplishing the primary class objective of aiding the students in the development of a graphic argument. Since the assignment is primarily about communicating an argument visually to an interested audience, it is useful to present the poster to an actual audience who then assess its effectiveness. As mentioned previously, the rubric serves to structure the discussion and guide the assessment of the work. The pin-up allows the students to see the criteria put into practice, which simultaneously reinforces the usefulness of the criteria while stimulating the students to imagine how they might improve their own graphic arguments. Lastly, the pin-up also tests the usefulness of the rubric criteria. Although I establish the ground rules for discussion and assessment, the peer review shifts the authority from the instructor to that of the class as a whole. Although I have a voice, I'm not the only or necessarily most important voice.

Relation to Overall Course Objectives

Today's class contributes to two essential IDEA course objectives:

- Learning to analyze and critically evaluate ideas, arguments, and points of view.
- Developing skills in expressing oneself orally or in writing.

The poster pin-up provides the students with an opportunity to analyze and critically evaluate the arguments of their peers, hopefully improving the development of their own argument in the process. As

stated previously, the poster is a graphic re-presentation of a written argument. The exercise clarifies intentions and aids in structuring the argument. As such, it contributes significantly to developing skills in expressing oneself in writing. Lastly, although oral presentation is not a primary focus of the class period, the students do have an opportunity to develop this skill as well.

Potential Problems/Challenges

Although the rubric is a useful assessment tool, it may be inappropriate to use it directly as a means of structuring the discussion. For one, it's likely too mechanistic to be used in such a manner and it would be too time-consuming if we were to cover each criterion for each poster. It's probably best to use it as a jumping-off point and as a means of assuring that each poster receives a comprehensive review. There is also the issue of time as it can be difficult to review five or six posters in one class period.

Kansas State University
College of Architecture, Planning, and Design
Department of Architecture

ARCH 716/816: Understanding Sustainable Architecture
Spring 2010
Professor Michael McGlynn

Case Study Assignment – 04.06.10

Peer Review

The objective of this assignment is to assess the efforts of one of your classmates to aid him/her in the development of his/her graphic argument. Please begin to fill out the following rubric during the in-class assessment, recording your thoughts as well as the thoughts of others. Then, complete your assessment outside of class and submit by the deadline indicated below.

Due

Submit your poster assessments to me no later than in class Tuesday, April 13th. You may also submit your peer review earlier and electronically via the Case Study Drop Box on KSOL.

Author: Reviewer:

Organization (Design)

Does the **Title and Subtitle** indicate the topic and serve as a launching point into the argument?

Do you use **Headings and Subheadings** to structure the argument based on the major claim type?

Do you use **Navigational Cues**, such as numbers, letters, and arrows, to guide the reader through your poster?

Do you develop a **Graphic Hierarchy** to assist the reader in determining the relative importance of various elements?

Do you format the poster in **Columns or Rows** to facilitate the flow of information?

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Does the poster read from top-to-bottom and left to right, working with **Reader Gravity** (Wheildon 1995)?

Does the poster have a good **Visual Balance** of figures and text separated by white space along an axis of symmetry?

Do you use **Color and Pattern** subtly to attract, but not overwhelm, the reader and consistently so as not to confuse the reader?

Content (Argument)

Are the significant question or research problem and major claims readily apparent?

Is the poster primarily graphic in content, using text as necessary for support?

Are the graphics clear and appropriate to the argument?

Is the text concise or are important points highlighted within blocks of text?

Do you include a conclusion that succinctly ties together the major claims of the argument?

Do you clearly identify yourself as the author, along with the name of the class and instructor?

Is the poster free of grammar, punctuation, and spelling mistakes?

Comments

Kansas State University
Peer Review of Teaching Program
Spring 2010

MEMO

To: Michael McGlynn
Cc: Michele Janette, Kurt Gartner
From: A. Abby Knoblauch
Re: ARCH 716/816 Post Observation

Course Description

During my third classroom visit, students presented drafts of their graphic arguments. Each student was assigned a peer review partner who took notes and filled in a rubric based on the class members' suggestions for the graphic argument.

Strengths

Personally, I was *fascinated* by the visual arguments. I absolutely love this assignment. The way that students talked about their own arguments as well as each others', trying to imagine alternative ways to structure these arguments. Students were generally interested in each others' presentations and focused their comments on elements of visual design as well as the impact the design features might have on the potential audience. Students' designs were in various stages of development, but each student was able to talk about his or her design, why he or she made specific design decisions, and his or her plans for revision.

The students' comments to each other seemed quite helpful as well, and, as usual, while you were a knowledgeable and helpful facilitator and contributor, the students did not seem to see you as the *only* source of knowledge in the room. I think that's one of your primary strengths in the classroom.

Suggestions/Responses

As we discussed, and as you noted in your pre-observation memo, time is a factor in this class. You were concerned that there wouldn't be enough time to critique all of the visual arguments and the class did, in fact, run out of time. This is, on the one hand, a bit of a problem because it shifts your own plans for the semester, causing you to make time during the next class period for the extra presentations. On the other hand, this also reflects the students' engagement with each others' projects.

I'm wondering if there are ways, however, to structure the time so that students get the kind of feedback they need in the time allotted. It's possible that, were you to do this again, you'll simply need to schedule more time for the peer review process. If that's not possible, however, I'm wondering if students could upload their visual arguments to the KSOL page (as they already seem to do) with a brief (one paragraph?) description of their goals for the argument, the other students could look at them before class and prepare one or two positive comments and one or two suggestions for revision, and then that would be the basis of the class period. On the one hand, this might reduce the amount of "think" time in the class; on the other hand, this might engage more students in the conversation. More student engagement is generally a good thing, but it might not help your time problem.

Conclusion

Overall, this is a fascinating assignment and most students were completely engaged in the peer review process. As we discussed, this is an essential part of the "training" for these students as presenting their work in such a way will be an integral part of their careers. My guess is, if you do a similar assignment in the future, you'll simply need to build more time into the schedule for the presentations.