Sound Design

1 - Theories of Design
Sound Design

http://www.sarc.qub.ac.uk/~prebelo/teaching/sd

This module introduces sound design in the context of audio-visual production. Students will be exposed to both theoretical and practical aspects of design and audio-vision. Lectures will introduce concepts to be applied in the analysis of sound design in film and animation works. Students will be asked to develop critical strategies for analysis and will be producing a soundtrack for a given film/video excerpt.

**Learning Outcomes:**
- To better appreciate and understand sound design
- To gain insight into editing strategies used in filmmaking
- To expand on our understanding of the soundscape
- To develop a language and body of references for the discussion of sound design

**Skills:**
- Development of critical listening abilities
- Familiarisation with tools and technologies used in professional sound production
- Broad-based design and computing skills
Sound Design
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Project 1: Essay/Analysis, 3rd March, 5pm
Analysis and discussion of sound design strategies in a given film/video excerpt.
Word Limit: 2000 words

Project 2: Soundtrack Friday, 12th May, 5pm
Create a soundtrack for a given film/video excerpt using techniques and strategies discussed during the module. The class will work as a group in the recording and editing of sound sources, creating a shared library of recorded materials for use in the soundtracks. The Protools software environment will be used for this project.
Sound Design
Acoustics
Music
Synthesis
Soundscape
Environments
Emotion
Warning
Identity
Dialogue
Narrative
Time
Mood
Place

Sound
Design

Creativity
Method
Communication
Response
Brief
Society
Interdisciplinary
Experimental
Function
Context
Cultural
Iterative
Production
Problem
Solution
Sound Design

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Theories of Design
Social Sciences, Architecture, Engineering, Systems Science, Computing, Psychology, Interaction Design, Graphic Design etc...
**William Morris** - Arts and Crafts Movement (late 19th Century)

*Praising Angel.*
Stained-glass panel designed by Sir Edward Coley Burne-Jones Bt. (1833-1898) and made by Morris & Company in 1902. Salisbury Cathedral.
**William Morris** - Arts and Crafts Movement (late 19th Century)

Promoting the role of the *craftsman* in the Industrial Age.

The role of craftsman and designers as linked their activities to wider social, political and economic issues of the time.

Industrialisation and the move from rural to urban societies is seen as having an adverse impact on the crafts.

Design is related to **social and political** values, not production and streamlining.
The Bauhaus, founded after World War I as a craft school, moved to integrating design education within industrial production during the Weimar Republic.

It implemented and transformed what Morris had started, linking the idea of craft with technology.

Walter Gropius created the notion of the Bau in the center, linking to all applied design professions.
Practical “building” and Design at the centre of education:
Architecture and consumer goods design to be:

- Functional
- Cheap
- Consistent with Mass production

Combining ‘arts and crafts’ with high-end production, i.e. technology

Design based on “basic principles” of materials and composition rather than on historical precedent
Design within new product and production processes to **differentiate one product from another**.

Addressing the need to **create** and **transform** the environment, to **serve** the human condition.

Beginning of a **separation** between craft and design.

The word design began to be viewed as both a "noun" and a "verb": A skill and a **framework** for **understanding**.

Design and designers transitioned from a trade, where craftsman took aspirations of others and interpreted them in physical objects, into an **activity in its own right**.

**Post World War II**

*Design as a Discipline*
**Raymond Lowey** - The Father of Industrial Design

Systematising knowledge through practice

"I believe one should design for the advantage of the largest mass of people, first and always. That takes care of ideologies and sociologies. I think one also should try to elevate the aesthetic level of society. And to watch quality control always, while insisting others do, too."
Iannis Xenakis, together with Le Corbusier and Edgard Varèse designed a dynamic space where light, space and music (composed by Varèse) would create a truly immersive experience, fusing architecture, light and sound.

Example of a shift from lone designer to **interdisciplinary team** effort

The Phillips Pavillion, Brussels World Fair Exhibition, 1958
The participants recognized that the lone designer producing design products did not work with the complexity of post-industrial societies.

Designers must work in cross-disciplinary teams where each participant brings their specific skills, language, experiences and biases to defining and solving problems.

Emphasis is on integrating creative and rational skills for a broader view and application of design.

"the future job of a designer is to give substance to new ideas while taking away the physical and organizational foundations of old ones. In this situation, it is nonsense to think of designing as the satisfaction of existing requirements. New needs grow and old needs decay . . ."

Jones. “A Systematic Design Method” 1950’s
John Christopher Jones (b. 1927) Wales.
“Design Methods” (1970) is one of the major texts in design studies.

The lack of application of ergonomics and user-centred design led Jones to the study of the design process itself.
Design methods as an area was driven by his experience in industrial design:

- Inability to balance individual, group, societal, and ecological needs;
- Lack of purpose, order, and human scale;
- Aesthetic and functional failure in adapting to local physical and social environments;
- Development of materials and standardized components that were ill suited for use in any specific application;
- Creation of artifacts that people did not like
Ergonomics and user-centred design

- Exploring possibilities and constraints by focusing critical thinking skills to define problem spaces for existing products or services—or the creation of new categories.

- Defining the specifications of design solutions which can lead to better guidelines for traditional design activities (graphic, industrial, architectural, etc.).

- Managing the process of exploring, defining, creating artifacts continually over time.

Design methods attempts to understand the essential elements that can lead towards holistic solution in improving the design of products or services with the final “user” in mind.
John Christopher Jones Design Methods Chart. Inside front cover of his book "Design Methods"
Design methods can be described as a kind of techno-rationality based on the following principles:

It is exploratory

It is collaborative

It provides a framework for exploring and categorizing (pattern)

It takes the best ideas from a number of disciplines

It bridges direct observation with deeper fact finding

It is humanistic (qualitative), yet integrates measurement

It is not prescriptive (outcomes), it provides options (ingredients)
Herbert Simon, in "The Sciences of the Artificial" lecture (1968). Proposed the use of **scientific methods** to explore the world of man-made things (**artificial**).

He discussed the role of **analysis** (observation) and **synthesis** (making) as a process of creating man-made responses to the world he/she interacted with.

Simon's concept had a profound impact on the discourse in both Design Methods, and the newly emerging design studies communities:
- It provided an entry of using **scientific** ideas to overlay on design
- Design as a type of **science** with the reduction of emphasis on intuition
Wicked Problems:
- Persist, and are constantly subject to redefinition
- Not objectively given: their formulation depends on the viewpoint of those presenting them.
- No ultimate test of the validity of a solution

Rittel and Weber’s (1973) article was an appropriate antidote to Herbert Simon’s The Sciences of the Artificial.

Rittel and Webber resisted the rationalisation proposed by Simons’ and argued that: “The design process, and any other professional task, is only very poorly explained in terms of goal setting, constraints, rules and state-space search.”

Problem setting is a contingent, fraught, and sometimes consensual process for which there is no authoritative set of rules, criteria, or methods. (Coyne)
Wicked Problems:

World Hunger
Poverty
Underground system for a large city
National Railway Systems
NHS
Wicked Problems:

DESIGN THE SOUND FOR THE SEGMENT:
How can this “problem” be defined?
Sound Design as a Wicked Problem?

- **Persistent**, and are constantly subject to **redefinition**

- Not objectively given: their formulation **depends** on the **viewpoint** of those presenting them.

- **No** ultimate test of the **validity** of a solution
Donald Alan Schön (1930-1997)

Development of **reflective practice** and learning systems within organizations and communities.

Accomplished pianist and clarinetist – playing in both jazz and chamber groups. This interest in **improvisation** and **structure** was mirrored in his academic writing, most notably in his exploration of professional’s ability to ‘**think on their feet**’.

Introduction of organizing concepts applicable across a wide range of applied fields:

- **generative metaphor** - figurative descriptions of social situations, usually implicit and even semi-conscious but that shape the way problems are tackled.

- **learning systems** - exploring the possibility of supra-individual level learning.

- **reflective practice** inquiry - reconsider the role of technical knowledge versus "artistry" in developing professional excellence.

The practitioner allows himself to experience **surprise**, **puzzlement**, or **confusion** in a situation which he finds **uncertain** or **unique**. He reflects on the phenomenon before him, and on the prior understandings which have been implicit in his behaviour. He carries out an experiment which serves to generate both a new understanding of the phenomenon and a change in the situation. (Schön 1983: 68)
**mode of thought**

Design is a plan or framework of linking ideas together into a system of meaning. It can also be an end in itself, an abstraction which generates ideas and concepts.

**mode of expression**

Design is also a way of taking thought systems and applying them to visual equivalents – usually defined by exploiting a medium's unique qualities to maximize meaning.

**mode of production**

Design is finally a way of making artifacts – limited by the way media is structured and exploiting its inherent qualities – by what is expected, or by the unexpected.

This diagram can be distributed as long as it is credited to Adam Kallish. Inquiries to a_kallish@hotmail.com. ©2005, Adam Kallish.
Design Metaphors

"...one generation's realizations of a metaphor can become part of the next generation's experiential basis of that metaphor." (Lakoff 1993)
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http://www.jiong.com/
"...one generation's realizations of a metaphor can become part of the next generation's experiential basis of that metaphor." (Lakoff 1993)

- Exploration of new ideas by referring to familiar concepts from another domain
- Understanding, organising or structuring the unfamiliar
- Providing a conceptual framework that facilitates decisions
- Providing constraints, thresholds and boundaries
- Providing conditions for transgression and "looking sideways"
“…one generation’s realizations of a metaphor can become part of the next generation’s experiential basis of that metaphor.” (Lakoff 1993)
1. **Identify** a Design Metaphor in an “Object” (this can be a physical or a media object such as video, photography, sound etc... as long as you can present it in class next week)

2. **Bring** the object (or a document referring to the object) and be prepared to **talk** about it’s Design Metaphor

**Hints:**
- The metaphor you attribute to the object isn’t necessarily the one the designer used.
- Choose a metaphor that is easy to explain (remember the point is to relate design strategies to something familiar)