

What is a Media Lab Master's Degree Design Thesis?

John Maeda, 9/25/2002

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Over my years at the Media Lab I have both participated in DCGS meetings as a member and received feedback from DCGS regarding my students. I often have heard the term 'Design Thesis' as being a particularly difficult area of definition. Since this impacts my own area, as well as other arts related faculty, I thought it might be useful to open a discussion regarding what a Design Thesis might constitute. In addition, I wonder if there really is any difference as compared to a more Technology-oriented thesis. Furthermore, does making such a distinction serve the greater goals of a laboratory that prides itself on diversity?

A student at the Media Lab pursuing a Master's level of study in the design discipline is faced with balancing sophisticated technical concerns together with meaningful humanistic concerns within the limited course of two years. To expect a student to achieve both an MIT-class technological achievement as well as the equivalent arts or design school's landmark level of achievement is the ideal situation which all Media Lab students should hope to achieve. However, the reality is different due to the constraints of time, as well as the latitude of the students' naturally occurring tendencies towards an imbalance—i.e. more-tech/less-design versus more-design/less-tech. Thus we should expect theses to lean towards one side or the other, and once in a while be surprised that we can have one right in the middle.

The methodology for a technically-oriented Master's thesis as I recall from my own Master's thesis in Course 6 is:

1) state a claim, 2) show that the claim's context is valid through a presentation of references to prior work, 2.5) demonstrate how prior work may have influenced the new claim (or been proven contrary by the thesis work), 3) show through experimentation that the claim can be proven, 4) sufficiently document the experimentation so that it may be reproduced, 5) provide insight into how the claim can be further used or extended, and 6) have the document reviewed by a set of expert readers for validity.

I have often heard that a design thesis is different from a technical thesis—that there needs to be some kind of special external critique and that the claims are somehow different from a technical thesis in that they can't be proven as absolute truth as in a technical thesis. Granted, a design thesis will often involve concepts that predict a cultural impact yet cannot be proven within the two year commitment of the Master's student. However at a DCGS meeting I remember how I once asked Prof. Benton what constituted whether a science thesis is valid to which he replied, "You can't really prove it. The passage of time is the ultimate judge of whether a scientific claim is valid."

I thus wish to suggest that a design-oriented Master's thesis in the technology domain as being no different from a technical Master's thesis, but differing only in the details for satisfying the completion of an argument. There is a direct parallel to 1-6 as listed above:

1) state a claim for an extension in the cultural vocabulary of technology, 2) show that the claim's context is valid through a presentation of references to prior work within both the technology field and in addition the arts and design field, 2.5) demonstrate how prior work may have influenced the new claim (or been proven contrary by the thesis work) through an exposition of the vocabulary space of visual, spatial, or aural language, 3) show through experimentation that the claim can be proven by exploring the vocabulary—identifying elements and how they can be combined, 4) sufficiently document the experimentation so that it may be reproduced through a presentation of further development of the grammar in 3, 5) provide insight into how the claim can be further used or extended, and 6) have the document reviewed by a set of expert readers for validity (this is the critique component no different from a technology thesis and should not be seen as anything different).

In closing, I believe that a design-oriented Master's thesis in technology, when viewed as the equivalent to a conventional MIT technology thesis, can be seen as a constructive adjunct to the many kinds of thesis that may emerge from the Media Laboratory.

Acknowledgement/

Much of this thinking was influenced by debates I often had with Prof. Smith.

NOTES:

Andrew Lippman response 5:39:42 Sep 25, 2002.

I don't get what some of the words mean. What is the "cultural vocabulary of technology?" Or the "vocabulary space of [...] language?"

Clarification:

- The cultural vocabulary of technology refers to a sense that technology mandates a certain set of usages and approaches that are unrelated to human concerns, and that only by enculturing technology can we find a better bond between human and machine.
- The vocabulary space of a designed system refers to how a form or environment can be reduced into a set of core components (the vocabulary) and how these elements can not only interrelate as the final product, but be manipulated to form completely different systems.