

History of Art and Technology

Midterm Exam

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1 Hacking from the Outside

Eddo Stern defines "Hacking from the Outside" as the unobtrusive misuse of pre-made objects to suit the hacker's needs. In his own work, this strategy is clearly visible in two installations. The first is the Tekken Torture Tournament in which Stern and some other collaborative artists from c-level built a micro-controller hack to accompany normal game play of Tekken III on the Play Station. The micro-controller addition monitored the health-bar information of game characters and applied electric shocks to participants when their avatar took damage during battle. This hack could have been made internal to the Play Station console, however, the micro-controller hack from the outside achieved the same results without the major technical complications involved in modifying the hardware internal to the Play Station. A similar strategy was used in Summons to Surrender where Stern used a micro-controller interfaced with a keyboard to mechanically control avatars in medieval on-line role playing games. This hack stems from Stern's desire to have a user when no user is present, meaning that the artificial intelligence which replaces the human participant interfaces with the game in the same way the human does.

2 Mixing Audio: an Example of Creation by Selection

If 10 audio recording engineers were presented with the same 15 track recording of a band, the resulting final mixes would sound drastically different even if the engineers were restricted to using the same software mixing program. This results from individual aesthetic preferences of the engineers being expressed within the constraints of the program.

3 Different Levels of Interface in Der Ring des Nibelungen

In the Language of New Media, Manovich defines seven properties that imply variability. One of these properties speaks to the possibility of modular content: the ability to separate the whole into stand-alone parts. Wagner's Der Ring des Nibelungen, more commonly known as the Ring Cycle, is a perfect example of old media that demonstrates this property of the "principle of variability".

The Ring Cycle was the first opera to realize Wagner's idea of Gesamtkunstwerk: the combination of music, story, theatre, and technical aspects to form a whole deliverable package. These

different aspects that join to form the Gesamtkunstwerk can all be separated out and still suggest the idea of a complete work. To analyze this, let's start with the four stories of the Ring.

Wagner originally wrote the last story, the *Götterdämmerung*, first. It was meant to be a stand alone story, however, after completing this story Wagner decided to write three other prequels to provide background information to the *Götterdämmerung*. While these four stories are meant to be experienced as a whole, it is possible to watch any one of these as a single story, and leave feeling satisfied. This is a first level of content separation apparent in *Der Ring des Nibelungen*, yet the production can be further broken down into other interfaces that further adhere to Manovich's property of "principle of variability". For example, the musical element can be eliminated so that only the theatrical element and story remain. The Ring Cycle then becomes a standard theatre production similar to a Shakespearean play. Conversely, the theatrical element of the work can be eliminated, leaving only the music. This form can then be distributed on some form of recording media such as a compact disc, and is accepted as an example of 19th century compositional work.

The music can be further distinguished as separate levels of content since Wagner wrote musical themes to accompany specific characters. On a basic level, these themes were used to announce a character's presence on stage, however, their intent and execution were deeper and more important than basic accompaniment to visual character identification. Wagner used these themes to sonically tie the story together. Before characters were introduced to the audience their theme might appear to foreshadow their importance in that element of the story. Variations on two characters' themes might imply future or past involvement between these characters. Many of these themes are so distinct that they have left their association with the Ring Cycle and embedded themselves in pop culture. A perfect example of this is the theme for the Valkyries. The Valkyries became famous in "Apocalypse Now" when American helicopters blast their theme while strafing Viet Cong soldiers. Many people have no idea that the attack music from "Apocalypse Now" is in any way connected with *Der Ring des Nibelungen*. This proves the Ring Cycle's ability to be separated into smaller stand alone applications. Thus the "principle of variability" exists in old media as well as new media. Wagner, it could be said, was the first to suggest summing stand alone parts to make a whole with his idea of Gesamtkunstwerk, and was therefore the first to apply variability to art.

4 The Lack of History in Artistic Hacking

Hacking has a 100 year history in engineering applications and a 60 year history in computer applications, but has very little history in artistic applications. The appearance of hacking in art endeavors can be traced to the beginnings of new media when artists began to dabble with the computer. This is when artists started retooling other people's work to fit their own needs. It stems from the massive database archives that have been compiled, allowing artists to siphon from previous work rather than building from scratch.

Reconstructing others' work is not a theme that is extremely visible in old media, a theme that was discouraged in the past by the overshadowing idea of plagiarism. In fact there are very few examples of hacking in old media. Of the few that exist, most of the work deals with modifying nature (an environment where appropriation is not really an issue). Christo and the later work of Robert Irwin are prime examples of old media style hacking. Christo is famous in California for constructing his "Running Fence"-a short term installation that was created to interact with 25 miles of northern California land-while Robert Irwin is famous for installing works that enhance the natural environment like the "Two Running Violet V Forms" at the University of California, San Diego. These two installations are hacks of already present work, but are a long way from being the appropriated hacks of today's artists.

A closer match to today's artistic hacking could be the pop art movement of the 1960's. Andy Warhol's "Tomato Soup" and "Marilyn Monroe" definitely fall into the category of appropriation, however, Warhol only reprinted these images, he did not change their content or drastically modify their meaning.

The art hacks of today rely on total misuse of the original program. Eddo Stern's Tekken Torture Tournament, as mentioned above, is a true example of new media hacking. The makers of Tekken never intended for anyone to add this masochistic element to their game, nevertheless, Stern and his collaborators twisted this other form of new media to extract their own meaning. The original owners never dreamed of this happening, nor want the association, for fear of legal action, to this hack. Thus this hack has become Stern's intellectual property, Stern's art.

These modifications have become prevalent in the field of new media and is now considered a valid form of art. Much of this has to do with property issue addressed by software like Napster, which helped people to realize the potential of database access with its increased flow of and access to information.