

Volume: a forcing interface as art

Hannes Waldschütz

Human Computer Interaction, Bauhaus-Universität Weimar

`Hannes.waldschuetz@uni-weimar.de`

Abstract

I describe the setup and motivation of an artwork about human-machine interaction as an artistic performance. «Volume» is an object about the hidden mechanics of power on which human-machine interaction is build upon. I present the documentation of this installation consisting of a machine, that emits some unspecified acoustic noise which becomes slowly louder and louder. With this artistic object I want to provoke a discussion about the concept of machines as a medium of power coercing their users to interact.

1 Introduction

In this artistic work I followed the idea that machines may be considered as a medium of power (*Machtmedium*) coercing their users to act. Therefore I want to present a piece made by me in 2011 and since then exhibited in several exhibitions in Germany and elsewhere. «Volume» is an object and performance around the idea, that every human-machine interaction is basically a forced performance of the user.

«Volume» is a machine, which sole function is to emit some unspecified acoustic noise which becomes slowly louder and louder until the noise fills up all surrounding space. This process takes about an hour. The increasing volume can be interrupted at any time by anybody by turning the large knob on the front in order to turn the volume “down”. Following such a volume control operation, the noise level once again increases with the same speed until it is once again turned down... – an ever repeating loop. The object activates precisely at the predetermined opening hours of the exhibition. An automatic process – there is no on- or off-switch. Equipped with a backup power supply for several days and constructed from massive steel plates, this object offers hardly any possibility for escape from it within the exhibition space.

«Volume» is an object and performance about the hidden mechanics of power on which human-machine interaction is built upon. Here it is all about stereotypes: The iconic black box, the volume knob as an iconic interface, the caretaker as a forced user of the machine. It is the attempt to draw the nearly invisible moment of machine service into the exhibition space. This installation requires a caretaker as a necessary component. It is addressed towards the supervision of an exhibition space, which is present due to a defined employment relationship. Through its design – the increasing acoustic volume, the solid construction, the backup battery, the heavy weight – I want to create a situation where it is hardly possible to evade the emitted noise in order to force an interaction with the object.

This object and performance is created around the idea, that every human-machine interaction is basically a forced performance of the user. Determined by the actual design of the interface and the function principles created by the systems designer. Through this approach we consider machines as a medium of power (Machtmedium). This concept is somehow related to and influenced by the work of the German philosopher Günther Anders who spent large parts of his work on a philosophical anthropology in the age of technocracy. In his main work „*Die Antiquiertheit des Menschen*“ (Anders 1992) Anders coins the concept of the human, who has to adapt, who has to adapt himself to the machine until his actions become as perfect as the machine's actions.



Fig. 1: *Volume*, installation view

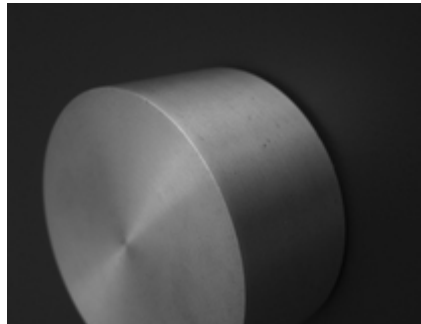


Fig. 2: *Volume*, detail view of knob

The construction consists of an outer shell and internally of a custom made programable amplifying circuit and a large battery with charging facility. The housing is designed as a dark grey cube of 74cm x 53cm x 53 cm, made from 2 mm thick, laser cut steel plates, welded to a massive steel frame, with some grid-like lateral openings for the speakers (Fig. 1). The overall weight extended 85 kg, in order to make it as hard as possible to carry it away. The machine's core is a fully programmable amplifying circuit controlled by an Arduino¹ board, with attached speaker horns taken from large megaphones. The 12V backup battery has enough capacity to run the machine for at least 5 days without wall power supply. The battery is continuously recharged while plugged in to a 230V power outlet. Centered on the frontside there is an aluminum made turning knob of 8 cm diameter, which is the only way to interact with the machine (Fig. 2). There is no on- or off-switch. The machines operating times are to be programmed upfront by me and could not be changed during exhibition. The machine switches on and off according to the exhibition opening hours, there is no interaction possible to change that, since the cube is fully closed, sealed and nearly indestructible due to its heavy construction.

4 Observations

During exhibition time no structured or methodological observations took place, but I spent on several occasions quite some time around the object to observe how people would react. Since this piece addresses foremost the guards and other staff of the exhibition place, most regular visitors didn't notice too much of the object. Depending on the actual noise level they more or less avoided/ignored the object and the room where it was placed. Most of the staff, to the contrary, actually got along with the use of the volume knob, turning down the volume once it became too loud or even when they just passed by on their way to another place. Here the intended interaction took place. As far as I understood the people in charge, had mixed feelings of the object, oscillating between feeling bad/angry about being force to take action and actually appreciating the fact, that this artwork is addressing the otherwise invisible work of the guards in an exhibition. A janitor told me once, that he actually started to like it, because he had something to take care of during his shift. As far as I observed, people even where guided by the iconic design to turn the knob towards the left side – without instructions.

5 Discussion and Conclusion

What can we learn about human-machine interaction by such an extreme, almost abusive interface installation? Since artistic practice is free to exaggerate and overdrive concepts and observations, it might shed some light on otherwise less visible contexts. Here its the sheer

1 www.arduino.cc

force the user to act in such a physical manner, instead their power is build on the fact that they represent a larger system of machines, which is according to Günther Anders not any-more just co-existing, but world constituting (Anders, 1992, S.287).

Observing the ease of use of the very basic interface – of turning the knob to decrease the volume without instructions led me to the assumption that there is actually some culture of knob turning. Obviously there is an interface-shaped society: people are trained to recognize and use even unlabeled/unexplained interfaces. So it seems its not about the question if human-machine adaption takes place, but to which extend and how does this shape us and how does this affect our communication. Wilhelm Flusser describes a development of provisions, from commandments to instruction manuals as a continuous decrease of meaning, towards formal instructions: “If a program is to be understood as writing directed not toward human beings, but toward apparatuses, the people have been programming since writing was invented—before there were any apparatuses. For one wrote to human beings as though they were apparatuses.” (Flusser, 2011, S. 56).

With the presented artistic object I want to follow Flussers observation and provoke a discussion about the idea, that every human-machine interaction is a forced performance no matter how much the design process involved the users and reflected their needs. There is only little freedom in using the design of others.

6 Literature

Anders, G. (1992), *Die Antiquiertheit des Menschen I*, München: C.H. Beck,

Flusser, V. (2011), *Does Writing Have a Future?*, Minneapolis: U of Minnesota Press