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KRFTWRK - Global Human Electricity

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<https://escholarship.org/uc/item/9cd4h4sw>

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Publication Date

2009-12-12

Peer reviewed

KRFTWRK – Global Human Electricity

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ABSTRACT

Health problems and the search for alternative energy solutions are two ongoing issues of western society. In this paper the author describes his continuing eco-political art project "KRFTWRK – Global Human Electricity", which connects these subjects and tries to present aesthetic and social solutions to these problems through artistic activities.

Keywords

Participation, Mixed Reality, Environment, Health, Net Art, Digital Art, Installation, Fine Art, Architecture

1. INTRODUCTION

Man Machine, pseudo human being

Man Machine, super human being

[repeat]

The man machine, machine

(Lyrics of the song "The Man-Machine" by "Kraftwerk" - Ralf Hütter, Florian Schneider, Karl Bartos, 1978)

A familiar issue of the wealthy western person is overweight and lack of fitness. Hundreds of programs for adults and children try to help people with health problems. They offer a variety of sport-trainings and diets, and form an important part of the economy. At the same time, a big problem is the production and waste of energy. In parallel, scientists and new economists are in search of alternative energy solutions in industrial states.

Influenced by the 1978 Kraftwerk-song "Die Mensch-Maschine"/"The Man-Machine", Rainer Prohaska realized that there is a connection between these two topics, and in 2005 he started to work on an art project that combines those. He searched for an artistic statement that deals with solutions to make people more aware, doing exercises and to benefit from their movements for alternative energy.

While doing research in alternative energy solutions, he found out that between "go green"-activities concerning biomass-, biogas-, photovoltaic-, wind- and hydro-power, there is a small group of people, who is engaged in the generation of human power, where energy is gained by the movement of human beings. Of course, this started a long time ago in the form of bicycles with dynamos producing energy for the bike's light, but it went further into piezoelectric energy-generating floors at train stations in Tokyo, at airports, discos and sightseeing attractions. [1]

These projects were fascinating, but lacked the element of health and fitness. Rainer Prohaska started to plan sculptures that produce power while used for exercises by humans. He named the project "KRFTWRK – Global Human Electricity" and set up the website www.krftwrk.org, where he began to publish texts, drawings and graphics (Figure 1).

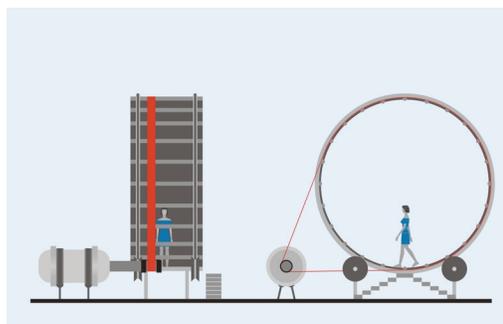


Figure 1. Power Producing Hamster Wheel, 2006.

In the meanwhile, he immersed himself into the subject and finally found out that in 2007, fitness centers in San Bernardino, California, and Hong Kong started to equip their work out machines with generators. [2] Coming from the Media Arts with studies at the University of Applied Arts Vienna in Peter Weibel's and Karel Dudesek's class, he was interested in the value of the power gained with the fitness tools and developed a concept for a tool to find out how much energy could be produced if all fitness tools would have a generator.

Another part of the project, which deals with an exploitation of human electricity, was influenced by Joep Van Lieshout's work "SlaveCity". Following description can be found on Atelier Van Lieshout's (AVL's) website:

"SlaveCity can be described as a sinister dystopian project which is very rational, efficient and profitable (7 billion euro net profit per year). Values, ethics, esthetics, moral, food, energy, economics, organization, management and market are turned upside-down, mixed and reformulated and designed into a town of 200.000 inhabitants. The 'inhabitants' work for seven hours each day in office jobs and seven hours in the fields of inside the workshop, before being allowed three hours of relaxation before they sleep for seven hours. SlaveCity is the first 'zero energy' town; it is a green town where everything is recycled and a city that does not squander the world's resources."

(SlaveCity, 2005 – ongoing, www.ateliervanlieshout.com) [3]

Amongst others, AVL's project included also models of a "SlaveCity Powerplant", an "Energy production center" which involves human's excrements. Rainer Prohaska carried this idea of a slave city on and combined it with his power producing fitness tools. See point 2.2.

The following text provides an overview of the project "KRFTWRK – Global Human Electricity" – its core and artistic measures - from the viewpoint of the year 2009. The project is a basis for an ongoing preoccupation with the mentioned topics, which are still contemporary issues.

2. KRFTWRK – GLOBAL HUMAN ELECTRICITY

"KRFTWRK" = reduced version of the German word "Kraftwerk"; in English: "power plant".

www.krftwrk.org

"KRFTWRK" is a social-political statement and an ironic comment on current problems like production and waste of electricity in industrial states, and overweight and lack of fitness of its population.

The target of "KRFTWRK" is to create a consciousness towards these topics with artistic measures in the fields of net art, architecture, installation and fine art.

The project consists of an artistic part in real space, a part happening in both spaces (virtually and real), and a virtual part. The most important parts are the staging of the virtual company, the internet-based simulation of a global power network, and the realization of usable fitness tools producing power including fine art objects.

The ambition of the company "KRFTWRK" is the planning and realization of a new generation of industrial plants, which gain electric energy by muscle-power and chemical processes of human bodies. For example, fitness tools operate generators and depict usable sculptures at the same time. Additionally a community will be formed, which communicates and carries the content of the project.

In the internet "KRFTWRK" is staged as a "reliable" and "global acting" company. Since the project is a work in progress, the website gets continuously updated. Following three sectors describe, equally to the website, the main artistic targets and measures of the project.

2.1 Green Sector: The Internet-Based Simulation of a Global Power Network

2.1.1 Virtual Power Plants

The Global Power Network of "KRFTWRK" is a worldwide simulation of an energy network, based on "Virtual Power Plants", called "VPP". A "VPP" is a web tool, which recalculates "TIME", which the user of such a "VPP" spends on a home trainer or in a gym, into a raw amount of "Electric Power". These time-data is merged into a database, where it is collected, recalculated and evaluated. The output of the whole simulation will be the global energy-production of all participants.

The team of "KRFTWRK" is working on this application at the moment.

2.1.2 Global Participants

To get involved into the simulation of a virtual connection to an electricity network and to test the global impact of "KRFTWRK", everyone using fitness tools is invited to contribute via the website.

After the power-network is activated, "VPP"-owners will find all details about "Global Participants"; information about the amount of energy each country and continent produces. Also different tools for database analysis and background information will be published.

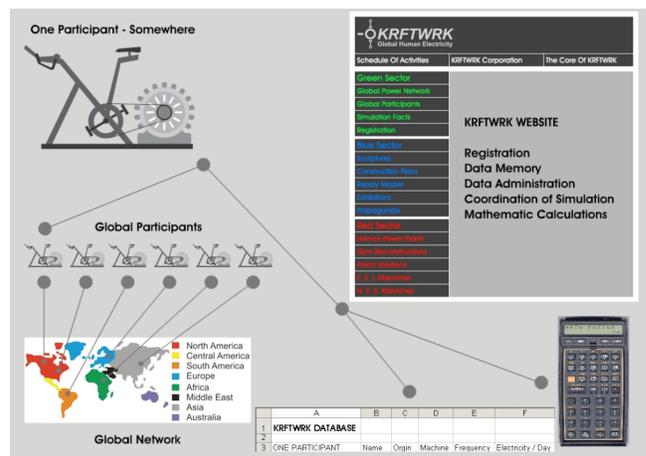


Figure 2. Simulation Facts, 2006.

2.1.3 Simulation Facts

Figure 2 depicts the algorithm and mathematical calculation of the simulation. It gives details about the way it works and how the data, with which participants have to feed their "VPPs", will be recalculated.

After an anonymous registration on the "KRFTWRK"-website the participant runs a virtual human power plant. Per every "work unit" on a home trainer or in a fitness studio, the participant informs the "VPP" on the "KRFTWRK"-website about the length and intensity of the training units. In the end the total amount of energy gained by the worldwide operating "KRFTWRK"-community can centrally be recorded and evaluated.

2.2 Blue Sector: Sculptures and Propaganda

A central artistic part of "KRFTWRK" in real space is the conception and production of usable power-producing sculptures, which consist of adapted or specially developed fitness tools with connected generators. Thereby, the graphic developments and sketches of these tools as well as the concrete realization and the functionality of the sculptures represent important artistic works. Basically, an abstract aesthetic of the machines should be reached. The first power producing sculpture, an oversized hamster wheel for 5 people at one time, exists as a permanent installation in Hainburg, Austria, since 2007 (Figure 3 and Figure 4).



Figure 3. Set up of the first power producing sculpture, 2007.

More installations of that kind are currently being planned.

Additionally, there is a growing collection of "Ready Made"-objects for experimentations and research work e.g. small manually-operated generators for producing light.

The propaganda of the virtual company for creating the hype about "KRFTWRK" happens not only virtually via the website, but also in real space, for example in exhibitions or at symposia. The staff of the company has an international, professional and global image, and performs the propaganda by using propaganda-texts and -speeches to evoke the idea of a collaborative competition.

2.3 Red Sector: Misuse of an Ecological Idea

The fine art sector includes architecture-studies for big "KRFTWRK"-industrial plants and there the integration in urban structures. Among those sketches exists a series of graphic works engaged in the topics of communication guerilla and misuse of the idea. They involve power producing prisons and slave camps (Figure 3).

3. CONCLUSION

"KRFTWRK" is an ongoing project, which was exhibited and presented at several occasions world wide. This includes ISEA 2009/Belfast, ISEA 2008/Singapore, paraflows festival 2008/Vienna, Body Navigation Festival 2007/St. Petersburg, and

STRP festival 2006/Eindhoven. During this exhibitions and presentations Rainer Prohaska noticed a growing interest in the project and realized that he hit a hot topic. That encouraged him to continue it with the actual programming of the "Internet-Based Simulation of a Global Power Network", which is planned to be finalized in 2010.

Who knows what's yet to come? "Man Machine, super human being"

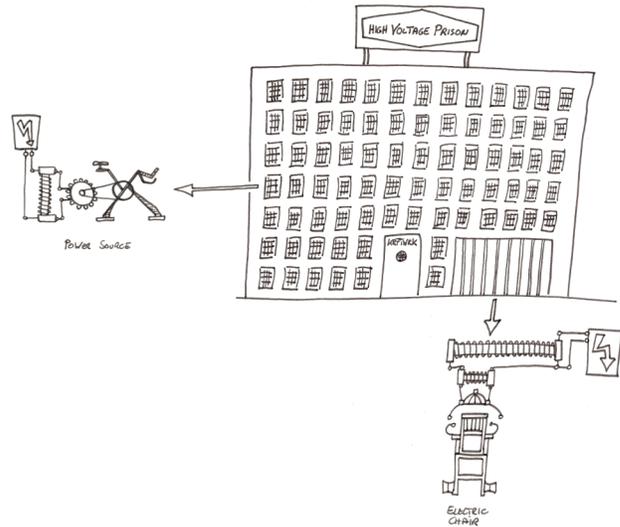


Figure 4. Power Producing Prison, 2009.

4. REFERENCES

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- [2] Fitness clubs as power plants. http://www.redorbit.com/news/video/technology/7/fitness_club_generates_electricity_from_workouts/29263/index.html?pollid=515
- [3] Atelier Van Lieshout (AVL). <http://www.ateliervanlieshout.com>