

PAINBOX_a study on the multidimensional body of pain

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Category: exhibition, interactive installation, performance

Year: 2015>2017

Technical collaboration:

Max Jurcev > mechanical / electronic design and programming

Artistic collaboration:

Elisa(Betta) Porro> performance designer

Max Jurcev > sound composition

Support:

Carlo Fonda > physicien - scifablab (International Centre for Theoretical Physics)
and **Federico Deganis** >engineer - scientific and technical support

description

The Pain-Box is a study of the multidimensional body of pain that registers its uniqueness through the experience of individuals and becomes, through its graphical interface, the map of the collective pain.

measure the unmeasurable

There are countless studies and scales that medicine uses to measure pain, among which: NRS (Numerical Rating Scale): series of numbers from 0 to 10 or 0 to 100, whose starting point and end represent the extremes of pain felt; VAS (Visual Analogue Scale): a horizontal or vertical line of 10 cm with two starting and ending points; McGill Pain Questionnaire: 102 classification of terms that describe different aspects of pain, where is added a VRS, to measure the intensity of this pain and a drawing of a human body to indicate the location; the Brief Pain Inventory consists of 15 descriptors relating to the intensity of pain and the consequent functional limitation. Then there is the Wong-Baker scale, the «emoticon» scale, used by children since the fourth year of age. Other approaches to pain assessment are the behavioral and the physiological who have, however, they are not always related to the self-assessment. None of these scales, although applied at different times, refer to pain such as a whole System but only at individual moments/events. Furthermore the psychical aspect of pain that the effects on the psyche and vice versa do not find any scales or parameters. Of this also the scientific world is aware and increasingly we heads towards the understanding of pain as a multidimensional event that focuses on the individual and not the disease. Nonetheless, the only valid within meters of the pain is, as we know, always individual. Mathematically, multiplying even only a few parameters and variables, we get always a unique and unpronounceable number.

Despite good intentions we start again from the point of the evaluator and not that of the evaluated. To offer a meter/display of pain as a self assessment and self analysis tool starts from a far off scale, testing or verification concept aimed to interpret the others.

PAINBOX_work technical details

software

We developed a Processing application, able to acquire data through USB and to produce a realtime 3D animation of a multiparametric shape. The rendering is fluid and responsive, applying colors, textures, environmental light, rotation and pulsation, applying a complex algorithm with time/space sinusoidal functions. As the user press the red button, the application displays a unique number and stores the current parametric pattern on disk, in order to have a statistic report about several users, for further elaboration.

hardware

The input panel is a wood box cut and carved using a lasercut process. The painkilling drug containers (the user input) can be inserted in 63 fitting holes, activating switches that are multiplexed and read by an Arduino processor. The realtime data are then processed and sent through USB to the computer. Some additional interface electronic and cabling are hidden in the box, that needs a little 12V supply.

INSTALLATION > individualization of «pain body» interface 1

The meter of pain involves the physical and the psychic sphere, which are subdivided into three categories, it can be endogenous and/or exogenous, and each has its intensity and duration. An interactive «Analog» panel: 63 holes related to as many definitions as that which characterize the pain felt. The insertion of analgesic drugs tubes causes the activation of the electronic circuit breakers.

INSTALLATION > display of «pain body» interface 2

The merged data to an Arduino board are decoded, processed and re-interpreted graphically by the computer and displayed on a monitor. The button «save» will allow us to view the "unique" individual number and save each single animated «body» that, thereafter, may be the subject of a study.

Through a software, all the self-evaluation informations collected by the interaction with the pain-box are displayed on the monitor. This information will be compared to identify the origins and the areas of pain that characterize our society.

The second step will be to replace definitions with images and add sound, in order to improve the understanding of the childrens' pain, working in team with the algology department of Trieste Hospitals.

ARTIST _Cecilia Donaggio Luzzatto-Fegiz

Multimedia designer and visual artist.

She graduated in scenic design at Accademia di Belle Arti in Rome, master degree in computer graphic at UCLA. She worked as videographic and art director for several national television networks CANALE5, RAI1, RAI2, RAI3.

Collaborates with artists, musicians, architects and scientists, her research is oriented toward a combination of traditional pictorial techniques, new media and technologies, using different languages as video-mapping, 3D printing, investigating robotics and interactivity.

A great part of her job is devoted to themes concerning social exclusion and disadvantage, coordinator of HeadMadeLab> multimedia lab for solidarity, has realized, since 2005, dozens of projects of social communication, concerning jails, women's right, AIDS. Among them: Città Viola> jails of Trieste and Tolmezzo (High Security). La Carica delle Centoeuno> video and workshop on the status of women in Italy. HIV += più o meno positivi> Visual Art International exhibition (sixth edition in 2016). AVATAR> project dedicated to young people on theme of digital identity. Design and layout of the magazine "Sconfinamenti" published by Duemilauno Agenzia Sociale.

Since 2010, belongs to the Gruppo78 international contemporary art trieste, some events: CATODICA> International Festival of Video Art; URSUS Multimedia Project> visual set on a pontoon 230 feet high (Molo 4, Teatro Miela, Magazzino 26 Biennale diffusa FVG - Trieste 2010-11); I'm leaving tomorrow> presidio (Museo Ferroviario - Trieste 2012). MARNERO>painting/video/performance, (Oaxaca, Torreon , Lux Art Gallery , Church of St. Girolamo, 46th Barcolana > Mexico-Italy 2013-14).

With the composer and engineer Max Jurcev and the performance designer Betta Porro presented Art is a rebellion against fate> video-mapping live, performance, site specific exhibition (Trieste - Ljubljana 2013-14); SAL> visual-mapping/sound performance site specific on the lighthouse La Lanterna, harbor of Trieste;

PainBox> a study on the multidimensional body of pain" (Trieste, Mexico 2015-16-17).

In november 2016, again with Max Jurcev, she presented a robot, part of the set design of her personal exhibition (fe)MALE - Museo D'arte Moderna Ugo Carà, the project with which competes this year at the ARS ELECTRONICA prize.

Senior member of AIAP (Associazione Italiana Design della Comunicazione Visiva) In 2012 she founded the company V_ArT - multimedia design (multidisciplinary design, video, graphic studio).

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