

Gastrosonic and Osmotactile Installations

Multisensory installations

Three pieces for a flattened ontology of the sensorium

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These installations represent a continuation of a series of works on the aestheticization of scientific experiments: a two-way loop, where the results of empirical studies in the psychology of multisensory perception are the inspiration for the design of artistic experiences and objects, which in turn constitute experimental environments or devices to be used in further research. A flattened ontology of the senses underlies the concept of these works, where the traditional vertical hierarchy between “primary” and “secondary” senses is relativized and horizontal operations of crossmodal associations that translate some senses into others are emphasized.

CCS CONCEPTS • Human-centered computing

Additional Keywords and Phrases: Crossmodal correspondences, Multisensory plateware, Taste-sound, Smell-touch

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1 BEYOND INTIMACY (2018)

In this installation, special glasses are used for the participants to experience the effects of sound on wine taste. These devices consist of a wine glass with sensors that are able to detect three main gestures of the user: grabbing the glass, airing the wine and the contact between mouth and glass while drinking. The sensing is performed through electrodes attached to the surface of the cup, next to the edge, and connected to capacitive sensors. These sensors generate an

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electric field and work by detecting other present fields interacting with it, for example those generated by the body. We extend the detection area to reach the hand holding the cup, using a special nontoxic metallic paint that is employed routinely in glassware. To avoid wiring, the sensor data are sent wirelessly to a computer that uses them to trigger sounds. In this way the intervention of the object is minimal and its use is similar to that of a normal glass. By using the glasses, we are able to synchronize all kinds of stimuli with the action of drinking for the design of multisensory experiences.

This work was part of Brain & Wine, the first international forum of oenological neuroscience in Barcelona, where we experimented with sound compositions intended to emphasize the taste of a young and an aged wine. [1]



Figure 1: Beyond Intimacy

2 EMOTIONAL PLATEWARE (2020)

Inspired by recent research on the effect of atmospheres on the perception of food, this scented video installation proposes to reflect on the use of digital devices at the table, which is usually considered in its negative aspects; however, digital technologies also promise opportunities for heightened multisensory culinary experiences. For this installation we designed prototypes of plateware with embedded digital tablets, on the basis of a cognitive pre-test where we asked for crossmodal associations of shapes, colors, smells and materials with 4 emotions induced by music: Energetic, Tender, In awe (“Sobrecogido” in Spanish) and Agitated. [2]

Each video is accompanied with smells presented on perfumery strips: Gas and Dollar Bill smell for Energy, Pear and Apple for Tenderness, Absolute Rose for Awe, and Sea smell for Agitation. We are currently analyzing the results of a new crossmodal association test and plan to use them for making real plateware and for designing the environment at dinners in virtual reality.

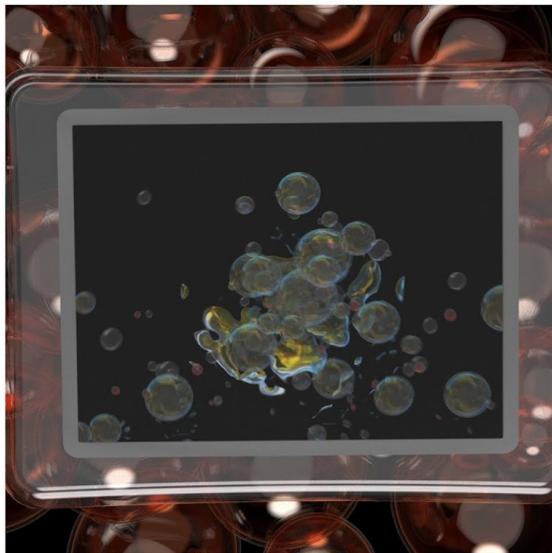
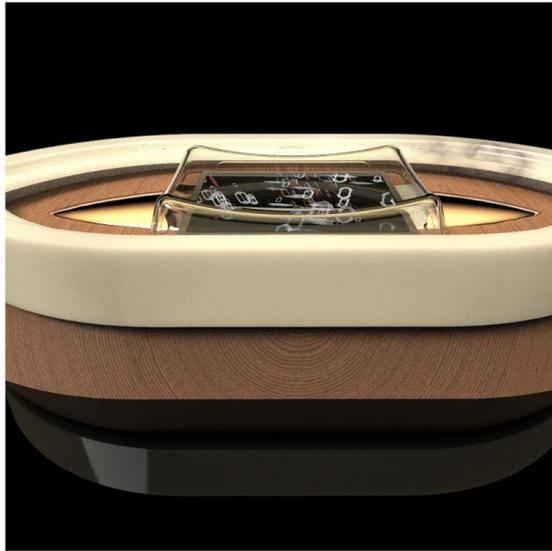
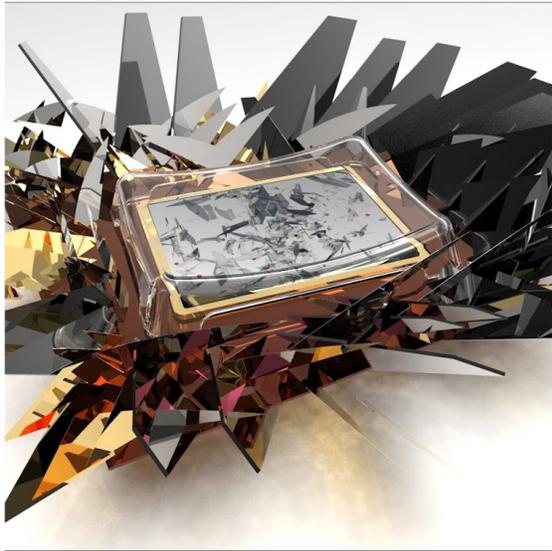


Figure 2: Emotional Plateware

