

Introduction

Experimenting with experiments

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The experimental nature of this issue started with the conception of the theme. During a workshop led by a member of the UU humanities faculty and involving several members of the journal's editorial board, we decided that the theme of the second issue of *Junctions* would be 'experiments'. With this topic, more general and free than the first issue's theme of 'power structures', we attempted to disclose the diversity and experimental nature of the humanities in both subject and methodology. In setting up a very broad Call for Papers without the obligatory "topics may include but are not limited to", the Call for Papers itself became an experiment to see how research master students in different humanities fields would interpret the notion of an experiment.

Upon short reflection, a number of different images and connotations can be brought to mind by the term ‘experiment’. One might, for instance, imagine a renowned scientist such as Marie Curie, working in her makeshift shed-laboratory, pouring acid onto pieces of pitchblende in an effort to isolate the unknown radioactive element, radium. Or perhaps one would interpret it in an artistic sense, and recall the image of Count Orlok’s clawed and menacing shadow, floating its way up the stairs, in F. W. Murnau’s *Nosferatu*. Alternatively, there is the famous image that we have presented on the front cover of this issue; taken in 1931, it shows the ‘one-wheel motorcycle’ invented by the Italian, M. Goventosa de Udine, and reportedly capable of reaching 150 kph (93 mph). These three examples demonstrate the multiplicity of features that we associate with the idea of ‘experiments’: a prototype designed with the aim of providing an alternative model of an old idea, testing the boundaries of what it is technologically as well as conceptually possible, producing an object that is new, different, and unexpected, or simply having a theory and testing its validity.

The articles that follow provide ample evidence that this notion can be interpreted very broadly and imaginatively indeed. It is impossible to focus upon ‘experiments’ as a single research topic, and it would go beyond our objectives to attempt an academic overview of the way that ‘experiments’ have been treated by scholars in various disciplines both within and outside of the humanities. Instead, by way of an introduction, we take the articles in this issue as a conceptual starting point for the variety of experiments in the humanities. In this manner, we explore the different ideas and attributes associated with various forms of ‘experiments’ in order to provide an entry point, and some thinking points, to the articles that we present in this issue. These articles represent a range of fields within the humanities and equally broad interpretations of the notion of the ‘experiment’, which we distinguish into three categories: scientific experiments, methodological experimental, and scrutiny of artistic experiments. We unite them in this introductory discussion by focussing on two dichotomies which emerge from the articles’ various approaches to the experimental: the first is that between objectivity and subjectivity; and the second, between control and uncontrol.

SCIENTIFIC EXPERIMENTS

The sciences and the scientific experiment are often associated with objectivity and control. These ideas are concerned with the way that a scientific theory becomes accepted as scientific fact. Specifically a scientific fact is established as objectively true if it is verifiable in multiple experiments, conducted by multiple researchers. The fact relies upon the consensus of the scientific community. This idea is one which is found throughout the history of the philosophy of science. Immanuel Kant wrote in *The Critique of Pure Reason* that “[i]f a judgement is valid for

every rational being then its ground is objectively sufficient and it is termed a conviction” (Kant 1952, 240). Following Kant, Karl Popper also argued for communal verification at the basis of objectivity: “I hold that scientific theories are never fully justifiable or verifiable, but that they are nevertheless testable [...] the *objectivity* of scientific statements lies in the fact that they can be *inter-subjectively* tested” (Popper 1972, 44). What Kant and Popper both highlighted was that although the individual researcher’s experiments and observations are subjective, they gain their objectivity when they are shared by other researchers. This is where the second dichotomy of control and uncontrol is important.

When we imagine the scientific experiment we might picture a laboratory setting, with controlled conditions designed to record precise effects, characterisations and data, in order to test the truth of a specific theory or hypothesis. The crucial feature is that laboratory science must have strict procedures, carefully constructed methodologies and tightly controlled conditions. These are designed to make the experiment reproducible: “the scientifically significant *physical effect* may be defined as that which can be regularly reproduced by anyone who carries out the appropriate experiment in the way prescribed” (Popper 1972, 45). Due to the fact that the experiment is reproducible by a variety of people in a variety of places, it is considered to be free from the subjective social, political or cultural prejudices of the observer, which allows it to be established as an objective fact. The reader will find an example of this picture of the scientific experiment in the first article presented in this issue by Mathilde Theelen. Theelen presents the results of her experimentation in the fundamental frequencies of spoken English and Dutch, and demonstrates her commitment to controlled and objective science with her detailed description of the methodology of her experiments and her critical evaluation of them. The goal of Theelen, and all scientific experiments, is to produce an end result which can be ratified and agreed upon by an entire academic community. Such results can be regarded as an objective fact and then used as the building blocks of further research.

Inevitably, over the course of its history, science has not always been able to live up to such high demands. It was Thomas S. Kuhn in *The Structure of Scientific Revolutions* (1962) who called into question logical positivism through what he called observational incommensurability. In his thesis, he questioned observation vis-à-vis perception and argued how the nature of observation may be influenced by the scientist's prior beliefs and experiences. After all, as Gerald Midgley put it, “observers are *part of* the reality they observe: they cannot observe from outside the systems of mutual causality that they participate in. Although links between the observer and the observed may be indirect, they do exist, and therefore *wholly* independent observation is impossible” (Midgley 2008, 60). If these links between the observer and the observed become too close then the results can be terrible for both science and society; there are numerable instances of large

sections of the academic community falling victim to what we now regard as pseudoscience. Stephen Jay Gould's famous analysis of the failings of biological determinism in *The Mismeasure of Man* (1981), demonstrated the way in which the racial prejudices of late-nineteenth and early-twentieth century Western society seeped into human research institutions creating the infected field which came to be known as eugenics. Gould argued that although scientist aim for objectivity, the questions that they ask and the funding that they receive will always be directed by the subjective preoccupations of their societies. Furthermore, these socially dictated predispositions can directly lead to mistakes in the carefully controlled conditions of scientific testing; if the researcher expected to find disparities between the intelligence of different races, they were more likely to overlook, or underplay, the significance of massively differing education levels between their various test subjects. And indeed, following Kuhn, after a phase of science in crisis, the shifting of paradigms gave way for sciences that acknowledged the scientist Self in knowledge production.

METHODOLOGICAL EXPERIMENTS

This brings us to the second strand of experimental research: methodological experiments. This process has been theorised by Donna Haraway as "situated knowledges", which she stipulates not only as a weakness but also as a methodological strength in research. She addresses that pure objectivity a notion that is commonly regarded as a myth within science itself: "The only people who end up actually *believing* and, goddess forbid, acting on the ideological doctrines of disembodied scientific objectivity enshrined in elementary textbooks and technoscience booster literature are nonscientists" (Haraway 2007, 110). Instead of proposing all knowledge is useless because it is socially constructed - which would just be "one more excuse for not learning any post-Newtonian physics" (112), Haraway proposes to take the researcher's subjectivity into account as a valuable part of knowledge creation.

One method that is prominent within Haraway's approach to research is diffraction. In this methodology, different subjects and theories are read within the context of the other, aiming to "disrupt linear and fixed causalities" (Van der Tuin, n.p.). In this case, objectivity and subjectivity are combined, as well as control and uncontrol. The objectivity and control of comparing two texts is disrupted by the mutual dependency on the other text during the reading, leaving the outcome of the experiment unpredictable. As Barad explains: "Diffraction is not a singular event that happens in space and time; rather, it is a dynamism that is integral to spacetime-mattering. Diffractions are untimely. Time is out of joint; it is diffracted, broken apart in different directions, non-contemporaneous with itself. Each moment is an infinite multiplicity" (Barad 2014, 169).

Aideen O' Shaughnessy approaches the theme of experiments in this manner, by using an experimental methodology to illuminate an old topic in a new way. Using empirical data from the Irish abortion rights debate, she analyses how the Pro-Life and Pro-Choice movements in Ireland construct and represent pregnant embodiment in differential ways, arguing that engaging with the abortion rights debate within the framework of body theory provides useful analytical tools for deconstructing current discourse. In this manner, body theory and contemporary discourse prove mutually beneficial in making space for the articulation of new perspectives from the point of view of the embodied pregnant subjects.

ARTISTIC EXPERIMENTS

Subjectivity is an idea often more comfortably associated with art than with science. For this view we can once again turn to Kant who argued in *The Critique of Judgement* that “[t]he judgement of taste therefore is not a cognitive judgement, and so not logical but is aesthetic - which means that it is one whose determining ground cannot be *other than subjective*” (Kant 1952, 476). What we have attempted to do so far in this introduction is to show that the boundaries between those features commonly associated with scientific experiment, objectivity and control, and those often associated with artistic experiments, subjectivity and uncontrol, have been blurred in the twentieth and twenty-first century. With artistic experiments, we are now moving towards a different interpretation of what an experiment entails. In contrast to the impartial observer of science, the artistic observer is usually presented as partial and directly invested in the work of art. David Hume, when discussing the beautiful in art, wrote that “beauty is no quality in things themselves: It exists merely in the mind which contemplates them; and each mind perceives a different beauty” (Hume 1987, 230). The article by Veerle Spronck, provides an example of this relationship between the work of art and the subjective observer. Her article focuses upon the work of composer John Cage, who was fascinated by the unique, individual experience of his art. Spronck tells us that Cage’s piece *4’33’’*, which consisted of nothing but silence, relied entirely upon what the observer experienced, sitting in their chair at that moment. Unlike the method of the scientific experiment in which strict conditions and rules are enforced, artistic experiments are often lauded by critics and the press for breaking the rules and pushing the boundaries of what art can be. Some of the most famous works of contemporary art, such Tracey Emin’s *My Bed*, or Carl Andre’s *Equivalent VIII* (infamously known as the ‘pile of bricks’) have come to public attention precisely because they have challenged perceptions of what art can be. Furthermore, unlike science which seeks to create an consensus in the scientific community about what is objective reality, art relies upon a lack of consensus and acknowledges the idiosyncrasies of the individual’s response to any given work.

This is the distinction between subjective art and objective science as it has been presented in the past by thinkers such as Kant, a distinction between the objective and universal on the one hand and the subjective and personal on the other. However, upon reflection, it is not difficult to also challenge this view of subjective art, as Midgley, Gould, and others have challenged the idea of objective science; and the articles presented in this issue show us the means of doing so. They show us the means of challenging the notion that art is not subject to boundaries and control, and regarding art as heavily dependent upon objective conditions. The second article presented is Danae Kleida's discussion of Loïe Fuller's experimental dance, which demonstrates the way that the objective reality of technological possibilities can guide, even dictate the direction of artistic experiments. What Kleida shows is the way in which Fuller's experimentations in dance were a response to technological innovations, which raises interesting questions about how creative art is limited or freed by objective conditions. Nobody could enter an art gallery without realizing how strictly controlled the conditions of artistic experiments, or see a stage play without being aware of the way light is used to direct the attention of the audience, and how many of us have found ourselves frustrated at a bad film's clumsy attempts to control our emotional reactions. Similarly, Christian Sancto scrutinizes artistic experiments in television production in the U.S. in the late 1960s which is an environment controlled by the established aesthetic of the avant-garde as well as the financial and governmental concerns intrinsically linked with television programming at the time. Together, the articles show how carefully controlled the artistic environment nearly always is.

OUTLINE

Moving between the three categories of experiments, this issue aims to demonstrate the variety and prominence of experiments within the humanities. The five articles in this issue are organized to move from scientific experiment, to the scrutiny of artistic experiments, to the use of experimental methodology, finally ending with an article which combines these categories.

In the first article, Mathilde Theelen presents her research "Fundamental frequency differences including language effects: Adaptation of the fundamental frequency in Dutch and English looking at both second language effects and language-specific effects". In a classical scientific experimental set-up, she examines the variability in fundamental frequency of spoken foreign languages and the variation of this frequency between Dutch and English.

Aideen O' Shaughnessy approaches the theme of experiments a different way, by using an experimental methodology to illuminate an old topic in a new way. O' Shaughnessy applies body theory to the abortion debate in "Analysing the abortion rights debate as a question of 'body theory': when differential representations and conceptualisations of pregnant embodiment

conflict”. Using empirical data from the Irish abortion rights debate, she analyses how the Pro-Life and Pro-Choice movements in Ireland construct and represent pregnant embodiment in differential ways, arguing that engaging with the abortion rights debate within the framework of body theory provides useful analytical tools for deconstructing current discourse, whilst also making space for the articulation of new perspectives from the point of view of the embodied pregnant subjects.

Veerle Spronck’s article can be read as a bridge between different types of experiments. In “Testing the Parameters of Music: The Halberstadt Performance of John Cage’s *ORGAN²/ASLSP* as Experimental System” she utilizes Science and Technology Studies to to develop an understanding of the productivity of experimental arts practices. Through Rheinberger’s understanding of experimental systems consisting of epistemic things, technical objects, and researchers, she investigates how the Halberstadt performance of *ORGAN²/ASLSP* functions and how it brings into view questions that help us to reconsider the parameters of music.

Then, Danae Kleida takes a different approach to the theme of experiments. Her article “Cinematographic Motion & Serpentine Dance: Towards a Media Archaeology of Modern Dance” describes the artistic experiments of Loïe Fuller. Kleida argues that Fuller’s technological experiments introduced a rupture in dance historiography, which can be located at the incorporation of ‘new’ technologies on stage and the emergence of ‘new’ analog media in the start of twentieth century.

Lastly, artistic experiments can, naturally, not be seen in isolation of their political and financial context. Christian Sancto’s “‘Managing Miracles’: Governmentality, Avant-garde Art, and ‘the TV problem’” examines how workshops for artistic experiments in television production in the U.S. in the late 1960s opened a space for experimental art practices contoured by, on the one hand, established avant-garde aesthetic preoccupations with medium specificity, and on the other, governmental concerns with directing television programming.

The contrast imposed upon science and art, as representing objective observation and subjective experience is a crude one, and one which can be challenged in a variety of ways. A shared understanding of experiments within this issue is the idea of something unestablished that is being ‘tested’ – an hypothesis corroborated or refuted in a lab; a concept diffracted through a foreign text; or an experience created by unconventional means. The articles that this issue presents, both reaffirm and contradict this simple picture of the world, and offer multiple views of what is an ‘experiment’, be it artistic, scientific or methodological. We do not claim that any one of these interpretations should be seen as the correct one, we merely hope that our readers will bear the

complexity of the notion of ‘experiments’ in mind, and appreciate how intelligently our authors have approached a difficult and ethereal topic.

We thank all our authors for contributing to this issue, and for all the hard work of our editors and reviewers for making it possible.

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ILLUSTRATION

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