

# HISTORY OF PREDICTION: A CONSTRUCTIVIST STUDY OF DISCOURSE, KNOWLEDGE AND MEANING.

## Basic thesis

Through tracing the continuity of predictive practices (refer to the definition *Prediction*) and theories in different formal systems of knowledge within historical moments (episteme), representation, knowledge and truth as *historical grounded* concepts can be further demonstrated in detail. By comparing historical and contemporary examples of prediction – to be explored as an interpretative system, projection of our desires and a control mechanism – I hope to critically reflect on how discourse not only constructs but that its' very nature is also constructed.

For the moment, i've mapped some of the key the themes, definitions and examples I would like to include in the thesis. Currently these entries are from the perspective of psychologists, anthropologists and sociologists, however I would also like to include the views of computer scientists and statisticians in the future. Some of the 'definitions' are taken from my annotated bibliography and some are directly quoted from their source. I'm still in the process of finding an interesting way to stitch them together, but for now the following classification system is helping me to contextualise the content through this particular formal layout. I hope to make use of the form and structure of the thesis to support the 'power' of the writing.

## Definitions appearing in a certain order

### Discourse defined by Michel Foucault, sociologist:

'Discourse' is that which constructs the topic. Foucault shifted and opened up the meaning of term 'discourse' from a linguistic concept to encapsulate a larger system of representation beyond signs. In other words, he was not concerned with how meaning was produced through language but rather how knowledge was produced through discourse. Further, discourse is about language *and* practice. By defining and producing the objects of our knowledge, it also regulates its meaning and the consequent conduct of others. Just as it governs certain acceptable forms of truth, it also defines limitations and restricts the construction of knowledge itself – of how reality is perceived and produced.

### Pareidolia defined by Jane D. Marsching, new-media artist:

In psychological terminology Pareidolia, a phenomenon belonging to a larger family called Apophenia (more detail below), is the fanciful perception or 'misperception' of a pattern or meaning in something that is actually arbitrary. This phenomenon is responsible for experiences ranging from seeing bulls and virgins in the constellations of stars, construction of conspiracy theory, to the vernacular and yet mythical constructions such as 'nephelococcygia', the practice of seeing shapes in clouds. Perception is an active process filtered by a projection of the viewers intentions, of their desires and anxieties. As Marsching describes it, "seeing is constructed belief."

### Everyday Apophenia defined by David Pizarro, psychologist :

The human brain is an amazing pattern-detecting machine. We possess a variety of mechanisms that allow us to uncover hidden relationships between objects, events, and people. Without these, the sea of data hitting our senses would surely appear random and chaotic. But when our pattern-detection systems misfire they tend to err in the direction of perceiving patterns where none actually exist.

The German neurologist Klaus Conrad coined the term "Apophenia" to describe this tendency in patients suffering from certain forms of mental illness. But it is increasingly clear from a variety of findings in the behavioral sciences that this tendency is not limited to ill or uneducated minds; healthy, intelligent people make similar errors on a regular basis: a superstitious athlete sees a connection between victory and a pair of socks, a parent refuses to vaccinate her child because of a perceived causal connection between inoculation and disease, a scientist sees hypothesis-confirming results in random noise, and thousands of people believe the random "shuffle" function on their music software is broken because they mistake spurious coincidence for meaningful connection.

### Divination defined by Barbara Tedlock, anthropologist:

Barbara Tedlock introduces a brief history of the use of the terms "divination" and "mantic". She writes that the English word "divination" having its roots in Latin (*divinus*) meaning belonging or relating to a deity and divine, was actually an improvement on the original Greek word *mantike*. This word is derived from mania, which meant madness, raving, insanity, or inspiration. Plato describes another ancient Greek term *oionistic*, that referred to the inductive art of the uninspired and sane who inquire purely from human reasoning into the future by observing bird flights and other omens, concluding that "both in name and in fact, madness is nobler than sanity [for] the first proceeds from a god, the other from mere men" (Helmbold and Rabinowitz 1956, 245). This is interesting in relation to how Perkins (1996) describes the perceptions of the different kinds of astrology in the 19th century. What was once seen as dull and an uninspired way of inducing a conclusion came to be acceptable knowledge guided by reason, while intuitive forms became deemed as 'superstitious'. This contrasts serves to highlights the how the ever-changing nature of knowledge and its following perception is valued and shaped by discourse. The term *mantike* originally referring only to prophecy consisting of a kind of mania, madness or ecstasy of divine possession later became extended to also mean *oionistic* – inductive, or artificial divination (*technike*) as well.

### Science defined by Barbara Tedlock, anthropologist:

Tedlock also writes that over the years, many so-called inductive or rational forms of divination have been compared with Western scientific techniques. Anthropologist Emile Durkheim and Marcel Mauss, argued that the science of divination was a system of classification. Marlene Dobkin labelled divination the non-Western equivalent of various psychological tests including TATs and Rorschachs (Dobkin 1969, 140), while Alan Harwood called divination an aetiology or science of causes (Harwood 1970, 111). Divination has also been categorised as a diagnostic procedure (Ackerknecht 1971, 168; Fabrega and Silver 1973, 38), and June Nash coined a new word for divination – *sociopsy* – which she argued was comparable to biopsy in Western medicine (Nash 1967, 133). As these analogies between divination and science indicate, the English term retains a strongly Roman rather than a Greek flavour.

### Rorschach test defined by Marie-Luise von Franz, psychologist:

Non-number divinations techniques are based on some kind of chaotic pattern, which is exactly like the modern psychological Rorschach test. Dr. von Franz argues that the Rorschach test is a procedure that rediscovered the primitive divination technique of using chaotic pattern. Looking at chaotic patterns allows one to project what the unconscious is fantasizing or dreaming about by means of confusing the conscious thoughts. She explains: "one cannot make head nor tail of a chaotic pattern; one is bewildered and that moment of bewilderment brings up the intuition from the unconscious and through the absolute knowledge in the unconscious one gets information about one's inner and outer situation." That is the working principle of using arbitrary patterns. The real beginning of science was when chaotic patterns were put into some ordered way. The step of going from the random pattern, the Rorschach pattern, as a source of information, to the pattern which contains a geometrical or numerical order, is coincident with the possibility of forming a general theory. She criticizes modern science for pulling apart theory and experiment but also how we have specifically developed mathematical ordering leaving the working principle of chaos and chance in its archaic form.

### Superstition defined by Maureen Perkins, anthropologist:

In the late eighteenth century the meaning of the term 'superstition' changed. Rather than conveying 'bad religion' which simply meant not following Christian principles, as it had formerly done, it now suggested more a sense of 'misplaced assumptions about causality stemming from a faulty understanding of nature', as the *Encyclopaedia of Religion* (1987) describes it. However, that faulty understanding was not solely linked to causality. It was also important to understand the workings of the natural world in order to be able to predict the future. 'Superstition', according to this new understanding of its meaning, actually made prediction more difficult, since it was premised on mistaken representations of the world.

### Prediction defined by Maureen Perkins, anthropologist:

According to Max Weber, accurate prediction lay in the heart of rationalism. The principle of development inherent in the process of 'civilization' was driven by the use of calculation as a strategy of social action. As such, rationalism, another credo of the 19th century reform movements, set the chasm between what was considered a rational way to 'calculate' and the superstitious way to predict. Statistical calculations superseded and marginalized older superstitious forecasts about the future. 'The rise of a culture of planning, is, in fact, a form of secular prediction'. The suicide of Robert Fitzroy, the first head of the new governmental department of meteorology in England, was because his weather forecasts in the newspapers proved to be disastrously wrong. As a result, the sensitivity towards such terms as prognostications, prophecy, or forecasts were tainted due to the association of practicing 'superstition'.

The sheer popularity of prediction is one that reflects how this tradition has not survived, a term that carries connotations of a persistence of old forms, but rather continued, a term which denotes new meanings and new boundaries. For example, prophecy being replaced by political and economic forecasting and science fiction, and weather prediction metaphors into weather forecasts issued by government meteorologist.

### Almanac defined by Maureen Perkins, anthropologist:

In 1827 England, as a part of the campaign to enlighten a rising literate class by replacing their existing faulty knowledge which reformers labelled as ignorant or 'superstitious', the Society for the Diffusion of Useful Knowledge (SDUK) chose to target the widespread of almanacs. Headed by Charles Knight, who sought to produce a respectable replacement to the potential 'divisiveness' of popular 'trash' reading for popular audiences, the SDUK aimed to marginalize superstition by establishing authority on scientific rational knowledge. Furthermore he also contributed to the triumph of the mass discourse of an idealized 'society of the text', a readership whose utilitarian values would acknowledge the grand narrative of useful knowledge. A different understanding of time which was increasingly getting transformed by the rise of statistical measurement, rendered the the claims to predict the future as jumping across the flow of time (Newtonian Laws) out of the question.

The British Almanac, launched in 1828 by Knight, is one of the first examples of this genre being taken up as a vehicle for reform. On what seemed to be a personal crusade, Knight was the first of several 19th century campaigners to make use of the almanac to advance particular social and political attitudes, one which attempted to transform social consciousness for the reception the doctrine of progress. In his version of the almanac, the moon changes usually featured in all the almanacs of the period were literally marginalized. In its place, at the head of the calendar, was information that would make use of the mechanical clock easier and space left over were filled with titles like "Useful Remarks". This signaled a change in the way in which time was measured. Moreover, a promotion of statistics was a prominent feature: "29 pages devoted to the heights of mountains in Europe indicate the type of numerical data which were eventually to replace the company's works of astrology and entertainment."

In 1824, the Vagrancy Act was implemented which provided for the prosecution of 'every person pretending or profession to tell Fortunes, or using any subtle Craft, Means or Device, by Palmistry or otherwise to deceive and impose on any of his Majesty's Subjects'. By the 1830's predicting the future using statistics had acquired the 'dignity of science'

### Probability defined by Marie-Luise von Franz, psychologist:

In writing about probability she talks about the irrational nature of a single event (number) and how modern mathematicians thus needs to project them by a specific procedure onto the background of infinite possibilities to cope with them. The secret in probability is repetition: the more repeats, the more accurate the probability. They ignore the individual and simply deal with it as a class, a group. She muses, "[m]athematicians are very honest people; they never deny that the single number has irrational, individual qualities, they are simply not interested". Or as the German mathematician and theoretical physicist, Hermann Weyl says, "ignore the single integer." Therefore the concept of average is an abstraction existing only in our minds: it doesn't actually exist, for the actual accumulation of people is an accumulation of unique cases. The calculus of probability is a mental artifact.

## Bibliography

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