

Soul Catchers – A Material History of the Mind Sciences

A History of Science Workshop at Princeton University (February 7/8, 2014), organized by Katja Guenther (Princeton) and Volker Hess (Charité/ Humboldt), and jointly funded by the Princeton-Humboldt Strategic Partnership, the Shelby Cullom Davis Center for Historical Studies, and the History of Science Program.

A soul catcher is a piece of incised bear femur decorated with animal heads. It is plugged with cedar bark on both ends, to catch and contain those ephemeral things that are often described by the term “soul” – a lost soul or an evil spirit. While the soul catcher today strikes us the work of superstition, and the product of an animistic culture, it resembles in both its form and function other, more mainstream, objects. Many technologies in the modern world, in daily life and in science, in the clinic and in the laboratory, might also in their way be labeled “soul catchers.” The psychoanalyst’s couch, the writer’s pen and paper, or the heavy machinery of scanners, processors, or EEG machines that populate our hospitals and research centers all try to catch that elusive object, which in the eighteenth-century was still called rather unproblematically the “soul.” Two hundred years later, the epistemic object caught in notebooks, photographs, film, PET scans, brain sections or electric circuits shows itself to be just as indeterminate as the soul caught in the hollow femur of the shaman.

This is not to downplay differences between these technologies of “soul catching,” which are indeed impossible to miss. Only a short glance reveals differences of complexity and scale, of cultural authority and plausibility. These differences also reflect many of the oppositions that structure the modern world: science versus superstition, mainstream versus marginal, and the finer differentiations between psychoanalysis, psychology, neurology, brain science, and criminology amongst others. But as the history of science teaches us, some of these divisions are new, and others have been constantly renegotiated over the past two hundred years. To use them to delimit the object of analysis would thus also pre-determine many of the results, and keep the research anchored to the categories of the present, upon whose genesis and constitution it might otherwise shed light.

For this reason, this workshop will try to lower the disciplinary boundaries that have traditionally kept these technologies separate, in order to examine the workings, problems, and futures of the technologies and the souls that they are catching. All these technologies confront the problem of how to use material objects in order to grasp something usually considered immaterial. Spirit photography attempts to capture traces of a departed spirit, a physical mark left on the photographic plate, as a sign of something we otherwise cannot see. So too, a PET scanner visualizes brain activity, representing “neural correlates” of depression, ethics, and more recently, love. Souls can be visualized, but they can also be written. The medical case history captures the mental disease of a psychiatric patient, the pen held by the writer of *écriture automatique* offers a point of access to the creative mind. Others have tried to grasp the soul through the expressiveness of the body. The measure of stress hormones in a laboratory animal allows us some access to its experience of stress, the lie detector is sensitive to minor vegetative changes in the body which supposedly can separate truth from falsehood.

While the workshop tries to break down certain distinctions, it also has the potential of providing new taxonomies. Would it be possible to divide up these soul catchers by the type of soul caught (emotional, pathological, spiritual, etc.)? Are the key divisions marked by the functions of the devices deployed (machines that make the invisible visible, that capture the ephemeral, that cultivate or produce certain mental states)? Or do the goals for which the catching process is deployed matter most (to analyze, to heal, to police)?

ABSTRACTS

Alexandra Bacopoulos-Viau (NYU):

“Scripting the Mind.

Écriture Automatique and the Discovery of the Subconscious”

It is often said that the advent of the Freudian “talking cure” around 1900 revolutionized the clinical setting by giving patients a voice. Less known is that for decades prior to the popularization of this therapy, several researchers had been experimenting with another practice aimed at uncovering the mind. As a tool of choice in the creation of the new psychences, “automatic writing” became widely used in *fin-de-siècle* clinics and laboratories, with medical psychologists regularly asking subjects to scribble under hypnosis. This paper illustrates the importance of such inscription practices in the making of the modern self. Specifically, it critically re-examines the crucial significance of automatic writing in what Henri Ellenberger famously called “The Discovery of the Unconscious” (1970). By focusing precisely on the underexplored (and often misconstrued) discourse about the “subconscious”, I point to a distinctly French model of the mind that emerged during this seminal period and that called into question the boundaries between experimental and therapeutic ways of producing knowledge about the psyche.

Cornelius Borck (Lübeck):

“Animating Brains”

A recent paper famously accused the rising field of social neuroscience of using faulty statistics under the catchy title “voodoo correlations in social neuroscience”. The exposé for our conference invites to take this claim as starting point for a cross-cultural analysis: In which meaningful ways can recent research in the burgeoning field of functional imaging be described as, contrasted with, or simply compared to animistic practices? And what light does such a reading shed on the dynamics and effectivities of a century of brain research into higher mental functions?

Reviewing the heated debate from 2009 and some recent trends in neuroimaging as possible candidates for current instantiations of “soul catching,” the paper will then compare these forms of primarily image-based brain research with older regimes, revolving around the deciphering of the brain’s electrical activity. How has the move from a decoding paradigm to a representational regime affected the conceptualization of self, psyche, mind, and soul (if there still is such an entity)? How did a century of soul catching by advanced technological means transform conceptualizations of the self within the brain? And in what ways does modern technoscience provide new tools for animating brains?

Katja Guenther (Princeton):

“Reflections on the Self – V.S. Ramachandran’s Mirror Box Therapy”

This paper presents a preliminary exploration of the topic of mirrors and the mind. It starts with the observation that the mirror is ubiquitous in the mind sciences. The mirror has been

used – as a real object but also as metaphor – at key moments in the history of psychoanalysis, developmental and clinical psychology, neurology, and modern neuroscience. In all these cases, the mirror was valuable because of the way it combined a promise to show the truth with an ability to create illusions. The paper will lay out a theoretical framework for understanding the role of mirrors in the mind sciences focusing on the case of Vilayanur Ramachandran’s use of the mirror box in the treatment of phantom pain (1990s).

Volker Hess (Berlin):

“Brain Research as Paperwork.

The Invention of the Hyperkinetic Syndrome in the Weimar Republic”

The case study focuses on the research program which Karl Bonhoeffer established in the Berlin psychiatric clinic (1912-1938). Regarding mental diseases as diseases of the brain, the psychiatrists aimed to identify some of the elementary processes of the brain by careful clinical observation. One of them was Kurt Pohlisch who tried to establish the new syndrome of hyperkinesis which was basic to all mental disorders. The paper will interpret his research project as a real paper technology in order to reconstruct the apparatus made by patient files and hospital records, schemes and duplicating machines, archives and retrieval techniques.

Uffa Jensen (Berlin):

“The Telltale Movements of the Patient’s Feet, Or How Did the Couch Become the Emblematic Device of Psychoanalysis?”

In more than one way, the Freudian couch became a quintessential soul catcher. It captured and symbolized the elusive and largely invisible therapeutic process at the heart of psychoanalysis. It also served as the pivotal site of the complex effects, which the psychoanalytical technique had on its obscure object, the ‘soul’. So far, historians have studied Freud’s intellectual biography in order to understand how he modified this piece of middle-class furniture from an instrument of suggestion and hypnosis to the site of the cathartic “talking cure” and, later, of transference and resistance. What remains largely unclear, however, is how and why the couch became such an emblematic device known to specialists and laymen alike in different parts of the globe. When did psychoanalysts around the world start to use the couch as an essential part of their practice? How did the knowledge about the spatial requirements of psychoanalysis travel from one place to another? How and when did it become more general cultural knowledge? In this paper I will try to answer these questions by examining a variety of sources from within the international psychoanalytical movement as well as from more general cultural uses of psychoanalysis. I will also attempt to understand the specific function of the couch for the complex therapeutic practice of global psychoanalysis – a practice which was much more intricate, disorderly and unorthodox than the history of psychoanalysis (and, in fact, the couch) suggests. But the couch did not merely represent the technique of accessing the ‘mind’, it developed its own looping effects on the very object it tried to reveal.

Ruth Leys (Johns Hopkins):

“How the Emotions Have Been Caught—and Made to Disappear”

In my paper, I shall examine recent attempts to use brain-imaging and other technologies to catch the emotions. In particular, I shall focus on works that offer an explicitly materialist approach to the affects, and on the intellectual consequences of such an approach. Among the questions to be posed are: If the 20th-century was the Freudian century, the century of libido, will the 21st century—as has been suggested-- be the century of the “post-traumatic” subject, whose affective indifference and profound emotional disengagement from the world mark him or her as a victim of brain damage? Will political, economic, and natural violence now take the form of a meaningless traumatic shock to the corporeal “emotional brain”? What are the stakes of such claims?

Phil Loring (London)

“Mind Maps: a history of the mind sciences at the Science Museum, London”

The free exhibition 'Mind Maps: Stories from Psychology' opened at the Science Museum, London, in December 2013, and will run for at least nine months. Aimed at an adult audience, it features over 160 objects spanning four centuries, most of which have never been on display before. The exhibition, organized as a series of five episodes, explores the links between, on the one hand, investigating the relationship between nerves and minds, and on the other, treating illnesses that sit uneasily between nerves and minds. It was supported by the British Psychological Society and developed by a team within the museum led by myself and project manager Sue Mossman.

Nicolas Pethes (Bochum):

“Psychicones.’ Visual Traces of the Soul in late 19th Century Thought Photography”

At the turn of the 20th century, the term “medium” is mostly used for a person who establishes contact with the afterworld in spiritist séances. At the time, technologies that we refer to as “media” today seemed to bear a close resemblance to this ability: Photographic plates, e.g., not only fixate ephemeral moments but are also susceptible to energetic fields or currents invisible to the naked eye. Based on this insight, authors like Ludwig Tormin (*Magische Strahlen. Die Gewinnung photographischer Lichtbilder lediglich durch die odisch-magnetische Ausstrahlung des menschlichen Körpers*, 1896) or Hippolyte Baraduc (*Photographie des états hypervibratoires de la vitalité humaine*, 1897) claimed to be able to produce visible traces of psychic fluids and even presented actual examples of “photos de la pensée” or “Gedankenphotographie”, as Louis Darget and Friedrich Feerhow later called them. Recent scholarship (Peter Geimer: *Bilder aus Versehen*, 2010) has argued that it is too simple to call these images a bluff, because the abstracts shapes and shades do refer to a ‘real’ source of some kind. From this perspective, the existence of thought photography questions the usual divide between rational and irrational scientific methods. My paper is further going to trace the close connection between the production of photographic images of the soul and the experimental sciences of the time, arguing that spiritist conceptions of photography were not a deviation but rather the groundwork of the success story of modern media technologies.

Armin Schäfer (Hagen):
“Graphology in German psychiatry (1870-1930)”

The paper will discuss both the use of graphology in German psychiatry (1870-1930) and making handwriting a domain of psychiatric experiments. In a first step, the emergence of a discourse on handwriting should be reconsidered. In 19th century, graphology had become a well-established hermeneutical practice in every-day live that could be traced back to a physiognomic approach of interpreting the bodily expressions of the soul. In a second step, the use and abuse of graphology in psychiatry will be traced. The examination of handwriting was part of an ensemble of diagnostic tools. Features of handwriting such as the shape of letters, the orientation of the lines or the disposition of the paper-space were declared as symptoms or correlated with a typology of psycho-pathological personalities. Although disorders of handwriting seemed to indicate psychic diseases, graphology did not seem to produce valid observations. Graphology did not match the scientific standards of psychiatry. Nevertheless, psychiatry started to use the process of writing as a means of research and diagnosis. In a third step, the paper will show how psychiatry made the process of handwriting a domain of experiments in order to get reliable data that could be correlated with other data, observations and symptoms. The focus will be on Emil Kraepelin who invented an apparatus, which could measure the dynamics of writing in various dimensions, especially the pressure of movements. The experiments produced a huge amount of data, but the psychiatrists were unable to interpret them in a comprehensible way. Obviously, they lacked a theory that correlated convincingly the writing process or bodily movements with psychopathology. Although psychiatry failed to catch the psychopathology of handwriting, they discovered something more important: the bodily movement as a systemic and feed-backed behavior of the organism.

Max Stadler (ETH Zurich):
“Some Subtler Skills”: The Neurophysiology of Bodily Labors, 1920s-1930s”

That the body – physiognomy, hands, or eyes – provides a “window” to the soul may be a truism to suggest. And yet, several decades into neuroscience’s spectacular and ongoing expansions, today even historians of the sciences of the soul are prone to forget that there is (or was) more to the nervous system than the brain; and hence, to catching (let’s assume) its product. The scattered historiography of the neurosciences - frequently styled as “cultural” histories of the brain - is a case in point. This paper attempts to re-centre, as it were, this narrative by revisiting the considerable scrutiny experimental scientists devoted to peripheral nervous system in the interwar period. It argues that laboring, athletic bodies – their skills, dexterity, and intricate movements – unsurprisingly were crucial objects of study at the time, rendering visible a peculiar, not particularly soulful “soul”. No longer mere “human motor”, not yet the disembodied cognition machine of the 1950s and 60s, its historical parameters stretched from (physiological) efficiency to (psychological) monotony and boredom; paradigmatically, it became manifest in the “subtler skills”, as the Manchester industrial psychologist Tom Pear put it (“in the gracefulness of the expert dancer or figure skater”, for example).

By drawing on a range of (mostly British) sources, I show how these subtle, neuromuscular phenomena were a function of the sites they was revealed at (the factory, battlefields, sporting grounds), as much as they sit oddly with subsequent, disciplinary demarcations.

Ridiculed by later generations of self-confident brain-scientists as handicapped by “peripheralistic” notions, interwar investigators of neuromuscular bodies, as this paper suggests, just may have been troubled by a less cerebral kind of soul.