

## Abstracts (Banff Retreat)

ISHN and Cheiron Joint Meeting  
Banff (19-23 June 2011), Alberta, Canada



The Professional Development Centre in Banff (photograph courtesy of the Banff Centre for the Arts).

**Sunday Afternoon, June 19, 2011**

**ISHN Movie Night:**

### **Iris: A Memoir of Iris Murdoch**

Sheryl Ginn, Rowan-Cabarrus Community College, Concord, NC, USA (DoctorGinn@gmail.com) and  
Axel Karenberg, University of Cologne, Germany (ajg02@uni-koeln.de)

“*Iris*, based on the life of revered British writer and philosopher Iris Murdoch, is a story of unlikely yet enduring love. As a young academic, teaching philosophy at Oxford, Murdoch meets and eventually falls in love with fellow professor John Bayley, a man whose awkwardness seems in stark opposition to the spirited self-confidence of his future wife. The story unfolds as snippets of time, seen through Bayley’s eyes. He recalls their first encounter over forty years ago, activities they enjoyed doing together, and Iris’ charismatic and individualistic personality. These images portray Murdoch as a vibrant young woman with great intellect and are contrasted with the novelist’s later life, after the effects of Alzheimer’s disease have ravaged her. Murdoch’s great mind deteriorates until she is reduced to a mere vestige of her former self, unable to perform simple tasks and completely reliant on her at times frustrated yet devoted husband” [Quote retrieved 9 March, from IMDB: <http://www.imdb.com/title/tt0280778/>]. [Film, USA and UK, British Broadcasting Corporation, 91 min., 2001, Director: Richard Eyre, Book: John Bayley]. This film will be briefly introduced from a media scientific perspective by Sheryl Ginn and then shown in the full 91 min. After the film viewing, Axel Karenberg

will first contextualize the film in the historical context of the neurological and psychiatric dimensions of Alzheimer-related dementias, before leading the discussion with the attending historians of psychology and neurosciences, as well as active psychiatrists, neurologists and psychologists joining the film symposium/session.

**Monday Morning, June 20, 2011**

**Featured Lecture IV:**

**Witnessing and Complicity: Sexual Crimes and Wrongful Accusation**

Robert A. Wilson, University of Alberta, Canada (rwilson.robert@gmail.com)

Judith Herman's groundbreaking book *Trauma and Recovery* (1992) begins with a powerful model for thinking about sexual crimes in general. This model both appeals to Herman's experience as a psychiatric therapist for victims of sexual crimes, as drawn on more directly in her earlier *Father-Daughter Incest* (1979), and has been extremely influential in shaping the direction of academic, legal, and activist work related to sexual criminal behaviour. In this model, in addition to the victim and the perpetrator of this type of crime, there is a third agent, the witness or observer. This talk explores this third kind of agent with two points of focus: (i) the work that such agents do in Herman's model and its appropriations in the humanities and behavioural and social sciences, and (ii) what this reveals about the phenomena of both "witnessing" and "complicity" in sexual crimes, and in wrongful accusations of sexual criminal behaviour.

**Mind and Body Medicine Workshop I:**

**Mind and Body Medicine –**

Frank W. Stahnisch, University of Calgary, Canada (fwstahni@ucalgary.ca)

[This workshop is co-sponsored by the Canada-wide SSHRC Cluster "Situating Science – Science in Human Contexts:] Theories and concepts about how the mind can make the body sick, as well as helping to render and keep it healthy, have been around in medicine, philosophy, literature and art since Classical Antiquity. Looking at the available research literature in the history of medicine, psychology and psychiatry, however, it becomes evident that the relationship between mind and body in medical contexts had never been "a stable one". Rather, the general picture, emerging from the scholarly work, is that of the impact of alternating or oscillating trends, the development of diverging paradigms, and cultural tropes that have led to a recurrent high interest in the topic of "mind and body medicine" *avant la lettre* so to speak. Envisaging the long history of medicine and psychology, a most recent 20th century trend towards mind and body medicine has come about with the emergence of psychological and medical theories in the field of "psychosomatics", with researchers, such as Franz Alexander, Alexander Mitscherlich or Carl von Weizsaecker, claiming that psychological conflicts, stressful living situations, incarceration, torture and trauma, etc. can lead to particular medical ailments like ulcers, functional heart diseases, eating and sleeping disorders and so on. It is the aim of this half-day workshop (June, 20 2011) to discuss the question of mind and body medicine from three major perspectives: (a) the disciplinary emergence of the field of "psychosomatics" (from its mother disciplines neurology, psychiatry, internal medicine, psychoanalysis and psychology); (b) an extended contextualization of the recurrent trends of the "mind-body-relationship" throughout the history of Western medicine and psychology; and (c) modern, 20th century cultural products reflecting and criticizing the burgeoning trend towards mind and body medicine in research and fine literature, art, newspapers, as well as the media at large. Professor Elizabeth Lunbeck (Vanderbilt University) will give her public keynote lecture as part of this workshop, and the event will close with a final discussion.

## **Into Mind & Brain: Defining Work in the Integrative Sciences, 1800-1950**

Stephen T. Casper, Clarkson University, USA (scasper@clarkson.edu)

It is clear that new methods in 19th and 20th century science and medicine facilitated the formation of the modern specialties neurology, psychiatry, and psychology. But how they did so, I will argue, is far from evident historically, sociologically, scientifically or clinically. This paper makes that case by not assuming any a priori logical coherence among the types of knowledge that ultimately constituted the sciences and medicines of the brain and mind. Instead, this paper addresses how new paradigms in 19th and 20th century diagnostic medicine, clinical pathology, histology, physiology, and biochemistry and biophysics represented new patterns for understanding the mind and brain. These patterns, I will suggest, changed and subsequently modernized medicine and science in ways that both created the appearance of delimited occupations in medical and scientific work and also constituted the limits of the mind and nervous system. The wider implication of this thesis is that a grounded historical approach to the mind and brain will ultimately situate both beyond the so-called internalist/externalist debate in the history of science, and instead begin the work of turning historical attention to how complex social and cultural developments in science and medicine transformed into the narrower categories we now recognize and call psychiatry, neurology, and psychology. Such a scholarly turn does more than answer questions of narrow historical and philosophical interest. The integrative history of these fields has established their contemporary polymorphous characteristics, a point with importance for the academic, clinical, industrial and commercial organization of science and medicine.

### **Abstract and Concrete Behaviour: Goldstein's Holistic Approach to Neuropsychology and the Problem of Mental Retardation**

Thomas Hoffmann, Ludwigsburg University of Education, Germany (hoffmann@ph-ludwigsburg.de)

In his theoretical main work, "The Organism" (1934), the German-American neurologist Kurt Goldstein developed a new and unique methodology for studying organismic behaviour. His total, holistic approach connects the empirical knowledge of explanatory, natural science with philosophical concepts of understanding man as mind and body. Goldstein's unifying view of the organism as the object and subject of biology was an important step to a homogenous, anti-Cartesian theory of human behaviour, beyond dualisms such as "higher" or "lower" psychological functions, normal psychology and psychopathology, biological and social life. Problems, like the relationship between normality, health and disease, emotion and cognition, knowledge and action, which seem to be divergent, and were treated in different ways, could now be understood as correlated and similar phenomena, which follow the same general laws of organismic life. According to Goldstein's concepts there is no bifurcation or antagonism between mind and body. Their distinction depends on the observer's point of view. The mind is a part of the life process as a whole. A brain lesion immediately affects the mind. But its actual impact on the behaviour of a person depends on the situation as a whole, which includes biological, psychological and social aspects. A number of theories of mental retardation in the first half of the 20th century were deeply affected by Goldstein's distinction between the so-called "concrete" and "abstract" attitude in human behaviour. One of his main thesis about the effect of neurological disorders on mental development was the idea, that the abstract attitude was essential for the normal functioning of intelligence and that this attitude was impaired in children with brain lesions and other neuropsychological syndroms: The primary disturbance leads to a number of secondary symptoms, which don't arise directly from the underlying processes, but depend on the role, a certain function plays in the mental development of the child, on the moment, when the given disturbance occurred, the social reaction of the environment and the individual abilities of adaption and compensation. As Goldstein stressed, "no damage of a separate function can be made responsible for a certain behaviour, only from the structure of personality as a whole". From this point of view, mental retardation appears not as a biological or familial caused deviation from the norm, but rather as a special case of "defective responsiveness": as a discrepancy between the demands of the

environment and the capacities of the individual. In this sense mental retardation was no longer considered to be merely a problem of inferior mentality, but to be a relational phenomenon, that consists in the relation between the concrete attitude of a neuropsychological impaired person, the abstract demands of culture and society and the support of the people around this person to employ the abstract attitude. The paper attempts to show the contribution of Goldstein to a dynamic, relational and systemic theory of mental retardation and their implications for education, therapy and empirical research on this field, especially with regard to the phenomenological approach of neuropsychological syndrome analysis and to the meaning of “detours” in the mental development of children with disabilities.

### **Therapeutic Emotions: Social Work Theory and Practice in 1930s America**

Susan Lanzoni, Boston, USA (slanzoni@wellesley.edu)

Mental hygienists of the early twentieth century claimed that understanding and managing one's emotions were central aspects of good mental health - a way of knitting body to mind and also promoting the self's growth and adjustment to life's conditions. Attention to emotions was also a central component of theory and practice at the Pennsylvania school of social work under the leadership of sociologists Jessie Taft and Virginia Robinson. Taft and her colleagues experimented with new non-directive interventions with clients in the early 1930s and sought to educate the feelings of the social worker as an important part of their training. In stark distinction to the behaviorists who decried excessive emotion in the parent-child relationship, Taft saw emotion as providing valuable signals as to what needed adjustment in personal and social life. Taft had earned her doctorate in sociology at Chicago under the tutelage of George Herbert Mead, and afterwards had worked at a reformatory for girls in New York, a psychopathology clinic at Cornell, and as director of the child study department at the Children's Bureau in Philadelphia. In 1926 she began a short psychoanalysis with Otto Rank, and adopted some of his ideas into her social work practice. In 1934 she became director of the Pennsylvania School of Social Work. Taft and her school embraced a functional approach to social work, in which the social worker focused on the specific problem raised by the client in a time-delimited manner rather than delving into deep psychological trauma. Social workers supplemented psychiatric care with aftercare, worked in outpatient clinics, assessed mental defect and deficiency, and grappled with the social problems of alcoholism and syphilis. They did not conduct psychological tests, as did the psychologists, nor did they diagnose mental illness, as did the psychiatrists; nor did they carry out in-depth analyses as did the psychoanalysts. As Taft saw it, social workers could nonetheless fill an important niche among health care professionals by taking the client's immediate complaint as the path towards building a present-oriented relationship attuned to emotional interaction. Taft structured the social work encounter around existing time constraints, and privileged the desires of the client, envisioning the social worker as merely an assistant to the unfettered expression of the client's self. This model emerged in good part from her work with children where she permitted extremely unrestricted forms of emotional expression in the therapeutic context. The social work curriculum developed at U. Penn honed the social worker's emotions to forestall the projection of her own feelings and ideas onto the client, and pushed students to use their feeling responses as therapeutic tools, in order to develop the kind of relationship that would aid the client. This active attunement to emotions in oneself and the other in evolving patterns of interaction comprised a social empathic model that Taft and Robinson called “relationship therapy.” Relationship therapy was an important but as yet still largely undocumented influence to a broader set of psychotherapeutic practices in the post World War II period. In particular, one can track the roots of the psychologist Carl Rogers' commitment to a client-centered approach in the work of Taft and her school. The emphasis on relationship rather than on patient insight formed the groundwork for a shift to models of therapy attuned to the nature of the therapeutic relationship that became increasingly common in the post war period. Social workers, then, as the least prestigious professionals in the health care setting, helped to pioneer models of emotion and therapeutic interaction that stood as a major contribution to models of health and well-being in the post war era.

**Nervism and Communism: from Physiology to Social Practice**

Boleslav L. Lichterman, The Burdenko Neurosurgery Institute, Russia (lichterman@hotmail.com)

According to “The Oxford English Dictionary” the term “nervism” (or “neurism”) appeared in English language in the 1830s meaning nerve (or vital) force. Half a century later it got a second meaning - nervous excitement. In 1883 a Russian physiologist Ivan Pavlov (1849-1936) defined nervism as “a physiological concept which is aimed at the dissemination of influence of the nervous system to as many body functions as possible”. This approach originated from works of his compatriot Ivan Sechenov (1829-1905). A particular stress on the impact of the nervous system on the rest of body became traditional for Russian and Soviet physiology. Pavlov himself developed the idea of a leading role of the nervous system. This resulted in his teaching on higher nervous activity. According to Pavlov, “the more perfect nervous system of a living being, the more it is centralized and its higher department increasingly becomes a manager and a distributor of all body activity”. Higher nervous activity was viewed as a physiological equivalent of psychic activity which became a synonym of a conditioned reflex. This view was further developed by many of Pavlov’s pupils and followers including K.M.Bykov, L.A.Orbeli, and A.D.Speransky. However after the Joint session of Academy of Sciences and Academy of Medical Sciences in 1950 (the so-called Pavlovian session) the idea of nervism was overemphasized whereas the role of humoral and hormonal regulation was underestimated. In Soviet Russia Pavlovian nervism was readily supported by the authorities. The ruling Communist Party was viewed as a kind of nervous system of society which permeated the social fabric and controlled all aspects of everyday life.

**Mind and Body Medicine Workshop II:**

**The Animal Within: Drive and Self in Classical and Revisionist Psychoanalysis**

Elizabeth Lunbeck, Vanderbilt University, USA (elizabeth.lunbeck@vanderbilt.edu)

Even as psychoanalysis is routinely cast as a theory of mind, the discipline continues to struggle over the standing of what is often grouped under the rubric of ‘biology’ in it. In this paper, I examine the contours of this enduring conflict in at a point of heightened visibility, at the point at which in the 1970s the revisionist self psychology of the Chicago-based émigré analyst Heinz Kohut mounted a serious challenge to classical Freudian drive psychology. The question, simply put, of the extent to which man was an animal marked the divide, with Kohutians arguing that rage and aggression were not innate but rather stemmed from an injured sense of self and Freudians maintaining in contrast that the essence of the human was to be located in animal nature—powerful drives and aggression. I look at the rhetorical work the biological does for partisans of both sides in this debate, and I explore in particular analysts’ use of such concepts and terms as introjection, metabolizing, hunger, and supplies to conceptualize how individuals relate to others and to their environments. I show that both sides used these terms in a variety of metaphorical and concrete ways, underscoring at once their indispensability and instability.

**John W. Thompson and Carl Stern - Two Psychiatrists in the Shadow of the Holocaust**

Paul Weindling, Oxford Brookes University, UK (pjweindling@brookes.ac.uk)

My new book, “John W. Thompson: Psychiatrist in Shadow of the Holocaust” is the biography of a doctor whose revulsion at Nazi human experiments prompted him to seek a humane basis for physician-patient relations. As a military scientific intelligence officer in 1945, Thompson was the first to name “medical war crimes” as a special category for prosecution. His investigations laid the groundwork for the Nuremberg medical trials and for the novel idea of “informed consent”. Yet, Thompson has remained a little-known figure, despite his many scientific, literary, and religious connections. This book traces Thompson’s life from his birth in Mexico, through his studies at Stanford, Edinburgh, and Harvard, and

his service in the Canadian Air Force. It reconstructs his therapeutic work with UNESCO in Germany and his time as a Civil Rights activist in New York, where he developed his concept of holistic medicine. Thompson was close to authors like Auden and Spender and inspirational religious figures like Jean Vanier, founder of *L'Arche*. He drew on ideas of Freud, Jung, and Buber. The philosophical and religious dimensions of Thompson's response to Holocaust victims' suffering are key to this study, which cites accounts of psychiatrists, students and patients who knew Thompson personally, war crimes prosecution records, and unpublished personal papers. This talk, based on the book, will particularly reflect on the exchanges of John W. Thompson and his contemporary, the emigré-psychiatrist Carl Stern at McGill University and the University of Ottawa.

**A Whirling Complexity: Theories of Mind and Public Engagement in  
Mid 20th Century Neurosurgery**

Delia Gavrus, University of Toronto, Canada (delia.gavrus@gmail.com)

In this paper in progress, I look at the way in which the Canadian neurosurgeon Wilder Penfield attempted to explain the mind by constructing and appealing to a theory of the functional organization of the brain in the middle decades of the twentieth century. In particular, I look at the fierce debate between Penfield and several clinical and experimental neurologists on this topic, and I analyze the ways in which scientific evidence was presented and contested. Furthermore, I show how Penfield's theory was being shared simultaneously in the public realm through talks and publications, and I trace the cultural reverberations of this act of scientific popularization. In this case, it appears that popularization constituted a means through which Penfield, whose ideas had encountered such a negative response in the scientific community, sought to redeem the loss of his epistemic authority. At a time when the Cold War sparked fears of materialism (the position, prevalent in the Eastern Block and sustained by famous physiologists such as Ivan Pavlov, that the mind was reducible to the brain), Penfield reassured the public that the mind was special: an entity interacting with, but distinct from the brain. This paper thus highlights the critical role of mid-century popular media, such as radio and magazines, in the dissemination of contested scientific ideas and in facilitating the interaction between multiple audiences.

**Jonny's in the Basement: The Central Grey as the Seat of the Soul**

Paul Bernard Foley, Neuroscience Research Australia, Australia (p.foley@neura.edu.au)

By the early 20th century the "psyche" had effectively supplanted the "soul" in the handbooks of mainstream neurology and psychiatry. The burgeoning literature on the macro- and micro-architecture of the brain had ostensibly rendered the search for the seat of the soul obsolete, but in reality the psyche was implicitly localized to the cerebral cortex, where it commanded all the functions previously ascribed to the soul, including consciousness, will and memory. A clear demarcation between the roles in this penthouse of the mind and the vegetative basement of the brain was accepted without demur by most authorities. At the same time, the failure of neuropathology to account for disorders of the mind had exacerbated the growing gap between neurology and psychiatry, and the popularization of psychological approaches to these disorders, including postulates of sub- and unconscious components of the psyche by Freud and others, deepened the rift. Prior to the First World War, however, the role of the mesencephalon (midbrain) in the internal life of humans was accorded detailed attention by a number of investigators, including the Austrian psychiatrist Josef Berze (1866-1957) and the Wuerzburg psychiatrist Martin Reichardt (1874-1966). Each invested the brainstem with much greater significance for psychic activities than previously recognized, although they differed on one crucial point: while Reichardt viewed the brainstem as de facto seat of the soul upon which the cortex was superimposed, Berze subscribed to the Economo thesis of progressive cerebration, whereby higher functions had gradually moved higher in the brain throughout evolution. Their ideas were widely discussed in the 1920s and 1930s, particularly as their models anticipated curious neuropsychiatric

phenomena first described in encephalitis lethargica, but both have since been largely forgotten, as the significance for English language psychiatry (in particular) of both German neuropsychiatry and the concept of “self” declined after 1945.

**Monday Afternoon, June 20, 2011**

**The Hard Problem in History Workshop:**

### **The Hard Problem in History**

Chris Smith, Aston University, UK (c.u.m.smith@aston.ac.uk) and  
Harry Whitaker, Northern Michigan University, USA (hwhitake@nmu.edu)

What David Chalmers dubbed ‘the hard problem’ has gained considerable prominence in recent years with the growth of consciousness studies, neuroimaging, neurophysiology and molecular neurobiology. It is not a new problem. It can be traced back far into antiquity. Its presence throughout history has, however, seldom been reviewed. This workshop is planned to rectify this omission. It is planned to examine the treatment of the problem in Western thought from late antiquity to present times and thus to gain some perspective on where we are today. The objective of this workshop is to review how ‘neuroscientists’ (to use a catch-all term to refer to anyone who wrote about brain and mind) understood and dealt with the ‘hard problem’ – the relation of the 1500 gms of ‘porridge’ within our skulls to the qualia through which we live – at different points in the history of Western science. We will consider the views of representative ‘neuroscientists’ from late classical and medieval times through the twentieth century. The format: brief (+/- 10 min) presentations (see below) that highlight main points followed by discussion and argument from all attending. We have no foreknowledge of where this discussion will lead; an attempt will be made to sum up at the end and to answer some of the questions posed in the opening remarks.

### **Winds and Walls – Late Classical and Medieval Theory**

Chris Smith, Aston University, UK (c.u.m.smith@aston.ac.uk)

The notion of ‘animal spirit(s)’, a sort of animating wind whistling down tubular nerve fibres, was accepted from Claudius Galen in late antiquity to Jean Fernel in the sixteenth century. But did this wind have a psychological dimension or was it just a communication medium and did the mind/body interaction in fact take place in the terra incognita of the cerebrum to be expressed in the walls of the ventricles? Ten minutes for a huge subject but one which I hope will set the scene for the feast that follows!

### **Spinoza on the Mind-Body Problem**

William Meehan, San Francisco, USA (wmmeehan@sbcglobal.net)

Spinoza, I would argue, was the most profound of the thinkers who took up the mind-body problem in the early modern period; but, though many of his insights anticipate contemporary neuroscience, he was not very interested in anything resembling what we would consider anatomy, or even biology. In the work most relevant to our discussion, *The Ethics*, he made only one observation that could be construed as related to physiology – in Postulate 5 of Book II, he says that the human body is composed of hard, soft and fluid parts, and that the fluid parts can transmit a stable impression of external objects to the soft parts. It is doubtful that the extreme generality of this statement is due to ignorance of his contemporaries’ more detailed anatomical and theoretical work. For one thing, we know he was in communication, through Oldenberg, with members of the Royal Academy (Nadler, 2001). For another,

as the *Ethics* is to a large extent a modification and refutation of Descartes, it is hard not to read Postulate 5 as a minimalist version of Cartesian pneumatic theory. But Spinoza had theoretical reasons for rejecting the empirical approach being taken by the British natural philosophers and he was well aware that, even *Passions of the soul* for all its anatomical detail, fails to account for interaction between the mutually exclusive mental and physical substances that Descartes posits. It is important to note that Spinoza does not say that Reason is an antidote to Passion (*E4p14*). Freedom is to be found in the Love of Reason, not in Reason itself (*E4p7*; 5p3, 25, 26). If what matters is our ability to persevere in being, all knowledge of the external world, in part or in whole, is knowledge of its effect on that ability, which is to say it is affective; and affects, like love of fatty food, status or the elation of backing a winning team, can only be offset by stronger affects, like love of physical health, or mental equilibrium.

### **Hooke's Mechanical Model of the Mind**

Jack J. MacIntosh, University of Calgary, Canada (macintos@ucalgary.ca)

In his Lectures of Light, given to the Royal Society, and spanning the years 1680-1682 (posthumously published in 1705), Robert Hooke puts forward an account of mind-body interaction which, his editor Richard Waller suggests, might possibly lead “some Persons [to] imagine that the foregoing Explication of these abstruse Actings of the Soul is too mechanical, and tends to the making the Soul a material Being (148)”, a suggestion that Waller immediately rejects on Hooke’s behalf, though at the same time somewhat nervously distancing himself from Hooke’s views (“I hold my self not in the least obliged to defend or maintain any of his Opinions or Discourses”). At the time, with the notable exception of John Locke, it was common for philosophers to argue that thinking required an immaterial soul or mind; rejecting this was considered something close to heresy, so Waller’s nervousness is understandable. (Earlier in the century the Blasphemy Ordination of May 1648 imposed the death penalty on “Mortalists”, that is, those who claimed the human soul might not be immortal.) In this paper I consider, briefly, the views of earlier thinkers such as Kepler and Descartes, and those of Hooke’s friend and patron, Robert Boyle. Their views can be seen as leading to Hooke’s mechanical model of mind-body interaction, but his view, though perhaps arising out of these earlier views extends and improves upon them. Hooke explicitly holds that the mind is immaterial, but his model of mind-body interaction does not seem to require such immateriality: the imaginings of “some Persons” are wholly understandable. Hooke writes, “because nothing is so well understood or apprehended, as when it is represented under some sensible Form, I would, to make my Notion the more conceivable, make a mechanical and sensible Figure and Picture thereof, and from that shew how I conceive all the Actions and Operations of the Soul as Apprehending, Remembring and Reasoning are performed”. Hooke does provide such a model and, interestingly, though Hooke does not say so, it seems to be a model that will work only if, in the words of his editor, we make “the Soul a material Being”.

### **Vibrations as Representations – Bonnet & Hartley**

Harry Whitaker, Northern Michigan University, USA (hwhitake@nmu.edu)

Addressing the question of how “ideas” might be represented in the brain, first formed from sensory input, then stored in memory and finally able to cause movements, Hartley and Bonnet independently proposed that these representations are vibrations in nerve fibers. Roots of the vibration model can be traced to Pierre Gassendi, Thomas Willis and of course Isaac Newton. Different from hydraulic models based on animal spirits (e.g. Galen, Descartes), vibrations were ostensibly material, quantifiable, sensory system specific (qualitatively different), storable, retrievable and localizable. By 18<sup>th</sup> century criteria, this was a componential model of the mind that, in principle, could eventually be empirically tested.

**Joseph Priestley – A Late 18th Century Newtonian Perspective**

Alan Beretta, Michigan State University, USA (beretta@msu.edu)

The Cartesian mind-body problem, premised on a commonsense notion of body, ceased to exist, Priestley argued, as soon as Newton proposed the gravitational force. Priestley invoked Newton's 'rules of philosophizing' that honored theory and rejected common sense to arrive at a view that mind and body were of 'some uniform composition'. In these respects, it is interesting to consider the extent to which Priestley anticipated the 'best-theory' physicalism that has been proposed in recent times.

**Bridging the Gaps in Neuroscience with Functional Concepts of Mind from Psychology**

Samuel Greenblatt, Brown University, USA (samuel\_greenblatt@brown.edu)

The "neurosciences" can be broadly defined. However, this deliberate inclusiveness could potentially cause problems with internal coherency of the discussion of the mind-body problem in its long history. In other words, we need to avoid the pitfalls of the internalist-externalist tension without losing the benefits of both perspectives. In fact, the discussion of the mind-body problem could be one of the most rewarding intellectual domains for the study of neuroscience history, because our subject is always culturally loaded and by the assumptions that the mind-body problem entails. Of course, neuroscience history is also influenced by all of the other cultural and scientific aspects of the milieu in which it is conducted. This presentation particularly aims at bridging the gaps in neuroscience through discussion of the functional concepts of mind in the field of academic psychology.

**The Behaviorist's View – Skinner *et alia***

Joe Layng, University of Chicago, USA (lyang@cs.uchicago.edu)

Skinner made a valiant attempt to address this problem in his paper "Behaviorism at Fifty". The paper was part of a symposium held in the early 1960s entitled, Behaviorism and Phenomenology: Contrasting Bases for Modern Psychology. His paper was published in Science and then as chapter of a book of the same title as the conference. What made the book really interesting was that it included commentary by the participants. The participants were Michael Scriven, R. B. McLeod, Sigmund Koch, Carl Rogers, Norman Malcolm and Skinner. Skinner's radical behaviorist perspective took the participants by surprise, though it should not have since Skinner had been advocating the inclusion of private events into the study of behaviour since his paper critical of operationism as a way around issues of privacy was published in the 1940s. Contingency analysts have continued to explore these issues and I believe have positions that could serve to inform neuroscience and other investigators interested in this topic.

**Can Neuronal Representation Pertaining to Faces and Plasticity Provide Insight into the Hard Problem's Riddle?**

Lawrence Kruger, University of California at Los Angeles, USA (lkruger@ucla.edu)

From antiquity to the present, recognition of "Individuality" in our species has been progressively dominated by the depiction of faces and eventually a concept of "mind" related to the brain by comparing behavioral traits and the emergence of modern research on consciousness. By the late 20th century the importance of individuality in brain "representation" of faces and the uncovering of epigenetic factors in relation to unexpected degrees of "plasticity" of brain connectivity were related to facial recognition variants (autism, Williams syndrome) currently being studied by brain imaging and detailed genomic correlates of brain structures implicated in cognitive analysis of faces. This presentation asks specifically

whether neuronal representation pertaining to facial recognition and the plasticity of brain connectivity can give us new insights into the questions posed by the mind-body problem.

**Alfred North Whitehead: Is the Machine Metaphor the Best Approach for Understanding the Mind-Matter Problem?**

Laura Edwards, East Carolina University, USA (edwardsla@ecu.edu)

This presentation intends to discuss the machine metaphor for the mind-body problem, by drawing on the British philosopher Alfred North Whitehead (1861-1947). In his book “Science and the Modern World” (1925), as well as in other important publications, Whitehead has provided what he dubbed “useful functions for comprehending reality”. In drawing on such meta-function and on human comprehension, vis-à-vis unilateral machine functions, Whitehead developed an influential critique of the machine metaphor. His critique was to influence many theorists of organicism who later on also claimed that the machine metaphor would not be useful to solve the hard problem in neuroscience, but had to be dropped. Among other questions, both the adequacy of the machine metaphor and its limitations to understanding the mind-body problem will be discussed in this presentation.

**Keynote Lecture V (~ ISHN Presidential Address):**

**Mapping Mind and Brain in ‘Modern’ Ways – On the Emergence of Interdisciplinary Approaches in the German Neuromorphological Sciences, 1910 to 1945**

Frank W. Stahnisch, University of Calgary, Canada (fwstahni@ucalgary.ca)

This lecture explores the co-evolution of neurological notions of health and disease and the merger of previously distinct clinical and research fields of neurology, psychiatry, anatomy and pathology in an era often referred to as the “period of classical modernity”. The first four decades of the 20<sup>th</sup> century witnessed the emergence of the new cultures of experimental neurology, neuroanatomy and clinical brain psychiatry. These cultures also served as important research bases for innovative approaches in the investigation of the central nervous system (e.g. regenerative concepts or cortical brain mapping projects), while becoming central features of new research trends in neurology and psychiatry. These research trends can also be seen as the product of new forms of institutional research organizations of “interdisciplinary” and “group research” activities, as well as the “brain research divisions” in neurological and psychiatric clinical departments and the institutional development of new forms of interdisciplinary brain research institutes. This transformation from institute-oriented research settings to new brain research centres primarily occurred in the German-speaking scientific world between 1900 and 1930, while its impulses gradually spilled over to other European countries, for example Holland, Belgium and Russia. At the same time, contemporary trends in brain research cannot be regarded in isolation from broader social developments, such as the discourses on social de- and regeneration, neurasthenia, nerve-weakness or the experiences of the brain-injured after WWI. Patients of the classical modern period found themselves vulnerable to neurological and psychiatric diseases, while in turn social and cultural developments also influenced researchers’ conceptualisation, scientific ideas and their experimental and clinical orientation. As shall be argued in this lecture, the methodologies in neuronal de- and regeneration studies, mapping approaches of cortical brain structures and the new physiological interpretations of neuroserological functions were not simply a product of recent advances in the scientific differentiation of somatic neurology or brain psychiatry. Instead, they resulted in important interdisciplinary attempts, which emerged from substantial collaborative work and included neuroscientists from various basic as well as clinical research contexts. By looking at the historiographical roles, narratives and epistemological meanings of concepts of “interdisciplinarity” in the neuromorphological community at the beginning of the 20<sup>th</sup> century, some tentative answers

regarding the place, time and culture of those groundbreaking changes in modern brain research organization shall be given.

**Tuesday Morning, June 21, 2011**

**Eugenics and Psychiatry Workshop I:**

**Eugenics and Psychiatry – Analyzing the Origin, Application and Perception of Early Forced Sterilization Programs from a Medical History Viewpoint**

Frank W. Stahnisch, University of Calgary, Canada (fwstahni@ucalgary.ca)

[This workshop is co-sponsored by the SSHRC-funded CURA group grant “Living Archives of Eugenics in Western Canada:” During the twentieth century Canada experienced two world wars and the Great Depression. These events exacerbated societal problems relating to minority populations including the mentally ill and new immigrants to the provinces. At the same time, this period also witnessed new “social reform movements” in areas such as public health and psychiatry, one of which – “eugenics” – started from categorizing the “abnormal” populations from the normal and led to drastic and inhumane public mental health measures. Specifically in the public mental health sector, Canadian provinces such as Alberta experimented with segregation, institutionalization, and forced sterilization. Alberta legalized sterilization of the mentally and/or morally deficient in 1928 in what was called the “Sexual Sterilization Act”. This piece of legislation also marked a radical change in psychiatric care programs and in how far the mentally ill were perceived as “patients” or even as “a threat” for society. In response, official legislation also impinged on medical practice in psychiatric institutions, such as the asylums at Ponoka and the Michener Center in Red Deer, and became likewise informed by the physicians’ knowledge and practices that shaped governmental and public views considerably. It is the aim of this one-day workshop (June, 21 2011) to bring together historians, philosophers, sociologists and disability scholars to discuss the knowledge basis and the sociocultural background in the public mental health sector between the 1880s and 1950s. In particular, questions shall be raised as to what factors brought the eugenics movement, psychologists, psychiatrists and other physicians together? What were the intrinsic conceptual assumptions that also fostered biological and somatic views in psychiatry about mental illness, following the brain-psychiatric assumptions of leading figures such as the diagnostician and clinical researcher Emil Kraepelin (1856-1926) and its North American counterparts? In what ways was the Canadian health care system, especially in the Western provinces, affected by international discussions in the United States, Britain and Europe? In order to analyze these questions, researchers from the Living Archives Cura Grant shall be brought together with other scholars working on the Canadian eugenics situation to discuss the impact of brain psychiatry and developments in the neurological sciences within their context in the socio- economic developments shortly before or during the first half of the 20th century.

**Introduction – How Eugenics Does Its Work: A Modest Proposal?**

Robert A. Wilson, University of Alberta, Canada (rwilson.robert@gmail.com)

The Sexual Sterilization Act of Alberta (1928-1972), and its implementation, have recently become the focus of research amongst philosophers, historians, disability activists and others as part of the 5-year project Living Archives on Eugenics in Western Canada ([www.eugenicsarchive.ca](http://www.eugenicsarchive.ca)). This interdisciplinary project is funded by the Community-University Research Alliance (CURA) program of the Social Sciences and Humanities Research Council of Canada, and is organized around four themes: Traditional Archives; Collective Memories of Eugenics; Disability, Inclusion, and Eugenics; and Post-Eugenics Futures. The project is also jointly sponsoring the workshop, Psychiatry and Eugenics, to be held on June 21st in Banff in conjunction with the joint meeting. This talk by the CURA project’s

director will provide a brief overview of the project and its connections with the history of psychiatry and neuroscience. The talk will then introduce and explore the idea that conceptualizing key eugenic practices as forms of wrongful accusation (like cases of wrongful accusation of ritual sexual abuse) helps to make sense of the functioning of those practices and distinctive features they possess. This may seem like a peculiar assimilation--of eugenic practices, such as classification of people as "feeble-minded" or "morons", or sterilization, to criminal accusations. In fact, it may seem a little too much like Jonathan Swift's famous "modest proposal" in nature, rather than a proposal to be taken seriously in its own right. The ultimate plausibility of the suggestion, however, lies in what it reveals about the mechanisms through which such eugenic practices operated, both inside the minds of individuals involved in those practices and through their group interactions. Although the session will make special reference to Alberta, the topics covered should be of general interest to anyone with interests in eugenics, disability, scientific expertise, public authority, and the relationships between them.

### **From Suffrage to Sterilization: Eugenics and the Women's Movement in 20th Century Alberta**

Erin Moss and Henderikus J. Stam, University of Calgary, Canada (elmoss@ucalgary.ca)

With the joint aims of improving society, it is not entirely surprising that both eugenics and first-wave feminism were inextricably linked during their respective inceptions. Dowbiggin (1997) has argued, "imperialism, eugenics and maternal feminism frequently intersected" (p. 138), and, as is well known, feminists became deeply involved in the eugenics movement (Black, 2003; Bruinius, 2006; Devereux, 2005). While focusing on home and hearth as the foundation of women's lives (and the nation's future), the leaders of first-wave feminism struggled against all obstacles to this aim, including feeble-mindedness. The objective of this paper is to explore the relationship between first-wave feminism and eugenics, with the aim of examining the history of the sexual sterilization program in twentieth century Alberta. It will be argued that understanding the role that first-wave feminism played with respect to eugenics legislation requires careful consideration and analysis of the significance of the ideology of maternal feminism, and the connection between this ideology and mental health concerns at the turn of the century. Indeed, the practices of sterilization were part of a general set of practices intended to alleviate mental illness, family distress and poverty. We will be examining this case and reconstructing the events by drawing upon a variety of different sources. As historians of eugenics have noted in recent years, it is important that the history of sterilization practices be carefully delineated at the local level to prevent the erroneous attribution that there was a single historical event (Klausen, 2009). This paper will begin by exploring the history of eugenics and various factors that influenced the fusion between the eugenics and first-wave feminist movements. It will then examine in greater detail the formation of maternal feminism and how this particular ideology impacted attitudes towards eugenic practices.

### **A Scientific Basis for Eugenics versus Pseudo-Scientific Practice**

Douglas Wahlsten, University of Alberta, Canada (wahlsten2@gmail.com)

Some well-defined disorders of the nervous system are caused by a defect in a specific gene that is inherited from the parents. The more severe defects are generally very rare. A eugenic program to reduce the frequency of these defects in the population can be founded on good scientific principles that were fully elucidated by the 1930s. Whether such a program should be voluntary and implemented through education and counseling or forcible by edict of the government is a question of ethics and politics, not biological science. Many other important human traits such as intelligence, personality, and emotions are very complex, cannot be traced to simple genetic origins, and are influenced in a substantial way by experience. A eugenic program to alter these traits in the population could be based on principles used to selectively breed improved strains of farm animals. Those principles were well understood by about 1940

and were widely taught in schools of agriculture during the 1950s. There is no evidence that the Alberta Eugenics Board was aware of or cared about those scientific principles. The practices of the Board were apparently based on social prejudice, not genetic knowledge, and membership on the Board evidently was determined by allegiance to a pseudo-scientific creed. That creed allowed the government of the time and the Board to deny the fundamental humanity of their victims and authorize actions against them that were without a doubt, crimes under Canadian law.

**Featured International CURA Lecture:**

**Sterilization Solutions: Varieties of Sterilization Policies in Twentieth-century Europe**

Paul Weindling, Oxford Brookes University, UK (pjweindling@brookes.ac.uk)

Whereas European sterilization has been seen as a direct transfer of North American (notably Californian) sterilization to Europe in the later 1920s, this paper outlines a far more complex and diverse forms of sterilization. Here there is a complex interplay of state welfare policies, politics, religion, and public attitudes. These determined both the forms that sterilization took, and (a matter of further complexity) its incidence. This paper examines the following forms of sterilisation: (i) segregation of mental defectives – the UK; (ii) legislation at a provincial level – notably Vaud, Switzerland; (iii) ‘voluntary’ legislation at a national state level – from Denmark (1929) onwards, notably in Scandinavia; (iv) professional sterilization – the examples of Finland and German-speaking Swiss cantons; (v) coercive sterilization in Nazi Germany on a legislative basis; (vi) coercive racial sterilization, notably of “racial” mixed types and Roma outside the legislative framework; (vii) X-ray sterilization, notably in Auschwitz; (viii) sterilization on the recommendation of professionals, and guardians; (ix) vasectomy for personal contraception; (x) the Pill on a voluntaristic or eugenic basis. These various types of sterilization policies had a complex take-up, with an uneven incidence over time and place, and a changing pattern of rationales and target groups in such contexts as Nazi Germany and Scandinavia. After WW2 sterilisation presented complex problems of its legality, particularly in Germany under Allied occupation, and in Austria. Again there are a range of issues notably the demand, practice and denial of refertilization, and compensation procedures. The paper will highlight the immense diversity of the incidence of sterilization within Europe, particularly once neglected contexts as Switzerland and Eastern Europe are figured in. It will point to possible North American/ Canadian comparisons and links as relevant.

**Eugenics and Psychiatry Workshop II:**

**Exclusion versus Protection: An Interview Research Project with Survivors of the Forced-Sterilization Program**

Anne Hughson, University of Calgary, Canada (ahughson@ucalgary.ca)

This presentation will introduce into the “Collective Memories of Eugenics” sub-project of the “Living Archives of Eugenics in Western Canada” Cura project in Alberta. It focuses on some methodological considerations regarding the interview research program with survivors of the forced-sterilizations in the province of Alberta, while developing foundations for an inclusive collective remembering about Canadian eugenics; delivering video narratives and input into curriculum materials. By integrating traditional archive work with community organizations that emphasize the value of inclusiveness, Living Archives of Eugenics wants to achieve two important goals over the next five years: Identify and develop resources on the history of eugenics in Western Canada that will be of lasting value both to scholars and to the general public; Engage scholars, community organizations and members of the public in discussions about aspects of the past that can inform current practices and policies. In this way, the project is also related to my ongoing research on families with members, who have physical or mental

disabilities. A literature review of current practices and perceptions has already been conducted to explore the reality of family members' experiences and the care provision for people with disabilities today. Interview themes and narratives of parents indicated that too often, parents simply lost their children to the protection services and little effort was made by the 'system' to offer family preservation interventions/ family enhancement supports to preserve family unity and reduce strain. Professionals continued to hold myths and misconceptions that resulted in reactive, deficit-based approaches that held parents with developmental disabilities to a higher standard than other parents. Interpretations of the harmful effects of the 'new institutions' within community and the practices of a 'new eugenics' are drawn from these findings.

### **Methodological Considerations of an Interview Research Project with Survivors of the Forced-Sterilization Program**

Anne Hughson, University of Calgary, Canada (ahughson@ucalgary.ca)

This presentation will introduce into the "Collective Memories of Eugenics" sub-project of the "Living Archives of Eugenics in Western Canada" Cura project. It focuses on some methodological considerations regarding the interview research program with survivors of the forced-sterilizations in the province of Alberta, while developing foundations for an inclusive collective remembering about Canadian eugenics; delivering video narratives and input into curriculum materials. By integrating traditional archive work with community organizations that emphasize the value of inclusiveness, Living Archives of Eugenics wants to achieve two important goals over the next five years: Identify and develop resources on the history of eugenics in Western Canada that will be of lasting value both to scholars and to the general public; Engage scholars, community organizations and members of the public in discussions about aspects of the past that can inform current practices and policies.

### **The Eugenics Paradox: Core Beliefs of Progressivism versus Relicts of Medical Traditionalism – The Example of Kurt Goldstein**

Frank W. Stahnisch, University of Calgary, Canada (fwstahni@ucalgary.ca)

The German-American neurologist Kurt Goldstein (1878-1965) is regarded by many as an impressive interdisciplinary scholar who has made numerous and continuing contributions to the fields of clinical neurology, brain psychiatry, experimental psychology, medical rehabilitation and philosophical anthropology. Goldstein has tried to combine the analytical approach of classical neurology with a holistic theory of brain function while integrating the insights of the contemporary "Gestalt Theory". In his clinical departments at the Universities of Frankfurt am Main and Berlin in Germany, Goldstein educated medical students and residents not only in basic brain research and neuropathology, but also trained them in broader psychoanalytic and clinicopathological approaches emphasizing the distinct need for a more humanistic attitude in future medical doctors. Rarely, however, has the fact been explored that Goldstein also embraced eugenicist and racial anthropological ideals, which may be found in his concise publication, *Ueber Rassenhygiene* ("On Eugenics") in 1913. In this early work, Goldstein discusses, for example, the interdependencies of structural brain anomalies that have clinical neurological symptoms. With respect to this publication, the argumentation becomes somewhat interwoven with elements from the "degeneration" and "exhaustion" discourse which display major cultural characters of Weimar medicine and science. Amongst some of his other claims, Goldstein has stated that "the relationship of hereditary conditions" points "not at specific characteristics, but aspires to meliorate the human race by eliminating the unfit individuals". With similar biologicistic – and in many respects militaristic – formal rhetoric, Goldstein has sided with many ardent contemporary racial anthropologists. In particular, the language he uses invokes that of the psychiatrist Alfred Hoche (1865-1943), who later on – and along with the Heidelberg law professor, Karl Binding (1841-1920) – coined the disturbing term of "life not worth living". In fact, *Ueber Rassenhygiene* was published out of

Hoche's Psychiatric Department at the Medical Faculty of Freiburg where Goldstein had served as a clinical research associate. Even though my paper is not an attempt to relativize Goldstein's holistic and humanist neurological theory, it does stress the important overlap of core social progressivist beliefs and relicts of medical traditionalism. This "paradox of eugenics" – as I prefer to call it – has haunted many social progressivists of that time period. Many of these individualists shared eugenics ideals, however, individuals such as Goldstein, after his emigration to America and the infamous Canadian health care politician, Tommy Douglas (1904-1986) eventually discarded them. Others, as in the well-known case of the Swiss-German psychiatrist, Ernst Ruedin (1874-1952), continued the promulgation of the eugenics line and thereby laid the ground for the murderous context of national socialist health care philosophy. In considering Goldstein's *Ueber Rassenhygiene* in its wider social and cultural context, this paper attempts to untangle some philosophical trends and eugenics convictions as they emerge from the context of medical modernity and its many antagonisms.

### **Bad, Sad, or Just Plain Mad: Varying Justifications for Reproductive Intervention and Narratives of Motherhood in Alberta's Women's Clubs**

Sheila Gibbons, University of Saskatchewan, Canada (sheila.gibbons@usask.ca)

This paper pursues a particular focus on the unique geographical isolation of Alberta, which contributed to the involvement of women in farmers' movements – one which eventually led to larger coalitions, such as the United Farm Women (UFW). What these organisations ultimately achieved was an allowance for rural women to not only combat their geographical and social isolation, but to secure a more empowered role in society. Newly emerged "club feminism" led to a unique form of social ethics which included gender, religion, co-operation, education, and agrarian democratic thought. Within these organisations in Alberta, including the UFW, the Alberta Child and Family Welfare Organisations, and various women's leagues, narratives of good and bad motherhood dominated discussions and publications. Similar narratives exist in literature and speeches to rally female support for extreme family control measures – particularly the Sexual Sterilization Act and its amendment, a push for medical testing prior to marriage, and the proliferation of birth control information and technology. These texts are dominated by three archetypes of the failures of motherhood, and shift based on the target: the mentally deficient mother, a defective menace requiring the strictest controls (institutionalization without parole in addition to sterilization); the socially deviant mother, typically of the lower classes with poor habits requiring intervention (education or sterilization in extreme cases); and the overwhelmed or depressed mother, representing the ennui of the middle class house wife who desires control over her own destiny (information and dissemination of birth control). I would like to examine the complex relationship between eugenics and the birth control movement within the unique feminist organisations in Alberta, and analyse how Prairie women developed and manipulated these varying narratives of the mad mother for social and political control of what Margaret Sanger described as a chronic condition among women – pregnancy and motherhood.

### **The Alberta Eugenics Movement and the 1937 Amendment to the Sexual Sterilization Act**

Mikkel Dack, University of Calgary, Canada (mikkeldack@hotmail.com)

The scholarly study of eugenics legislation in Alberta has been seriously limited as concentration has been restricted to the province's original Sterilization Act, passed in March 1928, and to the political, social, and economic conditions of the 1920s. Although the 1928 Act was of great significance, being the first sterilization law passed in Canada, it was its 1937 amendment and the permitting of involuntary sterilizations that made the Alberta eugenics movement truly distinct. During the late 1930s, a time when the great majority of regional governments were either decommissioning or disregarding their sterilization laws due to a lack of funding, the discrediting of hereditary science, and an increase in public protest, Alberta expanded its own legislation. Although similar laws were met with fierce opposition in other

provinces and states, this new amendment of 1937 remained virtually unopposed in Alberta. As a result of such limitations in research, the explanations for why the Act was amended and why resistance to sterilization remained minimal during the 1930s have been based almost entirely on political and social assumptions and not on sound evidence; explanations have proven to be exaggerated, inaccurate, and misleading. By dismissing the preconceived notions and arguments of the past we are left with a new grounding from which to build future propositions and with a new set of sharpened questions to help determine why the Alberta government and presumably its people were willing to support such regressive legislation when it was being rejected and ignored elsewhere. By doing so, new theories arise, such as the influential role of individual personalities within the provincial government, the mental state of Alberta immigrants, the definition and diagnosis of “mental deficiency” in Canada, and the means by which political resistance could be expressed.

### **The Forced Sterilization Debate of 1933 and the Eugenics Movement in Manitoba**

Erna Kurbegovic, University of Manitoba, Canada (ernak@mts.net)

The sterilization debate in Manitoba was centered on section 30 of the Mental Deficiency Act of 1933. Section 30 of the act called for the sterilization of those deemed to be “mentally defective,” if their doctors and psychiatrists believed it would be beneficial, not necessarily to the individual but to the society as a whole. Many in the medical profession presumed that mental illness was hereditary and that it would be passed on to the next generation if these individuals were allowed to reproduce. The debate not only occurred within the Manitoba Legislature between politicians but also within communities across the province. Clearly, there was much opposition to the bill, especially Catholic opposition, but there was also a significant amount of support, particularly from the medical profession. By mid-1933 the Mental Deficiency Act passed but without the controversial section 30, which was defeated by one vote. The purpose of this paper is to provide an analysis of the debate. I investigate both sides of the debate in order to understand what led to the defeat. As my analysis will show, the various arguments made by the pro and anti-eugenic groups in Manitoba had a significant impact on the future of the sterilization clause within the province.

**Wednesday Morning, June 22, 2011**

#### **Student History of Neuroscience Workshop I:**

##### **The Dualist Dilemma – Historical and Philosophical Reflections on the Mind-Brain Relationship**

Naveet Sohi, University of Calgary, Canada (navi\_sohi@hotmail.com) – [1]

The relationship of the mind to the body has led to a discipline that is both cutting edge in its understanding of mental processes, but has somewhat remained opaque – since Ancient times – in how it is connected to the mind (Hansotia, 2003). A clear relationship remained elusive until the 17th century when René Descartes, the father of modern philosophy, announced his notion of consciousness by stating, “I think therefore I am”, and designated the pineal gland as the “the seat of the soul”, the location at which the mind interacts with the body (George et al. 2000). Scientific inquiry has demonstrated Descartes’ theory of the pineal gland functions to be wrong (Hansotia, 2003); however, his inquiry into this problem has set the stage for philosophical discussion of the mind-body problem for centuries to come. Throughout history, dualism and monism, the two major schools of thought have emerged in an attempt to resolve the mind-body problem. Dualism, credited to René Descartes, claims that mind and matter exist independent of each other, whereas monism is the notion that the mind and body exist as one (Bunge, 2008). Monism dictates that one state of mind-brain interaction exists however, the actual properties of this state varies within different branches of the theory. Physicalists argue that only the physical world exists and that the mind will eventually be explained in terms of the physical body.

Idealists maintain that the mind is all that exists and that the physical world is simply an illusion created by the mind (Kim, 1995). The approach of physicalism in the 20th and 21st centuries has been particularly influential in the sciences, especially in the fields of sociobiology, computer science and neuroscience (LeDoux, 2002; Russel and Norvig, 2010). The historical and philosophical questions that I want to raise in this poster are: What historical factors have contributed to the development of ideas that have led to our present understanding of the mind-body interaction? How has neuroscientific research both influenced philosophical thought, and conversely what impact has philosophy had on neuroscience? Finally, how has this dilemma contributed to relate fields, in an attempt to answer questions such as, can computational modeling amount to artificial intelligence?

### **The Visual Culture of the Neurosciences from a Hyperrealist Perspective**

Claudio Flores Martinez, University of Heidelberg, Germany (c.flores@stud.uni-heidelberg.de) – [2]

In recent years, the specific interface(s) of images, patterns, morphological forms, and the logics of design (often mutually referred to as the “visual culture”) of the modern neurosciences have become of increasing interest in the theory of the life sciences and the historiography of medicine. Scholars in these areas have pointed to the seemingly similar nature of scientific and artistic forms of creativity, and long-held views on the essential tension between these fields have been proven to be incorrect and constraining cross-disciplinary exchanges in the understanding of human creativity. When the current visualization practice in the neurosciences and biomedicine is taken into account, it is evident that their visual culture has now emerged in a virtual form – both in educational and research contexts. This is most obvious in the case of computer tomography (Holder 2004), the visual human project® (Waldby 2007), the human genome project (Davies 2002), or applications in 3D gene regulation analyses (Burleigh, Suen & Jacob 2003). The digital nature of the images produced can be singled out as an essential feature of all of these visualization approaches. Their “product” is an information-derived process, which goes often beyond the specific influence and reach of human perception and decision-making, when these images are produced. Almost two hundred years ago, in his main work, “The World as Will and Representation”, philosopher Arthur Schopenhauer criticized the phenomenological and epistemic limitations of the prevailing natural sciences by emphasizing their inextricable attachment to mere appearances. This line of thought is completed by his declaration of reality and human consciousness as being nothing more than brain phenomena. Many findings in modern neuroscience provide empirical evidence for this idealist stance in philosophy, although in scientific thought, of course, the brain has not lost its material substantiality. From this perspective Schopenhauer can be regarded a forerunner of the philosophy of mind and its most striking issue – the “hard problem”. It can be argued that today we have transcended the topos of an illusionary, sensual perception of the real and entered a hyperreal domain in which the virtual and simulative nature of consciousness is taken for granted. The “visual culture” of modern neurosciences can be investigated from this hyperrealist point of view.

### **The Mackie Family Collection in the History of Neuroscience at the U of C – Presenting a Critical Cataloguing Project of this New Acquisition in the Health Sciences Library**

Nicole Lefebvre, University of Calgary, Canada (njlefebv@ucalgary.ca) – [3]

The Mackie Family History of Neuroscience Collection has recently been acquired by the University of Calgary as a unique resource, which will be an invaluable collection for neuroscience research and education to everyone including students, faculty and the public. The collection, which had been put together in over thirty years of active acquisitions and careful selection by the Texas neurologist Robert Gordon, broadens the local neuroscience educational experience, while digitizing the collection will enable people around the world to share this resource. It heightens the status of the University of Calgary as an international centre for neuroscience research and is an excellent addition to our library collection. The collection, which was primarily based on Lawrence C. McHenry’s “History of Neurology” standard

book and bibliography, includes for example an original copy of the 1953 Nature paper where Nobel winners James D. Watson (b. 1928) and Francis Crick (1916-2004) first described the discovery of the double helix structure of DNA. It also includes the rare first neurological text written in the 1600s by Thomas Willis (1621-1675), the physician who coined the term neurology and is known as the “father of neurology”. This project will help to establish an annotated bibliography, serves the critical appraisal of the books and materials and leads to the writing of a historical overview article outlining the historical trends of the neurosciences found in the collection. In relating to Webb Haymaker’s and Francis Schiller’s “Founders of Neurology” (1970), this project will (a) map major trends in the history of neurology and neuroscience, as they are reflected in the collection, (b) identify specific gaps that need to be developed in the future, and will (c) give a concise overview to both the International Society for the History of the Neurosciences (ISHN) and the International Society for the History of the Behavioral and Social Sciences (Cheiron), as to how members could benefit from research visits to the University of Calgary and working with the Mackie Collection in the History of Neuroscience in the Health Sciences Library’s new History of Medicine Room. A summarizing overview-publication for the “Journal of the History of the Neurosciences” is planned for the year 2012.

### **Experimentation or Quackery? The Treatment of Multiple Sclerosis and Similar Neurological Conditions between 1850 and 1950**

Aravind Ganesh, University of Calgary, Canada (aravindganeshy@yahoo.ca) – [4]

The disease frame of Multiple sclerosis (MS) and similar nosological entities took shape in the latter half of the nineteenth century, when advances in neuropathology enabled these diseases to be individualized and named. This period of 1850-1950 was marked by numerous diagnostic challenges, particularly in the differentiation of these neurological conditions, which could present quite similarly, with the most prominent confounders of MS being *Paralysis Agitans* (“Parkinson’s Complex”) and neurosyphilis (particularly *Tabes Dorsalis*). However, these challenges did not deter physicians from actively seeking therapeutic options for their patients. Using journal articles, reviews, and historical images, this poster outlines the various attempts at the treatment of these conditions between 1850 and 1950. Perhaps owing to the paucity of efficacious therapeutic options, there was a tendency to rapidly extend the application of treatments that had apparent benefits for one neurological disease to numerous others. Treatments during this period can be classified as non-pharmacological, pharmacological, and procedural. Non-pharmacological interventions included lifestyle modifications, which often limited physical exertion and appear to have been fashioned after Silas Weir Mitchell’s (1829-1914) “rest cure” for hysteria; various diets; hydrotherapy (bathing and rubbing in warm water); massages; exercises; and psychotherapy or hypnotism. Pharmacological interventions involved the use of various chemicals, including hyoscine/duboisin, arsenic, potassium iodide, cannabis, atropine, and mercury. Procedural interventions included electrotherapy (faradic or galvanic stimulation) and more invasive nerve-stretching operations. These early treatments often did not have any physiological basis, and in retrospect appear to have “bordered on quackery”, with any improvements likely attributable to the placebo effect. Particularly with MS, remissions that were part of the natural history of the disease were often mistaken for positive consequences of therapy. This possibility was acknowledged by several physicians at the time, yet many of these treatments were recommended even by such prominent figures as Hermann Oppenheim (1858-1919) and Charles Loomis Dana (1852-1935). Nonetheless, these therapeutic attempts also reflect the zeal of the profession, as physicians faced with suffering patients often experienced a strong emotional need to attempt treatments without waiting for an agreed-upon proof of efficacy, sustained by pressure from their patients. The end of the Second World War may be seen as marking the beginning of the therapeutic era in neurology, with the mass-production of the first antibiotic agent Penicillin, the therapeutic recognition of Levodopa, and academic research into interferons offering tangible hope to patients with syphilis, Parkinson’s disease, and MS, respectively.

### **An Oral History of Dr. C. Chan Gunn and his Neuropathic Theory IMS**

Chris Noss, Queen's University, Canada (chris.noss@me.com) – [5]

Dr. C. Chan Gunn was born in Malaysia in 1931 and grew up during the Japanese occupation of his country. He was educated as a physician at Peterhouse College at the University of Cambridge. His upbringing in Malaysia familiarized Dr. Gunn with the practice of acupuncture; however his personal experiences and medical education left him skeptical of its use. He immigrated to Vancouver, Canada in 1966 where he became interested in chronic myofascial pain while employed with the Workers Compensation Board. A combination of meticulous physical examination of patients and the serendipitous discovery of a monograph written by Walter B. Cannon (1871-1945)—posthumously published in 1949—would allow him to establish his neuropathic theory for chronic myofascial pain. Despite his skepticism of acupuncture, he was able to borrow an acupuncture technique termed dry needling and use it to treat these patients developing what is now known as Intramuscular stimulation (IMS). Despite the use of acupuncture needles, IMS is unrelated to acupuncture; rather, it aims to use simple neurophysiology to alter nerve function. Dr. Gunn has trained over 1200 physicians and physiotherapists throughout the past 30 years in IMS and currently runs iSTOP, a non-profit clinic in Vancouver. This poster attempts to outline in brief detail, the modern history of myofascial pain and put Dr. Gunn's contributions in context. The bulk of this poster is based on an annotated oral history transcript and memorabilia from Dr. Gunn, based on a part-time one year research project at the University of Calgary (HBI) and UBC. A recurrent theme in this poster is the contrast between Dr. Gunn's Asian heritage and his strictly allopathic theory. Another is the struggle between clinicians and laboratory scientists in research. An attempt to discuss the arguments of Dr. Gunn's main opponents is also made including a discussion of Walter Bradford Cannon's 1949 monograph.

### **Evolution of X-Ray Computed Tomography and its Implementation in Healthcare in Calgary**

Ankur Goel, University of Calgary, Canada (agoel@ucalgary.ca) – [6]

It can be argued that x-ray computed tomography (CT) is one of the greatest revolutions in the field of radiology and neurology since the introduction of the X-ray. In 1979, G.N. Hounsfield and A.M. Cormack were awarded the Nobel Prize in medicine for the invention of computed tomography. CT imaging started off as a simple low resolution two dimensional imaging technique that would require a patient to remain still for several minutes. It was first introduced at the Atkinson Morley Hospital in Wimbledon, England in 1974 and was used to take images of the brain. Since 1989, with the introduction of the spiral scanner, it has rapidly evolved to creating high resolution three dimensional images of the human body in mere seconds. Combined with other techniques, such as angiography, and positron emission tomography, CT imaging has become a staple modality in diagnosing and treating neurologic diseases. The CT scanner was first introduced at the Foothills Hospital in Calgary in 1975 with the efforts of Drs. B. V. Evans and H. Swanson. It was the first CT scanner in Western Canada, paving the way for exponential advancements in the fields of radiology, neurology, and neurosurgery. Outlining the introduction of CT scanners in Calgary and the initial challenges faced by radiologists and neuroradiologists will be a topic of discussion in the presentation. Information for this presentation will be obtained from scientific journal articles, medical reviews, and experts in the field of medicine and diagnostic imaging. The presentation will highlight the history x-ray computed tomography and how it has changed the field of diagnostic imaging in recent years.

### **Mental Health Care in Alberta's Hospital at Ponoka**

Alexandra Kimberly Whittick, University of Calgary, Canada (akwhitti@ucalgary.ca) – [7]

The Alberta Hospital at Ponoka has been an epicenter of mental health care for the province since its founding in 1911. At the time it was an advanced care facility intended to be the first of several small hospitals envisioned by Duncan Marshal, the Minister of Agriculture, wherein patients could receive a more personalized form of care and make progress toward recovery. Unfortunately by the 1930s the hospital was hopelessly overcrowded, with 1,707 patients far exceeding its intended capacity. Patient care suffered and what was meant to be a sanctum of healing became another Bedlam complete with straitjackets and bed cages. With the eugenics movement beginning in 1928 came the involuntary sterilization of patients deemed “mentally unfit” at Ponoka. This has become a hallmark of the stigma and personal harm that psychiatric patients are vulnerable to under institutional care. The most famous case, Leilani Muir has illustrated the degree of individual devastation caused by this practice and set a precedent for other victims seeking compensation for such treatment. The Ponoka hospital has improved greatly in recent years, emerging as a leader in Canadian psychiatric medicine with promising new therapies and a modern code of ethics regarding the treatment of patients. As is the general trend through medicine, patients and their families are gaining a voice and the right to choose their therapy rather than submit to ‘doctor’s orders’. This presentation will assess these and other changes in Ponoka, including how patients were treated from the perspectives of the doctors and nurses, the view of the government reflected in the policies supporting the institute, and the social stigma faced by the patients. Balancing the quality of life with the need for treatment is more important than ever, given the advancements in medical treatment that provide a variety of choice for therapy as well as risk factors associated with those treatments.

### **Recalling the Forgotten: Care for Dementia Patients in Alberta from 1900-1950**

Riana Downs, University of Calgary, Canada (rdowns@ucalgary.ca) – [8]

Before the turn of the century, very little was known about the origins and etiopathology of mental disorders, including behaviours now categorized as “dementia”. Depending on the extent of their “madness”, individuals were either “ignored, expelled, or imprisoned...” (Weiner, 2008, p. 257) For example, our current understanding of Alzheimer’s disease, the most common form of dementia, as caused by neurological abnormalities was only realized in 1906 when the Munich psychiatrist Alois Alzheimer (1864-1915) referred the clinical phenomenology in his famous patient “Auguste Deter” back to changes in the neurohistological structure of her brain (Maurer & Maurer, 1998). Such insights into biological psychiatry, highly impactful historical events like WWI, the Great Depression, and WWII, and other factors including social geographies created a unique mental health care environment in Canada in the early 20th century and one that can be intriguingly studied in the western province of Alberta. Before this revised pathological understanding of “dementia” at the beginning of the 20th century, in what ways were individuals who displayed symptoms of dementia or Alzheimer’s disease treated in Albertan hospitals, asylums, and local communities? What types of institutions and/or social groups played a critical role in caring for Alberta patients with dementia during this time? Through this exploratory project, I aim to historically map out dementia care in Alberta from 1900 to 1950 using literature and archive materials (photographs, medical artefacts, etc.) in conjunction with relevant contemporary literature and materials. Through such review, I endeavour to generate a greater historical understanding of the mental health institutions and the care they provided to dementia and Alzheimer’s patients in Alberta from the beginning to mid 20th century.

### **Major Depressive Disorder – Historical and Ethical Aspects of an Emerging Disease in 20th Century America**

Laura A. Ansell, University of Calgary, Canada (laansell@ucalgary.ca) – [9]

Major depressive disorder is one of the most prevalent psychiatric disorders found worldwide. In as little as ten years, the prevalence of this disease has increased from 3.3% to 7.1% in the United States, with several billions of dollars being spent on antidepressant drug treatments each year (Swedo and Grant, 2008). This is not new, however, as humans have been medicating themselves for thousands of years for problems ranging from pain to sleeping problems (Meyer and Quenzer, 2005), but the dramatic changes necessitate further scrutiny and also historical comparisons. More recently, the discovery that the monoamine oxidase inhibitors, which were originally used to treat heart problems, could treat depression led to the explosion in antidepressant development and use. Although MAOIs were effective in treating depression, physicians and patients alike were not satisfied with the slow onset of action (weeks up to months) and the host of negative side effects. The MAOIs and the later used tricyclic antidepressants were associated with many negative side effects, leading to a demand for a safer, faster, and more user friendly drug. The most common form of antidepressant treatment today is the Selective Serotonin Reuptake Inhibitors, which act to increase certain neurotransmitter concentrations in the central nervous system (Meyer and Quenzer, 2005). This is based on the “Serotonin Hypothesis” of depression, which associates depression with decreased synaptic serotonin levels. However, due to the length of time between the onset of SSRI use and the appearance of its therapeutic effects, a more complex model of the neurobiology of depression is required to move forward in its treatment (Krishnan and Nestler, 2008). The historical and ethical questions I want to raise in this poster are manifold: What were the historically contributing factors that accompanied the rise of MAOIs and tricyclic antidepressants (Hertzberg, 2009)? Is there a direct social and economic link between the rise of antidepressants in the 1960s and the modern SSRIs now? To whom are these drugs being prescribed, and what about changes in perspectives in children and the elderly? From the ethical perspective, my poster also investigates some of the reasons behind SSRI treatment and ethical issues regarding its widespread prescription. Ultimately we must ask, is there an alternative to SSRI and other drug treatments, or are we committed to the use of these drugs for an increasingly “depressed” population (Horwitz and Wakefield, 2007)?

### **Historical Viewpoint on Attention Deficit Hyperactivity Disorder, Childhood and the Media**

Valerie Brulé, University of Calgary, Canada (vbrule@ucalgary.ca) – [10]

Attention Deficit Hyperactivity Disorder (ADHD) has been described in medical literature as early as the late eighteenth century. Currently, ADHD is defined in the Diagnostic and Statistical Manual of Mental Diseases IV-TR as “[...] pervasive symptoms of inattention or inattention, hyperactivity and or impulsivity, which are clinically impairing with an age of onset prior to age seven.” Throughout history, this disorder has been known by other names, has evolved as a condition and has been associated with a spectrum of symptoms. In a similar manner, though with a much longer history, the definition of childhood has changed throughout time; the history of what it is to be a “child” is closely linked to how children behave in society. A scribe from 1800 B.C. Mesopotamia, for example, is recorded as ensuring his son attends school and behaves “well”. Interestingly, research into ADHD-like behavior increased in the early 1900s at the time when the British Education Act made school attendance mandatory for children; it has thus been postulated by some that a focus on “good” behavior at school has led to an increased awareness of ADHD. The historical views on childhood have influenced the evolution of ADHD as a disorder in the same way that popular culture and media today continues to shape it. The history of ADHD and of childhood will be explored as will today’s popular and often controversial views

on ADHD. The challenges that both patients and clinicians face in defining and living with this condition will be highlighted.

### **Kitimat, British Columbia: A Case Study in the History of Public Mental Health**

Kelsey Lucyck, University of Calgary, Canada (kdlycyk@ualberta.ca) – [11]

With attempts to reverse economic decline, our nation and industries within it do not always account for the individuals it affects. Paradigmatic of other manufacturing-based towns, Kitimat, British Columbia is a community that has been intrinsically connected to the economic development and decline of its industry. Located on the northwest coast, the town has lost two of its three key industries in the past decade, and is steadily diminishing. The most recent population count, as reported by Statistics Canada in 2006, was taken while all key industries operating. Even so, the population of 8,937 represents a 13% drop in the number of residents since Kitimat's last census in 2001, and does not account for the families who left after the closing of major (District of Kitimat 2009). Socioeconomic factors influence residents in a number of ways, and I wish to determine how residents of Kitimat have changed or adapted their discourses of mental health alongside economic development. Specifically, I will look at how depression has been treated or received in the community, and experience inequitably compared to more urban settings. Finally, I hope to determine how the situation in Kitimat relates to the literature linking mental health and industry (see Marchand 2007; Shields 2006). While Kitimat has only existed since the 1950s, it has undergone three major stages of development: pre-industrialization, industrial prosperity, and its current stage of economic decline. By using interdisciplinary methods, I will "explore the interplay of national and international forces with local needs and interests" that Peter Twohig (2007) claims is missing from the literature for smaller, rural Canadian communities. Following Geertje Boschma's (2003) suggestions on qualitative health research, I plan to record and gain consent to archive the oral histories of residents and health care professionals to understand how different members of the community view the state of public mental health. I will digitally record and transcribe the narratives of residents according to the procedures laid out by the Columbia University Oral History Research Office. Additionally, I will analyze council meetings and other public forums, existing town histories, and statistical data to gauge an understanding of what is or is not being said regarding the town's public mental health.

### **The Progression of Hysteria**

Jovita Byzitter, University of Calgary, Canada (jrbyzitt@ucalgary.ca) and  
Ashley Rommens (arommens@ucalgary.ca), University of Calgary, Canada – [12]

Throughout history, many mental illnesses have been described. Hysteria is an interesting malady because its pathology was debated and changed for years and even today there is not a thorough understanding of the disease. Hysteria was a term used to define a potpourri of excessive emotional symptoms and was diagnosed predominantly in females. This presentation will explain the origins of the pathologies of hysteria, and the transitions of the etiology, whether influenced by social or medical factors. Beginning with the Ebers Papyrus in Egypt and persisting until the Dark Ages, most cases of hysteria were attributed to a "wandering uterus" (Morris and Donohoe, 2004). When the 17th century rolled around, prominent figures in medical history such as Willis suggested that the symptoms of hysteria are more likely to arise from a dysfunction of the nervous system (Slavney, 1990). Charcot in the 19th century completed rejected the uterine hypothesis of hysteria and attempted to attach more concrete ideas to the disorder (Morris and Donohoe, 2004). What remained the same in the diagnosis of hysteria over the years was the prevalence in females. Many representations have been presented in popular literature, such as Gilman's 1892 work, "The Yellow Wallpaper". Attempts to preserve hysteria as a diagnosis have mostly failed due to their being no unitary concept of the disease. Hysteria has been described through a multitude of disciplines including psychology, sociology, neuroscience and feminist

literature. This constantly morphing disease shows how much of an influence social views have on medical care and on our perceptions of illnesses.

### **The Placebo Effect: An Unsung Hero**

Sravani V. Mudumbi, Upstate Medical University, USA (mudumbis@upstate.edu)  
 and Sreenath P. Narayan , Case Western Reserve, USA – [13]

On the matter of placebo, Sir William Osler wrote that a desire, conscious or unconscious, to take medication for an illness distinguishes humans from all other animals. The first medicine used by man, of course, cannot be known; the earliest evidence of organized treatment comes from 27,000-year-old cave paintings depicting ceremonial healing practices with a designated healer whose social status was equivalent to that of the contemporary physician - a tailed, hirsute Cro-Magnon who is thought to have relied principally on the psychological effects of treatment rather than knowledge of biochemical properties. Prescriptions from this period may have largely been belief-based and, similar to 17th century London's pharmacopoeia, chiefly enlisted use of organic matter of indeterminate medicinal value. Scientific investigation of Hippocrates' works has not revealed any treatment with underlying biochemical or biophysical mechanisms. In the hours preceding the death of Charles II, unsuccessful attempts at resuscitation consisted of phlebotomy, emetics, and strategic placement of pigeon dung on his feet. It was then, that Voltaire was heard to have said, "The art of medicine consists in amusing the patient while nature cures the disease." Something needed to change. Potent pharmaceutical agents derived from botanical sources were quickly gaining on old world medicine. This turning point arrived when Thomas Sydenham demonstrated the therapeutic specificity of quinine in malarial fevers. He introduced novel discrimination between placebo and non-placebo, marking the onset of scientific, belief-independent medicine. With increasing knowledge of biochemical mechanisms, the placebo effect became increasingly mysterious, rising to a greater level of significance than ever before. Following this, an effect would only be considered placebo when a pharmaceutical agent was not used, attributing it to expectation. This inherently uncertain phenomenon has now claimed its "official place" in clinical controlled trials. Expectation- and suggestion-induced neural changes have been demonstrated to have both beneficial and "toxic" effects on a variety of neurological and painful conditions. Emerging evidence supports an active placebo effect in chronic inflammation and "functional" disease, for which emotional state and the doctor-patient relationship appear to comprise a common substrate. Taking the placebo effect as product and proof of an extensive psychosomatic neural network involving end-organs, a gradual return to placebo treatment is in progress with increased patient awareness. This effect, which was likely responsible for many early forms of medicine, has earned a place as a scientific counterpoint, and is currently being explored as modern treatment.

### **A Better Race of Human Beings: Eugenics in the American Media, 1900-1909**

Celeste Sharpe, University of Calgary, Canada (celestetvs@gmail.com) – [14]

The term "eugenics" entered the realm of public discourse in 1883 and was defined as "the science which deals with all influences that improve the inborn qualities of a race; also with those that develop them to the utmost advantage". At the turn of the twentieth century, the United States grappled with the social pressures resulting from two decades of intense industrialization and urbanization. Subsequently, eugenics achieved its greatest level of success and support during the 1920s and 1930s, following the establishment of the Eugenics Record Office in 1910 and the 1927 Supreme Court decision in *Buck v. Bell* which upheld the constitutionality of forced sterilization. Also, increased fear of the fecundity of immigrants created a panic about 'race suicide', which was viewed as the rapid and improvident breeding of the lower classes and unfit. In the convergence of competing ideologies and global pressures, eugenics emerged in the United States as a proposed solution to the perceived ills of society. This project analyzes how eugenics was discussed in the print media from 1900-1909, and how this discourse reflected social

values and perceptions. Newspaper articles consistently blended established nineteenth century conceptions of scientists as vessels of progress, racial hierarchies, and marriage with messages, which emphasized the collective over the individual, and more significantly, the need to reform society through scientific means. These frameworks sought to present eugenics in an ideologically familiar manner to gain public support for sterilization programs and legislation.

**Ennobled Work: The Intrinsic Nature of Work Inside and Outside the Walls of the Saskatchewan Hospital North Battleford, 1929-1939**

Jennifer Creighton, University of Saskatchewan, Canada (jec374@mail.usask.ca) – [15]

The Great Depression was a period that reinforced work as a fundamental part of life for both men and women. Work was defined differently for each member of society, and was especially different between genders. As unemployment skyrocketed, and relief became part of life for many Saskatchewan families, work and the lack thereof became the conversation du jour. Finding pride in being a husband and provider declined with wage and work opportunities. At the same time, female informal labour increased as families needed to make ends meet. The Great Depression required more of women: more hours of work, more ingenuity, and more determination. Labour demands did not decrease for women during the Great Depression, in fact, they increased. Age also informed the relationship between work and gender because while both men and women worked until they were no longer able, the death of the male partner would cause his wife to then be considered socially redundant. Men and women who found the pressures of unemployment or being worked to death too great found themselves in a situation where their mental health was tested, even unto subsequent committal. The Saskatchewan Hospital North Battleford (SHNB) reinforces the importance of being industrious and willing to work, as these qualities presented themselves as the most noteworthy quality recorded in the ‘habits of life’ column of the General Register. This small column could have housed any description of their new patients, yet being industrious, or not, appears often. In addition, the Hospital utilized patient labour in many of their operations. Used as a form of therapy, though the concept was significantly out of date by the 1930s, patient labour helped the struggling hospital in a time of increased patient populations. Historians have suggested that patients who willingly worked were more likely to be discharged. This paper will discuss the ways in which the Great Depression defined work for men and women and how being industrious was considered one of the most essential personal characteristics in this era. Gendered conceptions of work, reinforced by relief policy, society and by hospital staff will also be covered, in connection with the different stages of life that men and women entered.

**The Eugenics Movement and the Albertan Public**

Alessandra Uifalusi, University of Calgary, Canada (auifalus@ucalgary.ca) – [16]

During the twentieth century Canada experienced two world wars and the Great Depression. These events exacerbated societal problems relating to minority populations including the mentally ill and immigrants. At the same time, these times also led to social reform movements in public health and psychiatry, categorizing the “abnormal” populations from the normal. Specifically in public mental health, provinces such as Alberta experimented with segregation, institutionalization, and forced sterilization. Alberta legalized sterilization of the mentally and/or morally deficient in 1928 in what was called the “Sexual Sterilization Act”. This piece of legislation likewise marked a drastic change in psychiatric care programs and in how far the mentally ill were perceived as “patients” or rather as “a threat” for society. However, official legislation and medical practice in institutions such as the Asylum at Ponoka did not go uncontested and the public discusses the then new eugenics programs in both appraising and in critical ways. This presentation will map the public perception of the eugenics movement in Alberta and it analyzes the interface of health care, the media and society by focusing on historical radio transmissions and film documents between the 1920s to the 1950s from the CTV,

Glenbow Museum and other archival sources. It aims at giving further insights into the interplay of science and cultural values, reflecting public policies and public opinions in Alberta at the middle of the 20th century, and traces historical developments that are also critical in medicine and health care today.

**The Involvement of Psychiatry and Psychiatrists in the Eugenics  
Program of Alberta – A Case Study**

Chinmaya Mishra, University of Calgary, Canada (cmishra@ucalgary.ca) – [17]

During the early 20th Century, Western Canadian provinces faced the consequences of large immigration populations, economic crises and the Great Depression. These developments also had their impact on social reform movements towards minority populations and led to what was seen as socially “innovative” approaches in mental health care, psychiatry and public health. Provinces, such as Alberta – but to a certain degree also Saskatchewan, British Columbia and Manitoba – envisaged the institutionalization of large groups of mentally ill individuals, and even forced sterilization programs specifically in these populations. As a consequence, during 1928, the Legislative Assembly of Alberta enacted the “Sexual Sterilization Act”. The act allowed public health and psychiatry institutions to forcefully sterilize mentally ill or morally unstable people in order to preserve the gene pool. This piece of legislation thus represented a drastic change in psychiatric care away from patient-centred and family-based care models towards the institutionalization of thousands of asylum inmates and hospital patients as well as the integration of forced sterilization methods within these institutions. Many in the medical profession presumed that mental illness was hereditary and that it would be passed on to the next generation if these individuals were allowed to reproduce. The Act of 1928 also allowed public health and psychiatry institutions to forcefully sterilize mentally ill or morally unstable people in order to preserve the “hereditary stock” as it was historically called at the time. However, official legislation and medical practice in institutions such as the Asylum at Ponoka did not go uncontested and the public discusses the then new eugenics programs in both appraising and in critical ways. This project will give further insight to the relation of the Calgary Isolated Hospital to other institutions of the Alberta eugenics movements, such as the Ponoka Psychiatric Hospital from 1939-1960. In collaboration with Dr. Frank Stahnisch and Alberta Health Services Archives, I wish to conduct my research on the aforementioned topic.

**A Question of Consent: A Historiographical Analysis of Sexual Sterilization in Alberta**

Mikkel Dack, University of Calgary, Canada (wmdack@ucalgary.ca) – [18]

The scholarly study of eugenics legislation in Alberta has been seriously limited as concentration has been restricted to the province’s original Sterilization Act, passed in March 1928, and to the political, social, and economic conditions of the 1920s. Although the 1928 Act was of great significance, being the first sterilization law passed in Canada, it was its 1937 amendment and the permitting of involuntary sterilizations that made the Alberta eugenics movement truly distinct. During the late 1930s, a time when the great majority of regional governments were either decommissioning or disregarding their sterilization laws due to a lack of funding, the discrediting of hereditary science, and an increase in public protest, Alberta expanded its own legislation. Although similar laws were met with fierce opposition in other provinces and states, this new amendment of 1937 remained virtually unopposed in Alberta. As a result of such limitations in research, the explanations for why the Act was amended and why resistance to sterilization remained minimal during the 1930s have been based almost entirely on political and social assumptions and not on sound evidence; explanations have proven to be exaggerated, inaccurate, and misleading. By dismissing the preconceived notions and arguments of the past we are left with a new grounding from which to build future propositions and with a new set of sharpened questions to help determine why the Alberta government, and presumably its people were willing to support such regressive legislation when it was being rejected and ignored elsewhere. By doing so new theories arise, such as the influential role of individual personalities within the provincial government, the radical

reforming culture of Alberta politics and society, the definition and diagnosis of “mental deficiency” in Canada, and the means by which political resistance could be expressed.

### **The Case against Sterilization: Manitoba and the Anti-Eugenics Movement of 1933**

Erna Kurbegovic, University of Manitoba, Canada (ernak@mts.net) – [19]

The introduction of the sterilization clause within the Mental Deficiency Act of 1933 sparked an intense dialogue between the pro and anti-eugenics groups in Manitoba. Section 30, if implemented would have ensured that an individual deemed to be mentally “unfit” by the provincial psychiatrist would be sterilized, if in the best interest of that individual and the general public. The majority of the opposition came from, among others, the Roman Catholics within the province. They mobilized quickly and voiced their views regarding involuntary sterilization in local newspapers and letters to Premier Jon Bracken. After many debates within the Manitoba Legislature, the Mental Deficiency Act passed in May of 1933 but without the controversial sterilization section, which was defeated by one vote. The purpose of this project is to analyze the anti-sterilization campaign in Manitoba. How effective were the letters and petitions sent by the opposition groups in influencing certain Members of the Legislative Assembly [MLAs] to vote against the sterilization measure? Also, were other factors present in ensuring the defeat of section 30?

### **Nobel Laureates, Neuroscientists and Eugenics**

Natalie Ball, University of Calgary, Canada (neball@ucalgary.ca) – [20]

Eugenics is a topic debated ever since the term was coined by Sir Francis Galton in 1883. Eugenics means “well born” or “good birth”. The two main directions of eugenics are positive and negative eugenics (Fisher, 1917; Ward, 1913). Positive eugenics could be achieved through encouraging reproduction for those with so-called desirable traits and measures to change or improve on the genotype/phenotype of an offspring through somatic interventions on the embryo and fetus level and germline interventions on the parents’ level. Negative eugenics could be achieved through discouraging reproduction for those with undesirable traits and through measures to select, change, improve, or discard a genotype/phenotype of a potential offspring on the embryo or fetus level. Various forms of eugenics are employed and discussed around the world. Nobel Laureates are a group of people held in high esteem seen as visionaries in their areas. This presentation looks at the role of Nobel Laureates from the inception of the prize in 1901 to today in the Eugenics debate and their views towards Eugenics. Though eugenics can encompass all human traits, intelligence has been a major focus of eugenicists (Ryan, 1997). Particularly, there has been debate about whether it is the environment that causes lower intelligence, or heredity (Stevenson, 1945; Wallace, 1934). This focus on the human mind, the genetic traits that affect it and the environment that impacts it means that in order to provide support for or evidence against eugenics, the opinions and knowledge of neuroscientists, psychologists and psychiatrists would have been a valuable resource for eugenicists or opponents of eugenics. In particular, this poster will highlight the views of neuroscientists, psychiatrists and psychologists who received Nobel prizes towards eugenics.

### **Factors Influencing the Acceptance of Negative Eugenics in the 19th and 20th Centuries**

Sarah J. Collins, University of Calgary, Canada (sjcollin@ucalgary.ca) – [21]

When details of the North American negative eugenics movement are discussed, particularly cases of involuntary sexual sterilization of individuals with mental health problems and other minority groups, many are left to wonder how these seemingly inhumane, prejudiced and racist theories and procedures gained widespread acceptance. The history of eugenics has received an increasing amount of attention

from historians within the last several decades, and a growing body of work now suggests that the negative eugenics movement in North America arose out of a number of social, scientific, and political factors. This poster presentation will examine three of the key factors necessary for the widespread implementation of negative eugenic ideas and practices in North America during the late-19th and early-to-mid-20th centuries. First, the publication of Darwin's theory of natural selection in *The Origin of Species* can be considered the theory that provided an initial framework for eugenics. Despite the fact that Darwin's theory was not initially developed within the context of human nature, his ideas prompted concern about scientific advances in health care, and the fact that such advances might interrupt the process of human evolution. Next, Francis Galton's introduction of the term eugenics as "the science of improving stock" (Galton, 1883) launched a controversial dialogue about the supposed need to prevent the degradation of the human race. In his later work, Galton provided a more comprehensive definition of the term eugenics: "the science which deals with all influences that improve the inborn qualities of a race; also with those that develop them to the utmost advantage" (Galton, 1904). While the work of Darwin and Galton may have provided a theoretical basis for negative eugenics, the "science" lacked a method for practical application in society. Specifically, in order for eugenic ideas to be translated into policy, a way to determine who should and should not be permitted to procreate was needed. Thus, the development of intelligence testing in France, the importation of the measures into North America, and their popularization as a psychological tool aided in the practical application of negative eugenic ideology. Together these three historical events contributed to a climate that was conducive to negative eugenic practices in North America.

### **The Translation of Eugenic Ideology into Public Health Policy: The Case of Alberta and Saskatchewan**

Karolina Kowalewski, University of Calgary, Canada (kkowalew@ucalgary.ca) and  
Yasmin Mayne, University of Calgary, Canada (ymayne@ucalgary.ca) – [22]

During the twentieth century Canada experienced two world wars and the Great Depression. These events exacerbated societal problems related to minority populations including the mentally ill and immigrants. These tense times led to social reform in public health, education, and immigration policy, categorizing the "abnormal" populations from the normal. Specifically in public mental health, provinces such as Alberta experimented with segregation, institutionalization, and sterilization. Alberta legalized sterilization of the mentally and/or morally deficient in 1928. One of the key players in promoting and encouraging eugenics and the purity of the Canadian population were the United Farm Women of Alberta. The situation in Saskatchewan was different; sterilization was not legalized even though hereditarian ideology was prevalent in society. Initially, Tommy Douglas was a supporter of eugenic practices. However, after visiting Germany in the 1930s, his views concerning eugenics radically changed. There has been minimal research on the eugenics movement in Alberta, Saskatchewan and Canada in general. The only national synthesis of eugenics in Canada to date is Angus McLaren's book *Our Own Master Race: Eugenics in Canada, 1885-1945*. This research explores the impact that individuals, groups, and institutions had on the eugenics movement in Alberta and Saskatchewan in the first half of the twentieth century.

