

## The Sources of Cultural Psychology

Hegel's philosophy represented the pinnacle of encyclopædic thought. The world of which it was a part began to crumble almost as soon as Hegel died. Before Hegel's dialectical science could become a real participant in the development of real human science, science had to step backwards to relatively primitive philosophical foundations, and then make its way back again to an interdisciplinary, holistic human science, which nonetheless had its feet planted firmly on experimental, practical and observational ground.

The extremely brief overview of the sources of cultural psychology and activity theory which follows traces how this passage was achieved.

Marx's appropriation of Hegel's idealism on the basis of activity (or praxis) rather than Spirit, had created the basis for an interdisciplinary science of concepts. But Marx was a communist, not a philosopher or psychologist. His concern was scientific socialism, and his laboratory was the Revolution of 1848, the International Workingmen's Association and the Paris Commune.

In the decade after Hegel's death, the first proletarian uprisings had broken out in France and the Chartist movement in Britain marked the opening of a new historical phase. The bourgeoisie was now no longer a revolutionary force as it had been, but found itself in opposition to further extension of the emancipatory developments it had released. This aggravated the problem of transcending the limitations of idealist philosophy and analytical science. Science itself became politicised. The appropriation of Hegel's philosophy could not proceed in a straight line.

I will characterise the theoretical framework in which a science of concepts could be pursued as "Cultural Psychology." By "Cultural Psychology" is meant the study of human consciousness using laboratory techniques, which incorporates into its methods the cultural sources of concepts – the language, institutions, forms of commerce and production, family life and so on – in the wider society. The creation of a Cultural Psychology was a serious scientific and technical challenge. The process of its creation in a world in which science had become politicised, split into human sciences and natural sciences, and dominated by analytical philosophy, was a complicated process. This process found success only after the Russian Revolution, in the work of the Soviet psychologist, Lev Vygotsky (1896-1934). At the time Vygotsky intervened in Soviet Psychology in the 1920s, varieties of physiological and social behaviourism dominated both Soviet and American psychology, although Freud also exerted great influence on psychology across the world. In the United States, John Dewey anticipated much of Vygotsky's ideas, but both Vygotsky and Dewey remained relatively marginalised by mainstream, analytical approaches in both countries. In this chapter I will trace this process of the creation of Cultural Psychology, from the middle of the 19<sup>th</sup> century up to the aftermath of the Russian Revolution.

There are three sources and component parts of Cultural Psychology: German Natural Science, French Sociology and American Pragmatism. I shall use a series of brief biographical sketches to indicate these currents of thought and

their interconnections, so that we can better understand the sources from which Vygotsky's idea of concepts arose in the wake of the Russian Revolution. This process – the real, historical resolution of the contradiction between philosophy and experimental science – remains a live issue today and it is hardly likely that an adequate science of concepts will be created without a restoration of the unity of science and philosophy.

The disconnection between experimental psychology and philosophy was there from the beginning of psychology as a branch of positive science. By following the real process by means of which this mutual disregard was overcome, perhaps we can better appreciate the outcome.

## German Natural Science

### ***Herman von Helmholtz (1821-1894)***

Helmholtz was one of the greatest scientists of the 19th century, particularly due to his successful application of the methods of mathematics and physics to the study of living organisms. He made fundamental contributions to physiology, optics, electrodynamics, mathematics, and meteorology, but is best known for his statement of the law of the conservation of energy and his successful struggle against vitalism.

A sickly child, his father, who was a teacher of philosophy and literature at the Potsdam Gymnasium, taught him Greek, Latin, French, English, and Italian, and the philosophy of Kant and Fichte at a young age. Much of Helmholtz's later work was devoted to refuting Johannes Müller's "Nature Philosophy" which he had been taught by his father.

He attended the Friedrich Wilhelm Medical Institute in Berlin under the great physiologist and nature philosopher, Johannes Müller, receiving a free medical education on the condition that he serve eight years as an army doctor. He also attended the lectures in physics, worked his way through higher mathematics from textbooks, and taught himself the piano.

Shortly after graduating, he was relieved from military duties and became assistant professor and director of the Physiological Institute in Königsberg and in 1855 was appointed professor of anatomy and physiology at the University of Bonn. More and more his interests moved towards physics. In 1882 he was elevated to the nobility and in 1888, appointed director of the Physico-Technical Institute at Berlin, where he spent the remainder of his life.

One of the central scientific interests of the latter part of the nineteenth century was investigation of the relationship between human beings and Nature through the study of the physiology of perception. The majority of biologists of his day, including Müller, believed in the existence of a *life force* of some kind, inhabiting the bodies of living beings and responsible for their vitality. From an early age, Helmholtz set himself to dispense with **vitalism**. But further, although much influenced by Kant, he was critical of Kant's idea of *innate faculties* of Reason and the pure intuition of space and time. Helmholtz insisted that *all* knowledge came through experience. He also rejected Hegel's deduction of natural law from philosophical considerations. Although criticising natural science for paying no regard "to the rightful claims of philosophy, that is, the criticism of the sources of cognition, and the definition of the functions of the intellect," he

held, on the other hand, that Hegel had overstretched the claims of philosophy in natural science. He believed that the natural and human sciences should maintain contact with each other, but their methods and foundations had to be kept separate.

At the beginning of his career, in Johannes Müller's laboratory, Helmholtz determined himself to tackle the problem of uncovering the physical and chemical processes at work in living organisms. His doctoral thesis on the connection between nerve fibres and nerve cells soon led him to the problem of explaining the generation of body heat on the basis of physics and chemistry. He aimed in this way to refute the doctrines of vitalism, which held that body heat was derived from the action of the "life force." His general considerations in preparing this work led to his formulation of the Law of Conservation of Energy ('Force' as he called it). His 1847 paper marked an epoch in the history of natural science. In 1850, Helmholtz succeeded in measuring the speed of transmission of nerve impulses at 27 metres per second, an observation, the sheer mundanity of which, contributed to undermining vitalism.

In attempting to develop a consistent empiricism, he formulated an epistemology based on a conception of sensations as 'symbols' of external reality: "as the quality of our sensations informs us of the properties of external action by which this sensation is produced, the latter can be regarded as its *sign*, but not as its *image*." While Müller explained the correspondence between sensation and object by means of an innate configuration of sense nerves, Helmholtz argued that we construct that correspondence by means of a series of learned, "unconscious inferences." For Helmholtz, the degree of resemblance between perception and object may be as remote as the degree of resemblance between a written name and the physical person to whom the name refers.

With painstakingly detailed investigation of the mechanisms of sight, and later studies of the sensations of audible tones, Helmholtz undermined Kant's conception of the innate comprehension of space and time, and published a number of exemplary works on the physiology of sight and hearing. Helmholtz showed how the sense of vision created the sense of space, which was learned, rather than innate. Moreover, Helmholtz also attacked Kant's insistence that space was necessarily three-dimensional because that was how the mind had to conceive it. Using his considerable mathematical talent, he investigated the properties of  $n$ -dimensional space and showed that it could be conceived and worked with as easily as Euclidean space. *Contra* Kant, he concluded that Euclidean space is *not* an inescapable form of our faculty of intuition, but a product of experience.

Helmholtz's mathematical talent was exceptional. He solved equations that had long frustrated physicists and mathematicians. In 1858, he published the paper "On the Integrals of Hydrodynamic Equations to which Vortex Motions Conform." This was not only a mathematical triumph, but also seemed to provide a key to the fundamental structure of matter. One of the consequences that flowed from Helmholtz's mathematical analysis was that vortices of an ideal fluid were amazingly stable; they could collide elastically with one another, intertwine to form complex knot-like structures, and undergo tensions and compressions, all without losing their identities. In 1866, Kelvin proposed that these vortices, if composed of the ether that was presumed to be the basis for

optical, electrical, and magnetic phenomena, could act exactly like primeval atoms of solid matter. Thus the ether would become the only substance in the cosmos, and all physical phenomena could be accounted for in terms of its properties.

Helmholtz also did significant work on the mathematics of electrodynamics and spent his last years unsuccessfully trying to reduce all of electrodynamics to a minimum set of mathematical principles, an attempt in which he had to rely increasingly on the supposed mechanical properties of the ether.

In an 1881 lecture delivered in London, Helmholtz argued for the particulate nature of electricity, leading to the coining of the word “electron.” Helmholtz completed the whole development of classical natural science. When Helmholtz died in Berlin in 1894, physics was poised on the brink of revolution. The discovery of X rays, radioactivity, and relativity led to a new kind of physics. The same person who proved that life and consciousness rested solely on natural processes, also proved that sensations had to be understood as signs, rather than images of any sort. Thus were the preconditions for a scientific cultural psychology laid in the nineteenth century.

### **Wilhelm Dilthey (1833-1911)**

Dilthey was the founder of Descriptive Psychology and an opponent of British empiricism and the positivism of people like Comte and Spencer. Dilthey argued for methods in the human sciences distinctly different from that of the natural sciences, and that Psychology should be the foundational science for all the human sciences.

Dilthey objected to the pervasive influence of the natural sciences and developed a Philosophy of Life emphasising historical contingency. His ‘Philosophy of Life’ drew on Hegel’s *Geist* and pivoted on the notion of a living spirit which develops in historical forms. Dilthey was little known during his own lifetime, being rediscovered in post-World War One Germany, and is now widely recognised as a founding figure of cultural studies.

Dilthey was the son of a Reformed Church theologian, but after studying theology at Heidelberg and Berlin, he transferred to philosophy. After completing his Doctorate at Berlin and a short time as a school teacher, he dedicated himself full-time to writing. After appointments at Basel and Breslau, he took up the position as Chair of Philosophy at the University of Berlin, where he spent the remainder of his life.

Dilthey’s aim was to find the philosophical foundations for what he called the “sciences of man, of society, and the state”, which he named *Geisteswissenschaften*, usually translated as “human sciences” – a term that eventually gained general recognition to collectively denote the fields of history, philosophy, religion, psychology, art, literature, law, politics and economics.

In 1883, the first volume of his “Introduction to Human Sciences“ appeared but the second volume never appeared, only a series of essays including “Ideas Concerning a Descriptive and Analytical Psychology” in 1894.

Against the dominant conception of his time, Dilthey opposed the idea that the human sciences should emulate the methodology of the natural sciences, and tried to establish the humanities as sciences in their own right. Dilthey

developed important insights in his study of interpersonal experience, its realisation in creative expression, the reflective understanding of this experience, and the “logical development” that may be attributed to the development of knowledge and culture in social and historical processes. He developed his “descriptive psychology,” mainly through the study of literature, and said of the psychology of his times: “Contemporary psychology is an expanded doctrine of sensation and association. The fundamental power of mental life falls outside the scope of psychology. Psychology has become only a doctrine of the forms of psychic processes, thus it grasps only a part of that which we actually experience as mental life.” Psychology needed to be based on an analysis of mental processes in *real-life situations*, rather than in a laboratory. Dilthey emphasised that the essence of human beings *cannot* be grasped by *introspection* but only from a knowledge of history and the history of the arts in particular. Knowledge could never be final, because history is never final. Dilthey thus suggested, for the first time, a Cultural Psychology, though Dilthey preferred the term *Geisteswissenschaft*, in which *Geist* is to be understood in the Hegelian sense in which spirit is manifested in both history and the psyche.

Dilthey held that the *historical* relativity of all ideas and institutions is the most characteristic and challenging fact in the intellectual life of the modern world. He was hostile to the construction of closed, rational systems and preferred to leave questions unsettled. This preference for leaving questions open, was perhaps the main contributing factor to his failure to be recognised in his own time. Only after the War, did the significance of the methodology of his historical philosophy of life come to be appreciated.

### **Wilhelm Wundt (1832-1920)**

The German physiologist and psychologist, Wilhelm Wundt proposed that two different sciences were required for the study of the human mind: Experimental Psychology and *Völkerpsychologie*. Experimental or “subjective” psychology aimed to trace elementary psychic experiences and reactions to physiological processes using the introspection of trained subjects. *Völkerpsychologie* covered the territory that Dilthey had opened up in his Descriptive Psychology.

Graduating in medicine from the University of Heidelberg in 1856, Wundt studied briefly with Johannes Müller, before joining the University of Heidelberg, where he became an assistant to Helmholtz in 1858. There he wrote “Contributions to the Theory of Sense Perception” (1858-62). It was during this period that Wundt offered the first course ever taught in scientific psychology. Until then, psychology had been regarded as a branch of philosophy to be conducted primarily by rational analysis. Wundt instead stressed the use of experimental methods drawn from the natural sciences. His lectures on psychology were published as “Lectures on the Mind of Humans and Animals” (1863).

Bypassed in 1871 for the appointment to succeed Helmholtz, Wundt then applied himself to writing a work that came to be one of the most important in the history of psychology, “Principles of Physiological Psychology” (1874). The “Principles” advanced a system of psychology to use **introspection** to investigate

the immediate experiences of consciousness, including sensations, feelings, volitions, apperception and ideas.

Wundt recognised the two different objective processes involved in Psychology: culture and physiology. The physiological basis of psychology could be studied with the aid of introspection. *Völkerpsychologie* (usually translated as “Cultural Psychology”), however, could not be studied by laboratory methods because the higher psychological functions extend beyond individual human consciousness, for example, in the construction of languages and social institutions. *Völkerpsychologie* requires the use of a developmental-historical methodology, and must therefore incorporate ethnology, the “science of the origins of peoples.”

Its problem relates to those mental products which are created by a community of human life and are, therefore, inexplicable in terms merely of individual consciousness, since they presuppose the reciprocal action of many ... Individual consciousness is wholly incapable of giving us a history of the development of human thought, for it is conditioned by an earlier history concerning which it cannot give us any knowledge (quoted in Cole 1996, p. 29).

In 1871, Wundt began publication of a scientific journal of psychology, “Philosophical Studies.” In 1875 he took up a position at the University of Leipzig and in 1879, established the first psychological laboratory in the world, where the founders of both American and Russian Behaviourism, Edward Titchener and Vladimir Bekhterev, studied.

### ***Carl Stumpf (1848-1936)***

An early student of Franz Brentano, the founder of *Act Psychology*, Stumpf became head of the Berlin School of Experimental Psychology, from where he exercised great influence. Edmund Husserl, the founder of Phenomenology, Max Wertheimer, Wolfgang Köhler, and Kurt Koffka co-founders of Gestalt Psychology were all influenced by Stumpf. Stumpf was critical of the use of pure introspection and regarded Wundt’s work as ‘mechanistic’. He was a good friend of William James, and supervised Kurt Lewin’s PhD studies.

### ***Sigmund Freud (1856-1939)***

In 1873, Freud entered the University of Vienna to study medicine, where he worked with Ernst von Brücke, an exponent of Helmholtz’s anti-vitalism. In 1882, he went to the General Hospital in Vienna to train in psychiatry, and was appointed lecturer in neuropathology. He also admired the work of Franz Brentano and Friedrich Nietzsche. In 1885, Freud went to Paris to work under Jean-Martin Charcot who was using hypnosis to cure patients suffering from paralysis and ‘hysteria’. Freud returned to Vienna after a very short stay in Paris and never succeeded in mastering the art of hypnosis. The physician Josef Breuer, who had cured an hysterical patient by simply encouraging her to talk about her problem, provided Freud with an alternative approach. 10 years later he published a joint paper with Breuer on the use of free association as a technique for uncovering the roots of psychosis. Thus arose the talking cure which characterises psychoanalysis.

The key insight to which the work with free association led Freud was that there was something called the “Unconscious.” Freud did not invent this concept, but

he was the first to systematically investigate it and develop a definite conception of the structure of the psyche. Freud's idea was that the content of the "Unconscious" were events which had been repressed and hidden from awareness for some reason. However, from time to time people would make a "slip of the tongue" or in one way or another do something from which the contents of the Unconscious could be inferred. The point then was to develop ways of bringing these unconscious thoughts to light so that the patient himself could deal with them.

In the course of this study – to which he gave the name 'Psychoanalysis' in 1896 – Freud formed the view that the principal content of this Unconscious was sexual, even if the patients did not directly articulate it. Freud's early work concentrated on female 'hysteria', but in order to formulate a general theory of the mind, Freud had to broaden his work to study the psyche of the normal male. Freud began by studying the one psyche to which he believed he had direct access – his own. However, the psychoanalytic movement he began reserved the privilege of self-analysis for its founder alone; every psychoanalyst is inducted into the profession by being psychoanalysed by a psychoanalyst, thus joining a genealogy linking back to Sigmund Freud's original self-analysis.

In "The Interpretation of Dreams," he interspersed evidence from his own dreams with evidence from those recounted in his clinical practice. Freud saw dreams as essentially a form of wish fulfilment, in which the real meaning of the unconscious is "coded" in the form of images taken from everyday experience, and regarded dreams as the "royal road to the unconscious."

Centred on the concept of repression of sexual desire, Freud developed explanations for hysteria, obsessive compulsions, paranoia, and narcissism. However, Freud's achievement is easily separable from his conviction that sexual frustration lay at the root of all these disorders. Although Freud's theories scandalised the sexually repressed Vienna of his day, they attracted wide interest across Europe. In 1902, Freud's Psychological Wednesday Circle began to grow, including Alfred Adler and Carl Jung among participants. In 1908, the group was renamed the Vienna Psychoanalytic Society and became an international organisation, and for much of the twentieth century, a vast social movement of popular psychoanalysis.

Freud constructed a very elaborate "topology" for the Mind, including the division of the psyche into the Unconscious, Preconscious, and Conscious and structural components called the Id, the Ego, and the Superego.

### ***Franz Boas (1858-1942)***

Boas, the father of American Anthropology, studied at the University of Berlin and was influenced by the ideas of Herder and the v. Humboldt brothers and Helmholtz. Boas introduced a systematic and scientific approach in anthropology, freed of all biologicistic explanations.

Boas received his doctorate in physics from Kiel university in 1881, on the optical properties of water, but had become intrigued by the problems of perception that arose in his research and the psychological and epistemological problems in physics. In his study of threshold perception of colour, he concluded that, contrary to the scientific wisdom of the time, perception is always situational, and there is no universal threshold of perception. He

considered moving to Berlin to study psychophysics with Helmholtz, but having no training in psychology, he chose anthropology instead. He spent a year with the Inuit people on Baffin Island, work which made him famous. Fed up with the anti-Semitism in Germany, Boas settled in the United States and made his career in anthropology, convinced that all cultures were based on the same basic mental principles, developed differently in different cultures. Boas introduced “culture” as an explanatory concept into the human sciences for the first time, holding that ideas and concepts are valid only within the scope of the culture of which they are a part, and was the first person to use the plural: “cultures.” Variations in custom and belief, he argued, were the products of historical accidents and he dismissed as worthless all the nineteenth century science of “race” along with the presumed superiority of the Anglo-Saxon “race.” Based on physical measurements comparing immigrants with their family remaining in Europe, he demonstrated that not only habits, but *body shape* and bone structure were determined by culture as well as inheritance. This discovery was ground-breaking. Boas participated in all the social and cultural disputes in America alongside the Pragmatists such as John Dewey. His work influenced the development of Cultural Psychology not only in America but across the world.

### ***Christian von Ehrenfels (1859-1932)***

Austrian philosopher and student of Franz Brentano, Ehrenfels was inspired by Ernst Mach’s “Analysis of Sensations,” and Goethe’s idea of Gestalt. With his book “On the Qualities of Form” (1890), he initiated a search for the psychological mechanisms of the perception of Gestalt forms through the senses. Ehrenfels is regarded as a precursor of Gestalt Psychology.

### ***Kurt Koffka (1886-1941)***

A founder of Gestalt Psychology, Koffka studied perception and sensorimotor learning. A student of Wertheimer and Stumpf, Koffka trained as a psychologist in Berlin under Stumpf, and in 1910 with Wolfgang Köhler. He joined Max Wertheimer’s research into the optical illusion known as the phi phenomenon\* at Frankfurt University. He developed an interest in learning and in 1921 published “Growth of the Mind: An Introduction to Child Psychology,” and in 1935 “Principles of Gestalt Psychology.” A fluent English speaker, Koffka is mainly responsible for popularising Gestalt Psychology in the English-speaking world.

### ***Wolfgang Köhler (1887-1967)***

Köhler was one of the founders of Gestalt Psychology, trained under Wertheimer and Carl Stumpf, and attended the lectures of von Ehrenfels in Prague. Wolfgang Köhler was born in 1887 in Estonia. He researched the physics of hearing under Carl Stumpf at the University of Berlin. He then became an assistant at the Psychological Institute in Frankfurt, where he met and worked with Max Wertheimer. In 1913, Köhler took advantage of an assignment to work at the Anthropoid Research Centre at Tenerife, studying the

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\* The phi phenomenon is the illusion on which the cinema is based: the appearance of movement created by a sequence of still images.

problem-solving abilities of chimpanzees, where he remained until 1920, during which time he wrote “The Mentality of Apes.” Kohler’s aim was to study the nature of intelligence by giving the chimps tasks which stretched their abilities to the limit.

In 1922, he became the chair and director of the psychology laboratory at the University of Berlin, where he stayed until 1935. During that time, in 1929, he wrote “Gestalt Psychology” which included strong opposition to introspection as well as the analytical approach to psychology. In 1935, he moved to the U.S., where he taught at Swarthmore, Pennsylvania. He was a particularly vocal opponent of Social Behaviourism, which he claimed failed to make use of physiological measurements which provided information about a person’s internal state.

Gestalt Psychology contributed to Cultural Psychology by countering the various positivistic trends of psychology, which used simple, mechanistic notions of perception, obliging research to move towards more holistic explanations. These were demands that could be met by Cultural Psychology.

### ***Kurt Lewin (1890-1947)***

Lewin, a German-American social psychologist, was one of the founders of group dynamics, group-learning, organisational development theory and action research.

Kurt Lewin was born in 1890 in Mogilno in Poland, but moved to Berlin at age 15. He entered the University of Freiberg in 1909 to study medicine, but transferred to the University of Munich to study biology. Around this time he became involved in the socialist movement. His particular concerns were the combating of anti-Semitism, the democratisation of German institutions and improvement of the position of women. Along with other students he organised and taught an adult education program for working class women and men.

While working for his doctorate at the University of Berlin under Stumpf, he developed an interest in Gestalt psychology. In 1921, he joined the Psychological Institute of the University of Berlin, where he lectured in philosophy and psychology. His work became known in America and he was invited to spend six months as a visiting professor at Stanford (1930). Lewin worked briefly with the Frankfurt Institute for Social Research, but the political position worsened in Germany, and in 1933 he emigrated to the US.

At the University of Iowa he undertook research linked to the war effort including a study of troop morale, psychological warfare and reorienting food consumption away from foods which were in short supply. At the same time he spoke frequently on minority and inter-group relations and worked with the American Jewish Congress in New York and was involved in studies of religious and racial prejudice. In 1944, he was a founder of the Research Center for Group Dynamics at MIT. In 1946, working with community leaders and group facilitators, he developed the idea of ‘T’ groups or ‘basic skill training groups’. This theory was concerned with the process of group learning, change management and collective decision-making. Lewin’s ideas drew from Gestalt psychology and parallels many of Dewey’s ideas about group learning.

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It can be seen that the beginnings of Cultural Psychology emerged from German science on the foundations laid by Classical German philosophy. Just as the sciences differentiated themselves from philosophy and the human sciences differentiated themselves from the natural sciences, the best of natural science and philosophy was applied to the solution of problems of the development of thinking. As early as the 1850s, Helmholtz had established that sense perception entailed the interpretation of signs, as different from the object represented as a person's name is different from the person. Dilthey had demonstrated that the breadth of human psychology had to be studied in real life, and not just in the laboratory. Wundt meanwhile advocated two psychologies, one experimental and the other cultural.

So after Hegel's death, science in Germany turned to practical investigation, observation and experiment to solve problems of the development of the mind. This step was associated with considerable difficulties in disciplinary specialisation and a struggle to simultaneously develop a coherent view of the human condition, whilst pursuing detailed study of particular problems. Cultural Psychology has its roots in this unbroken effort.

French sociology

### ***Jean-Jacques Rousseau (1712-1778)***

Rousseau was on the Left Wing of the French Enlightenment, Deist (God did not interfere in the world after the act of Creation), Dualist (in relation to thought and matter), Sensationalist (sensations the only source of knowledge), most renowned for his social theories, including the "social contract" and private property as the source of inequality.

Along with Diderot, Voltaire and others, Rousseau laid the theoretical foundation for the French Revolution. Rousseau's contribution to philosophy as such was modest, but he was the foremost social thinker of his time.

Rousseau's ruthless and thoroughgoing social criticism made an important contribution to paving the way for philosophical materialism to break out of the mechanical view of the relation between consciousness and Nature which predominated up to that time. Descartes, Bacon, Hobbes and Locke all saw only an individual human animal perceiving Nature via their senses. Under these conditions, the origin of concepts is mystified. While he emphasised the need to live and develop in conformity with Nature, Rousseau broadened the vision to see human beings as social products.

In 1754, Rousseau published "Discourse on the Origin of Inequality Among Men," showing how social conditions, in particular private property, lead to inequality and the consequent social ills, creating a tradition of looking for the source of illness in social relations, rather than in biology. "Emile" (and the later "Sophie") are unstructured works in which Rousseau uses narrative and dialogue with a fictitious son (and daughter) to expound his theory of child development, pedagogy and sociology. He shows how upbringing and social environment shape a person's personality and views.

### ***Emile Durkheim (1858-1917)***

Durkheim was the founder of the school of French sociology. His studies of suicide, religiosity, etc., opened a window on social roots of psychological problems. Durkheim laid the basis for the structuralist school in sociology. Initially, Durkheim was a follower of Auguste Comte's positivism, emphasising the need to study society as a particular kind of collective consciousness whose laws differed from those of the individual psyche, which develops within a social environment. He highlighted population density, means of communication and collective consciousness as the chief factors in social development.

Born into a poor Jewish family in Paris, Durkheim excelled at school and gained entry to the prestigious *École Normale Supérieure*. Meeting Jean Jaurès while boarding in Paris he soon abandoned his religious upbringing and developed reformist beliefs. At the *École Normale* he earned a reputation as an extremely able and iconoclastic student. Graduating in 1882, he took a year's leave from teaching to pursue research in Germany in 1885, where he met Wilhelm Wundt. In 1887, he was appointed to the University of Bordeaux, and taught social philosophy there until 1902, before returning to take up a position as a full professor at the University of Paris.

Although Durkheim was familiar with several languages, he travelled little and never undertook any fieldwork, his theoretical studies being entirely based on the reports of anthropologists, travellers and missionaries.

Durkheim's mission was to overcome the broad and deterministic generalisations which were characteristic of the founders of sociology, such as Auguste Comte and Herbert Spencer. But further, he found that the unhistorical, analytical approach of the 'second positivism' of his time, represented by people like Ernst Mach, quite unsuited to the solution of the problems of sociology. Durkheim held that reality is understood only by means of *concepts* which are *social* constructs. In his criticism of James' and Dewey's Pragmatism, Durkheim dealt with how myths, which may have no practical or scientific validity in themselves, may nevertheless provide a conceptual approach to grasping reality, and he rejected what he saw as the Pragmatists' dismissal of truth as simply individual utility.

The Second Empire, which collapsed after the French defeat at the hands of Germany in 1871, seemed to Durkheim a period of levity and dissipation. On the other hand, he viewed the Paris Commune as senseless destruction and evidence only of the alienation of the working classes from bourgeois society. The bloody repression that followed the Commune he took as further evidence of the ruthlessness of capitalism and of the selfishness of the bourgeoisie. The subsequent resurgence of nationalism and anti-Semitism convinced Durkheim that progress was not the necessary consequence of the development of science and technology, as most Positivists of the time had assumed, but on the contrary, the growth of technology and mechanisation undermined society's ethical structures.

Durkheim made a study of suicide, and observed that an individual who was closely integrated with his culture, was less likely to commit suicide, and consequently, what appeared to be the most individual of actions, could only be explained through social forces. Increasingly through his career, Durkheim

focussed on education and religion as the two most important institutions required for stability while society underwent such deep transformations. His 1915 work on the totemic system in Australia also brought him wide recognition. Just a few names will be mentioned from the broad sociological movement which continued the work begun by Jean-Jacques Rousseau and put onto a modern scientific foundation by Durkheim.

***Pierre Janet (1859-1947)***

French psychologist who studied under Jean-Martin Charcot at his Psychological Laboratory in Paris and anticipated many of Freud's ideas. He was one of the first to draw a connection between events in the subject's past life and his or her present day disturbance, and coined the words 'dissociation' and 'subconscious'.

***Marcel Mauss (1872-1950)***

French sociologist, Mauss a nephew of Emile Durkheim, and a founder of modern anthropology. He was a socialist who worked with Jean Jaurès and Georges Sorel. His most famous work was "The Gift" (1923), an inspiration for the work of Claude Lévi-Strauss.

***Henri Wallon (1879-1962)***

Wallon was a French Marxist and child psychologist. He applied Freudian and Hegelian ideas to the study of development, in contrast to Piaget's Kantian approach.

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The principal contribution of French science to Cultural Psychology was to trace how social conditions are manifested in the most inward and private experiences of human beings. They taught that to understand the human mind means first and above all to understand society. German science had indicated in general terms that culture and social relations had to be included in Psychology, but Marx and Weber notwithstanding, Germany did not provide the conditions for the social sciences to flourish. Until the last decades of the 19<sup>th</sup> century, Germans were spectators of history, not its makers.

It was the French who had tackled their problems by changing society. As a result, they made real headway in investigating the role played by social relations in the formation of the human personality. Durkheim traced scientific thinking back to its roots in religion, myths and mysticism, and provided important insights into the origin and nature of concepts. The French were the supreme social thinkers of time. They created all the ideals of modern democratic Europe and following the Great Revolution of 1789, made and remade their society by revolutionary means almost continuously for the next 100 years. These experiences bred a disposition to seek the solution to problems by social transformation, rather than in the reform of the individual human being.

American Pragmatism

The third important source of Cultural Psychology comes from America. More than 9,000 Americans attended university in Germany during the nineteenth

century, providing most of America's academic leadership. Although the roots lay in Europe, it was the Americans who first gave a definite shape to Cultural Psychology, and did so as part of a distinctively American philosophy, Pragmatism. Pragmatism was carried along by a broad social movement – the Progressive Movement of the late nineteenth and early twentieth century.

A number of conditions conspired to form American Pragmatism (Menand 2001). At least well up to into the nineteenth century, America drew its ideas from Europe – Britain and Germany in particular – but every idea imported into the New World was subject to the test: “does it work?” The Americans showed a readiness to subject what was appropriated from Europe to pragmatic revision to suit their own conditions. It was the American Civil War of 1861-1865 which catapulted the United States into modern finance capitalism. The modern conditions unleashed by the Civil War, and the *reaction* to these conditions as well as the national bloodletting itself, on the part of a group of the intellectual elite in the Boston area grew into what would become American Pragmatism, as a philosophical, psychological and social movement.

As Louis Menand (2001) tells it, although there was no slavery in the North, it was by no means the case that there was universal and strong sentiment for a Crusade against slavery. The great majority would have been happy to let the South go its own way. In the end it was a provocative act by the Confederacy which triggered hostilities. But not only the slave-owning system in the South, but the whole of the beliefs and assumptions of the pre-War Northern elite was discredited in the minds of many by the Civil War. It was moralistic ideologues, the Abolitionists, who had drawn the country into an protracted and unspeakably bloody orgy of fratricide. This opinion may seem odd from this historical distance, but it was justified by the fact that no kind of emancipation resulted for the Negroes, who shared in none of the benefits and rights of American social and political life until a century later. So to these people, ideas were dangerous things, if pursued with too little regard for the opinion of others or awareness of the possibility of error. This disenchantment with idealism and the violence they associated with it, was a major element of what emerged as Pragmatism at the end of the nineteenth century.

Whether as a reaction to the Civil War, the legacy of religious refugees from Europe, or due to the outlook of a New World settler nation, Pragmatism was born with an innate distrust of overall theories of reality. The founders of American Pragmatism held that there are no deterministic laws whether divine, natural or social, and that natural and social life is a series of accidents and adjustments. The truth is not some hidden law or principle acting from behind experience, but rather truth resides in experience itself. This conclusion equally followed as a reaction against the kind of social Darwinism of people like Herbert Spencer, who had transformed Darwinian statistical mechanics into a fatalistic law.

The Pragmatists believed in tolerance, both in the sense of allowing for a margin of error in their own actions, and in the sense of tolerance for the views of others. While this is clearly a liberal philosophy, it did not mean laissez faire economics, and nor was it individualist. On the contrary. They saw thinking as a collective activity, and that was a prime reason for tolerance of a diversity of opinion, for it was only through freedom of enquiry that truth could be determined. So

individualism was not counterposed to community, but rather community flourished through the free expression of individuality and individuality flourished through community.

Among this group there were four figures whose impact on the development of Cultural Psychology are particularly noteworthy.

### ***William James (1842-1910)***

James' father was not only hostile to the established church, he hated all kinds of institution and so he never kept his sons in any one school for more than a short time before moving them to another school or another country (Menand 2001). William James would visit Europe 14 times during his life. This, combined with the fact that William was pathologically unable to make up his mind and settle on a belief or a choice of career, meant that his education was disorganised and spread across a range of disciplines. Although James did ultimately complete a degree in Medicine, as a young person, he switched from painting, to science to chemistry to anatomy to natural history to medicine to experimental psychology to philosophy. He thus acquired a unique education for a time when specialism had become the norm. He was appointed instructor in anatomy and physiology at Harvard in 1873, assistant professor of psychology in 1876, assistant professor of philosophy in 1881, full professor in 1885, chair in psychology in 1889, returned to philosophy in 1897, and emeritus professor of philosophy in 1907. James chose his philosophical position pragmatically. He discovered early on that in order to live, it was necessary to settle on some belief, even if you cannot fully justify that belief. Despite his dedication to science, James remained a believer in life after death and took an interest in all kinds of spiritualism and mysticism to the end of his days.

While in Germany in 1867-68, he failed to secure a position with Helmholtz or Wundt, so spent his time at a spa in Bohemia, reading Goethe. Nonetheless, James was able to establish the first psychology laboratory in America, at Harvard in 1875, at a time when he was involved with the physiology of perception. But James gave short shrift to the practices dominating the New Psychology, which he dismissed as "brass instrument psychology." For example, in relation to the measurement of reaction times, he found that "behaviour is a matter of the relation of the whole organism and the whole situation," it cannot be broken down into parts, as Wundt and Titchener had wanted, and depended on the context. James established himself as the leader and representative of the New Psychology in America, while remaining set against the positivist, analytical approach which predominated in experimental psychology. James also followed the work of Pierre Janet, and maintained friendship with most of the leading figures in European science and culture, including Carl Stumpf, Henri Bergson, and many, many others.

In 1890, James wrote "Principles of Psychology" and in 1898, gave a series of lectures at Berkeley based on this book, in which he introduced "Pragmatism" to the world. James credited Charles Sanders Peirce with coining the term Pragmatism. Peirce had defined Pragmatism in 1872 as follows: "Consider what effects, which might conceivably have practical bearings, we conceive the object of our belief to have. Then, our conception of these effects is the whole of our conception of the object." Peirce gave the name of "Pragmatism" to this position,

taken from Kant, who says in “The Critique of Pure Reason”: “Such contingent belief, which yet forms the ground for the actual employment of means to certain actions, I entitle *pragmatic belief*.” Or as Peirce had put it, a belief is what you are prepared to act on. This is pragmatism, and it was a view Peirce shared with a whole group of associates. Peirce was not eager to claim credit for this idea as James had popularised it, and called his view instead: “pragmaticism.”

James presented Pragmatism in the formulation of the legal theorist, Wendell Holmes Jr., that judges do not decide most cases by reference to principles, but on the contrary, the principles are formulated *post facto* to rationalise a decision which had been worked out on the basis of “experience.” There is no noncircular set of criteria for knowing whether a particular belief is true, no appeal to some standard outside the process of coming to the belief itself (Menand 2001). Concepts therefore could not be seen as any kind of representation of something existing independently in the material world, but rather existed only in and through human activity, in the most general sense. At the same time, this approach demonstrated *why* people must take it that objects exist independently in the external world and are subject to causation and knowable forces. These lectures turned Pragmatism into what became virtually a social movement, embraced by the Progressive Movement, and forming the guiding philosophy for a uniquely American style of communitarian liberalism. It was William James’ psychology which provided the key inspiration for Vygotsky’s critique of the physiological behaviourism favoured in the early Soviet Union.

### **Charles Sanders Peirce (1839-1914).**

Peirce was a contemporary of James and played an important role in the early discussions which gave rise to Pragmatism. Peirce’s father had been a talented mathematician, and the son inherited his talent for logic along with an insufferable arrogance. Peirce was a misanthrope in fact. Leaving aside romantic infidelity, he was a spendthrift incapable of living on any income, incapable of holding down a job or completing any task he set himself and systematically alienated all his friends. He came close to dying in destitution before William James was able to rescue him, assisting his wife to manage his affairs for him. He never managed to present his ideas in any publishable literary form due to an inveterate tendency to take tangents and tangents off tangents. Fortunately, copious manuscripts of his work have survived, and much of his thinking has been preserved.

Over and above the impetus he gave to Pragmatism as such, he developed a brilliant and original theory of semiotics, which overcomes a number of fundamental problems of philosophy. According to Peirce, both Nature and mind are constituted by ‘semiosis’, or sign-activity. His semiotics uses a triadic structure: a *sign* which indicates an *object* to an *interpretant*; the interpretant is not to be understood as a subject, but rather is itself just another sign. This system allows an ontology, an epistemology and a logic to be developed on the same monistic foundation, doing away with the Cartesian dichotomy which affects, for example, the semiology of Saussure and the physiological psychology of the time. Peirce’s semiotics also provided an approach to understanding how a coherent universe can emerge out of chaos, providing a response to the

determinism referred to above. Peirce's semiotics also creates open-ended lines of enquiry due to its mediational structure. Perhaps Peirce's inability to follow any line of thinking to the end was a perverse reflection of this semiotic structure?

### ***George Herbert Mead (1863-1931)***

Mead had studied with Wundt and Dilthey and at Harvard where he met William James, and was tutor to James' children. He joined his close friend, John Dewey at Chicago in 1894, presenting lectures on 'social psychology', based on the idea of the gesture as the prototypical action, equally social and physiological. He also developed a critique of individualism in psychology. Mead explicitly set out to create a dialogical approach to personality development based on the master-servant dialectic in Hegel's "Phenomenology." To do this he took the person as a subject/object which he cleverly called 'I/Me'. The I, or subject, observes itself, i.e., Me, in the mirror of the reactions of other people with which I is interacting. This mediated formation of self-consciousness had been developed earlier by W. E. B. DuBois, an African-American philosopher who studied the development of self-consciousness among 'blacks' in response to how they were treated by the people around them. Mead spawned the school of Symbolic Interactionism.

### ***John Dewey (1859-1952).***

Dewey was a generation younger than James, Peirce and Holmes, the generation who founded pragmatism, but he would become America's foremost public intellectual and advocate of Pragmatism up to the Second World War. Dewey was a leader of the Progressive Movement and an active participant in all the public affairs of the country.

The young John Dewey received his training in philosophy at the University of Vermont under Henry Torrey who was a proponent of a peculiar local variety of Hegelianism which used Hegel to 'reconcile' faith and reason. The holistic worldview that he acquired from Hegel remained with Dewey throughout his life. When Dewey arrived at John Hopkins, he chose to study under the Hegelian George Morris. Every one of the 53 professors at John Hopkins had studied in Germany, putting this university at the cutting edge of American philosophy. Dewey also studied under G. Stanley Hall, a physiological psychologist who had studied under Wundt and Helmholtz and had also studied Hegel and Goethe and had worked with James. At age 35, Dewey became chair of philosophy at the University of Chicago, and it was here that he developed the views for which he became known in the midst of the tumultuous birth of modern industrial America in Chicago of the 1890s with its poverty, rapid industrialisation, social conflict and labour struggles.

At Chicago, Dewey taught a course in psychology to teachers, and this inspired him to establish an elementary school which he saw as a *philosophy laboratory*. His school was known as the Laboratory School, for the purpose of exploring the 'unity of knowledge', which Dewey conceived of as knowledge inseparably connected with doing. Thus school learning was inextricably bound up with participation in day-to-day tasks, chemistry was learnt as an extension of problems which arose in cooking. The whole academic curriculum was continuous with practical, goal-directed life activity outside school. Arising from

this experiment, he published his most famous book, "School and Society." The whole experience of the school was an experiment for the development of his philosophical ideas. Philosophy must be an experimental science like any other, responding to the problems of social life. On the basis of these insights, Dewey took the vision he learnt from Hegel to a vision in which practical human activity took the place of Spirit. From this flowed important insights into social problems, conflict resolution, group problem-solving, group dynamics, education, democracy. Dewey provided a social and philosophical foundation for the ideas that James had developed in his critique of the New Psychology and his development of the pragmatist theory of knowledge.

In 1891, following the publication of James' "Principles of Psychology," James wrote to Dewey, sending him a copy of an essay he had written on Leibniz, to which Dewey responded with admiration. Over the following decade the philosopher and the psychologist became closer, in realisation that they were both playing a leading role in what had become a veritable social movement, and thereafter remained in constant communication.

### *Dewey's Critique of the 'Reflex Arc'*

Following James, Dewey made a critique of psychology in which he took up the concept of *attention*. Like James, Dewey said that the *act* (of attention) was a *unit of analysis* and could not be further broken up into parts without losing the unity which had to be understood. To this end, in 1896, he published a critique of the fundamental principle of Wundt's psychology, the 'reflex arc', in which a sensory stimulus causes an idea, from which flows an action oriented to the sensation. But Dewey pointed out that the analysis of the whole act into a series of stimulus-idea-response links is possible only in retrospect, after the completion of the act. In reality it is an *unbroken circuit*. Further, Dewey said that the action towards the stimulus is really *prior* to the sensation. In other words, that perception is an *active* process of appropriating from the environment through activity.

the sound is not a mere stimulus, or mere sensation; it is an act, that of hearing ... The conscious stimulus or sensation, and the conscious response of motion, have a special genesis or motivation, and a special end or function. The reflex arc theory, by neglecting, by abstracting from, this genesis and this function gives us one disjointed part of a process as if it were the whole. It gives us literally an arc, instead of the circuit; and not giving us the circuit of which it is an arc, does not enable us to place, to center, the arc. This arc, again, falls apart into two separate existences having to be either mechanically or externally adjusted to each other. ... It is the circuit within which fall distinctions of stimulus and response as functional phases of its own mediation or completion (Dewey 1896, p. 140/147).

A person is always already doing something. In the course of their activity an act generates a sensation, that is to say, an *unexpected* reaction from the environment. This sensation, which is the consequence of and forms part of the act, is reflected on, and the person modifies their action. The circuit thus begins and ends with the action, which is primary, while the sensation is secondary, in

a continuous circuit which makes up the activity of a person inquiring into their environment, simultaneously doing and suffering, developing their consciousness by learning to foresee the consequences of their actions.

### *Dewey's Concept of Experience*

Beginning from this concept of the fundamental unit of human action, Dewey created a concept of 'Experience' which is the irreducible foundational concept of his philosophy. Dewey's philosophical background included not only German Idealism, but also British Empiricism, and his concept of Experience reflects these sources. For Dewey, Experience is both: "*simultaneous* doings and sufferings" (Dewey, 1917, p. 63).

'Experience' is what James called a double-barreled word. Like its congeners, life and history, it includes *what* men do and suffer, *what* they strive for, love, believe and endure, and *how* men act and are acted upon, the ways in which they do and suffer, desire and enjoy, see, believe, imagine – in short, processes of *experiencing*. ... It is 'double-barreled' in that it recognizes in its primary integrity no division between act and material, subject and object, but contains them both in an unanalyzed totality. 'Thing' and 'thought', as James says in the same connection, are single-barreled; they refer to products discriminated by reflection out of primary experience (Dewey, 1929, p. 256-7).

This is the same concept as that of 'activity' introduced to Marx by Moses Hess, except that in the English language 'Experience' carries connotations which emphasise subjectivity, whilst 'activity' carries connotations which emphasise objectivity, but as used by these writers the whole point is that experience (or activity) is both subjective and objective, a unity of subject and object.

### *An Experience*

In an essay on aesthetics written in 1934, entitled "Having An Experience," Dewey made this concept even more precise. Whereas experience is always somewhat inchoate, there are certain episodes of which we would say "That *was* an experience!" Experience "is a thing of histories [NB plural], each with its own plot, its own inception and movement toward its close, each having its own particular rhythmic movement" (Dewey, 1934, p. 555). Such an experience [NB the indefinite article] has a unity, and rather than simply terminating, it is consummated. These experiences are transformative.

The existence of this unity is constituted by a single *quality* that pervades the entire experience in spite of the variation of its constituent parts. This unity is neither emotional, practical, nor intellectual, for these terms name distinctions that reflection can make within it. In discourse *about* an experience, we must make use of these adjectives of interpretation (Dewey, 1934, p. 556).

Such an experience joins the action and its consequences, and is a transformative learning experience. Dewey deals with 'an experience' under the heading of aesthetics, understanding that artistic production and aesthetic consumption are inseparable. The artist can only represent an experience by

means of another experience, consequently it is only in the arts that the nature of experience is fully revealed.

But once consummated, such experiences must be rendered symbolically if they are to become a concept, with an intellectual content that is distinguished from the practical and emotional origins, and in that sense 'provisional':

Without some kind of symbol, no idea; a meaning that is completely disembodied can not be entertained or used. Since an existence (which *is* an existence) is the support and vehicle of a meaning and is a symbol instead of a merely physical existence only in this respect, embodied meanings or ideas are capable of objective survey and development. To 'look at an idea' is not a mere literary figure of speech ... if [facts] are not carried and treated by means of symbols, they lose their provisional character (Dewey, 1938, p. 231-2).

Consciousness, as the capacity to be aware of the consequences of one's actions, is developed through 'inquiry' into problematic situations:

The unsettled or indeterminate situation might have been called a *problematic* situation. ... the necessary condition of cognitive operations or inquiry. In themselves they are precognitive. The first result of evocation of inquiry is that the situation is taken, adjudged, to be problematic. To see that a situation requires inquiry is the initial step in inquiry. ... Without a problem, there is blind groping in the dark (Dewey, 1938 p. 229).

Dewey differentiates scientific concepts from everyday concepts by the kind of problems they are dealing with, rather than by a difference in the kind of logic employed:

Because common sense problems and inquiries have to do with the interactions into which living creatures enter in connection with environing conditions in order to establish objects of use and enjoyment, the symbols employed are those which have been determined in the habitual culture of a group. They form a system but the system is practical rather than intellectual. ... the meanings involved in this common language system determine what individuals of the group may and may not do in relation to physical objects and in relation to one another. ... In scientific inquiry, then, meanings are related to one another on the ground of their character as meanings, freed from direct reference to the concerns of a limited group (Dewey, 1938 p. 235-6).

'Concept' is not one of Dewey's words. But the outlines of a theory of concepts is clearly visible in his work, as when he says:

[The point of view of] pragmatism [is] that general ideas have a very different role to play than that of reporting and registering past experiences. They are the bases for organizing and registering future experiences (Dewey, 1917 p. 50).

In the Summer of 1928, Dewey visited the Soviet Union including an inspection of its education system, but there is no conclusive evidence that he met Lev Vygotsky, who is the subject of the next part of this work.

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Pragmatism was a product of its times, a sceptical reaction against dogmatism, determinism and idealism. Pragmatism could explain ideas as means of adaptation to the world, but not why people were prepared to die for them. Pragmatism could explain how people develop interests and pursued pre-existing goals, but was less effective in understanding why people pursued goals that transcended the conditions of everyday life (Menand 2001). This insight seemed to be the privilege of French social theory.

The Pragmatists were also unable to develop an adequate methodology for the development of a cultural psychology. Nonetheless, they laid the philosophical groundwork for such a psychology. It is noteworthy that it was not just the practicality of American thinking that brought this current of thinking to the creation of a Cultural Psychology. Pragmatism was founded by people trained in both German Philosophy and German Science, but in a situation which could hardly be more different from the conditions in 18<sup>th</sup> and 19<sup>th</sup> century Germany. These conditions facilitated a root-and-branch renovation of both idealist philosophy and analytical science, bringing philosophy to bear on problems previously confined to the laboratory.

All these currents of thinking came together in the aftermath of the Russian Revolution – classical and romantic German philosophy, Marxism, German natural science, French social theory and American pragmatism, joined up with Russian aesthetics, linguistics and phenomenology, in the creation of a current of Cultural Psychology led by Lev Vygotsky.

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## References

- Cole, M., (1996) *Cultural Psychology. A Once and Future Discipline*, Cambridge, MA: Harvard University Press.
- Dewey, J. (1896) "The Reflex Arc Concept in Psychology," *The Philosophy of John Dewey, Two Volumes in One*, ed. John J. McDermott, (1973) Chicago IL: University of Chicago Press. pp. 136-148.
- Dewey, J. (1917) "The Need for a Recovery of Philosophy," *PJD* pp. 58-97.
- Dewey, J. (1929) "Experience and Philosophic Method," *The Philosophy of John Dewey, Two Volumes in One*, ed. John J. McDermott, (1973) Chicago IL: University of Chicago Press. pp. 249-277.
- Dewey, J. (1934) "Having an Experience," *The Philosophy of John Dewey, Two Volumes in One*, ed. John J. McDermott, (1973) Chicago IL: University of Chicago Press. pp. 554-573.
- Dewey, J. (1938) "The Pattern of Enquiry," *The Philosophy of John Dewey, Two Volumes in One*, ed. John J. McDermott, (1973) Chicago IL: University of Chicago Press. pp. 223-239.
- Menand, L. (2001) *The Metaphysical Club. A story of ideas in America*, New York: Farrar, Straus and Giroux.