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FRIEDRICH ALBERT LANGE ON NEO-KANTIANISM, SOCIALIST DARWINISM, AND A PSYCHOLOGY WITHOUT A SOUL

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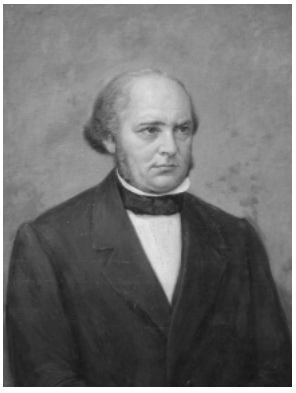

Friedrich Albert Lange was a German philosopher, political theorist, educator, and psychologist who outlined an objective psychology in the 1860s. This article shows how some of the most important worldviews of the nineteenth century (Kantianism, Marxism, and Darwinism) were combined creatively in his thought system. He was crucial in the development of neo-Kantianism and incorporated psycho-physiological research on sensation and perception in order to defend Kant's epistemological idealism. Based on a critique of phrenology and philosophical psychology of his time, Lange developed a program of a psychology without a soul. He suggested that only those phenomena that can be observed and controlled should be studied, that psychology should focus on actions and speech, and that for each psychological event the corresponding physical or physiological processes should be identified. Lange opposed introspection and subjective accounts and promoted experiments and statistics. He also promoted Darwinism for psychology while developing a socialist progressive-democratic reading of Darwin in his social theory. The implications of socialist Darwinism on Lange's conceptualization of race are discussed and his prominence in nineteenth century philosophy and psychology is summarized. © 2002 Wiley Periodicals, Inc.

Friedrich Albert Lange (1828–1875) was a German philosopher, socio-political theorist, educator, and psychologist.[1] In 1851, he received his doctoral degree in philosophy and in 1855 the *Habilitation*[2] in philosophy and pedagogy from the University of Bonn. Active in

1. F. A. Lange has occasionally been mistaken for Carl Lange (1834–1900) of the so-called *James-Lange theory of emotion.* For example, F. A. Lange's name is listed in Roback's (1961) "register of personal names." In the text, however, only the James-Lange theory of emotions is discussed.
2. Habilitation is the license to lecture at a University and to become a professor.

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the labor movement, Lange was reprimanded in Germany for publishing pro-labor ideas (see Lange, 1968, 1875), and in 1866 he moved to Switzerland. In 1869, he submitted his *Habilitation* to the University of Zürich, and was named professor of inductive philosophy in 1870. The pro-French sympathies of the Swiss in the Franco-German War (1870–1871) led him to resign in 1872,[3] when he returned to Germany for a professorship of philosophy at Marburg, where he stayed until his early death in 1875 (see Eisler, 1912; Ellissen, 1905; Weinkauff, 1883).

In 1866, Lange published his most important work, *The History of Materialism and Criticism of its Present Importance* (Lange, 1866/1950).[4] The 1925 English edition was introduced by Bertrand Russell (1950), who called it "a monumental work, of the highest value" (p. v). Schnädelbach (1984) in his study of German philosophy between 1831 and 1933 labeled it "one of the most influential works of philosophy in the nineteenth century" (p. 18). Köhnke (1991) showed that it became "one of the most important and above all the most read of all the writings of neo-Kantianism" (p. 151). Friedrich Nietzsche (1844–1900), one of the most influential thinkers of the twentieth century, was introduced to the natural sciences through the *History of Materialism* which he praised (see Sieg, 1994) and he was directly shaped by it (see Stack, 1983).

The *History of Materialism* is primarily a philosophical text, and thus one would not necessarily expect any relevance for a scientific psychology. However, Lange's (1866/1950) program of a *psychology without a soul*[5] (p. 168) was discussed in great detail in this book. The whole third section is a psychological text, entitled *Man and the Soul*, encompassing nearly 150 pages (pp. 83–230) and four chapters devoted to: the relation of man to the animal world; brain and soul; scientific psychology; and the physiology of the sense organs and the world as representation. Therein, Lange vehemently challenged philosophical psychology, its subject matter, and methodology, while offering an alternative framework. In fact, he had outlined a program for an objective psychology nearly half a century before John B. Watson (1878–1958) expressed his ideas. Contemporaries of Watson were well aware of that fact: Titchener (1914) wrote in his critique of Watson's *Psychology as the Behaviorist Views It*: "My point is that Watson's behaviorism is neither so revolutionary nor so modern as a reader unversed in history might be led to imagine" (p. 5). He specifically referred to Lange's ideas on a scientific psychology in the *History of Materialism.*

Early pioneers of psychology were familiar with Lange's writings on psychology and could access his views on a psychology without a soul in either the German or English version. James (1890) referred to Lange in his discussion of the functions of the brain in his *Principles* and quoted a lengthy passage (p. 29) in which Lange rejected and ridiculed phrenology. G. Stanley Hall (1907) knew Lange's work and quoted his *History of Materialism* (p. 551), as did J. M. Baldwin (1905, pp. 328–329). Wundt (1877) called Lange "one of the ablest representatives of this idealistic philosophy" (p. 516) and his *History of Materialism* "an excellent account and criticism of German Materialism" (p. 500). Brentano (1874/1995) referred several times to Lange's ideas in his *Psychology from an Empirical Standpoint.* He

3. Wilhelm Wundt (1832–1920) was his successor in Zürich.

4. The first German edition was published in 1866, the first volume of the second edition was published in 1873, the second volume in 1875. The English version, based on the second German edition, was published beginning in 1877. The English version of 1950, used in this article, is a reprint of the 1925 re-issued edition, and encompasses 1102 pages. The book will be referred to as *History of Materialism.* Sieg (1994) points out that the first and second editions differ substantially.

5. *Psychology without a psyche* would perhaps be a more adequate translation.

called Lange's notion of a psychology without a soul "paradoxical" (p. 11) and he rejected Lange's criticism of introspection.

German historiography recognizes Lange's prominent role in the history of psychology. Klemm (1911) followed Lange's course of description in his historical discussion of atomistic materialism (p. 32) and mentioned him prominently as an opponent of introspection [innere Wahrnehmung] (p. 85). Pongratz (1984) has more recently counted him among the "fathers of modern psychology" (p. 90), but added that he was often overlooked in psychology because Lange had not published his planned critique of psychology as a stand-alone work, but had incorporated it into his *History of Materialism.* In North American books on the history of psychology, Lange is neglected. Esper (1964), one of the few authors who discusses Lange, dedicated two pages (pp. 257–259) to Lange's ideas. He emphasized the familiarity of Lange's ideas for twentieth century American psychologists. Hilgard (1987) introduced Lange as an early critic of introspection, and interpreted Lange's psychology without a soul as a psychology without a self (p. 53).[6]

As Lange's psychology is not well known in English-speaking historiography of psychology the emphasis of this article will be on Lange's programmatic ideas in which some of the most important worldviews of the nineteenth century were amalgamated. His ideas and his psychology exemplify from an intellectual-historical point of view a sophisticated combination of Kantianism, Darwinism, and socialism. Each played a role in his outline of an antiphilosophical natural-scientific psychology. Specifically, five issues will be discussed: (a) Lange's defense of Kant's epistemological idealism in relying on psycho-physiological research on sensation and perception; (b) Lange's critique of phrenology and philosophical psychology; (c) Lange's outline of a psychology without a soul; (d) Lange's promotion of Darwin for psychology while developing a socialist understanding of Darwinism in social theory; and (e) the implications of socialist Darwinism on Lange's conceptualization of "race."

KANTIANISM AND ITS PSYCHO-PHYSIOLOGICAL FOUNDATION

Neo-Kantianism was an enormously influential yet divided intellectual movement of the nineteenth century (see Köhnke, 1991). Supporters ranged from natural scientists such as Hermann Helmholtz (1821–1894) or Ernst Mach (1838–1916) to cultural scientists such as Wilhelm Windelband (1848–1915) or Wilhelm Dilthey (1833–1911). From an intellectual-historical point of view, Kant's revival can be attributed to the fact that philosophers struggling with traditional philosophical topics required a firmer standing than what was provided by the speculative reasoning of Hegel's absolute idealism and systematic philosophical science. Philosophers interested in the new and rapid knowledge produced by natural scientists required a philosophical position that could amalgamate with these advances. And some natural scientists drawn into philosophy discovered that Kant provided an ingenious foundation for their inquiries.

Lange was the father of the *Marburg School* of neo-Kantianism, which became one of the most influential philosophical communities in Germany (see Sieg, 1994). Lange's successor in Marburg was Hermann Cohen (1842–1918) who outlined a philosophical justification for Immanuel Kant's (1724–1804) transcendental program (e.g., Cohen, 1871).

6. This is a misleading interpretation as this was certainly not Lange's concern.

Another member of the Marburg school was Paul Natorp (1854–1924) who made himself a philosophical name through his introductory works to neo-Kantianism and his interpretation of Plato (see Natorp, 1903). The *Marburg School* came to its institutional end—like many other German intellectual movements—when its leading member Ernst Cassirer (1874–1945), who published on epistemological problems and the history of philosophy (e.g., Cassirer, 1906), lost his professorship in 1933 and was forced to emigrate to the United States of America.

Lange belonged to a group of early epistemological neo-Kantians who introduced a psycho-physiological foundation for Kant's epistemology. Kant's (1781/1968) *Critique of Pure Reason* had suggested that human knowledge does not mirror external objects and events but that external objects and events are modeled according to the human mind. Kant suggested that *things-in-themselves* are essentially unknowable but that the human mind can know and understand their lawful appearances. In accordance with such an epistemology, the physiologist Johannes Müller (1801–1858) had formulated that the mind is not cognizant of objects and events in the external world but of states of the nervous system (see Fancher, 1996). Lange (1887)[7] mentioned Müller for addressing this issue, but primarily credited Hermann Helmholtz (1821–1894) for demonstrating that the nervous system imposes its characteristics on mental processes.

In 1855, Helmholtz (1903) gave a talk on visual perception in Königsberg,[8] where he provided a physiological interpretation of Kant's theory of knowledge. He compared the philosophical achievements of Kant, who had accordingly understood that the nature of the mind determines knowledge, with the empirical achievements of Johannes Müller, who had found that the nature of the senses determines perception. Helmholtz emphatically concluded that Kant's ideas are "still alive" (p. 116) and that there is no difference between philosophy and natural science, but that its division applies only to certain types of philosophy, meaning Hegel's (1770–1831) and Schelling's (1775–1854) systems.

Lange was aware of this talk and of Helmholtz's research on the physiology of senses and perception. For Lange, Helmholtz's studies refuted epistemological materialism and supported a Kantian inspired epistemology. However, it was not Kant's forms of intuition and the categories but the physiological organization of humans that determines what humans know. Lange, who had attended Helmholtz's lectures as a student, rejected, as Helmholtz did, not philosophy in general but only absolute idealism as developed by Hegel and Schelling, and he saw a return to Kant as a possibility to invigorate philosophy (see Lange, 1887). Lange (1887) went so far as to designate the idea that the "qualities that we perceive do not belong to the things but to our own organization"[9] (p. 581) as the primary axiom [Fundamentalsatz] of psychology and philosophy.

In his psychology in the *History of Materialism*, Lange (1866/1950) neither doubted external reality or that it followed certain natural laws. However, he was convinced that humans were not able to grasp the essence of reality. Because of the character of the senses, humans cannot have true pictures of things-in-themselves: "The senses give us, as Helmholtz says, *effects* of things, not true pictures nor things in themselves" (p. 230). Humans capture the world of experiences and appearances based on their mental organization, that is, the

7. Lange's original entry in the encyclopedia was published in 1870. The co-editor Schrader remarks in the second edition that only minor changes were necessary in Lange's text because of the lasting relevance of the article.

8. Königsberg was Kant's city of birth, work, and death.

9. My translation.

physiology of the senses. Colors, sounds, smells "do not belong to things in themselves, but . . . they are peculiar forms of excitation of our sensibility, which are called forth by corresponding but qualitatively very different phenomena in the outer world" (p. 217).

The notion of a primacy of ideas did not mean that these ideas would not follow natural laws that could be studied empirically:

> What is the Body? What is Matter? What is the Physical? And modern physiology, just as much as philosophy, must answer that they are all only our ideas; necessary ideas, ideas resulting according to natural laws, but still never the things themselves. (p. 223)

From a contemporary psychological perspective, it may be difficult to understand that the promotion of epistemological idealism did not contradict support for an empiricist natural-scientific psychology. Even some of Lange's scientific peers who endorsed scientific materialism feared that such a position would lead to the end of science and truth (see Gregory, 1977). Lange was not trapped between idealism and positivism (see Köhnke, 1991), however, but he embraced both in his version of "criticism." As an idealist he thought that the human mind had no access to things-in-themselves and that science could only study their appearances. As a "positivist," or to be more precise, as a materialist of appearances (see Vaihinger, 1876), Lange believed that these appearances could be studied with the rigorous concepts and methods of the natural sciences. There was no doubt for Lange that psychologists could formulate natural laws based on these appearances.[10]

Critique of Phrenology and Philosophical Psychology

Lange (1866/1950) did not challenge psycho-physiological research or studies on the relationship between the brain and the psyche when he summarized the results of Jacob Moleschott (1822–1893), Pierre Flourens (1794–1867), Theodor Meynert (1833–1893), Eduard Hitzig (1839–1907), or David Ferrier (1843–1928). His critique targeted the phrenological studies of Franz Josef Gall (1758–1828) and Johann Kaspar Spurzheim (1776–1832) and academic philosophical psychology. This critique was necessary for Lange's self-understanding and was required before he could outline his alternative program for an objective psychology without a soul. Lange rejected phrenology because of its unscientific methods and its logic of research:

> Of more exact scientific methods there is in Gall's procedure not the faintest trace discoverable, a circumstance that was not unfavorable to the spread of his theory. For this kind of inquiry every one has talent and aptitude; its results are almost always interesting, and "experience" regularly confirms the doctrines. (pp. 113–114)

Lange consigned phrenology to the "sham sciences" (p. 114) and compared it to astrology and most medicines, including homeopathic ones.

Lange also distanced himself from Johann F. Herbart's (1776–1841) influential academic psychology, to which he "owes much" (Lange, 1865, p. III). Herbart (1824/1825) was successful in refuting faculty psychology but his promotion of a *Mechanik des Geistes* (mechanics of the mind) and its mathematical conceptualization did not satisfy Lange's criteria for a scientific psychology. In 1865 Lange published a critique of Herbart's psychology in

10. Ernst Mach (1838–1916) would later also promote such an "idealistic" positivism.

The Foundation of Mathematical Psychology: Essay on the Fundamental Error of Herbart and Drobisch (Lange, 1865).[11] In Lange's (1866/1950) perspective it was false that Herbart's mathematical psychology "mastered the world of ideas, as Kopernikus and Kepler the world of the planets" (p. 162). He even compared Herbart's system with the delusions of phrenology and argued that this psychology:

> must always be regarded as a highly remarkable testimony to the violence of the metaphysical whirlpool, which in our country at that time mastered even him who struggled against it, and hurled him out into the intellectual comet-orbit of visionary discoveries. (p. 164)

However, he agreed with Herbart that instead of a history of psychology, as presented by Friedrich August Carus (1770–1807), the field of psychology needs a critique of psychology. Lange's conclusion: "We are afraid that if this were to be written now, there would not remain very much of the whole supposed science" (p. 167). Lange also rejected the psychology of Theodor Waitz (1821–1864), a Herbartian, who had given up Herbart's mathematical method and had changed Herbart's system into an outline for an "empirical" natural-scientific psychology (see e.g., Waitz, 1849). Waitz belonged to a group of nineteenth-century philosophical psychologists who attempted to put psychology on a scientific basis (see Klemm, 1911). However, according to Lange, Waitz had just transformed Herbart's mathematical psychology into a theory on the nature of the soul. But what is the good of a theory on the nature of the soul, Lange asked, "so long as we still have so little accurate knowledge of particular phenomena which are the first things to be considered by any exact investigator?" (pp. 167–168).

Lange was very critical of German philosophical attempts to develop a systematic foundation for psychology. Karl Fortlage (1806–1881), professor of philosophy at Jena, proposed an empirical scientific psychology based on introspection (Fortlage, 1855). For Lange, "the whole book deals in general propositions, with a terminology of his own invention, without a single definite phenomenon being described" (Lange, 1866/1950, p. 171). Rudolph Hermann Lotze (1817–1881) introduced his famous *Medical Psychology* (Lotze, 1852) with a discussion on the existence of the soul, the mind-body problem, and the essence of the soul before he dealt with physiological issues. For Lange this first part contains "a hundred and seventy pages of metaphysic, to which it is owing that medical men have not benefited by the book" (p. 175).

Immanuel Hermann Fichte (1796–1879), son of Johann Gottlieb Fichte (1762–1814), professor in Bonn and later in Tübingen, developed a theological psychology. His psychological *Anthropology* (Fichte, 1860) was characterized by Lange as showing "logical weaknesses and pretentious repetition of obsolete errors" (p. 176). Leopold George (1811–1873), professor of philosophy at Greifswald, with his speculative psychology (see George, 1854), and Julius Schaller (1810–1868), professor of philosophy at Halle, with his psychological studies "stand upon the ground of speculation" (p. 176). Only Wilhelm Wundt was mentioned favorably as a counter-example to this German academic philosophical psychology. Lange (1878) also praised Ernst Heinrich Weber's (1795–1878) and Gustav Theodor Fechner's (1801–1887) psychophysics as a substantial building block in a scientific psychology.

11. This short booklet has 34 pages. Drobisch (1802–1896) was a professor of philosophy and mathematics who promoted Herbart's mathematical psychology.

In Lange's (1875)[12] *The Labor Question in its Significance for the Present and Future*, Weber and Fechner were reinterpreted sociologically. Lange suggested that Weber's law, according to which the ability to distinguish stimulus differences does not depend upon the absolute but on the relative difference (see Fechner, 1860), can be applied to social and political phenomena. Already a superficial view indicated, according to Lange, that "the sensation of the increase of political oppression is not proportional to the absolute value of the increase, but that it is dependent on the relation of the increase to the size of the whole political oppression" (Lange, 1875, p. 115). Lange argued that a society with generous freedoms would react with large discontent towards a moderate deterioration of rights. A society with already limited freedoms in a context of oppression would react with less discontent towards the same increase in mistreatment and the experience would be less severe towards the same amount of political deterioration.

Lange (1878), who had worked as a schoolteacher and thus was concerned about pedagogy, also envisioned educational implications from psychophysics and suggested that certain education tools should be based on psychophysical knowledge. He suggested that it was "foolish to overload children early on with joys and gifts" (p. 593) as these children would not be able to appreciate small treats. He considered it wiser to make the child's mind used to a few treats, which leaves children receptive for small gifts. Similarly, he recommended that teachers should think about the principle that not the absolute amount but the relative increase with regard to the usual amount of reward is relevant in terms of the distribution of rewards and punishment.

In contrast to highly critical remarks on German philosophical psychology, Lange praised British psychology—particularly the contributions of Charles Darwin (1809–1882), Herbert Spencer (1820–1903), and Alexander Bain (1818–1903). His only concern was that the British psychologists had not gone far enough, as their theories still "lack a firm experimental foundation" (p. 186). He (1866/1950) argued that "Psychology has remained a favorite study of the English, and it cannot be denied that the study of their works affords to the statesman, the artist, the teacher, the physician, a much richer abundance of contributions to the knowledge of man, than can our German psychological literature" (p. 186).

Program for a Psychology without a Soul

Lange (1866/1950) rejected the idea, common among his philosophical contemporaries, that the *subject matter of psychology* can be "rigidly determined and completely clear" (p. 162). Accordingly, only "the scholastic or ignorant pedant" (p. 162) can believe that. It does not make sense to start with metaphysical principles of the soul such as "extensionlessness" (p. 163), as already suggested by Descartes (1596–1650), because such attributes do not allow for the "scientific treatment of the subject" (p. 163). Indeed, according to Lange, the soul is an empty notion, an "old myth" (p. 168). The question then for Lange was: "How, then, is a science conceivable which leaves it doubtful whether it has any object at all?" (p. 168).

Lange (1866/1950) provided a rather contemporary argument (see Eberlein & Pieper, 1976) on the subject matter of psychology:

12. The revised third edition of 1875 (404 pages) was used for this article. No English version exists. The book will be referred to as *The Labor Question.*

> We have a traditional name for a considerable but by no means accurately defined group of phenomena. . . . Shall we reject the name because the object of science has been changed? That were [sic!] unpractical pedantry. Calmly assume, then, a psychology without a soul. And yet the name will still be useful, so long as we have something to study that is not completely covered by any other science. (p. 168)

More specifically Lange suggested that psychology should include not only the study of sensation and perception, "but also the investigation of human action and speech, and generally of all manifestations of life, so far as an inference is possible from them to the nature and character of man" (p. 178).

In discussing problems of comparative psychology Lange expressed his disrespect for traditional psychological terms: "Names like thinking, feeling, willing are mere names. Who will point out exactly what corresponds to them? Shall we make definitions? A treacherous element! They are of no use, at least for any exact comparisons" (p. 136). A similar problem arose for Lange when psychologists attributed actions to will: "But what do we know of this will? Apart from the inventions of the psychologists absolutely nothing but what is contained in the facts, in the manifestations of life" (p. 148). And even more: "When we speak of this 'will,' we only add a comprehensive word for a group of vital phenomena. Every supposition of a thing for a name is to exceed the facts given us, and is, therefore, scientifically worthless" (p. 148).

Lange criticized the core method of the psychology of his time, namely self-observation (introspection)[13] (pp. 168–177). He called upon Kant who noted that self-observation "leads to enthusiasm and hallucination" (p. 169). Thus Lange argued that Kant, in his anthropology, "based his own empirical psychology . . . not on self-observation, but essentially on the observation of others" (p. 169). According to Lange, psychology does not need introspection or subjective accounts. Instead of self-observation he recommended the controlled observation of others. He even challenged the traditional distinction between internal and external observation, as the process of observing oneself is qualitatively not different from observing others and both involve interpretation. The crucial difference regarding the method of observation does not refer to the process but whether the observation can be "made by others . . . or whether it evades any such control and confirmation" (p. 174).

Thus, the capability of being tested became a core feature of Lange's program:

> External observation would never have led to a sure empirical, or even exact science, unless every observation had been capable of being tested. The elimination of the influences of preconceived views and tendencies is the most important element of the exact method, and this element becomes inapplicable just in those observations which are directed towards our own thoughts, feelings, and impulses. (p. 174)

Another core feature is the exclusion of subjectivity as introspection is subjective, and external observation is objective: "The core of all the numerous cautionary measures of this method lies, however, just in the neutralising of the influence of the observer's subjectivity" (p. 177). Further, Lange went beyond basing the discussion of the value of a method on epistemological arguments, and invoked pragmatics: The extent to which the "scientific method can be applied to psychology must be shown by the result" (p. 177).

Psychological processes are based on physiology and physics. Therefore, Lange argued that psychologists should identify for each psychological process the physical or physiological

13. See Danziger (1990), who also listed Lange as a critic of introspection, for a historical overview of introspection.

basis. This method, for which Lange hesitated to use the term materialistic, was called the "somatic method" (p. 184). It was "the only one that in most branches of psychology promises success" (p. 184). This meant that psychologists "should as far as possible keep to the corporeal processes . . . which are . . . by law connected with the psychical phenomena" (p. 184). This program should not be understood as a refutation of epistemological idealism because such a methodological approach did not suggest that a corporeal process is the ultimate basis of the psychological reality. Again Lange emphasized that "empirically ascertained facts, and even 'empirical laws,' have their own rights, quite independently of their resolution into the bases of phenomena" (p. 186).

For example, Lange suggested that psychologists should explain emotions "by their corporeal symptoms" (p. 183). For Lange any solid result in the study of the emotions required a serious study of symptoms. He proposed indeed a program that anticipated the William James (1842–1910) and Carl Lange theory of emotion by arguing that the "consciousness of our own emotions is only determined and brought about by the sensation of their corporeal reactions" (p. 184). In this context, he also praised Darwin's (1872/1965) essay on *The Expression of the Emotions* for psychology.

Lange envisioned support for his psychology without a soul from *animal psychology* because "we can easily subject the animal to experiments" (p. 178). Animal psychology also proved for Lange that introspection was not a necessary method and that external observation could allow psychologists to observe and interpret rigidly "movements, gestures, and actions" (p. 178). Again, the subjectivity of the observer or the research subject no longer played a role in this type of experiment: "An exactly described procedure with an exactly described animal can always be repeated" (p. 178). Animals allow objectivity as observations can be repeated and thus corrected and "thoroughly cleared from the influence of personal preconceptions, which have so great a share in so-called self-observation" (p. 178).

Besides animal psychology Lange recommended the study of *child psychology*, especially regarding infants: "An important contribution to the foundations of a future psychology lies also beyond doubt in the only very recently systematically instituted experiments on newborn infants" (p. 180). Here psychologists "can seek to observe the first and simplest elements of this mechanism" (p. 180) of psychological processes. From experimental child psychology more can be learnt than "from whole volumes of speculative 'Inquiries'" (p. 181). He mentioned, for example, observing the first words of a child in order to draw conclusions as to the development of the mind (see p. 174).[14]

Another area supported by Lange was *Völkerpsychologie*[15] as far as it works with a linguistic method that can be used scientifically. Linguistics was for Lange one of the most essential sources of *Völkerpsychologie* as it had helped to bring language into scientific discussion. Lange mentioned Wilhelm von Humboldt (1767–1835) who had demonstrated the "psychological essence of speech" (p. 181). On the other hand he warned of the early "travels of men of science"—he mentioned James Cowles Prichard (1786–1848)—who were guided by a "mass of misunderstandings" (p. 181) (see Prichard, 1813). They showed clearly the limits and unfruitfulness of this type of psychology: "Religious prejudices of the reporters,

14. Lange made these comments before Darwin (1877) published his landmark biography of his own firstborn child in 1877. He was clearly involved in important psychological developments as they were occurring.

15. Lange referred to the German *Völkerpsychologie* as inaugurated by Steinthal and Lazarus who started their *Zeitschrift für Völkerpsychologie* (Journal for Völkerpsychologie) in 1860 (see Klemm, 1911). Wundt (1921), with whom *Völkerpsychologie* is now usually associated, credited Steinthal and Lazarus for giving this research program its name and vision (see p. 30).

from their pride of race, and from their incapacity to throw themselves into the modes of thought of lower grades of civilization" (p. 181).

Lange also embraced statistics as a significant tool in his program. In his work on the labor question he called statistics "the most revolutionary of all sciences" (Lange, 1875, p. 16). According to Lange (1866/1950), statistics allowed a "strictly methodical inquiry" (p. 194). Statistics "records human actions and human chances, and by combining these records many an insight may be gained into the machinery not merely of social life, but also of the motives which guide the individual in his actions" (p. 194). Lange wanted to include data and draw psychological conclusions from the number and kind of crimes, suicides, illegitimate births, extent of education, and the number of literary productions. He even suggested that statistics of commerce and navigation, traffic reports of the railways, quantities of crops and number of cattle, and the results of the subdivision of property (see p. 194) would lead to psychological knowledge. However, Lange already warned against the prejudiced use of statistics when, for example, the number of crimes yearly occurring in a country was used in order to make statements on the morality of this country. From a purely statistical point of view it was necessary, according to Lange, to begin such an analysis by "dividing the number of punishable actions by the number of opportunities or temptations to punishable actions" (p. 199).

The importance of statistics in a psychology without a soul raised the question of free will. According to Lange, the average will "approximately represents the great mass of all individual will-impulses" (p. 195) and is influenced, for example, by "age, sex, climate, food, kind of labour" (p. 195). For Lange it was reasonable to conclude that the individual will was governed by physical conditions and thus considered the doctrine of the freedom of the will to be "obsolete" (p. 196). Referring to Kant, he saw no contradiction between freedom and necessity or, as Lange phrased it, "between freedom as form of subjective consciousness and necessity as fact of objective science" (p. 196). There was always "empirical conditionality and strict causality of all human actions" (p. 197).

Socialist Darwinism

Darwin's publication of the *Origin of Species* made 1859 a significant year for science. Darwin inaugurated a paradigm shift in the understanding of nature and — as some researchers have held — society. Even Marx claimed Darwin as support for his perspective on dialectical materialism (see Teo, 2001). Lange, together with Ludwig Büchner (1824–1899), was one of the first German intellectuals to incorporate Darwin's ideas into psychological and political theory. Weikart (1999) even suggested that Lange was "probably the first anywhere" (p. 83) to apply Darwinism systematically to social issues. Indeed, several years before Darwin published *The Descent of Man* in 1871, Lange talked about the struggle for existence in human society in his first 1865 edition of the book *The Labor Question.*

Lange's combination of Darwinism and progressive economic and political ideas was, however, not well received. Lange (1875) expressed disappointment about the "total disregard of the first edition within the circles of labor organizations and their leading voices" (p. IV).[16] The second edition, which addressed an educated middle-class audience, was still not successful. The third edition, however, was directed towards politicians and politically active citizens and became extremely successful among the social-democratic elite,[17] and

16. Citations from this book are my translations.

17. Lange (1875) admitted substantial changes between the first (1865) and the third (1875) edition. However, Darwin kept a central place in all editions.

Eduard Bernstein (1850–1932) used Lange's book as the starting point for his fundamental revision of Marxism into social-democracy (see Sieg, 1994). Thus, until the 1980s, Lange's was considered a quasi-traitor in orthodox Marxist scholarship (see Wrona et al., 1988).

Lange's interest in social theory must be understood in the context of the political and social history of mid-nineteenth-century Germany. Lange, who himself experienced censorship, was aware of the persecution and trials of intellectuals. As a young man, he saw the defeat of the 1848 revolution and its democratic supporters (see Schnädelbach, 1984). As a politically conscious intellectual, he was cognizant of the dramatic structural changes in the German states where industrial workers increasingly began to flood the large cities. Housing, poverty, and health concerns became major public issues. Workers were exploited, labor conditions were horrendous, and child labor was a common practice (see Weingart, Kroll, & Bayertz, 1988). On this social background intellectuals had the opportunity to justify the status quo or to challenge it (see Jaeger, 1982). Lange became a social agitator, a critic of Bismarck's policies, a supporter of labor unions, and an opponent of reactionary institutions.

Lange applied Darwinism to psychology as well as to social theory. He introduced his psychology (1866/1950) with a reflection of the evolutionary bases of the human mind, which included a discussion on the age of the human race and its unity. Summarizing and challenging the scientific discourse of his time, he laid out as an axiom of his psychology, "that ultimately the intellectual life also must be capable of being understood as a product of the general laws of nature" (p. 85) and that "the proceeding of man from the animal world is scientifically obvious" (p. 86). Lange did not shy away from polemics when he suggested on the background of natural-scientific knowledge: "It will be found that to proceed from an already highly organised animal . . . is fitter and more agreeable than to proceed from an inorganic clod of earth" (p. 109).

Lange wrote that Darwin "has contributed magnificent material for the psychological understanding of the human species and struck out new paths in which plentiful matter may be gained for whole departments of psychology" (p. 183). However, Lange himself did not develop these new paths in his psychological writings, but in his social theory. Weingart, Kroll, and Bayertz (1988) pointed out in their study of the history of eugenics in Germany, that in the early 1860s a *progressive-democratic* reading inspired the German political interpretations of Darwin, emphasizing change and progress, rather than selection. Ernst Haeckel (1834–1919), Ludwig Büchner (1824–1899), and Lange were the leading voices. In the 1870s, a reactionary aristocratic re-interpretation of Darwin took place, for which once more Haeckel, with whom Lange corresponded, provided crucial arguments. Another pioneer of (child) psychology who claimed Darwin for his psychology and his reactionary political goals at that time was William Preyer (1842–1897) whose program was in direct opposition to Lange's (see Jaeger, 1982).

Although Weingart, Kroll, and Bayertz (1988, p. 56) interpreted Lange as an early proponent of a politically left "eugenic" program, the evidence is not so clean. Lange agreed with Thomas Malthus (1766–1834) on the relationship between population growth and the means of subsistence (see also Weikart, 1999), but he was critical of practical ideas of "Malthusianism." Malthus, he argued, has "seen the welfare of humanity solely in making marriages more difficult and in the prospective inhibition of population growth: A way which has been taken willingly by many patronizing governments to the disadvantage of Europe" (Lange, 1875, p. 14). Lange called it a "misconceived practical application" (p. 14).

Lange also posed the question of whether a struggle for existence would not lead to a differentiation into a "higher and lower race" (p. 54) within a given society. He suggested to the contrary, that the human "desire for reason and freedom" (p. 56) controls the process of

natural selection, and that therefore attempts for the "emergence of a higher human race is doomed to fail sooner or later" (p. 56). In fact one could see, according to Lange, that the opposite process was taking place, because an ever-increasing equality was emerging. Thus, there will be no final division of humankind.

Lange's Darwinism was infused by socialist theory and his experiences in the labor movement. Both nourished his theoretical and political ambitions. Willey (1978) called him "the only genuine political activist in the early phases of neo-Kantianism" (p. 83) and even suggested that the social question was more important to Lange than epistemology and science. Lange was by no means a Marxist. He praised Marx "without hesitation as the most scholarly and sharpest national economist of the present time" (p. 248). On the other hand he suggested that the speculative Hegelian elements in his system, such as Marx's theory of value, will have "no lasting significance" (p. 248). He also shared Marx's analyses of the ideological function of theories and emphasized that "Karl Marx has ripped off the mask of the hypocritical tendency of political economy" (p. 60).

Lange pointed out that defenders of capitalism usually supported the theories of David Ricardo (1772–1823) and Malthus as they presented "the misery of the workers as a consequence of a merciless natural law" (p. 14). In doing so, they could alleviate their responsibility. Moreover, capitalists could use "pseudo science" (p. 15) in order to support their view. He suggested political economy "was and is faked systematically, in the interest of capitalists and in order to suppress social reforms" (p. 39). From a psychological perspective it is interesting that Lange emphasized psychological reasons for the hesitation of individuals to participate in social movements (see pp. 25–27).

In reconciling Darwinism with socialism, Lange developed a unique social theory. He suggested that the notion of a *struggle for existence* has limited value when it comes to society and humankind. Humans have a different nature from animals because they have accumulated knowledge, they can make predictions, and they formulate ideals. The pursuit of humans has the purpose of "creating a condition in which the living can live their lives as perfectly as possible, enjoying their existence" (p. 4). Lange reconstructed how the struggle for existence has taken different forms in the course of human history, from the control of fire (according to Lange, an important step for the creation of humankind proper) to the wars and conflicts of the present time. True humanitarian ideals, according to Lange, have only emerged in the last few centuries. He suggested that it "must be the final goal of all social movements to suspend the struggle for existence through reason . . . or to limit it to its smallest amount" (p. 251).

Lange argued that humans modify, suspend, and reduce natural laws of evolution, and that the interaction of humans leads to the idea of "equality and unity" (p. 67). On the one side there is the power of natural differentiation, and on the other side the power of ideals. There is no doubt for Lange that the power of ideals would prevail. With regard to the labor question this meant that oppressed classes may gain ground and domineering classes may lose their "security of domination which they are used to" (p. 69). According to Lange, there will be times when the struggle for the preferred position will turn into a "communal struggle for a higher plan of communal life" (p. 70). Over and over again he emphasized that "the struggle for existence can be suspended . . . by the intellectual [geistige] development of humankind" (p. 214).

According to Lange, the struggle for existence was experienced in its most devastating form by the working class, the industrial workers who were alienated from culture and society. For Lange, the struggle for existence became a struggle for wages and a "struggle for the

standard of life" (p. 160).[18] Lange applied a Marxist analysis in emphasizing that the dilemma of workers lies in the circumstance that they must sell their labor in order to survive. This was only possible because they are "free": free in the sense that the workers have the social capacity to sell their labor, and free in the sense that they are free of the means of production as they do not own land nor machines nor capital. According to Lange, capital, which owns the means of production, pockets the surplus value, although it is rightly the workers' achievement. According to Lange, exploitation is an essential feature of capitalism and the products of labor become commodities like labor itself.

On a more general level Lange reconstructed the human struggle for existence as a struggle for the preferred position by reinterpreting Darwin's overproduction of organisms as an overproduction of abilities. Lange pointed out that although "ability and inclination for a leading position are distributed among the working masses" (p. 47) they are doomed to languish. He called the idea that talent and genius will prevail in any circumstance a "deeply rooted error" (p. 48), which was contradicted by real life. He also argued that one overestimated the contribution of people in higher positions to society. He suggested that many individuals would have the ability to take leadership positions but that there were no opportunities. The occasion when a worker moved up to management did not really solve the problem of the overproduction of ability, as such moments were limited to a few workers, according to Lange.

Lange was not a revolutionary socialist. His support for socialism was nourished by ethical concerns (see Vaihinger, 1876). Instead of revolution, he proposed evolutionary ideas based on ethical principles. They ranged from legal and governmental actions that focused on the "welfare of the masses" (p. 359) to actions that led to a complete emancipation of the workers from their dependency on capitalists. He also emphasized that the material improvement of the workers could not be separated from their intellectual and moral improvement. The *Labor Question* ended with an optimistic vision:

> Centuries may pass before the struggle for existence is changed into the peaceful cohabitation of the peoples of the world; however the turning point of time, the victory of the good will to the improvement of our conditions will not lie all too far away. (p. 392)

Socialist Darwinism and Race

Race became a topic of increasing interest for scientists and psychologists in the nineteenth century (see Howitt & Owusu-Bempah, 1994; Richards, 1997). Darwinism provided a means of modifying the racist discourse in the late nineteenth century so that the European "race"—and within Europe the Nordic "race"—could be conceptualized as the champion of human evolution. It also allowed for the justification of the inhumane practices of Europeans in the establishment and running of colonies and in slavery. Pioneers of psychology such as Herbert Spencer (1820–1903), Francis Galton (1822–1911), Paul Broca (1824–1880), and Gustave Le Bon (1841–1931) contributed to the various racist discourses in psychology (see Richards, 1997; for the rise of modern science and the discourse on race, see Ernst & Harris, 1999; Goldberg, 1993; Malik, 1996).

German philosophy in the second half of the nineteenth century arose within a specific socio-political situation in terms of ideological justification of imperial practices. German

18. Lange (1875) used the English term *standard of life* in parenthesis (p. 147).

states were negligibly involved in imperialism (in comparison to England), and there was no economic interest in slavery. This did not mean, however, that there was no racial theory developed in this context (see Mecheril & Teo, 1997). The fact that Darwin played a significant role in Lange's psychology as well as in his social and political theory raises an interesting question: How did Lange view non-European "races" on the background of his progressive-democratic understanding of Darwin?

Lange used the term race in three different senses: Race in terms of different ethnic populations from different geographic regions; race as a group of people (the working class could become a race; see above); and race as the human race (Lange, 1866/1950, p. 104). Lange (1866/1950) discussed the "unity of the human race" (p. 105) in the first chapter on psychology in his *History of Materialism.* Instead of providing a clear construction on human races, Lange shifted the discourse to the meta-theoretical level and pointed out that research in this area was biased and rooted in the worldview of their proponents ranging from religious to economic interests: "The innermost spring of these discussions lies not in a purely scientific interest, but in great party questions" (pp. 105–106). He specifically referred to the North American slave question. For Lange, it was understandable that, given the political-economic interests in America, there was an "American tendency to represent the negroes as creatures of the lowest possible kind and of almost brutish organisation" (p. 106). In contrast he mentioned Waitz's (1863) anthropology which suffered, according to Lange, from "a constant exaggeration of the arguments for the 'unity' of mankind" (p. 106).

Lange himself took difference for granted and suggested that there are "lower grades of civilization" (p. 181). This did not mean for Lange that one should challenge the unity of humanity as "there is often seen the most striking analogy between races which have hardly clothes and huts, and others which possess palaces, proudly built cities, and an abundance of implements and objects of luxury" (p. 183). He also emphasized the role of environment as it is a "fact that man, with the same capacities, attains a much higher goal if he is in a very advanced environment, than if he grows up amidst the rudest traditions" (p. 104). A similar thought might also apply to human races:

> Only so much seems to be guaranteed by the concurrent descent, that a backward race, or even one that has become hardened and perverted in its lower qualities, might yet, by circumstances which we cannot calculate, be led to a higher development. (p. 107)

It must be mentioned that he added that this might also be true for animals.

In the *Labor Question*, Lange (1875) suggested that, before reason became victorious, a race struggle was part of the struggle for existence in human history. He provided a sober analysis of European colonization that brought "Christianity and death" (p. 6). For Lange, it was a fact that a horrible devastation beyond imagination began. Whole peoples were cleansed, exterminated, and reduced. Millions of distressed Africans were deported "to be exploited and bred like domesticated animals in America" (p. 6). Lange again emphasized the role of political economy in this context. Accordingly, the slave-owners in the United States followed the economic idea that it is better to terminate the lives of slaves sooner than later, while taking advantage of their work while they lived and thus extorting "superhuman work performances" (p. 59). The financial gains based on this method could be reinvested in new slaves who in turn should be used as quickly as possible. In this context he referred to free trade economy [*Freihandelslehre*] as being nothing "but the elimination of all constraints that humanity has installed against the process of differentiation" (p. 59).

Lange thus participated in the racialized discourse of his time during which the reality

of races and the reality of different types of civilization were taken as a given by many intellectual elites in Europe and America. But, in contrast to scientific racists, he did not participate in a discursive-ideological construction of a natural inferiority of non-White races in order to justify oppressive practices. He did not systematically construct differences, evaluate these differences, attribute them to the nature of races, and use these constructions in order to promote racist practices (see Teo, 1999). On the contrary, he critiqued the practices of Euro-Americans and emphasized the role of environment, which was compatible with his socialist interpretation of Darwin in his socio-political theory.

CONCLUSION

Lange was a German intellectual with several "souls." His first soul belonged to Kant, the mastermind of German philosophy, whose epistemology he vindicated by referring to physiological research. His second soul belonged to socialism and the ethical ideals of a society beyond exploitation. The third soul belonged to Darwinism whose significance for philosophy, psychology, and social theory Lange clearly understood. What is most remarkable, perhaps, is that Lange was able to represent and personify a program in which these important and apparently disparate academic Western worldviews of the nineteenth century were creatively synthesized.

Lange did not perceive what contemporary psychologists might consider unreconcilable contradictions. The epistemological idea that the human mind cannot have exact pictures of reality was not in contradiction to Lange's program to demand from researchers the discovery of exact laws that govern nature and humans. Materialism, according to which matter is the ultimate ground and essence of reality, was endorsed as an appropriate methodology for the natural sciences, but Lange was convinced that it was unsuitable and untenable as a philosophical foundation in terms of epistemology and ethics. The Darwinist idea of a struggle for survival was not in contradiction to a moral understanding of Marx's critique of political economy. Lange hoped that the struggle for existence could be combined with a moral outcry against subjugation and exploitation, which should lead to the rational and moral design of society, controlled by reason. Lange even warned about thinking in terms of races and "deconstructed" the interests of proponents who defended the inferiority of certain races.

Mainstream North American psychology and historians of psychology have neglected Lange although he also signified the slow transformation of nineteenth-century science, philosophy, and psychology (see Green, Shore, & Teo, 2001). Lange, who rejected philosophical speculations on the nature of the mind and who recommended detailed empirical studies, was an important promoter of the discipline. He suggested that psychology needed concepts derived from physiology instead of a vague psychological terminology, that the subject matter of psychology was not the soul or consciousness, that psychologists should focus on actions and other manifestations of life, and that introspection was subjective and thus the observation of others, a process that could be controlled, should be endorsed. He suggested that psychologists should embrace statistics, animal, and infant psychology. All these ideas made Lange a true pioneer for twentieth-century psychology.

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