



Elisabeth Theresia Widmer*

Psychophysiological Transcendentalism in Friedrich Albert Lange's Social and Political Philosophy

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Abstract: In recent literature, it has been suggested that Lange's social and political philosophy is separate from his neo-Kantian program. *Prima facie*, this interpretation makes sense given that Lange argues for an account of social norms that builds on Darwin and Smith rather than on Kant. Still, this paper argues that elements of psychophysiological transcendentalism can be found in Lange's social and political philosophy. A detailed examination of the second edition of the *History of Materialism*, *Schiller's Poems*, and the second edition of *The Worker's Question* reveals that Lange sought to develop a systematic foundation of psychophysiological transcendentalism that is presupposed in his social and political philosophy. This allows for a more detailed understanding of Lange's practical philosophy and assures him a position in the tradition of neo-Kantian socialism.

Keywords: Friedrich Albert Lange, psychophysics, transcendental philosophy, Marburg neo-Kantianism, Darwinism, materialism, left-Kantianism, left-Hegelianism, post-Marxism

1 Introduction

In recent years, historians of philosophy have shown a growing interest in the early neo-Kantian thinker Friedrich Albert Lange (1828–1875). Intellectuals like Hans Vaihinger (1852–1933)¹ and Friedrich Nietzsche (1844–1900) were deeply inspired by Lange's aesthetics (Breazeale 1989; Hill 2003; Hussain 2004; Wilcox 1989). Lange also left an indelible mark in the fields of psychology, logic, and philosophy

¹ Vaihinger discusses Lange in *Hartmann, Dühring, and Lange: A Critical Essay* (1877) and *The Philosophy of As-If* (1911).

*Corresponding author: Elisabeth Theresia Widmer, Department of Philosophy, University of Vienna, Vienna, Austria, E-mail: elisabeth.widmer@univie.ac.at

of science (e.g., Beiser 2014, 2018; Bellucci 2013; Eckert 1968; Edgar 2013; Freimuth 1995; Hussain and Patton 2016; Köhnke 1986; Patton 2011; Sieg 1994; Teo 2002). Even his social and political philosophy was widely read by his contemporaries. Lange's political works enjoyed a small resurgence in the 1890s, when the SPD politician, Eduard Bernstein (1850–1932), tried to revise the socialist party program with the slogan “Back to Lange” (Retter 2007, p. 103).²

Influenced by the physiologists Hermann von Helmholtz (1821–1894) and Johannes Müller (1801–1858), Lange *naturalized* the *a priori* conditions of experience and offered a psychophysiological interpretation of the Kantian framework. Lange presented an evolution theory-based explanation of class struggle in his social and political philosophy and drew on Smith to explain social behavior. Some scholars conclude that Lange's social and political philosophy is not Kantian (Beiser 2014; Klein 1994; Vorländer 1900). Although Frederick Beiser acknowledges a common “starting point” in Lange's and Kant's practical philosophy, he argues against a connection between Lange's socialism and his neo-Kantian program (Beiser 2014, p. 362). According to Beiser, Darwin and Smith, rather than Kant, influenced Lange's view of the social realm. Similarly, the Marburg neo-Kantian Karl Vorländer (1860–1929) has argued against a “connection between his [Lange's] socialism and Kantianism” (Vorländer 1974/1911, p. 122). Likewise, Armin Klein argues: “An ethical justification in a Kantian sense does not exist in Lange's thought. Precisely because only his theoretical philosophy was Kantian, he thought he was not permitted to transfer it in his ethics” (Klein 1994, p. 138). *Prima facie*, these views seem plausible if we consider Lange's social and political philosophy.

If viewed in isolation from his other works, we get the impression that Lange's moral and political philosophy breaks with his Kantianism. With a concept of class struggles inspired by August Weismann's (1834–1914) adaptation of Darwinian evolutionary theory and Adam Smith's (1723–1790) notion of moral sentiments, Lange argues that the capitalist class struggle is a result of evolution. His account of social norms seems to have little to do with Kant. In the second edition of *The Worker's Question* (1870), where Lange deploys his evolutionist explanation of capitalist class struggle, he views “sympathy” and “egoism” as human dispositions that result from the “struggle for survival.” In *Mill's Views* (1866b), Lange considers the possibility of interpreting Kant's categorical imperative as a *psychological* principle; however, he ultimately rejects this option and accepts

² “Back to Lange” is a reference to “Back to Kant”, which was the slogan that initiated the neo-Kantian movement. However, Bernstein did not take up Lange's thoughts uncritically. He criticized Lange for not taking historical materialism seriously enough (Bernstein 1892, p. 102).

a sensualist foundation of morals. Moreover, Lange claims in the *History of Materialism* (2005) that Kant's "positive" (=practical) philosophy would not suffice in modern times characterized by breakthroughs in the natural sciences. Because of the metaphysical entanglements of Kant's deductive approach to justify the *a priori* foundation of the moral law, Lange was convinced that his practical philosophy was not compatible with an enlightened scientific worldview (Lange 2015, p. 254).³

My central aim in this paper is to show that Lange's social and political philosophy builds on his neo-Kantian framework after all. I argue that Lange implicitly presupposes psychophysiological Kantianism when dealing with psychophysics and normativity in *The Worker's Question*. Even though Lange did not sufficiently outline the Kantian foundation, I suggest that his social and political philosophy involves a naturalist justification of the categories and an aesthetic account of ethical idealism.

The argument unfolds as follows. In the second section, I present Lange's *prima facie* naturalist (Darwinist and Smithian) conception of class struggle as an alternative to the most influential positions of Marx. In the third section, I highlight the neo-Kantian aspects of Lange's philosophy of science. Against proponents of natural-scientific materialism, I show that Lange argued for a novel adaptation of Kantian transcendentalism inspired by the materialism controversy. In the fourth step, I emphasize those sequences in his social and political writings suggesting that Lange presupposed his Kantian foundation. Thereby, I show that Lange's political approach is not exhausted if reduced to Darwin and Smith. I argue that Lange's naturalism leads to a Kantian foundation that he previously worked out in the *History of Materialism*. In the last section, I summarize the main arguments of the paper. I conclude that Lange's social and political philosophy is taken too one-sidedly if reduced to Darwin and Smith. The current study offers a more detailed picture of Lange's complex approach and allows viewing him as a philosopher who was part of neo-Kantian socialism.

3 Because Lange supports a psychophysiological conception of the conditions of experience, his heirs use his philosophy mainly as a negative foil to demarcate their anti-psychologistic thought of line (Cohen 2001, p. 33; Vorländer 1900). Although Cohen appreciates Lange's efforts regarding the social question, he criticizes Lange's concept of socialism (2005, p. 111). With this difference in mind, Beiser claims: "If Lange is the father of Marburg neo-Kantianism, then that tradition was based on patricide" (2014, p. 357). Lange's naturalist interpretation of Kant has, thus, been excluded from the "classical" stream of the critical-idealist neo-Kantians in a strong sense (Heis 2018, 3; Ollig 1979, 219).

2 Lange's Naturalist Socialism as an Alternative to Marx

To understand Lange's novel approach in *The Worker's Question*, one needs to have a clear picture of the intellectual developments at the time. In the 1850s, Germany was still dealing with the aftermaths of the unsuccessful March revolution. Marx was put in jail after the French February revolution, and rationalistic, pantheistic, and atheistic worldviews were blamed for the revolutionary tendencies in Germany (Köhnke 1986, p. 143). What followed was a reactionary phase. In the mid-1850s, the economic upswing led to a strong liberal party, "*Die Deutsche Fortschrittspartei*." Hermann Schulze-Delitzsch (1808–1883) developed the main ideas for the party. Instead of a proletarian revolution, Schulze-Delitzsch believed that worker unions and loans would provide the working class with the means to improve their situation (Herkner 1916, p. 463). However, in the eyes of Marx and Engels, Schulze-Delitzsch's approach was "bourgeois" and failed to address the structural origin of the problem (*ibid.*). While these two camps characterized the 1850s, the decade after required a novel assessment of the "social question."

In the early 1860s, some members of the *Fortschrittspartei*—including Lange—were seeking a more left-leaning course of the party. Whereas Marx's ideas were too radical for the liberals, Lassalle called for legal reforms and a democratic organization of the state. This approach evoked the interest of the liberal party. In 1863, the *Fortschrittspartei* invited Lassalle to comment on their new program (Russel 1896, p. 47). Lange, however—who was drawn to statistics—was unsatisfied with the intellectual landscape. In a letter, he says: "I did not come to socialism by studying socialist literature but by studying national economy and statistics" (Ellissen 1894, p.189). This becomes clear in *The Worker's Question* (1865/1870), where Lange provides an evolutionist and naturalist explanation of class struggles. He favors thinkers such as Darwin, Mill, Malthus, and Smith over Marx and Lassalle.⁴ Instead of finding the reasons for inequality in the logic of capitalism (Marx) or the undemocratic organization of jurisdiction (Lassalle), Lange offers a theory of socialism that allows for a naturalist perspective on the social question. This section outlines Lange's

⁴ The thesis I defend in this paper relies on the second editions of *The Worker's Question* and the *History of Materialism*. I weigh his later works more heavily for two reasons. First, in my view, Lange was working towards a systematic account of psychophysiological transcendentalism that is not yet noticeable in his early works. Second, I take it that his revisions mirror more accurately what Lange actually had in mind.

naturalist approach. Thereby, I aim to show why Beiser, Vorländer, and Klein suggest excluding Lange's socialism from his Kantianism.

Lange's position can be broadly summarized as follows: Class division is neither a result of the logic of accumulation nor is it caused by the historical development of positive laws. Instead, it originates in the egoistic human nature seeking to gain an advantage in the evolutionary "struggle for survival." Human nature, however, is also equipped with sympathy—a disposition that evokes the inclination to constitute an *ethical* society. Societal progress is not dependent on a revolutionary transformation but proceeds incrementally and requires legal reforms. Lange agrees with Marx that one of the main problems of capitalism is that the "products of labour are treated as [private] commodities." In his view, Marx was correct in pointing out that the production of commodities is based on collective action and, thus, should be treated as such (Lange 1870, p. 11). However, without denying the crucial role of economic and juridical laws, those are only effects of an underlying *natural* cause grounded in human social nature: egoism.

Lange explains the social nature of human beings with Adam Smith's sensualist ethical theory. Like Smith, Lange assumes that the moral character of human beings consists of two contradicting tendencies: egoism and sympathy. Whereas our egoist nature is responsible for the inclination to secure a high position, our sympathetic disposition allows us to ignore personal interests and to think collectively. Sympathy is, thus, the natural desire opposed to egoism. Capitalism promotes competition, unequal opportunities and entails a high degree of luck. Socialism, by contrast, strives for a just distribution of goods, equal opportunities, and the minimization of the role of chance in a person's outcomes. It thus goes back to our sympathetic character. Capitalism and socialism are both historically contingent. However, the natural cause of human nature disposed toward class struggle appears to be timeless.

Although both sympathy and egoism are natural dispositions, sympathy is grounded in our consciousness. It allows us to picture the social realm as it is and as it should be. Later, I will say more about Lange's conception of normativity. For now, it is important to note that Lange is convinced that we can resist the demands of evolution, which is why he declares himself "not to be an unconditional supporter of the Darwinian system" (1870, p. 31). In contrast to orthodox Darwinian positions such as those found in Ernst Haeckel's (1834–1919) *Natural History of Creating* (1868) or Herbert Spencer's (1820–1903) *The Principles of Ethics* (1879–93), Lange refrains from purely causal explanations. In Lange's eyes, the capacity to create and act on self-given laws is the most distinctive feature of human beings.

Lange argues that Malthus' law of population—based on statistics—came methodologically closer to reality than Marx's method. Malthus formulated in *An Essay on the Principle of Population* (Malthus 1998) a law that claims an imbalance between food production and the rising number of people in the world. While food production—due to the limits of crop fields—progresses *arithmetically*, the human population increases *exponentially*. With this principle, Malthus tried to prove that food shortages were inevitable. In *The Capital* (1962/1867), Marx criticizes the Malthusian naturalist explanations of impoverishment that confuses human malfunction with natural laws. While Lange provides a Darwinist alternative to Marx's method of historical materialism that is sympathetic to Malthus' law of population, Marx's historical materialist notion of class struggles is meant to critique Malthus' naturalism. According to Marx, periods of food shortages and poverty must not be explained by the scarcity of natural resources. Instead, Marx tries to identify historical laws that reflect economic logic and lead to industrial "necessities" (Marx 1962 [1867], p. 731).⁵

Lange acknowledges the point raised by Marx that Malthus' law of population played directly into the hands of classical economic theories. For the latter, Malthus' theory would allow the blame for structural problems to be shifted onto nature (Lange 1870, p. 14). Yet, Lange prefers Malthus' methodology over Marx's and Lassalle's Hegel-inspired ideas of class struggle. He translates the current class struggle into Weismann's Neo-Darwinist account: "The foundational law of the struggle for survival lies in the physiological nature of a surplus production of germs of life (*Lebenskeime*) that are doomed" (1870, p. 48). While nature creates many versions of an organism, only the version best suited to the environment continues to exist. This law, Lange continues, "also applies to the societal human life" (*ibid.*). The "germs of life" are replaced by the "germs of skills needed for a leading position" (*ibid.*). For each leading position, a high number of skilled and capable people are to be found. Lange believes that this mechanism demonstrates that the Darwinist principle also applies to the social realm (1870, p. 50).

Judging solely from this section, it may seem plausible to separate Lange's neo-Kantianism from his social and political philosophy, as Beiser, Vorländer, and Klein suggest. Since Lange is drawing on naturalist explanations instead of Kantian elements, it makes *prima facie* sense to exclude his neo-Kantian framework from his Darwinist and Smithian approach in his social and political

⁵ Similarly, Lassalle's *juridical* explanation of class division refrains from naturalist explanations. For Lassalle, class struggles are an expression of historically contingent power relations. Abuse may be prevented with a *democratic* principle that allows the participation of all members of society (Lassalle 1861). Lange criticizes Lassalle's account that would show "reactionary tendencies" (Lange 1979/1865, p. 4).

philosophy. However, Lange's view on naturalism or materialism and Kantianism is more complex. The following two sections show that naturalist explanations are preliminary steps to Lange's 'psychophysiological transcendentalism.' He, thus, presupposes this Kantian foundation in his social and political philosophy.

3 Psychophysiological Transcendentalism in Lange's Inductive Logic of the Natural Sciences

This section highlights the Kantian elements of Lange's view on logic in the natural sciences. Further below, I will argue that he presupposes this foundation in his social and political philosophy. But first, I depict Lange's psychophysiological examination of scientific logic in the context of the "materialism controversy" (*Materialismus-Streit*) that peaked in the 1850s.⁶ Lange's epistemological program may be summarized as follows. He agrees with the materialists—and even more with the empiricists of the anglophone tradition—that objective empirical statements require inductive logic. At the same time, Lange is convinced that necessary logical judgments regarding the conditions of experience are possible. Due to the latter, Lange remains Kantian as he explains the foundation of logic based on subjective categories of understanding. However, in contrast to Kant, Lange—inspired by materialism—argues for an *a posteriori* examination of the *a priori* conditions of experience. Although Lange appreciates the materialists for steering philosophy into the right *naturalist* direction, he identifies severe shortcomings in their positions and aims to solve them in a Kantian manner. We now take a closer look at this.

Lange argues that we *volens volens* create idealized concepts in science that play a crucial role in inductive inferences.⁷ Lange claims that "inductive logic" was the only methodology of the sciences that allows for objective statements about the world (Lange 2015 [1875], p. 274). In contrast to the materialists, however, Lange does not accept a realist position that leaves mental states and the subjective conditions of experience unexplored. Lange is convinced that objective statements need to be viewed in relation to subjective categories.

⁶ Lange tried to overcome the naïve empiricist views of materialists such as Carl Vogt (1817–1895), Jacob Moleschott (1822–1893), Ludwig Büchner (1824–1899), Immanuel H. Fichte (1796–1879), and Heinrich Czolbe (1819–1873) by integrating a Kantian notion of necessity with his—to some extent—empiricist foundation of inductive logic.

⁷ Lange added this discussion in the second edition of the *History of Materialism*, more specifically in "Die Physiologie der Sinnesorgane und die Welt als Vorstellung" and "Der Standpunkt des Ideals."

Lange rejects the Kantian method that tries identifying *a priori* conditions through transcendental deduction and argues for the empirical scrutiny of the conditions of experience. Whereas Kant deduces *a priori* necessary conditions of experience, Lange believes that only empirical investigations, hence psychological and physiological scrutiny, will lead us to necessary judgments about the conditions of experience. Lange, thus, changes the Kantian framework in fundamental aspects and avoids claims based on the assumption that we can derive objective principles from the perceived things without clarifying the natural laws that structure our perception (2015, p. 287).

However, despite Lange's empirical orientation, he is eager to find a theory that investigates the crucial role of mental idealizations in the logical foundation of science. According to Lange, a theory of scientific knowledge must reflect all elements—including hypostatization, ideas, and presuppositions—that are part of scientific inferences. Since we necessarily create ideal concepts that deviate from our sensual experience, we must accept that these idealizations play an essential role in our knowledge generation. We have never perceived the “forms of geometry” nor the “algebraic form” of “magnitude or force in their absolute accuracy” in nature (2015, p. 263). And yet, we would necessarily draw on geometrical idealizations to make inferences about natural phenomena.

To underpin this claim, Lange discusses the elliptical form of a planet's orbit. The ellipse has never been perceived in its shape, nor is it possible to know the shape of the planet's orbit independent of our perception. However, we create an image or a “hypothesis” based on our mathematical measurements (2015, p. 263). Even though Lange rejects the Kantian method as a scientific method, he is convinced that Kant offered the best available explanation regarding this matter.

Lange illustrates his neo-Kantian or transcendental foundation of inductive logic with two cases. In the first case, we observe that complementary colors appear “exceptionally vivid” next to one another (2015, p. 265). If we then experience a case that refutes this principle, we must find another generic term to explain the phenomenon. However, a different picture is painted in the second case, where we learn something about the “quality” of the “physiological condition of experience” (2015, p. 265). If we look through a telescope that has a stain on the lens and notice a black spot, we can infer that a black spot will *always* (or *necessarily*) appear when using the telescope. Even though the stain on the lens is a contingent aspect that we learn *a posteriori*, it allows for a necessary judgment because it deals with the condition of the (telescope) experience. If we then pick up the telescope and find out that the stain on the lens is gone, Lange notes that it was the “material” aspect of our judgment that was wrong (because, e.g., we might have confused the telescope for a different one) (2015, p. 265). The

“form of necessity,” however, was correct all along (2015, p. 265). Here, the Kantian implications of his theory are illustrated: “It would not be possible” to call “a combination of two sensations knowledge if the foundation for this combination wasn’t grounded in the organization of our consciousness” (2015, p. 288). Instead of Kant’s deductive critique, Lange views the *a priori* conditions of experience as natural properties that shape human reasoning and appear in the way we perceive and think about the empirical world.

With Lange’s naturalization of the *a priori* conditions, he develops a position that is meant as a way out of the “materialism controversy.” The materialism controversy took place in the 1850s at a time when German universities gained international recognition. This was a significant development given that in the early nineteenth century, Germany lagged behind England and France. Publicly funded grants, the emergence of new disciplines, and the new competitive culture in academia helped German universities to take part in a “federalist competition” between Western European countries (Nipperdey 2013, p. 495). Until the 1850s, the philosophical view on the natural sciences was still shaped by the direct followers of Kant, the classical German Idealists Schiller, Hegel, and Fichte. Materialism was a radical scientific worldview that accepted the existence of a mind-independent world; rejected idealism and the existence of god; and agreed that objective judgments were only valid if based on inductive inferences (Gregory 1977, pp. 7–8).⁸ In other words, the materialism controversy was an attempt of philosophers, physicists, and scientists to overcome the German Idealists’ view of the natural sciences.

Lange’s argument against materialism is that we *volens volens* create idealized concepts in science that play a crucial role in inductive inferences.⁹ In the *History of Materialism*, Lange aims to show the shortcomings of the materialist’s epistemology by directing most of his attention to the materialist Heinrich Czolbe. His detailed examination of Czolbe may not be considered a side thought; Lange attempts to show that materialism is only a preliminary step to Kantianism—a thought that reemerges in his social and political philosophy. According to Czolbe, materialism stands for the rejection of *a priori* deduced principles. Only “inductive logic” would meet the standards of scientific objectivity (Czolbe 2012, p. 136). Lange decided as well that “inductive logic” was the only methodology of the

⁸ Vogt advocated the most radical view by claiming that “thoughts connect to the brain just like the gall connects to the liver and the urine to the kidney” (Vogt 2012, p. 6). This view was contested by Rudolf Wagner. He thought materialism could co-exist with religious beliefs (Wagner 2012, p. 46).

⁹ Lange added this discussion in the second edition of the *History of Materialism*, more specifically in “Die Physiologie der Sinnesorgane und die Welt als Vorstellung” and “Der Standpunkt des Ideals.”

sciences that allowed for objective statements about the world (Lange 2015, p. 274). However, he saw a severe problem in Czolbe's radical empiricist rejection of apriorism, namely the lack of attention given to mental states that make necessary judgments possible.

Lange criticizes that the materialist Czolbe would base his epistemology unknowingly on the "postulate of perceptiveness" (*Postulat der Anschaulichkeit*). In Lange's view, this postulate is a metaphysical claim assuming that we can derive objective principles from the perceived things without clarifying the laws that structure our perception (Lange 2015, p. 287). The materialists would face the following problem: On the one hand, materialism would reject *a priori* conditions of knowledge that allow for necessary assertions and hold onto the belief that all objective principles are derived from sensations. On the other hand, materialism would claim that the laws of nature—such as the Newtonian laws—are *necessary*. "It is true always and forever that a stone, which is not backed up by a base, falls towards the center of the earth," claims Büchner (2012, p. 186). According to Lange, the materialists must accept that they either have to buy into the empiricist's stance that knowledge is genuinely hypothetical and necessary judgments are, thus, not possible.¹⁰ Or—if holding onto the view that necessary principles are possible—they must bite the bullet and admit that empiricism and materialism are wrong (Lange 2015, p. 265).

However, by accepting the possibility of necessity on natural grounds, Lange faces a problem that neither the empiricists nor the Kantians had to face before. How is it possible that the naturalist conditions of experience can only be grasped empirically and, at the same time, be justified as *a priori* necessary conditions?

Because Lange was aware of this problem, he welcomed the critical reading of the Kantian framework in the second edition of the *History of Materialism* that offered a solution to this problem. In the first edition, Lange did not see the possibility of viewing the idea of the thing-in-itself and the categories merely as methodological concepts. Lange was convinced that the thing-in-itself was based on a metaphysical claim that assumes the existence of things beyond their empirical appearance. However, Cohen's *Kant's Theorie der Erfahrung* taught him differently. "[W]e cannot know if a thing-in-itself" exists, but a "consistent application of the laws of understanding" results in a "problematic something,

¹⁰ The classical empiricists such as Hume, Mill, and Smith were more nuanced on this issue, claims Lange (2015 [1875], p. 287). Mill did not assume that our experience consists of external things. By accepting that the experienced objects are *mediated* through sensations, Mill protected his position from problematic metaphysical claims and argued against the possibility of necessary judgments.

which we take for the cause once we have accepted that our world consists only of mental representations” (2015, p. 265).¹¹ Since every perceived object is dependent on a mental representation that fundamentally shapes how we experience sensory input, Lange differentiates between *objective* and *subjective* concepts. We proceed objectively when we eliminate “the impact of prejudiced pictures and inclinations” and find laws that can be tested and verified (2015, p. 473). If Lange had agreed to the metaphysical interpretation of the thing-in-itself, he would have to agree that Kant’s deductive critique leads to a concept that allows for truths beyond the empirical world. However, Cohen’s critical interpretation of the absolute has neither metaphysical meaning nor can it be sensually perceived. Instead, he takes it as a methodological and ideal concept that allows for objective assertions. Lange claims that we would create an ideal conception of the thing-in-itself that does not appear purely in the empirical world but non-ideally in the perceived object.

Regarding the logical principles, however, the issue seems to be more difficult. On the one hand, Lange takes them as logical categories that constitute our experience; on the other hand, he argues that it is possible to investigate them with empirical methods. In other words: Lange seems to contradict himself, agreeing to empiricism and idealism at the same time. To solve this issue, Lange advocates a “problematic” interpretation of the categories of understanding analogously (2015, p. 288).

Lange argues that while Kant, who calls the categories “Stammesbegriffe,” would grasp the categories if they had metaphysical status, we would develop an idealized notion of the categories that “appear” in substantial judgments (*ibid.*). Even though it is in Lange’s view possible to investigate the natural (physiological and psychological) foundation that constitutes our logical thinking, the categories are also taken as logical *idealizations*. A critical or “problematic” reading of the categories allows Lange to uphold the idea that there is a rational foundation that constitutes our thinking and, at the same time, to agree with materialism, believing that these principles are based on our nature. In contrast to Kant, Lange argues that we neither deduce nor define the categories definitively. Instead, we first assume them by presupposing an idealized image of the *a priori* conditions. In a second step, we empirically scrutinize the psychological conditions constituting our

¹¹ Beiser rightfully points out that Lange did not consequently argue for a critical concept of the thing-in-itself, which is why we sometimes still find the claim that the thing-in-itself exists in the second edition of the *History of Materialism* (Beiser 2018, p. 84). For Edgar, this means that Lange did not offer a theoretical basis that managed to overcome the tension between his psychophysics and his Kantian dualism (Edgar 2013, p. 110).

thinking. Lange thereby argues for a framework that allows—as Lydia Patton formulates it regarding Lange’s *Logische Studien*—for “an account of necessity not reducible to materialism or psychologism” (Patton 2011, p. 150). For Lange, necessary judgments are possible, even if the epistemological preconditions are natural factors that require empirical scrutiny.

I have outlined Lange’s psychophysiological transcendentalism as a Kant-inspired answer to the materialism controversy. This section has demonstrated that Lange’s approach combines idealized concepts with empirical research to identify foundational psychophysiological principles constituting our experience of objects.

4 Psychophysiological Transcendentalism in Lange’s Social and Political Thought

I have shown that, for Lange, a thorough reflection of scientific practice leads necessarily to a Kant-inspired position of critical idealism. Since we rely on Kantian idealizations when we deliberate objectively in science, we need to accept an adapted version of the Kantian framework that can explain necessary judgments while doing justice to the latest insights of psychophysics at the same time. Instead of the Kantian method based on the transcendental deduction, we ideally assume and empirically investigate the physiological and psychological preconditions that allow for logical inferences. In this section, I argue that in *The Worker’s Question*, Lange’s naturalist explanation that presupposes an empiricist or a materialist worldview is likewise just a preliminary step to a Kant-inspired investigation of the conditions of social experience. What Lange is after is the scrutiny of the psychophysiological preconditions of our social reality. Egoism and sympathy appear as temporary concepts or placeholders that require further scientific scrutiny.

According to Lange, Darwin has shown that humans share one crucial aspect with plants and animals: the “struggle for survival” (Lange 1870, p. 2). Lange transfers the evolutionist struggle for survival to the social realm. He claims that “analogously” to the physical principle, we find the same tendencies in our social behavior (1870, p. 48). From an evolutionary standpoint, Lange explains this against the background of the egoistic nature of human beings. The “struggle for survival” that plays out in the capitalist organization of the social realm is a manifestation of a human trait. Egoism alone, however, does not suffice as an explanatory concept. As we can investigate the natural world with the inductive

logic of the empirical sciences, we can examine our social behavior and social reality with the methods of the natural sciences.

To Lange, understanding capitalism means scientifically scrutinizing the psychophysiological principles that are responsible for injustices in capitalism. In the second edition of *The Worker's Question*, Lange draws on psychophysics' latest developments to explain the mechanisms of our behavior that constitute injustices in the social realm. As the following paragraphs show, Lange was not fully satisfied with Darwin, Malthus, and Smith's account of morality. Similar to his aim in the *History of Materialism*, he argues that the psychophysiological scrutiny of the conditions of social experience would provide the "scientific foundation" constituting our social experience and behaviour. Knowing the principles of our actions allows us to counteract unjust behavior.

This becomes clear when Lange builds on the Weber-Fechner law to formulate a principle of pleonexia. The original Weber-Fechner law says that our perception of pressure grows linearly to the logarithm of objective growth. The amount of pressure that is needed to feel a difference depends on the pre-existent pressure level. The higher the pre-existing pressure level, the more pressure is required in order to feel a difference. Lange translates this principle into one of the feelings of joy evoked by the increase in money. The principle of pleonexia says that a slight rise in income would significantly impact their well-being for poor people. However, a considerably higher raise for wealthy people is required to create the same effect (1870, pp. 115–118).

Lange is operating here on two levels. The Smithian account contains a naturalist explanation of (un)ethical behavior; Lange is dealing here with a vague concept of morality. The psychophysiological account is a more precise way of explaining human actions; it asks about the conditions of social experience, thereby drawing on Kantian transcendentalism. Lange identifies egoism as a fundamental character trait that is needed to assert oneself in the capitalist "struggle for survival." However, the concept of egoism is too vague to account for a scientific principle of human cognition. In *Mill's Ansichten*, Lange claims that Adam Smith offered with his sensualist explanation one of the "most appropriate concepts," however, he considers his ethical principle "deficient" (1866b, p. 21). Lange claims: "Smith's moral principle is too one-sided in the emotions of pain and pleasure" (1866b, p. 39). By stepping away from a simplified sensualist explanation and agreeing on a scientific explanation of pleonexia, he, thus, moves away from a vague materialist (sensualist) to a neo-Kantian (scientific) explanation.

In the *History of Materialism*, Lange claims: "Materialism has always been based on the observation of nature; in the present day, however, it [...] must place

itself on the ground of exact research” (2015, p. 329).¹² Materialism, naturalism, and sensualism are only correct insofar as they seek to find naturalist explanations of our actions. Lange’s primary goal in the *History of Materialism* is to show that in the history of philosophy, materialist movements—such as the one from the 1850s—often functioned as a critical tool by setting limits to metaphysics. However, this is not a full concession to materialism on Lange’s part. Lange counteracts materialism with a Kantian adaptation of transcendentalism that demands studies of the exact sciences. When Lange pays merits to Smith, who traces ethical behavior back to egoism (and sympathy), he takes the same argumentative path. Like the materialists, Smith offers a helpful theory that moves away from an unfounded conception of actions. However, the Smithian concept of egoism needs to be replaced by *scientific* principles that explain our social behavior.

One might object that resemblance between Lange’s theoretical and his political philosophy alone does not yet prove that he builds on the same presuppositions as in *History of Materialism*. However, a closer look into the *Worker’s Question* shows that Lange explicitly mentions that he aims to exchange vague naturalist explanations of human morality for scientific-anthropological explanations.

At the beginning of the third chapter on “luck and happiness,” Lange outlines the chapter’s goal. Lange is—among other things—concerned with the “connection of man’s inner happiness with his outer situation” (1870, p. 83). This is important “in so far as one wishes to rise above the standpoint of vague moral considerations” (1870, p. 83). Lange is instead concerned with insights that “belong to *natural scientific anthropology*” (ibid.). Here, Lange clarifies that materialism cannot account for the explanation of scientific principles. Instead, Lange takes a scientific approach that deals with constitutive principles of social behavior that can be tested and verified. Letting go of vague concepts, however, means letting go of materialism. Since for Lange, identifying necessary conditions of our (social) experience presupposes Kantian idealism, the principle of pleonexia leads away from an empiricist or materialist stance and towards a Kantian position. It is, thus, only possible to accept the psychophysiological law as a general principle if we overcome materialism.

However, the philosophical foundation of natural-scientific explanations in Lange’s social and political philosophy is not the only aspect that displays Kantian-inspired elements. In his moral philosophy, Lange takes inspiration from

¹² As Hermann Cohen correctly points out, Lange’s concept of materialism is to be understood in a broad sense: “He grasped materialism not in the narrow sense of the psychological question of body and soul, but in its universal significance for the problem of matter” (2005, p. 37).

Kant and Schiller and their discussion of *aesthetic* consciousness. In the last chapter of the *History of Materialism*, Lange argues: “The same principle that prevails in the realm of beauty, art, and poetry, prevails in the realm of action as the *true ethical norm*” (2015, p. 554, italics added). He states that “[o]ne thing is certain: that man needs a supplement of reality by an ideal world created by himself, and that the highest and noblest functions of his spirit cooperate in such creations” (2015, p. 557). Lange believes that ethics or the “world of values” is an aesthetic hence fictitious but necessary complement to the “world of being” (2015, p. 557).

Prima facie, this may seem surprising since Lange advocates moral statistics and is, therefore, a defender of a descriptive notion of morality. Before Lange was a professor in Marburg, he held a chair in Zürich that focused on the philosophy of the inductive sciences. In a letter from 1862, Lange states: “My ethics are statistics” (Ellissen 1894, p. 106). Additionally, Lange takes the moral law as an *a posteriori* and fictitious product of Western civilization that leads to ethical behavior but turns out to be wrong (1866b, pp. 57–68).¹³ However, in the last chapter on idealism in the *History of Materialism* and *Schiller’s Philosophical Poems*, Lange’s aesthetic consciousness bears some systematic resemblance to Kant’s notion of practical reason.

Imagining a better world is, for Lange, not arbitrary. Like the logical consciousness, the imaginative consciousness follows a structure that is reminiscent of Kant’s practical philosophy. Lange claims that there is “one fundamental idea” in Kant’s ethics that survives an aesthetic foundation of ethics, namely “Kant’s idea of moral freedom” (1897, pp. 14–15). Although Lange criticizes Kant’s methodology for being “speculative” and based on outdated metaphysical assumptions, he views the idea of freedom as a feature that originates in Kant’s ethics (1897, pp. 14–15). However, since Lange’s concept of freedom still differs significantly from that of Kant, this statement should be taken with caution.

Lange adopts a Schiller-inspired concept of moral freedom. Despite the moral agent’s capacity to imagine a counterfactual world, the idea of human beings as ends-in-themselves does not allow for deductive inferences about the metaphysics of the intelligible world. Instead, a fictitious idea opens an ideal “standpoint,” from which society is imagined *harmoniously*. It is the same origin as the unified

13 According to Lange, the Kantian moral law may reflect the *Zeitgeist*, but it does not tell us anything about the form of moral judgments or its function as a rational testing procedure (1866, p. 57–58). However, he endorses Kant’s ethics because it fosters ethical behavior. Lange does not differentiate between Kant’s *Groundworks*, the *Bible*, or, e.g., Mandeville’s *The Fable of the Bees*. In Lange’s view, they would all have a favorable influence on people’s behavior because they help overcoming selfish behavior (1897, p. 2).

notion of the thing-in-itself presupposed in the natural sciences: “The point of unity, which makes the facts a science and the science a system, is a product of free synthesis and thus arises from the same source as the creation of the ideal” (2015, p. 553). Although Lange believes Schiller came much closer to an aesthetic conception of morality than Kant, he regrets that even Schiller would sometimes fall back into a Kantian and rationalist notion of the moral law. Most evidently, in the 10th letter of Schiller’s *Aesthetic Education of Man* (1793), Schiller would disregard his naturalist foundation and claim that the moral law was based on a “deduction of reason,” making his theory susceptible to problematic metaphysical entanglements (1897, p. 21). Because of this mistake, Lange believes that Schiller’s poems are more instructive since they deal with “figurative” truths (2015, p. 559).

By accepting a concept of figurative truth, Lange introduces another notion of objectivity that differs from objectivity presupposed in empirical studies. For Lange, true art is not just fiction but conveys a statement considered objectively true. “Art” proceeds “objectively” in so far as it manages to bring across a message in a sensually appealing manner (1897, p. 16). He illustrates this thought by comparing the “didactic genre” with the “fable” (ibid.). Although both genres aim to teach a practical life lesson, the fable is, in Lange’s view, a higher form of art because it manages to wrap up the message more indirectly and appealingly. In Lange’s estimation, Schiller’s poems—executed in the purest metrical form—surpass all other genres: The “highest goal” of art is to find the “right form of language” that speaks the most to our senses (1897, p. 20).

There is another systematic component in Lange’s ethics that recalls Kant: the “general will” or the concept of the “absolute,” which prompts us to imagine social norms as a *coherent* picture of the social realm (1897, p. 10). Although Lange rejects Kant’s transcendental logic, he believes that the idea of a cohesive whole goes back to a genuine *aesthetic* inclination of our consciousness. While we find unjust norms in empirical social reality, we inevitably create a mental image of a just society. It is only natural to overlook unjust interests and imagine society as a unified whole. Our aesthetic nature forces us to exceed the “empirical reality” (2015, p. 509). And this idea of a cooperative and harmonious society is, in Lange’s view, the “origin” of “what is everlasting in morality” (2015, p. 509). Lange, thus, offers an aesthetic alternative to the rational and moral “will” that fundamentally determines Kant’s ethics.

Another Kantian resemblance is noticeable regarding Lange’s dualist conception of morality that leads to an inner conflict. The Kantian agent deals with the battle between sensual inclination and practical reason. The Langean agent’s struggle, however, is between empirical “reality” (the world as it is) and moral “fiction” (the world as it ought to be): “An inclination of our nature constantly wants to combine the truth and the beauty” (1897, p. 2). In Lange’s view, we

naturally “detest the shiny robe of a lie,” which is why we are not “satisfied if the truth appears in a distorted way” (1897, p. 2). The “gleam of the beautiful” is in a “constant fight” with reality (1897, p. 2). This inner conflict is shown best in Schiller’s poem “Ideal and Life” (“*Ideal und Leben*”).¹⁴ Lange argues against orthodox Kantian interpretations of this poem, such as Kuno Fischer’s *Schiller as a Philosopher* (1858). Whereas Fischer believes that the protagonist of this poem is dealing with the inner conflict between inclination and reason, Lange interprets it as the struggle one must face in finding pleasure in the “pure form of beauty” (1897, p. 76). An enlightened agent is not dependent on “articles of faith”; the aesthetically and scientifically educated agent can differentiate between fictitious ideals and empirical reality and, thus, must accept their deviation. This differentiation, however, comes with the never-ending conflict between knowing what is the case and desiring a coherent set of norms that *ought to be* the case.

By arguing for an ideal of harmony, Lange offers a normative foundation that is inspired by and distinct from Kant’s rationalistic approach. So far, I have only shown that Lange has an aesthetic-ethical account that justifies normative statements. In the preface of *The Worker’s Question*, however, it *prima facie* seems that he moves away from the “Platonic” and thus idealistic aspects of his theory. “Some reader, who has taken a Platonic affection to the more abstract picture of my views in the last chapter of the ‘History of Materialism,’ may recoil from these applications and concrete explanations” (1870, p. IV). What is still missing is the textual evidence showing that Lange presupposes this account in his social and political philosophy. I shall now argue that Lange implicitly presupposes this normative foundation in *The Worker’s Question*.

We find indication for this interpretation in the passages on Lange’s critique of Lassalle and Marx. Lange identifies a biased view in Lassalle’s “iron rule of wages” (“*ehernes Lohngesetz*”) that says that the wage of the working class is always reduced to the minimum standard (1863, p. 5). Lange is sympathetic to this idea, mainly because it refutes the classical economists’ assumption that the principle of “supply and demand” would regulate the free market justly. However, he criticizes Lassalle for not underpinning his thesis with empirical facts. Instead, Lassalle’s argument relies on “referencing authorities” (1870, p. 167).

Lange identifies the same problem in Marx’s interpretation of the great Irish famine of 1845–52. As mentioned earlier, Marx was eager to refute Malthus’ law of population. Against the common assumption that the natural catastrophe of the potato blight was responsible for the significant food shortages in 1846, Marx

¹⁴ In the *History of Materialism*, Lange sometimes refers to this poem as “The Realm of the Shadows”. In his view, the “beauty” of the realm of the shadows and its “value for human beings” were more strongly emphasized in this title (1897, p. 60).

tried to show that this was yet another effect of capitalism (Marx 1962 [1867], p. 731). According to Lange, however, Marx's view was blinkered by his dialectical understanding of the class struggle that tries to boil all societal disruptions down to capital accumulation. Even though Marx builds on statistical data, Lange accuses him of a biased and one-sided depiction of this historical event. Marx and Lassalle—both influenced by Hegel—are said to suffer from “conflating the deductive and empirical method” (Lange 1870, p. 237).¹⁵

Here, Lange “interlaces” a “methodological comment” (1870, p. 226). He claims: “National economy requires both deductive inferences based on assumed laws, and empirical facts, which only in combination can help to achieve one's aim” (1870, p. 227–8). We have seen that Lange advocates a scientifically oriented perspective on socialism that builds on scientific and “empirical facts.” But what is the philosophical basis in Lange that allows for deductions based on “*assumed laws*”?

These passages need to be interpreted against the background of the previously introduced aesthetic-ethical foundation of normativity. We find textual evidence for this claim in Lange's affirmative notion of “rationality” in *The Worker's Question*. Despite Lange's reservation against Kantian rationalism, he claims that human nature is installed with a “call for equality” based on “rationality” (1870, p. 52).

According to Lange, we naturally feel inclined to create hierarchical societies. However, our nature exhibits features that prevent us from giving in to this inclination. It is the “pursuit of reason and freedom,” Lange claims, that naturally “counterbalances” the self-centered tendencies of our nature (1870, p. 56). Further below, he argues: “It is the pursuit of reason to improve the circumstances created by the struggle for survival. Reason requires the reduction of inequalities among peoples, a better proportion between effort and pleasure, and the abolition of slavery, where one part of humanity is sacrificed to enable a dignified life (*Dasein*) for others” (1870, p. 266). Given Lange's aversion towards a wrong rationalization of ethics, it would be inappropriate to believe Lange falls back into Kantian

¹⁵ In a footnote in *The Worker's Question*, Lange criticizes Hegel's concept of reason that would “declare the real for the rational” (1870, p. 245). Already in 1865, Lange identifies in a letter to Engels a severe problem with Hegel's “mathematical and natural-scientific education” (Eckert 1968, p. 82). He accuses Hegel of presupposing a notion of nature that leads to a biased view of empirical facts. Although Engels agrees with Lange that Hegel's perspective on the natural sciences is—compared to the rest of Hegel's works—not one of his best works, he disagrees strongly with Lange's *Worker's Question*. Engels' opinion on Lange's *Worker's Question* was devastating. In a letter to Marx, he wrote: “Lange is a confused Malthusian and Darwinist thinker who is flirting in all directions; however, he said some nice things about Lassalle and the bourgeoisie cooperatives” (Eckert 1968, p. 74).

rationality. “Rationality” serves Lange rather as an umbrella term for the critical human consciousness that is responsible for the possibility of the scientific scrutiny of the conditions of our behavior based on a concept of equality that distinguishes human nature from animals. While we share with other organisms our egoistic nature, we can reflect upon our actions and choose otherwise. Since we—as calculating and aesthetic-ethical beings—inevitably create a universal image of a better world, the history of humanity is shaped by constant fights against the biological imperatives of evolution.

Although Lange does not elaborate on the concept of rationality or the foundation of his normative statements, it seems plausible that he draws on the notion of aesthetic consciousness when claiming that “the actual solution to inequalities must be measured by the idea of a harmonious society” (1870, p. 52–3). As Lange replaces a materialistic with a scientific explanation of egoism, sympathy is replaced by an aesthetic-ethical principle of harmony. In both cases, Lange draws on systematic elements inspired by Kant.

One last objection might be that Lange’s inclusion of Kantian elements in his ideal theory does not necessarily presuppose *psychophysiological* transcendentalism. Since this position requires a justification of the conditions of experience on psychological and physiological grounds, it would require an empirical and scientific justification of aesthetic experience to count as such.

Lange, however, differentiates between ‘primitive’ pleasure and more ‘refined’ pleasure. Whereas we find in Kant the distinction of “dutiful actions” and “acts out of duty” (Kant 2016, p. 397), Lange argues for a sensualist equivalent. He distinguishes between pleasurable actions because of personal motives and moral actions we find pleasing because we act under the fictitious idea of a harmonious society, where everyone is treated equally (Lange 2015, p. 509). Because the normative realm deals with inner states that are not measurable, Lange’s idealism ultimately remains subjective and unscientific. But precisely because of this subjectivist and speculative stance, he deliberately excludes his aesthetic standpoint from the scientific realm. His aesthetic-ethical Kantianism is part of his psychophysiological transcendentalism because it necessarily accompanies it.

Once we know more about the conditions of social behaviour—as Lange tries to show with the psychophysiological principle of pleonexia—we strive for action-guiding laws under the idea of harmony that counteract the violation of this image. Lange’s aesthetic renewal of the Kantian system not only allows to overcome a metaphysically charged method of deductive reasoning. It also aligns with a rational foundation of socialism that draws on the newest insights of psychophysics and aims for a harmonious society. We are interested in discovering

the principles shaping our sociality because we—as aesthetic beings—necessarily create an “image” of equality.¹⁶

Lange does not refer explicitly to Kantianism in his social and political philosophy. However, in the first edition of the *History of Materialism*, Lange notes that he originally had planned to include a section on the “ethical and political sciences” or a “critique of the national economy” in his systematic Kantianism (Lange 1866a, XIII). Instead, we find passages in *The Worker’s Question* suggesting that Lange’s account presupposes psychophysiological transcendentalism. Unfortunately, Lange died before working out his systematic account in *The Theory of Democratic Republicanism* (Lange 1897, ix). However, the introduced sections suggest that naturalism or materialism and Kantianism are not mutually exclusive in Lange’s account. Instead, it is a necessary preliminary stage for a psychophysiological renewal of the Kantian framework: “Often already an epoch of materialism was only the silence before the storm, which should break out from unknown crevices and give the world a new shape” (Lange 2015, p. 566). Lange was undoubtedly not a Kant-philologist who was concerned with merely repeating Kantian ideas. However, his account would be treated one-sidedly, not considered in light of his Kantianism. In his theoretical and political philosophy, Lange had a systematic understanding of transcendentalism in mind that fundamentally shaped his works.

5 Summary

Against the standard view that suggests that Lange’s social and political philosophy must be excluded from his neo-Kantianism, I have argued in this paper that he presupposes a Kant-inspired framework after all. More specifically, my paper has followed three steps. First, I have set out the Kant-inspired elements of Lange’s foundation of logical judgments and philosophy of science that he formulated against German natural-scientific materialism. Second, I have demonstrated that Lange worked out a naturalist alternative conception of the class struggle that opposed Marxism. Third, I have argued that the Worker’s Question builds on his foundation of logic and his aesthetic idealism fundamentally shaped by Kantian elements.

Ursula Renz states that it is a distinct feature of neo-Kantianism that its proponents problematized the systematic character of philosophy but seldomly overcame their systematic thinking (2002, p. 4–3). Although Renz is not targeting

¹⁶ Cohen later criticizes Lange’s aesthetic approach to the social question: “Ethics is not poetry, and the idea has truth value without relying on an image” (Cohen 1896, p. 115).

Lange *per se*, my paper has shown that this statement holds true of him as well. Lange draws on psychophysiological laws that shape the social realm and connects rationality with the aesthetic image of a harmonious society. It would be wrong to argue that his social and political philosophy was merely built on naturalist thinkers such as Darwin and Smith. Lange was first and foremost an intellectual who, throughout all his philosophical work, took Kant as a key source of inspiration. For this reason, we thus can allocate Lange in the long nineteenth-century movement of neo-Kantian socialism.

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