

# Kant's ethical attitudes in his master's thesis *On fire*

Sergey Lugovoy<sup>1\*</sup>

<sup>1</sup>Immanuel Kant Baltic Federal University, 14 Alexandra Nevskogo st., 236016 Kaliningrad, Russia

**Abstract.** The significance of the ethical concepts of Kant, developed in the critical period of his philosophy, goes far beyond the boundaries of the Enlightenment. In the *Groundwork of the Metaphysics of Morals*, the *Critique of Practical Reason*, *The Metaphysics of Morals* Kant criticises the most common doctrines of morality in the eighteenth century, including the philosophy of moral sense and the Wolffian ethics. However, almost all of Kant's life took place in the "Age of Reason", and his early works fit completely into the cultural context of the Enlightenment. True, a significant part of them is devoted to natural science problems that are not directly related to practical philosophy. In this material it is difficult to identify the ethical foundations which Kant, the natural philosopher, followed and to establish how typical they are for the German Enlightenment of the mid-eighteenth century. It is similarly difficult to see which of them would continue to be significant for Kant in his mature period. It is advisable to begin with an analysis of Kant's Master's thesis *On Fire*. As examples of Kant's ethical attitudes, I can point out: observance of the etiquette norms of writing in the Gallant Century; trust in the geometric method; declaration of distrust of philosophical speculation in itself, combined with the construction of empirically verifiable hypotheses; the desire to establish the truth, synthesising speculative and experimental knowledge.

**Keywords:** Kant, natural philosophy, ethics, moral sense, perfection

## 1 Introduction

At the heart of Kant's practical philosophy, which he formulated in the critical period, is the metaphysics of morals. It tries, by the use of mere reason, to establish the principle of moral behaviour expressed as a synthetic a priori judgement. Kant believed that he had managed to prove that the categorical imperative of morality, which contains the form of volition generally, was the desired "synthetic practical proposition" (*GMS*, AA 04: 444; Kant, 1997, p. 51), whereas the ethics founded on the latter was necessary and universal. In March 1789, deeply impressed by the *Critique of Practical Reason*, Heinrich Jung-Stilling wrote to Kant: "As soon as one comprehends the *Critique of Reason* one sees that no refutation of it is possible. Consequently, your philosophy must be eternal and immutable" (*Br*, AA 11: 7;

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\* Corresponding author: [SLugovoi@kantiana.ru](mailto:SLugovoi@kantiana.ru)

ORCID: 0000-0002-4323-2173

Kant, 1999, p. 288). It is a simplification to reduce the ethics of the mature Kant, which pretends to applicability to every rational being, to the cultural context of the Enlightenment; a simplification that both Kant and his contemporaries would have condemned.

In the second note to the fourth theorem of the *Critique of Practical Reason* Kant shows that the enlighteners Mandeville, Hutcheson, Wolff, Crusius, like other moralists, proceeded from the wrong material foundations, defining the principle of morality instead of beginning, as was necessary with the form: “[...] the matter of the maxim can indeed remain, but it must not be the condition of the maxim since the maxim would then not be fit for a law” (*KpV*, AA 05: 34; Kant, 2015, p. 31). Nevertheless, as an original thinker, Kant undoubtedly came to maturity in the Age of Enlightenment. Therefore, it is advisable to consider particularly the early works of Kant in the context of the ethics of the Enlightenment. Kant gives his most comprehensive account of moral problems in two works of 1764 – the *Observations on the Feeling of the Beautiful and Sublime* and the *Inquiry Concerning the Distinctness of the Principles of Natural Theology and Morality*. In these writings his position approaches the ideas that were voiced in the early eighteenth century by the advocates of the moral sense theory:<sup>1</sup> “Hutcheson and others have, under the name of moral feeling, provided us with a starting point from which to develop some excellent observations” (*UD*, AA 02: 300; Kant, 1992b, p. 274).

Kant’s other printed works of the pre-critical period focus mostly on natural science and do not have a direct bearing on practical philosophy. Analysis of these writings helps to identify the ethical rules that Kant, the natural scientist, observed and to reconstruct the moral principle that he applied. This leads to the historical-philosophical task of determining to what extent the moral norms accepted by the young Kant were typical of the German Enlightenment of the eighteenth century, which of them would be criticised in his late works and which would endure. Fulfilling this task requires a series of philosophical investigations, and one does well to begin with Kant’s first Latin dissertation *On Fire*.

## **2 The ethos of the scientist in the treatise *Succinct exposition of some meditations on fire***

The natural philosophical dissertation *On Fire* uses the geometrical method. It includes an introduction, two sections comprising twelve propositions, and a conclusion. There are eleven drawings in the dissertation. A bibliography and elements which are now obligatory in a research paper (problem statement, description of methods) are missing. In most cases, however, Kant mentions in the text the names of scholars whose works he consulted and sometimes cites the titles of the books as well as the publishing details.

The introduction notifies the reader that the ensuing meditations on fire are preliminary in their nature. Kant emphasizes that he “carefully guarded against [...] hypothetical and arbitrary proofs” (*Di*, AA 01: 371; Kant, 2012, p. 312). He proclaims the geometrical method and reliance on empirical data the prerequisite for the veracity of a piece of research and expresses his mistrust of speculative reflections.

The first section deals with the nature of solid and liquid bodies. Kant deems it necessary to begin with this issue since “the force of fire is manifested principally in the rarefaction of bodies and in breaking down their combination” (*Di*, AA 01: 371; Kant, 2012, p. 312). Kant is interested in the cohesion of elements constituting bodies. Misinterpreting Cartesian ideas, Kant argues in Proposition I that the fluidity of matter cannot be explained by its division into “smooth minute parts that loosely cohere” (*Di*, AA 01: 371; Kant, 2012, p. 312). In Proposition II Kant analyses Pascal’s law and concludes that liquids consist of both “minute parts” and “elastic matter, which is present between the elementary parts of a fluid body.”

<sup>1</sup> For more detail on the Kantian position on ethical sentimentalism, see Apersyan (2007).

This matter “is nothing other than the matter of heat” (*Di*, AA 01: 372; Kant, 2012, p. 313). Proposition III holds that this elastic matter is found between elements in solid bodies. Proposition IV invokes “elastic matter” to explain the ability of metal wires to “stretch[] a little without breaking when a weight is hung from them” (*Di*, AA 01: 373; Kant, 2012, p. 314). In Proposition V Kant employs his hypothesis about intervening elastic matter to analyse Hooke’s law (in so doing, he makes a calculus error) and to inquire into experiments on the compression of elastic bodies. Kant ends the section with the conclusion that “every body consisting of solid parts is held together by some elastic matter as the bond of its unity” (*Di*, AA 01: 375; Kant, 2012, p. 317).

The second section focuses on the matter of fire and its modifications. It begins with Proposition VI, which examines some empirically observed properties of fire, heat, and cold. Proposition VII identifies the matter of fire with the intervening elastic matter discussed in section one, whereas heat is defined as the “undulatory or vibratory motion” (*Di*, AA 01: 376; Kant, 2012, p. 318) of this matter. Later Kant describes the phenomenon of boiling, using, as Erich Adickes believes, contemporary textbooks of physics (Adickes, 1925, p. 40). Proposition VIII, which contains a reference to Newton’s *Opticks* (Newton, 1717), says that “[t]he matter of heat is nothing but the ether (the matter of light) compressed by a strong attractive (adhesive) force of bodies into their interstices” (*Di*, AA 01: 377; Kant, 2012, p. 318). At the same time, Kant writes that his opinion agrees well with both the fact that glass is transparent and Euler’s hypothesis of light being the pressure of the ubiquitous ether. In Proposition IX Kant recounts the method for measuring heat which was put forward by Guillaume Amontons and summarises the ideas of Daniel Gabriel Fahrenheit, Herman Boerhaave, Pierre Charles le Monnier and Jean-Batiste Baron de Secondat to reflect on the properties of air at different heights. The focus of Proposition X is on the nature of vapours, which, according to Kant, consist of tenuous bubbles, particles of liquids that hold elastic ether within their thin walls. Proposition XI explores the properties of vapour (or gas, or “elastic liquid”, as Kant calls it) as described by Stephen Hales (1727) (*Di*, AA 01: 381; Kant, 2012, p. 323). Finally, Proposition XII reveals the nature of fire. Kant defines it as “vapor brought to that degree of fire that it flashes with light and goes out only when there is insufficient fuel” (*Di*, AA 01: 383; Kant, 2012, p. 325). Further on, Kant draws on Euler’s works (without referencing them) to explain how a tiny spark can start a big fire without violating the principles of mechanics that state that the cause is equivalent to the effect. In the brief conclusion Kant writes courteously that he commends his dissertation and himself “to the indulgent and benevolent will of the [Most Distinguished Faculty of Philosophy]” (*Di*, AA 01: 384; Kant, 2012, p. 326).

When reading *On Fire* in Latin, one immediately sees that Kant meticulously adheres to the conventions of the eighteenth-century writing etiquette. Following the tradition of the time, the full title of the dissertation contains thirty-one words, including the adverbs “graciously” (*benevole*) and “humbly” (*humillime*) (*cf. Di*, AA 01: 369; Kant, 2012, p. 311). The text contains decorous epithets. Kant calls Euler and Amontons “celebrated”, *clarissimus* (*Di*, AA 01: 378; Kant, 2012, p. 319) and *laud[atus]* (*Di*, AA 01: 379; Kant, 2012, p. 320); Newton, an “incomparable man”, *vir incomparabilis* (*Di*, AA 01: 377; Kant, 2012, p. 319); the Faculty of Philosophy at the Albertina, “the most eminent”, *Amplissima* (*Di*, AA 01: 369; Kant, 2012, p. 311).

Although Kant refers to his dissertation as a “succinct exposition”, *delineatio* (*Di*, AA 01: 369; Kant, 2012, p. 311), or a “little work”, *opusculum* (*Di*, AA 01: 384; Kant, 2012, p. 326), and writes that it is merely “the outlines of a theory” (*Di*, AA 01: 369; Kant, 2012, p. 311), which will not occupy much of the time of university professors, whom he calls “men occupied with heavier duties” (*Di*, AA 01: 384; Kant, 2012, p. 326), he honestly attempts to create a work of scientific value. Kant advances an original hypothesis about the elastic matter, i.e. ether, existing alongside atoms. He uses this matter to explain some observable

properties of liquids, solids, gases, fire and flame. He is concerned about the reliability of his findings and places restrictions on speculative reason, which is eager to prove anything. Kant insists that he follows “the thread of experience and geometry, without which the way out of the labyrinth of nature can hardly be found” (*Di*, AA 01: 371; Kant, 2012, p. 312). I suppose that this research approach reveals the influence of the tradition of experimental natural philosophy, with which Kant familiarised himself by reading Newton’s works, Boerhaave’s textbooks, Euler’s writings and articles on physics and chemistry published in the “Transactions of the Royal Academy of Sciences at Paris”.

Despite proclaiming the significance of experiments in investigating the nature of fire, Kant acts as the opposite of a field scientist. The only experimental method he uses is found in Proposition VI. Consisting in the enumeration of observable well-known properties of fire, it is equipped with neither measurements nor calculations. The other empirical data are drawn from scientific publications published many years before. For example, Philippe de la Hire (1705) conducted his experiments on compression of elastic bodies as early as the eighteenth century. Nevertheless, all the descriptions of experiments that Kant cites are authoritative, verifiable, and reproducible. He offers experimental physicists some of his insights into matters of natural science as “an opinion [...] worthy of their most accurate investigation” (*Di*, AA 01: 382; Kant, 2012, p. 324). Probably the absence of Kant’s own experiments<sup>2</sup> is due, firstly, to a shortage of time – Kant was preparing for the oral Master’s examination while working on the voluminous *Universal Natural History and Theory of the Heavens*. Secondly, as almost all German universities of the mid-eighteenth century, the Albertina was faithful to the Wolffian philosophy, which taught that strict adherence to the geometrical method (*mos geometricus*) was a sufficient condition for the veracity of scientific data. The selection of this method of presenting research findings and a dearth of experiments indicate that, at the beginning of his career as a researcher, the young Kant strongly relied on the Wolffian tradition. I think that, bereft of an opportunity to study fire empirically and forced to construct speculative hypotheses that could be verified experimentally (and required such verification), Kant tried to abide by the ethical rule “perform the most perfect action in your power” (*UD*, AA 02: 299; Kant, 1992b, p. 273), which was propagated by Wolff and his acolytes.

Thus, the essence of the ethical position Kant takes in his doctoral dissertation *On Fire* was adherence to the etiquette of the age of *fêtes galantes*, trust in the geometrical method, outright doubts about philosophical reasoning *per se* (accompanied by the construction of empirically verifiable hypotheses), and a desire to establish the truth by synthesising speculative and empirical knowledge. All these attitudes flow from the principle of perfection (in this case, perfection in the cognition of nature), typical of Wolffian ethics.

### 3 The development of the ethical position from *On Fire* to Kant’s later works

In his Latin dissertations written immediately after the treatise *On Fire*, Kant continues to adhere to the writing etiquette of the time, employs the geometrical method<sup>3</sup> and tries to synthesise the speculative and empirical approaches. In *A New Elucidation of the First Principles of Metaphysical Cognition* Kant cites many empirical examples from physics and

<sup>2</sup> Kant will close this gap, at least partly, in 1763 when he proposed in the *Attempt to Introduce the Concept of Negative Magnitudes an original experiment, which, he believed, could* “verify the existence of opposed temperature poles” (*NG*, AA 02: 186; Kant, 1992a, p. 225).

<sup>3</sup> In his second dissertation Kant does not employ *mos geometricus* with the same unimpeachable rigour. He chooses “not to copy out afresh the definitions and axioms which are firmly established in ordinary knowledge and which are consonant with right reason” (*PND*, AA 01: 388; Kant, 1992d, p. 6).

astronomy. In the introduction to the *Physical Monadology*, he states that “[m]etaphysics, therefore, which many say may be properly absent from physics is, in fact, its only support; it alone provides illumination” (*MonPh*, AA 01: 475; Kant, 1992c, p. 51). Later he will immerse himself more deeply in the problems of natural science and adopt the attitudes shared by empiricists. For instance, in the *Observations on the Feeling of the Beautiful and Sublime*, his first printed work that directly touches upon ethical issues, Kant repeatedly mentions moral perfection. Yet he calls conscious moral feeling the moral principle: “[...] true virtue can only be grafted upon principles, and it will become the more sublime and noble the more general they are. These principles are not speculative rules, but the consciousness of a feeling that lives in every human breast and that extends much further than to the special grounds of sympathy and complaisance. I believe that I can bring all this together if I say that it is the **feeling of the beauty and the dignity of human nature**” (*GSE*, AA 02: 217; Kant, 2007, p. 31).

Kant attends to the relationship between moral sentimentalism and the Wolffian rational ethics in his *Inquiry Concerning the Distinctness of the Principles of Natural Theology and Morality*. He comes to believe that the Wolffian principle of perfection, which is contained in two formal grounds of all obligation to act – “Perform the most perfect action in your power!” and “Abstain from doing that which will hinder the realisation of the greatest possible perfection!” (*UD*, AA 02: 299; Kant, 1992b, p. 273), is founded on the ability to represent the truth, i.e. cognition. Still, “no specifically determinate obligation flows from these two rules of the good, unless they are combined with indemonstrable material principles of practical cognition” (*ibid.*). These principles appear by virtue of the feeling of the good described by Hutcheson, Shaftesbury, and Kant himself (see the above quotation). For Kant, moral feeling is fundamental since the notion of the good “arises from simpler feelings of the good” (*ibid.*). Nevertheless, he notes that it has yet to be determined “whether it is merely the faculty of cognition, or whether it is feeling (the first inner ground of the faculty of desire), which decides [morality’s] first principles” (*UD*, AA 02: 300; Kant, 1992b, p. 274-275). As we know, Kant will dedicate many years to the search for the answer. And the one he finds will expedite the Copernican turn in practical philosophy and become the major argument against all heteronomous concepts of morality, including moral sentimentalism and Wolffian ethics.

During the critical period Kant analysed the nature of moral feeling in the *Groundwork of the Metaphysics of Morals*, the *Critique of Pure Reason*, and *The Metaphysics of Morals*. In the first of these works he argues that moral feeling denotes the interest a person has in moral laws. But “[this feeling] must rather be regarded as the subjective effect that the law exercises on the will, to which reason alone delivers the objective grounds” (*GMS*, AA 04: 460; Kant, 1997, p. 64). Kant explores this thought further: “[...] it is not because the [moral] law interests us that it has validity for us (for that is heteronomy and dependence of practical reason upon sensibility, namely upon a feeling lying at its basis, in which case it could never be morally lawgiving); instead, the law interests because it is valid for us as human beings, since it arose from our will as intelligence and so from our proper self” (*GMS*, AA 04: 460-461; Kant, 1997, p. 64).

In the *Critique of Practical Reason*, Kant writes that moral feeling must be preceded by “[t]he concept of morality and duty” (*KpV*, AA 04: 38; Kant, 2015, p. 35). In *The Metaphysics of Morals*, he defines this feeling as “the susceptibility to feel pleasure or displeasure merely from being aware that our actions are consistent with or contrary to the law of duty” (*MS*, AA 06: 399; Kant, 1991, p. 201) and restates that it simply proceeds from the representation of moral law. If a feeling is the principal motive of an action, this action is pathological according to Kant. This feeling is rooted in the desire for personal happiness and leads to heteronomy of the will. Therefore, for the mature Kant, the statement that we have a special ability to determine what is morally good is false: “We have, rather, a susceptibility on the

part of free choice to be moved by pure practical reason (and its law), and this is what we call moral feeling” (*MS*, AA 06: 400; Kant, 1991, p. 202).

The *Critique of Practical Reason* also dwells on the Wolffian interpretation of perfection as the objective internal practical and material ground for the determination of the will in the principle of morality. While defining perfection in practical terms as “the fitness or adequacy of a thing for all sorts of ends” (*KpV*, AA 04: 41; Kant, 2015, p. 36), Kant emphasises that “ends must first be given to us, in relation to which alone the concept of perfection [...] can be the determining ground of the will” (*ibid.*). Yet in this case the end will precede the determination of the will and become its empirical matter. Just like moral feeling, the end will be inseparable from the principle of personal happiness. Consequently, Wolffian ethics is heteronomous.<sup>4</sup>

## 4 Conclusion

The style of the Master’s thesis *On Fire*, the geometrical method employed in that work and the absence of original experiments in it show clearly that the young Kant strongly relies on Wolffian rationalism. This he cannot yet overcome, notwithstanding his declarations of the significance of experiments for cognising nature. The ethical principle, to which the young Kant adhered when working on his dissertation, was the search for perfection. All the above was distinctive of research conducted at Prussian universities in the mid-eighteenth century. In later pre-critical texts Kant was increasingly embracing empiricism. His ethical position was now compatible with that of the Scottish school of moral philosophy. He proclaimed Wolffian ethics fit for cognition or, more precisely, the elucidation of the notion of the good arising from the feeling of the good, rather than for the regulation of behaviour. In the critical period, Kant abandoned empiricism in ethics, re-adopted ethical rationalism, and created an original practical philosophy, at the heart of which was the autonomous good will. From this perspective, he criticises both ethical sentimentalism and the Wolffian principle of perfection, which is unacceptable for the mature Kant because of its heteronomy, its association with eudemonism and, finally, empiricism. Therefore, the ethical position that Kant adopted in *On Fire* is different from that which he would take in the practical philosophy of criticism. The tendency towards synthesising empiricism and rationalism in cognising nature, one that was already apparent in Kant’s first dissertation, is very much in line with his intentions of the critical period.

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<sup>4</sup> For more detail on the mature Kantian criticism of Wolffian ethics, see Kruglov (2018).

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