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Critical rationalism and metaethics

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Abstract

For Hans Albert, what is to be deemed morally right or wrong could either be based on human conventions (decisions) or on findings of facts (cognitions). As an ethical non-cognitivist Albert emphasizes that decision-based conventions are constitutive of ‘morals/ethics’. Yet, it has been claimed that Popper’s falsificationism applies to prescriptive moral theories roughly as it does to descriptive empirical theories and that this analogy justifies a variant of ethical cognitivism. It is argued in this paper, that such ethical cognitivism would require beyond empirical and analytical fact-finding other abilities of moral cognition which are to be rejected within Albert’s critical rationalism and realism.

Keywords Albert · Popper · Critical rationalism · Metaethics · Ethical cognitivism

JEL Classification A 12 · B 40

1 Introduction

Our experiential knowledge of the world refers to facts of natural and social reality. By means of pure reasoning we can also acquire analytical knowledge of logic and mathematics. Yet, can we extend our knowledge to the realm of morals, that is, can we know which actions are morally obligatory or prohibited and which normative demands are morally valid or invalid? Disputes concerning this question have been raging in moral philosophy for a long time. Adherents of ethical cognitivism answer the question affirmatively. Ethical non-cognitivists take the opposite stance.

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According to their view, knowledge of means-to-ends relations is possible and can form the factual basis of moral evaluations and demands. Moreover, it is possible to know which kind of moral convictions, moral views and rules as a matter of fact prevail in a specific society.¹ Yet, in the eyes of the non-cognitivists, these prevailing moral convictions and views themselves are not knowledge-based. They are seen as incorporating *prescriptive* or *evaluative* elements expressing personal volitions and evaluative attitudes² that (ultimately) result from personal choices and decisions rather than knowledge of facts.³

In line with general critical rationalist proclivities Hans Albert as the leading German critical rationalist has been a particularly persistent critic of ethical cognitivism.⁴ But within critical rationalism there have been dissenting voices. Interestingly enough it has been argued that Popper's falsificationism applies to prescriptive moral theories roughly in the same way as to descriptive empirical theories and that this analogy justifies a variant of ethical cognitivism.⁵ Subsequently I intend to critically examine such views in some detail. The aim is to lay out the meta-ethical implications of basic epistemic assumptions of critical rationalism, especially of the version advocated by Albert.

2 Basic epistemological assumptions of critical rationalism

Epistemologically critical rationalism endorses a variant of *fallibilistic realism*. Accordingly, reality is assumed to exist independently of human subjects and is in principle accessible to human knowledge. As epistemic acts observations are directed at objects, properties, structures or processes of that reality. Observational propositions are true if the facts they assert really exist. However, all observational statements as well as the underlying observations can in principle be wrong. For this reason epistemic certainty concerning reality is beyond what humans can achieve. All knowledge remains fundamentally conjectural.⁶

Within a critical rationalist perspective, the method of knowledge acquisition can be characterized as a process of *construction* and *critique*. To explain certain perceived events or processes a theory is established. A central constitutive part of such

¹ True, the objects of these statements are ontologically subjective in nature, since their existence is based on attitudes and actions of people. But this does not change the fact that epistemically they are objective facts, the statement of which does not involve any normative evaluation. See Searle (1993), p. 7 ff.

² In detail on this Hare (1952), p. 1 ff.; v. Wright (1985), p. 266 ff.

³ Some philosophers of language have conceptualized the issue of the cognitive nature of moral judgment not as an epistemological but primarily as a linguistic problem that should be addressed and solved within an account of "the language of morals". They discussed, for instance, whether according to established language-conventions moral utterances should be classified as truth bearing; see on this v. Savigny (1993), p. 216 ff. This account, however, fails to acknowledge that an analysis of practices of language cannot as such show that these practices are epistemologically justified; see on the latter Mackie (1977), p. 19 f.

⁴ See Albert (1985), p. 71 ff.

⁵ In this sense for example Steinvorth (1999), p. 28 ff.

⁶ For fallibilistic realism see Albert (1987), p. 43 ff; Musgrave (1993), p. 274 ff.

a theory are nomological statements expressing hypotheses concerning (law-like) real regularities. On the basis of such nomological statements predictions of future events or processes can be formulated. These predictions are then to be tested against observations. If a prediction is contradicted by the observations of a test the underlying theory is regarded as falsified. In that case it has to be modified or to be replaced by a different theory. If prediction and observation coincide the underlying theory can be regarded as corroborated or preliminarily true.⁷

3 A critical rationalist account of ethical cognitivism

‘Pragmatic’ ethical cognitivists suggest that the basic method of construction and critique can be extended from empirical to moral knowledge acquisition. For the solution of moral problems normative theories need to be ‘constructed’. These theories incorporate universal rules, principles and ends that raise claims to general validity which can then be tested and criticized in view of our moral intuitions (resp. observations) concerning specific cases and problems. If the verdict implied by the theory does not cohere with the specific case-related moral intuition or perception then, as a rule, the theory is to be regarded as falsified by the case at hand.⁸ Adherents of such views typically add the proviso that moral intuitions suffer from being insufficiently systematic and partially contradictory in ways that may also require a revision of the intuitions in the light of the theories with which they conflict.

Without going into further details, it should be clear how pragmatic ethical cognitivists intend to reach a coherent reflective equilibrium concerning moral intuitions and normative theories (which also takes into account descriptive knowledge of the social and natural sciences as conventionally understood).⁹ So, let us turn to a critical assessment of this approach.

3.1 Observation, moral intuition and realism

According to the precedingly sketched views of the pragmatic cognitivists, moral intuitions can provide critical tests for normative theories that serve the same functions as observations for the test of empirical theories. However, at closer inspection

⁷ For details on this hypothetical-deductive method see Albert (1987), p. 70 ff.; Popper (1959), p. 59 ff.; and – with a stronger empiristic accentuation – Quine (1992), p. 1 ff. Under certain circumstances it may be sufficient or even unavoidable to be content with partial, rudimentary or sketchy explanations, at least for the time being.

⁸ See on such an application of falsificationism to normative theories Steinvorth (1999), p. 28 ff.

⁹ Allegedly, the latter strategy of eliminating conflicts between general theories and specific moral intuitions does not amount to a qualitatively relevant deviation from the practices of empirical science (as described historically in Wootton 2015). Where the moral philosopher relies on normative theories to form a coherent account of several moral intuitions the empirical scientist relies on descriptive theories to explain separate and often conflicting observations in a coherent way – the crucial point being that in practices of descriptive empirical science under certain conditions apparently falsifying specific observations rather than the theories with which they conflict must yield. On the concept of reflective equilibriums see Rawls (1971/1999), p. 42 ff., for a general sympathetic discussion of it Daniels (1996), p. 21 ff. and Hahn (2016).

tion this central assumption of pragmatic cognitivism seems to be questionable. It does not adequately reconstruct the epistemic role of observations in the process of empirical science. Within a realistic conception of empirical science – and contrary to epistemological idealism and phenomenalism – observations are epistemic acts that do not merely refer to phenomena, ideas or sense-data but to the objects, properties, structures and processes of the real world.¹⁰ As mere *phenomena* observations do not provide corroborations or refutations. Whether they can serve as a test of a theory is rather dependent on their truth. According to a realistic account this applies only if the perceived state of affairs does in fact prevail – that is, falsifications of a theory do not merely refer to observations of facts but to the facts of the world themselves.¹¹ The perceptions and observational statements are merely the – themselves fallible – means that are instrumental to accessing the facts.

Moral intuitions and perceptions could play the same epistemological role as empirical observations in empirical science only if they would refer to the same kind of facts. The latter would imply an ontological commitment amounting either to moral realism or to moral Platonism. Moral realists claim that objects, events or states of the world have evaluative qualities that are not mere projections of subjective evaluative attitudes in the eyes of their beholders. They postulate that objective values exist as part of the natural environment.¹² Platonists are of the opinion that moral values and norms are non-natural, abstract, respectively ideal entities existing in a separate world of values.¹³

Despite their ontological differences both, realist and Platonist conceptions claim that evaluative attributes, moral values and moral norms are facts that can allegedly be known like natural facts. Referring to them summarily as ‘normative facts’ it needs to be emphasized that from an ontological as well as from an epistemological point of view the claim that such facts exist like other facts seems to be precarious. A main characteristic of the elements of the real world is that they are nomologically connected with each other. ‘Normative facts’ do not possess this property. Thus, they would be the only natural entities which would not be in any nomological relation to each other and to the other objects and events of nature. The Platonic assumption of ‘another world’ of normative facts separate from the ‘natural world’ avoids this problem. But it faces – beyond all other objections against Platonism – the difficulty, that it remains completely unclear, how the separate world of normative facts relates to the natural world and can influence it.

Epistemological concerns weigh just as heavily. Observations of the world are possible to the extent that the world can causally affect human sense organs. Without solving the aforementioned problems normative facts must, however, lack causal effectiveness. Without such causal effects on sense organs it is hard to see how humans

¹⁰ See for a comprehensive analysis and critique of such broadly idealistic views Musgrave (1993), p. 85 ff.

¹¹ The concept of a fact is used here as referring to existing real entities and their relationship to each other without implying a specific ontological assumption concerning the status of facts. Wittgenstein (1922), p. 25 ff., for instance, advocates an ontology of facts; Quine (1960/2013), p. 227 f., for example, rejects it.

¹² See for instance Boyd (1988); Enoch (2011); v. Kutschera (1999), p. 219 ff.; Werner (1983).

¹³ For example, Hartmann (1949), p. 148 ff.

could conceivably acquire knowledge of normative facts. Here, as opposed to social facts like for instance factually prevailing institutionalized norms, it is impossible to rely on observations of overt verbal or nonverbal human behavior as a perceivable event which then could be interpreted accordingly.¹⁴

Unless the preceding difficulties can be overcome, insurmountable epistemological problems persist. Reconstructing evaluative concepts as a special class of theoretical concepts that do not directly relate to observable aspects of reality does not provide a way around such problems. Theoretical assumptions that are made in the process of knowledge acquisition are instruments employed in pursuit of the aim of explaining observable phenomena. To justify the introduction of theoretical entities it is necessary to relate them *nomologically* to the phenomena they are meant to explain.¹⁵ Since – as laid out before – such a nomological relation by construction does not exist in case of normative facts, they cannot be directly observed with human sense organs nor is it possible to detect them indirectly by their effects.¹⁶

Another variant of moral realism seeks to overcome this difficulty by interpreting normative facts in terms of secondary qualities or at least as analogous to the latter.¹⁷ This seems *prima facie* plausible since in epistemology color, taste, smell etc. are framed as secondary qualities and distinguished from primary qualities like shape, size or weight because the former contrary to the latter cannot be characterized independently of subjective human sense perceptions.¹⁸ Now, it is obviously true that the attribute of being sweet is ascribed to an object of ‘taste’ only because it causes a certain experience of sweetness in the observer. Yet this subjectivity of secondary qualities does not affect the factual status of secondary qualities. On behalf of causal effects of the latter they can be objects of human cognition like primary qualities. It is exactly this property that some moral realists seek to invoke in their efforts to justify that alleged normative facts are indeed to be treated as facts. They acknowledge that such properties depend on sensory impressions and perceptions. Yet, this would not change the status of these properties as aspects of the real world.

However, this attempt to justify ethical cognitivism is not convincing either. Secondary qualities are – as just explained – characterized by the fact that they cause certain perceptions or sensations in an observer, which happens by affecting his sensory receptors. Since it is a process determined by laws of nature, the perceptions or sensations can be described and explained nomologically. For example, color perception can be analyzed as, firstly, the absorption and reflection of light rays of cer-

¹⁴ On the ontology of social facts see Searle (1995).

¹⁵ See on this relationship between theoretical construction and observation Albert (1987), p. 103 ff.

¹⁶ This problem is not recognized by v. Kutschera (1999), p. 240 f. He thinks that objections against evidence-based knowledge of normative facts can be neutralized by pointing out the general theory-ladenness of all observations and observational statements. But does not take into account that even then there must be ways to explain the occurrence of the observational events which must be triggered by “something”.

¹⁷ For instance McDowell (1985).

¹⁸ The best known view on the distinction between primary and secondary qualities is the theory of Locke (1690/1997) sec. book, VIII; although it is not entirely clear whether Locke identifies the secondary qualities with the sensations of an observer, i.e., epistemologically adopts an idealist standpoint, or whether he distinguishes the secondary qualities from the corresponding perceptions of the perceiving subject. On this question Musgrave (1993), p. 112 ff.

tain wavelengths by the surface of an object, secondly the stimulation of the visual receptors of the observer as a result of the reflected rays impacting them, and, thirdly, the further cognitive processing of these stimuli. In contrast, such explanation is not possible for value sensations or value perceptions. There are no regularities that link natural properties of objects or processes to a subject's perception of those properties as good or bad.

As a way out, it remains only to assert a quite peculiar way of perceiving normative facts, which is fundamentally different from a perception by “normal” sense experiences.¹⁹ Such a special faculty of knowledge acquisition, however, seems mysterious.²⁰ Humans as cognizing beings are a part of the natural world. Their abilities must therefore be explained just like the other facts of reality by certain regularities - for instance of a physical, biological or physiological kind. Such a naturalistic explanation can be given for the process of cognition based on sensual perception.²¹ The assumption of a special faculty to recognize moral correctness, however, cannot be justified in this way. Rather, it must be presupposed that man has direct access to the asserted normative facts through “immediate feeling” or “non-mediated perception”, without the need of any direct or indirect influence on his sense organs which can be explained by laws of nature. But there are no reasons in sight that could justify such a hypothesis. In any case it is not compatible with a naturalistic epistemology. In sum, paralleling moral intuition and observation to justify ethical cognitivism implies ontological and epistemological assumptions that can hardly be brought in line with the epistemological views of critical rationalism.

3.2 Coherence without correspondence

According to what has just been said, the possibility of moral cognition cannot be explained by a simple transfer of the procedure of empirical acquisition of knowledge. For the latter, man's ability to grasp facts accurately by observation is constitutive. Moral intuitions cannot fulfill such an observation-analogous function. One might, however, consider abandoning the requirement of reference to particular facts of value from the realm of morality. In this vein some moral philosophers suggest that referring to ‘normative facts’ that correspond to the intuitions or everyday judgments is unnecessary to uphold the analogy. It suffices if a coherent reflective equilibrium incorporating moral theory, on the one hand, and on the other moral intuitions and moral everyday judgments can be reached.²² According to this view, in contrast to empirical knowledge of natural/social reality, the testing instances of a theory are not

¹⁹ Intuitionism, for example, assumes such a moral cognitive capacity of its own. A prominent representative of this view is Moore (1903/1993). Currently, Audi (2004) advocates an intuitionistic moral epistemology.

²⁰ See Mackie (1977), p. 43 ff.

²¹ On the program of a naturalistic epistemology see Albert (1975), p. 13 ff., and esp. Quine (1969), p. 69 ff. See further on the basic assumptions of naturalism Beckermann (2012); Vollmer (2013).

²² Goldman (1988). On the problem of radical change in moral beliefs within a coherentist approach DePaul (1987). On the idea of a coherence-theoretical reflective equilibrium in political philosophy, see Rawls (1971/1999), p. 42 ff.

the facts of the world to which observations refer, but the moral intuitions or everyday moral judgments themselves.

Without the assumption that ‘normative facts’ provide test-instances, the coherence-theoretic approach can avoid the ontological commitments and epistemological problems of moral realism and moral Platonism. But such a purely coherentistic grounding of moral views and beliefs comes at the price of rendering the claim that moral views and convictions have a regular claim to truth highly implausible. To be sure, it is possible to pass truth-bearing judgments concerning the logical relations between case-based moral intuitions or specific everyday moral judgments and general normative theories: whether a system of general and specific moral value judgments is coherent or not, can in principle be assessed by human cognition. But this does not bestow a truth-bearing epistemic character on the value judgments themselves. A general moral theory remains noncognitivist as long as the specific moral intuitions or specific everyday moral judgments on which theory and system formation rely, are construed as volutative or expressive rather than acts of cognition. The moral intuitions or moral everyday judgments can express cognitions if they refer to ‘normative facts’. Unfortunately, this brings us back full circle to the previously diagnosed problems of moral realism and moral Platonism.

3.3 Acceptability, correctness and purely rational cognition

Other moral philosophers are of the opinion that moral theories raise no claim to truth but merely one of correctness, respectively, acceptability. Habermas, for instance, posits that the correctness of a normative statement – contrary to the interpretation of the truth claim of a descriptive statement – should not be interpreted as stating that certain facts prevail. Instead he suggests an interpretation in terms of the demand that a corresponding norm be accepted. “‘Truth’ is a justification-transcendent concept... it refers to the truth conditions that must, as it were, be met by reality itself. In contrast, the meaning of ‘rightness’ consists entirely in ideal warranted acceptability.”²³ In the Habermasian account, that the criteria of correctness need not “be met in reality itself” does not cast doubts on the cognitive character of moral convictions. According to this conceptualization, moral knowledge is merely specified differently than empirical knowledge. It does not arise from perceiving ‘normative facts’ but rather from the cognitive insight that the norm or act merits to be accepted. Yet how can (wo)men know whether the norm or act deserve to be accepted?

In this context cognitivists mostly tend to point to certain highest ends, rules or principles meant to serve as objectively valid standards of acceptability. Kant’s categorical imperative is a well-known example: “Act only in accordance with that maxim through which you at the same time can will that it become a universal law.”²⁴ Moral knowledge would thus be constituted by two components: on the one hand, the insight that the specific act or norm complies with or violates the standard of acceptability, and on the other, the very knowledge of the standard of acceptability.

²³ Habermas (2003), p. 247 f.

²⁴ Kant (1785/2018) p. 34.

From this immediately arises the question how the ultimate ends like for instance perfect happiness or highest rules and principles as the categorical imperative can themselves be justified by cognitions. For reasons laid out already, a perceptual knowledge of normative facts that would be comparable with empirical knowledge is out of the question.²⁵ This leaves us with the alternative of some knowledge a priori, an insight of pure reason which is not subject to empirical corroboration or refutation.²⁶ Since substantive ends or principles cannot be derived from the laws of logic and semantic rules alone, this kind of knowledge cannot be analytical.²⁷ Consequently, it would have to be synthetic knowledge a priori. Yet, how can such synthetic knowledge a priori that must be independent of experience a posteriori be possible at all?

One might think here in the first place of deducing the statement to be justified from other theoretical statements. But this moves the problem of cognitive justification merely one level up, since now the theoretical premises themselves require justification in terms of synthetic knowledge a priori.²⁸ This obviously leads to the possibility of a progression to infinity. To avoid this, one might want to stop the justificatory procedure at some point at which the ends, rules and principles that need to be justified are treated merely as testable hypotheses. Yet this immediately raises the problem of how these hypotheses can be tested.

It is a characteristic of hypotheses that they are conjectures with an uncertain truth value. To corroborate their truth they must be tested. As far as empirical knowledge is involved here observations must be invoked. They are the (themselves) fallible instruments for determining the truth of theoretical propositions. According to them hypotheses are to be ‘provisionally’ accepted or rejected. Yet, with respect to insights of pure reason such an approach is closed off. Being a priori such insights can neither be corroborated nor refuted by observation. Again synthetic statements a priori that are known to be true by reason alone would have to serve as a remedy. Without such synthetic statements a priori we would lack sufficient criteria to judge whether hypothetically assumed ends, rules or principles should be deemed right or wrong. For instance, it would thus be possible to maintain with equal justification the validity of both, a rule demanding ‘p’ and a rule demanding ‘non-p’. Yet, ethical cognitivism requires that it can in principle be determined which of such two rules is valid. In view of what has been previously said this in turn raises the question how the crite-

²⁵ An elaborate conception of empirical grounding, however, is promoted by Habermas. He claims to derive his moral principle (U), which is inspired by Kant’s categorical imperative, from indispensable preconditions of argumentation. These, in turn, are said to belong to the communicative form of life of all human beings, which according to Habermas are factually without alternative. He thus takes an empirical approach to justify the necessary validity of the presuppositions of argumentation and thereby indirectly also the moral principle (U). Basically Habermas (1990), p. 43 ff. For an in-depth critique, see Engländer (2002), p. 59 ff., 70 ff.

²⁶ For a detailed discussion of the idea of a pure knowledge of reason from the perspective of critical rationalism, see Musgrave (1993), p. 176 ff.

²⁷ For an attempt to justify a utilitarian ethics based on an analysis of the semantics of prescriptive propositions, however, see Hare (1982). Critically Tugendhat (1992), p. 292 ff.

²⁸ This problem also arises in a transcendental method of reasoning which, starting from the assumption of the existence of synthetic judgments a priori, wants to open up the conditions of the possibility of such judgments a priori. Cf. Albert (1987), p. 18 ff.

ria for passing judgment on this issue can be known independently of observational experience. In consequence, the problem of justification arises anew.

To avoid both, an infinite regression as well as a circularity in their justifications adherents of ethical apriorism must in the end claim that human reason has direct access to non-analytical knowledge of ultimate ends, rules or principles. In consequence they thereby act like those moral realists who conceptualize moral intuitions as a form of particular conceptual knowledge of concrete ‘normative facts’. That is, adherents of ethical apriorism are taking resort to a somewhat mysterious special faculty of knowledge acquisition but fail to provide convincing evidence for its existence.²⁹ Actually they merely conceal that their ultimate moral ends, rules or principles owe their acceptance to an act of voluntary stipulation rather than a cognitive insight concerning something that exists independent of further justification or voluntary creation. As non-cognitivists correctly state, their normative validity rests on decisions (Albert’s “Entscheidung”) rather than cognition (Albert’s “Erkenntnis”). In sum, raising the claim of a priori knowledge of normative facts leads into an epistemological dead end.

4 Conclusions

Efforts to provide a variant of ethical cognitivism within a broadly critical rationalist framework are bound to fail. It is impossible to acquire moral knowledge without violating the epistemological premises of critical rationalism and the critical realism (‘naturalism’) associated with it: neither empirical cognition a posteriori or a priori insights of reason will do. Within a critical rationalist approach Albert’s plea for non-cognitivism stands.³⁰ Quite generally speaking noncognitivism is the only way to pay due respect to “the invention of science” (Wootton 2016). When it comes to normative issues there is no ‘moral science’ – at least not without abusing the concept of science.

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²⁹ Currently, the proponents of transcendental pragmatics promote such a special knowledge a priori with the so-called strict reflection. See Apel (1998), p. 178 ff.; Kuhlmann (1985), p. 76 ff. For criticism see Albert (1982), p. 58 ff.; Keuth (1993), p. 232 ff.

³⁰ For Albert, though, it does not follow from non-cognitivism that there are no criteria of rationality for moral values and norms or that they cannot be criticised rationally. Cf. Albert (1985), p. 94 ff.

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References

- Albert, H. (1975). *Konstruktion und Kritik*. Hamburg: Hoffmann und Campe
- Albert, H. (1982). *Die Wissenschaft und die Fehlbarkeit der Vernunft*. Tübingen: Mohr Siebeck
- Albert, H. (1985). *Treatise on Critical Reason*. Princeton: Princeton University Press
- Albert, H. (1987). *Kritik der reinen Erkenntnislehre*. Tübingen: Mohr Siebeck
- Apel, K. O. (1998). *Auseinandersetzungen in Erprobung des transzendentalpragmatischen Ansatzes*. Frankfurt am Main: Suhrkamp
- Audi, R. (2004). *The Good in the Right. A Theory of Intuition and Intrinsic Value*. Princeton: Princeton University Press
- Beckermann, A. (2012). Naturwissenschaften und manifestes Weltbild. *Deutsche Zeitschrift für Philosophie*: 5–26
- Boyd, R. (1988). How to Be a Moral Realist. In G. Sayre-McCord (Ed.), *Essays on Moral Realism* (pp. 181–228). New York: Cornell University Press
- Daniels, N. (1996). *Justice and Justification: Reflective Equilibrium in Theory and Practice*. New York: Cambridge University Press
- DePaul, M. R. (1987). Two Conceptions of Coherence Methods in Ethics. *Mind* 96: 463–481
- Engländer, A. (2002). *Diskurs als Rechtsquelle? Zur Kritik der Diskurstheorie des Rechts*. Tübingen: Mohr Siebeck
- Enoch, D. (2011). *Taking Morality Seriously. A Defense of Robust Realism*. Oxford: Oxford University Press
- Goldman, A. H. (1988). *Moral Knowledge*. New York: Routledge
- Habermas, J. (1990). *Moral Consciousness and Communicative Action*. Cambridge, Mass.: The MIT Press
- Habermas, J. (2003). *Truth and Justification*. Cambridge, Mass.: The MIT Press
- Hahn, S. (2016). From Worked-out Practice to Justified Norms by Producing a Reflective Equilibrium. *Analyse & Kritik*: 339–369
- Hare, R. M. (1952). *The Language of Morals*. Oxford: Clarendon Press
- Hare, R. M. (1982). *Moral Thinking: Its Levels, Method, and Point*. Oxford: Clarendon Press
- Hartmann, N. (1949). *Ethik* (3. ed.). Berlin: Walter de Gruyter
- Kant, I. (1785/2018). *Groundwork for the Metaphysics of Morals*. With an updated translation, introduction, and notes. New Haven: Yale University Press
- Keuth, H. (1993). *Erkenntnis oder Entscheidung*. Tübingen: Mohr Siebeck
- Kuhlmann, W. (1985). *Reflexive Letztbegründung*. Freiburg/München: Karl Alber
- Kutschera, F. v. (1999). *Grundlagen der Ethik* (2. ed.). Berlin: Walter de Gruyter
- Locke, J. (1690/1997). *An Essay concerning Human Understanding*. London: Penguin Books
- Mackie, J. L. (1977). *Ethics*. Harmondsworth: Pelican Books
- McDowell, J. (1985). Values and Secondary Qualities. In T. Honderich (Ed.), *Morality and Objectivity. A Tribute to J. L. Mackie* (pp. 110–129). London: Routledge & Kegan Paul
- Moore, G. E. (1903/1993). *Principia Ethica* (Rev. ed.). Cambridge: Cambridge University Press
- Musgrave, A. (1993). *Common Sense, Science and Scepticism. A historical introduction to the theory of knowledge*. Cambridge: Cambridge University Press
- Popper, K. R. (1959). *The Logic of Scientific Discovery*. London: Hutchinson & Co
- Quine, W. V. (1969). *Ontological Relativity and Other Essays*. New York: Columbia University Press
- Quine, W. V. (1992). *Pursuit of truth*. Rev. ed., Cambridge, Mass.: Harvard University Press
- Quine, W. V. (1960/2013). *Word and Object*. New: ed. Cambridge, Mass.: The MIT Press
- Rawls, J. (1971/1999). *A Theory of Justice*. Rev. ed. Cambridge, Mass.: Harvard University Press
- Savigny, E. v. (1993). *Die Philosophie der normalen Sprache* (3. ed.). Frankfurt am Main: Suhrkamp
- Searle, J. R. (1995). *The Construction of Social Reality*. New York: Simon & Schuster
- Steinvorth, U. (1999). *Gleiche Freiheit*. Berlin: Akademie Verlag
- Tugendhat, E. (1992). *Philosophische Aufsätze*. Frankfurt am Main: Suhrkamp
- Vollmer, G. (2013). *Gretchenfragen an den Naturalisten*. Alibri

- Wittgenstein, L. (1922). *Tractatus Logico-Philosophicus*. London: Kegan Paul, Trench, Trubner & Co
- Wootton, D. (2015). *The Invention of Science. A New History of the Scientific Revolution*. New York: Harper Collins
- Wright, G. H. v. (1985). Is and Ought. In E. Bulygin (Ed.), *Man, Law and Modern Forms of Life* (pp. 263–281). Dordrecht: D. Reidel Publishing Company

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