

What is Practical Knowledge?

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Abstract: In this paper practical knowledge is first defined and then identified. The concept of knowledge itself is not discussed but presupposed, the paper's topic rather is what kind of knowledge is practical. 'Practical knowledge' is roughly defined as knowledge that does and shall (from a normative, prudential or moral, point of view) motivate to act in a certain way (sect. 1). After criticizing externalist (sect. 2) and inadequate internalist conceptions of practical knowledge (sect. 3), a strategy for identifying practical knowledge is exposed. One central idea of this strategy is to examine empirically the various ways of our deliberations and to choose those that are epistemically rational; the knowledge used on these ways is practical (sect. 4). As a first execution of this strategy, some elements of a decision psychology are sketched, and then some pieces of practical knowledge are identified. In particular, intrinsic value judgements are defined. The most central forms of practical knowledge, however, are value judgements that a certain action is optimum, where 'optimum' is defined in a certain internalist manner (sect. 5).

1. The Definition of 'Practical Knowledge'

The aim of this paper is to clarify what practical knowledge is, analytically and materially. First, an analytical answer to this question will be given, which will be deepened in the course of this paper, and, second, it will be empirically identified which knowledge fulfils the analytical conditions. In this undertaking emphasis is put on the "practical": what is special about *practical* knowledge as opposed to mere theoretical knowledge? Therefore, I will say very little on the concept of 'knowledge' itself, e.g. about the difference between knowledge and mere true belief; this is a question of epistemology and not of practical philosophy. I will use the term "knowledge" in a very loose way, including epistemically justified, however false beliefs; a better, however rarely used, term would be "cognition". Sometimes I will even speak of the practical nature of *beliefs* when it does not matter whether these beliefs are true or justified.

As a starting point for the further considerations, an answer to the analytical part of the question what practical knowledge is can be given immediately.

Practical knowledge is (defined as)

1. *epistemic condition*: knowledge
2. *empirical condition: effective motivation / internalism*: that, as a central element of a deliberation, actually or potentially, under empirically realizable epistemic conditions, motivates at least a bit to act or to abstain from acting in a certain way and
3. *normative condition: desirable motivation*: that, from a normative (moral or prudential) perspective, should motivate in this way.

Several parts of this definition require some explanation.

"Knowledge": The theory presented here is rather open with respect to the concept of 'knowledge' to be used in the definition of 'practical knowledge'. What is important is that knowledge in the sense meant here implies a justificatory process that leads to true, probably true or truthlike beliefs; however, it does not have to be actually true belief. Apart from this, one may insert one's preferred concept of 'knowledge' and even distinguish degrees of differently strong concepts of 'practical knowledge'.

"Motivate to act as a central element of deliberation": That a belief 'motivates to act' implies that the belief (or its physiological basis) *causes* the action. In addition, the causal relation depends on the belief's content, namely in such a way that the belief makes up an essential part of the deliberation that leads to the action. Furthermore, in order to be really motivating the belief should be a *central* part of the deliberation so that there is more than a rather loose connection between the belief and the action. An example of a belief which would not be central in the given context is that I see on my watch that now it is 8:50 p.m.; since I want to call Antonio at 9:00 p.m. this belief may lead me (i) to not calling now but (ii) to decide to consult my watch soon again; so, knowing that it is now 8:50 p.m., together with other thoughts, desires etc., causes me to consult my watch in several minutes; but it is much less central than, let us say, the belief that it is better to call Antonio at 9:00 p.m. than at 8:50 p.m. Furthermore, not *any* belief in some remote premise that influences the thoughts in a deliberation is a motivating belief; for example my knowledge that $2+6=8$ may be important for the deliberation because I have just returned to Central Europe from New York and not yet readjusted my watch so that 6 hours have to be added to the time indicated on my watch in order to calculate the local time; in such a way just any belief may play a role in motivating action. For making the definition more restrictive and significant we should distinguish between beliefs that in certain situations are merely *motivationally* (and practically) *relevant* -- like the knowledge that $2+6=8$ -- and *motivating* or practical beliefs, where the latter include only such beliefs that are central in the deliberation in the sense that they directly, i.e. as a final thesis, or rather directly, i.e. as an ultimate or penultimate premise to the final thesis, cause the action. -- This explanation of 'motivating belief' is not meant to imply that beliefs alone, e.g. without irreducible desires, can be motivating. In order not to be stipulative I want to leave this question open and require only that the belief be a central element in the deliberation that leads to the effective decision. This explanation

of 'motivating' is still rather vague; however, a much clearer and more precise explanation presupposes already an empirical model of how deliberation works.

"Potentially, under empirically realizable conditions": The condition that the motivational effect of practical knowledge may also be only potential, however under empirically realizable conditions, is intended to significantly extend the set of practical knowledge, in particular for including beliefs that only via some further (background) information and instruction will develop motivational force. The idea is that some persons may generally be too little informed or not sufficiently informed about the important things, to be motivated by otherwise practical knowledge; this lack of information should not count against the practical knowledge but rather against the missing information. However, so as not to make the request for motivational force an empty condition the extension is rather limited: the motivational force must be obtainable under empirically realizable epistemic conditions, i.e. as a consequence of instruction, information or, what Richard Brandt has called, cognitive psychotherapy (Brandt 1979, pp. 110-124, in particular p. 113). Brain surgery or other direct interventions on the brain etc. are not among the means by which otherwise not motivating beliefs can be made motivational.

"At least a bit": To be motivational, practical knowledge is not always required to be sufficiently strong to cause (or prevent) the respective action that it is about. It may e.g. be a *prima facie* consideration in favour of a certain action which is then outweighed by another consideration. This is what I mean by "the knowledge motivates at least a bit". In a more elaborate version of this definition of 'practical knowledge' the degree of motivation should be further specified for not allowing the motivation to be too weak.

"From a normative (moral or prudential) perspective, should motivate": The most problematic term in the definition is the normative "should". That a certain kind of knowledge '*should*' be motivating from a moral or prudential perspective, in a first approximation, means that it would be morally or personally *good* to be motivated in this way. This explication is true, I think, and fairly neutral with respect to nearly all approaches in ethics and the theory of rationality. This explication would even be sufficient if we could draw on an independent determination of the moral or personal good. However, the problem is, I think, that we do not have such an independent notion and, in particular, that the personal or moral good cannot be determined independently from the knowledge about which beliefs are motivating. -- A very important and big class of beliefs that it would be good to have probably are e.g. beliefs of the type 'It is good to do *a*'. That the value predicate 'good' (inner 'good') in these beliefs' contents and the value predicate by which to assess these beliefs and their motivational effect (outer 'good') are identical does not necessary imply a vicious circularity. However, we simply may not know how the outer 'good' is defined. And since the outer 'good' is identical with the inner 'good', where the latter is the predicate of a belief that should be empirically motivating, the belief in the outer proposition with the outer 'good' as the main predicate (viz the belief 'it is good that / if the belief 'It is good to do *a*' is motivating'), i.e. the proposition by which we determine the extension of 'practical knowledge', should be motivating and practical knowledge too. It should motivate us e.g. to acquire such knowledge or to try to augment its motivational force or to reduce the motivational impact of those beliefs whose

motivational force is not good. In contrast to the idea of specifying the normative condition of our definition by making recourse to a given notion of the good, the attempt to define what 'practical knowledge' is may just be the right strategy to define the 'morally ...' or 'personally good' in a noncircular way. In this case the foregoing substantial explication of "should motivate" would have to be replaced by a mere formal explication. I will come back to this point below.

To begin with, a sketchy justification of this definition, can refer to the fact that an uncontested idea about practical knowledge is that such knowledge has to do with action in the way of leading or motivating to action; otherwise the knowledge would not be practical. However, this relation to action may be interpreted in an empirical or in a normative way, i.e., roughly, according to condition 2 (practical knowledge motivates) and condition 3 (practical knowledge should motivate) of the above definition. The definition says that practical knowledge has to fulfill both conditions. We need the normative condition 3 because 'practical knowledge' is a practical-philosophical and normative term; without the normative condition 3 it would only be a psychological notion. As opposed to psychologists, practical philosophers want to know what to do with motivating beliefs, in particular whether there are motivating beliefs that are decisive from a normative point of view or that open possibilities for rationalizing our actions by acquiring more or better justified beliefs that lead to these actions. Or, from a different angle, ethics and theory of practical rationality are interested in normatively orientating people by means of knowledge with motivational impact. -- The normative condition 3 is only contested by philosophers who deny the possibility of a rational form of normativity. I cannot confute this objection right now. However, the positive strategy -- set out below --, for answering the normative question, implicitly replies to this objection.

We also need the empirical condition 2 because if this condition were not fulfilled the "practical knowledge" so defined would be practically irrelevant; people would not react at all to the acquired "practical knowledge" or would only react with the question 'so what?'. The "practical knowledge" would not fulfil its practical and orientating function. We would not even understand why it should be a reason to act. The empirical condition has been accepted, explicitly or implicitly, by nearly all theorists of practical rationality and by the majority of ethicists because they accept the *practical requirement*, i.e. the requirement that a moral conviction together with its justification to some degree must motivate rational or prudent persons to follow that conviction. However, it has been contested by a certain type of ethical externalists, who may be called "*effective externalists*" and who deny the practical requirement (viz that moral convictions, together with their respective justification, have to be motivational).¹

¹ To make these distinctions clearer it should be added that there is another, much less radical form of externalism, which may be called "*foundational externalism*" and which says that we do not need to rely on empirically given motives to justify the content of morals. Foundational externalists may easily accept the practical requirement and thus be effective internalists, and yet deny that one has to rely on empirically given motives to fulfil this requirement. A case in kind is Kant. The more radical, *effective externalists* (like Richard Boyd and David Brink), however, will usually be also foundational externalists; and foundational internalists (e.g. Humeans and advocates of a game-theoretical approach to ethics, as well as Richard Brandt, Frank

In the following effective externalism and its objections to the empirical condition 2 will be discussed; this serves to further substantiate the empirical condition 2 (sect. 2). Subsequently, various effectively internalist conceptions of practical knowledge that try to respect the practical requirement (and that accept the definition developed above) will be criticized. A main problem of these approaches is just that the normatively desired content of practical knowledge cannot be determined independently of those beliefs they are motivating (sect. 3). The constructive part of this paper will begin by developing a strategy for how to resolve the problem of bringing together the empirical and the normative condition and how to identify practical knowledge; thereby the normative condition will be refined (sect. 4). Finally, some empirical results about motivating beliefs will be presented and the refined normative condition will be used to choose the normatively acceptable among them (sect. 5).

2. Defending the Empirical Condition -- The Challenge of Effective Externalism

The empirical condition in the definition of 'practical knowledge' is a special kind of *effective internalism*, which requires that practical knowledge has to be motivating (under certain conditions to some degree). Effective internalism has to be distinguished from *foundational internalism*, which is the stronger claim that the motivating force required by effective internalism can be reached only by basing morality on the subject's empirical desires or pre-existing motives. Effective internalism has been briefly justified above: First, only such a motivating force makes practical knowledge practically relevant. Second, without this relation to motivation we would not even understand in which sense this knowledge should be practical and (at least under certain conditions) a reason to act; it would be only theoretical knowledge. We now may add a further reason in favour of effective internalism. Third, motivation, in a certain sense, is the economic basis of morals. Let me use an analogy to explain. Socialists are often criticized by conservatives and defenders of economic liberalism that they make certain demands, e.g. about income distribution or assisting the poor, without considering the economic preconditions and consequences of the realization of such demands; and they are reminded that the economic system is the material basis for fulfilling such demands. Analogously, motivation, in a certain sense, is the material basis for fulfilling moral demands. Making moral demands without respecting this material basis is to build castles in the air, a kind of wishful thinking detached from implementation and practical engagement.

Nonetheless, there are effective externalists in ethics who do not accept the practical demand, e.g. Richard N. Boyd (1988), David Owen Brink (1986; 1989; 1997) or Peter Schaber (1997, pp. 174; 187). Their approaches, of course, lack the decisive advantages just listed. However, these theories are defended by means of objections to effective internalism, to which we should respond. This is not the place (nor is there sufficient space) to give full justice to all the variants of these objections and still less to the positive effective externalist theories. The present

Jackson, Philip Pettit, Arthur Schopenhauer, Michael Smith, Bernard Williams) will usually be effective internalists.

aim is only to show that the objections can be quashed and do not point to real problems; in addition, the spirit and sense of the theory and of its details shall be made clearer by responding to the objections.

A first objection says that effective internalism does not leave sufficient room for the normativity of morals; morals must be able to condemn morally wrong actions. If effective internalism were true nobody could act immorally because if the agent is not motivated to act morally, according to effective internalism, the moral demand would vanish as well. The reply to this objection is simple: This, clearly, is not what effective internalism says or implies. According to the rather weak form of effective internalism proposed above, there are several possibilities that may go wrong if someone is not motivated to act morally, and which however must be excluded before the moral demand has to be discarded as being against the requirements of effective internalism. (i) The agent may simply not believe that her action is morally wrong; (ii) she may be motivated but have other, overriding reasons; (iii) the other epistemic preconditions for the motivating effect of the conviction may not be fulfilled.

A second, more targeted objection says that morality cannot consider everybody's motivation, otherwise morals would be too weak, and perhaps could even vanish completely. Ultimately, this is only a weaker form of the first objection; therefore the reply is similar to the first rejoinder. Considering the many possibilities which have to be excluded before a moral demand would have to be discarded for not fulfilling the conditions of effective internalism, there seems to be ample room for rather strong moral demands.

A third, more radical criticism says that the aim of ethics is to justify moral *judgements* and criteria for such judgements; questions of motivation instead are the task of educators, psychologists and politicians. This objection can be interpreted as a criticism of *foundational* internalism only, but here it shall be taken as a much more radical objection, i.e. a rejection of effective internalism. However, in this case the objection begs the question. Effective internalism by no means excludes that ethics, among other tasks, tries to justify criteria for moral judgements, it only establishes motivational constraints for the resulting criteria. To say that the ethicist does not need to do so, as such, is not an argument but only an unjustified counter-claim, against which the three reasons given above stand. A stronger rejoinder is to concede that ethics, of course, has to justify moral judgements but that this has to be functional for guiding and evoking moral action (cf. e.g. Aristotle, E.N. 1094a, 22-24; 1095a, 2-6).

3. Questionable Conceptions of Practical Knowledge -- The Problem of the Empirical Basis of Motivational Force

I now want to discuss some conceptions of practical knowledge that at least implicitly accept the practical requirement and thus effective internalism, which however, according to the following analyses, do not fully realize the implications of this requirement. Again, discussing these theories

aims mainly at clarifying the approach developed here; the discussion must be sketchy and cannot do full justice to the alternative theories.

3.1. Value Objectivism and Moral Realism

A first group of conceptions that are effectively internalist, however not consequently, are value objectivism and moral realism, i.e. theories that claim that there is an objective moral reality that as such, and completely independently of a valuing subject, has objective value or constitutes a normative realm that should and can guide our conduct. Such positions are held e.g. by Jonathan Dancy (1993; 2000), John McDowell (1995), David McNaughton (1988), Graham Oddie (2005), Mark Platts (1991), Peter Railton (2003), and Russ Shafer-Landau (2005). Such conceptions have been the target of serious, and in particular ontological and epistemological, criticisms: What kind of independent reality shall this be besides the usual layers of reality like the physical world with its many sub-layers, the world of mental phenomena or the world of abstract entities? What kind of access, e.g. by means of which kind of sensory organ, do we have to this reality? Why do people intersubjectively and culturally differ so much about moral judgements? What are the exact procedures for acquiring the respective knowledge? (Cf. Mackie 1977, ch. I.) However, what is more interesting in the present context is a different concern, the practical problem. If such a subject-independent reality existed it would be a further layer of reality, like the visible or the audible etc. However, these layers of reality, however, as such have no orientating function and are not motivating, so they are not practical. If I know that this action lasts five minutes this *per se* does not imply anything about how to decide about this action; similarly, if I know that in the realm of morality a certain action is "forbidden" -- presupposing for a moment that we can give a meaning to this term -- this *per se*, again, does not imply anything about how to decide about this action. Now, I wanted to discuss conceptions of practical knowledge that at least implicitly recognize the practical requirement; so defenders of such versions of value objectivism and moral realism must hold that this kind of subject-independent reality, contrary to first appearance, has an orientating and motivating effect, which again is a quality of this reality as such; we need only to recognize this reality correctly for undergoing its motivating effects. This implication leads to a further ontological objection, which John Mackie has dubbed "ontological queerness" (Mackie 1977, sect. I.9). The exact content of his criticism is not completely clear. I try to explain it in the present framework. First, if this reality is motivating independently of our own motivational inclinations it must be in some sense magnetic. However, the queerness of this kind of magnetism is that it operates only via our cognitions: if we have no respective cognitions of the good we are not attracted by it; and if we hold something to be good which in fact is not good we are attracted nonetheless. Second, even natural forces that act on one object from another need a certain structure in the second object in order to be effective; a magnetic field can only influence magnetisable objects etc. So, there has to be a certain structure in the perceiving agent. Of course, a first part of this structure has to be the respective cognitive capacity. However, other, morally neutral cognitions, e.g. 'this car is blue', do not have any direct motivational effect. Therefore, aside from

this cognitive impact, there has to be a certain motivational sensibility too, to react on this kind of cognitions, e.g. the cognition that someone next to us urgently needs our help, and not on others, e.g. cognitions that certain objects are blue. Now this sensibility cannot be a quality of the perceived object and its forces, it has to be something subjective, appertaining to our motivational apparatus. The general lesson to be learned from this criticism is that the motivational effect of some reality cannot be an objective quality of this reality; the motivational effect always depends on the motivational make-up of the respective subject.

3.2. Kantianism ²

Kant's conception of practical knowledge is to identify it with *a priori* justified imperatives. Being justified *a priori* they cannot rely on personal inclinations and motives (e.g. Kant 1785/1786, BA VIII-X; 27-29; 32 f.; 34; 36 f.; 59; 63 f.; 77; 90). Therefore Kant is a foundational externalist. Nonetheless he thinks that these imperatives are, not always but at least often, practical; and being motivated by them is the only way of acting morally (Kant 1785/1786, BA X-XII; 26). Therefore he is an effective internalist.

From the perspective developed here, this project can be criticized with respect to the normative as well as with respect to the empirical part. Korsgaard has named the respective lines of criticism "content skepticism" and "motivational skepticism about practical reason" (Korsgaard 1986, p. 311). With respect to the normative part, it is unclear how *a priori* truths could orientate us in our actions. To begin with the first formula of the Categorical Imperative, it is already unclear why we should always follow *universalized* maxims, i.e. laws (Kant 1785/1786, BA 17; 52).³ What is more important, however, is that Kant's idea to select the content of the general moral law merely on the basis of the form of such laws leads only to an imperative of the form: 'Act always according to universal maxims!' Such an imperative, however, is completely empty⁴, it does not forbid any single action. Of course, this is not the first formula of the Categorical Imperative. Kant has added to it, first, that it must be *possible* that the universal maxim is realized *as a universal law* and, second, that the moral subject *can want* this maxim to be realized universally. Both these additions do not in any way follow from Kant's formal idea. Furthermore, the resulting Categorical Imperative is still void. For every kind of self-interested action we can find a law that fulfils the conditions of the Categorical Imperative. The general and well-known problem behind this failure is that an *a priori* reflecting reason can only find analytical truths, in particular truths about actions, but it cannot determine which of these truths is or should be practically relevant in the sense that if

² Some of the following criticisms to Kant have been elaborated in: Lumer 2002/03.

³ Kant defends the universality requirement e.g. by holding that it has to be fulfilled by making moral requirements binding (Kant 1785/1786, BA VIII; 59); however, here he seems to confuse deontological necessity with *a priori* necessity. The problem is not that the universality requirement is false (maybe yes, maybe no) but that there are no *a priori* reasons for it or no *a priori* reasons why a rational subject should follow only general norms.

⁴ 'Everybody should cheat whenever this is advantageous for him!' and 'Nobody should ever cheat!' e.g. are both universal.

an action has a certain quality *F* it should be chosen or avoided. Determining practical relevances is a second task beyond establishing the truth of such propositions.⁵

With respect to the empirical condition of practical knowledge, Kant maintains that we are free and thus can follow the practical law and at least sometimes do so (e.g. Kant 1788, A54)].⁶ However, even if this were so and if the Categorical Imperative had a substantial content there would have to be an *empirical* connection between recognizing the practical law and the motivation to act accordingly. The simple reason for this is that motivating is a *causal* relation. And causal relations, according to the usually accepted general Humean idea, are contingent empirical relations describable by universal empirical laws. (A Kantian causality of Reason, on the other hand, has never been explicated in an understandable way.) All this implies that if knowledge of the kind 'action *a* satisfies the conditions of the Categorical Imperative' motivates to perform action *a* there must be some causal process that connects this knowledge with the motivation to do *a*. Of course, it is logically possible that there is such a causal connection, however whether it exists is an empirical question. And, the fact that it is empirical has an important consequence. To repeat, whether the knowledge (or only belief) that a certain action *a* is *F* has motivational consequences, whereas the knowledge that *a* is *G* does not have these consequences is an empirical question, which depends on our physiological and psychological make-up. This means that it is not again our reason (or Reason) which decides whether quality *F* or *G* (or some other quality) is practically relevant and then activates the respective motivation. At the basis it is a brute empirical, psychological fact which cognitions have a motivational effect and which do not. Or, in even more generalized form: at the basis it is an empirical fact which criterion is our decisive criterion for action.

3.3. Theories of Practical Inferences

Another well-known model of practical knowledge is elaborated by the various theories of practical inference. Theories of practical inference try to capture the very idea of instrumental rationality: 'Subject *s* wants / intends / desires to obtain *p*; *s* believes that doing *a* is a necessary / sufficient / good means for obtaining *p*; therefore, *s* should do *a* / tries to do *a*.'⁷

⁵ Kant's justification of the second formula of the Categorical Imperative (Kant 1786/86, BA 65-66) contains similar problems: neither is it an *a priori* truth that rational beings should preserve their own existence; nor does it follow from this that a given rational being should preserve the existence of other rational beings.

⁶ In his "Critique of Practical Reason" Kant develops a psychological explanation of how this motivational effect works in an *a priori* understandable way: the practical law humiliates us by completely denying our self-interest; in a second step however this humiliation leads to a special kind of recognition of and an admiration for the practical law: namely respect for this law. (Kant 1788, A 129 f.; A 133; A 139-147, in particular A 130-141.) One may doubt the reality or at least the anthropological universality of this psychological process. However, even if it were factual, according to the criticism presented below, this process cannot be *a priori* because it is causal and thus depends on empirical laws. One can easily imagine another course of events, e.g. that the denial of our self-interest leads to upset about the Categorical Imperative.

⁷ One important defender of practical inferences as rational schemes of our practical deliberations is von Wright (1971, ch. III).

An immediately striking feature of the debate about practical inferences is that there have been very many suggestions about their exact content. This manifoldness concerns all propositions of the practical inference. The major premise, according to the various models, speaks for example of intentions or desires or it is a value judgement (it would be good if p were true / if s were to realize p). The minor premise is about necessary, sufficient or probably successful or good means. And the conclusion may be an imperative (do $a!$), a value judgement (it would be good if s were to do a), a description of an action (s does a) or of a trial (s tries to do a) or it is even the action itself. This manifoldness not only complicates the discussion, it also shows the shaky basis of these approaches. More specifically, in these models the relation between empirical and normative questions is completely obscure. If the conclusion is an action description the practical inference would turn out to be a psychological hypothesis, which could be empirically verified or falsified but which would not have any normative content. If the conclusion is a value judgement or an imperative it is not clear, first, why it should follow from the premises and, second, how and why it should motivate to act accordingly.

If we want to give practical inferences an empirical reading the inference would either be very, very weak; i.e. it would have very strong premises -- e.g. that s has an unconditional and unshakable intention to realize p and that s believes that doing a is the only and likewise sufficient means to realize p --, which make the inference rarely applicable; in addition it would have a weak conclusion; altogether the premises would be so strong that the inference would be rarely applicable. Or, taken as a generalization, the practical inference would be empirically false. One could discard the latter result by switching to a normative reading and say, the worse for empirical reality, which does not respect practical logic. However, the reasons for the many empirical violations of the practical inference scheme also shake this normative interpretation because these reasons often seem to be well-founded from a normative point of view. Such reasons are e.g.: there may be better alternatives than a ; doing a would be very costly because of other consequences than p ; s has other intentions which would be foiled by doing a etc. Given these reasons, it would be irrational to decide always or mostly according to the practical inference.

In addition to this failure on the material level, one may question the foundational basis of practical inferences. Usually defenders of this approach do not even try to give a real justification of their schemes, neither empirically nor normatively. They just rely on their intuitions. These intuitions, according to the empirical theory sketched below (sect. 5), have a true kernel, they capture the most simple form of a practical deliberation, viz. when there is not much time to deliberate, when there are no obvious alternatives, no considerable negative consequences etc.; but these intuitions neglect all of the more complex forms of practical deliberation. To sum up, practical inferences do not represent any form of practical logic or the like, which is justified on the basis of *a priori* reasons and for which the motivational effects would have to be investigated; rather they are poor representations of some piece of empirical reality, they fit the most simple cases of practical deliberation. What is completely missing, however, is a normative justification.

3.4. Decision Theory

Decision theory seems to be an up-to-date response to the just sketched problems of theories of practical inference because decision theory treats deliberations about several options with many consequences, including uncertain consequences. On the one hand, there is the rational interpretation of decision theory; and according to some, e.g. Davidson (1980), rational decision theory represents something like the *logic* of practical reasoning, which also has to be used to give a "logical" sense to what people are deliberating. On the other hand, there is the empirical interpretation of decision theory, which until the 1980s was the favourite model of empirical decisions in economics. This dual aspect seems to make decision theory the most attractive and up-to-date model of practical knowledge.

However since the 1970s decision theory in the form of subjective expected utility theory has been falsified many times in various ways as a good empirical representation of our ways of deciding (e.g. Kahneman / Tversky 1979; overview: Camerer 1995). This implies that - "rational" - considerations following the rules of subjective expected utility theory will not always be empirically motivating either.

In addition, rational decision theory has been criticized from a normative point of view. First, it would be irrational to always decide according to the decision procedure of rational decision theory; on most occasions it would be too expensive to do so (cf. e.g. Gigerenzer 2002), on other occasions it would be unwise not to look for further alternatives or to inquire longer for further possible consequences etc. The problem is that rational decision theory does not reflect the costs and benefits of determining subjective expected utility and of deciding according to the precepts of rational decision theory.⁸ Second, linear weighting of subjective probabilities, i.e. using expected utility as the decision criterion, may be a good strategy in case of decisions for which the law of great numbers holds but perhaps not in cases that occur rarely and may have a decisive influence on our life.⁹ Third, practical philosophers have criticized that in its usual interpretation rational decision theory relies on uncriticized and unfiltered preferences. Therefore they have suggested alternative criteria, namely to use only very special kinds of preferences as the basis for determining subjective utility, e.g. preferences on the basis of full information or most highly developed basic preferences that do not rely on empirical inferences (cf. sect. 4).

The normative criticisms show that rational decision theory is far from being something like a logic and that its justification is quite unclear. That it is not something like a kind of logic may become clear if we imagine for a moment that humans might be psychologically quite different from how they are actually. They could be deontic creatures who always act on the belief that a certain act is normatively required by some law, god or society's rules etc. Or they could be creatures with naturally fixed aims for which they simply seek means. In these cases the precepts of rational decision theory would not help us a bit, and other forms of practical knowledge would be

⁸ A model of rational decision that, by contrast, reflects costs and benefits of decision is: Lumer 1990, 390-399.

⁹ Allais' Paradox reflects this consideration (Allais 1953).

required. This suggests the hypothesis that the precepts of rational decision theory have been designed for beings who decide in a certain way, namely for beings who have various options at their disposal, who have intrinsic desires of different (including negative) degrees regarding a multitude of states in the external or their own psychic world, who have probabilistic conjectures about the consequences of their actions etc. For beings of this kind the precepts of rational decision theory are a fairly good means to realize many and important intrinsic desires. However, whether they are good means depends, first, on the psychological make-up of the decider, in particular on his possibilities to deliberate, and second, on his desire or at least inclination to realize as many and important intrinsic desires as possible.

In a certain sense, with this consideration we are back to the initial explication, in particular to the interpretation of the normative condition in the definition of 'practical knowledge', which required that it must be good to be motivated by this kind of knowledge. So the normative question what criterion for the 'good' should be used here seems to be as open as before. However, in the meantime we have also made some progress in getting a feeling for how the empirical and the normative may be brought together. The normatively good practical knowledge must depend on and fit our deliberative and motivational make-up.

4. A Strategy for Identifying Practical Knowledge

In this section a strategy to identify practical knowledge will be outlined.¹⁰ By this strategy in particular the normative condition of the above definition of 'practical knowledge' has to be filled with a clearer content that is suitable to be operationalized. In addition, this strategy has to guarantee that both the empirical and the normative condition of the definition can be fulfilled, while resolving the difficulties found in the approaches analyzed so far.

1. Prudential knowledge prior to moral knowledge: A first step to avoid later impasses is to clearly separate prudential and moral knowledge as well as the respective theories and to determine the conditions for prudential knowledge first, while dealing with moral knowledge only in a second step. The reasons for this systematic order are, first, that the requirements of sagacity are more comprehensive and more precise than those of morality in the sense that we should always act prudently and that prudential reason gives us very specific positive advice. Morals, on the other hand, to a great extent are only negative; in many or even most situations they only forbid us to act in certain ways, and if they make positive prescriptions morals mostly leave ample room on how to abide by them. Second, although ethicists stress the priority of morality over prudence, from an empirical point of view and given our motivational structure, just the opposite seems to be the case. So, probably we will have a practically effective morality only if it respects the demands of prudential reason.

¹⁰ Some further elucidations and refinements of this strategy are provided in: Lumer 1998.

2. *Empirical investigation of our ways of deliberation:* According to several of the above criticisms, motivation is a scarce resource; it cannot simply be created by a rational *fiat* and it depends completely on our psychological make-up. This implies that if we want our normative ideas about motivating knowledge to be effective we need to make recourse to empirically given or possible ways of deliberation, i.e. forms of decision processes, where this practical knowledge affects the decision. More precisely, in order to fulfil the normative and the empirical condition in parallel we should detect exactly: 1. what are the various ways in which people decide or possibly decide, and in particular what role do beliefs play on these ways, and 2. which are the conditions that determine whether people decide in one way or the other, and in particular, whether there are special kinds of beliefs among these conditions. To give a trivial example as an illustration, people investigate the possible consequences of their options in very diverging degrees of completeness and exactness; the degree of completeness and exactness they aspire to may depend on a rough idea of the importance of the respective decision. The various ways to decide may then be regarded as a set of possible options among which we can choose according to normative considerations. In addition, if the choice of a certain way to decide depends on our beliefs (here e.g. a belief about the importance of the decision), this way of deciding is also an element of the set of the *epistemically accessible* ways of deciding: we can induce a certain way to decide by forming that belief that leads to this kind of decision. In this way we may have two different kinds of practical knowledge. First, there is the decision theoretical and structural knowledge that leads to a certain form of decision, including the use of a certain criterion to decide. And, second, there is the material knowledge which is acquired and used during the decision.

3. *Selection among the ways to decide according to formal criteria: epistemic rationalization:* Given the set of epistemically accessible ways of deciding and the respective roles of knowledge in them, it should be feasible to fulfil the empirical requirement, that practical knowledge has to be effectively motivating. The systematically next step in the strategy for identifying practical knowledge is to choose between the various epistemically accessible ways of deciding according to normative criteria; the central pieces of knowledge used on these selected ways of deciding are then practical knowledge. The most direct normative criterion for this choice is, as already suggested above, to select the best way to decide. However, at this stage of constructing the theory, we still have to establish the criterion of the personal good, and so it is not yet available. Therefore we should use *formal* criteria as an alternative for choosing between various ways of deciding.

One formal criterion for determining the best way of deciding is *epistemic rationalization*: We should improve our decisions by choosing those ways of deciding which are most rational from an epistemic point of view. One suitable operationalization of this idea is *robustness or stability with respect to new knowledge*: if we attain new knowledge we will stick to this way of deciding. Stability with respect to new knowledge does not necessitate having complete information; however, implicitly it requires that one's choice of the right way to decide be based on the really *relevant* information. Some reasons for this stability criterion are the following. First, such a choice of one's way to decide is wise in the sense that it is based on the relevant knowledge; it is not the

consequence of ignorance about important facts. Second, stability with respect to new knowledge is economically efficient. It leads to stable decision criteria; and this implies that we do not need to revise our decisions later because of a change of our decision criteria; thus we can avoid regret, avoid losing investments or even avoid paying a high price for undoing what we have already realized on the basis of an earlier decision criterion.

Another, in part additional, formal requirement for the best way to decide is *practical coherence*, in particular *mere temporal stability*. Again for economic reasons we should dismiss decision criteria which are temporally unstable even if their instability does not depend on a belief change but e.g. on emotional arousal or on the fact that they are simply whims.

At the moment I do not see any better or supplementary formal criteria for choosing the best way to decide. This, of course does not exclude that such further criteria exist.

4. *Fundamental and secondary decision criteria*: Because of the criterion 'stability with respect to new knowledge' the strategy explained up to this point will lead to decision criteria, utility definitions, ways to decide and forms of practical knowledge that are very detailed, precise and sophisticated. However, using this apparatus all the time would be too costly and inefficient. Therefore, secondary criteria for faster and cheaper ways of deciding are needed, which may be used for less important decisions, decisions to be taken rapidly or for decisions on the basis of very incomplete knowledge. These secondary criteria would also imply secondary forms of practical knowledge. To determine such secondary criteria for decisions and practical knowledge poses no problems of principles because *now* we already have a criterion of the personal good so that these secondary criteria can be justified by showing that their use for unimportant or quick decisions etc. would be good or optimum according to the fundamental criterion.

This strategy for identifying practical knowledge and for defining 'good' may be called "*analytic-synthetic*". The strategy begins with a careful analysis of the various empirical ways to decide and the single elements therein. The other half of the strategy is synthetic in that it composes an ideal way to decide, which is prescribed in detail, of the various possible elements of the decision procedure. It is synthetic in yet another respect: in all places where the decision process makes recourse to empirical or analytical beliefs, the respective objective propositions appear in the corresponding theoretical definition of 'personal utility' or of 'the best option' -- and not again a reference to a belief state. If e.g. according to the 'good' defined by this strategy an option *a* is better for a subject *s* than *b* on hedonic grounds it is so not because *s* believes that *a* will make her happier than *b* but because *a* will really do so. Thus the elements for establishing the personal value of an object are, on the one hand, (selected) personal preferences and ways of deciding etc. and, on the other, objective truths.

The most important alternative to the analytic-synthetic way to determine 'practical knowledge' on the basis of personal preferences but beyond simple subjective expected utility theory is the full-information approach to rational decision, first developed by Richard Brandt (1979, part I). The full-information approach, very roughly, says that a preference is rational if it coincides with the preference on the basis of full information about the relevant options. Relying on

full information is another form of operationalizing epistemic rationalization. Therefore, the full-information approach seems to be akin to the analytic-synthetic approach just proposed. Notwithstanding this and some other similarities, the two criteria are quite different. First, the respective objects of epistemic rationalization are different. The criterion of the full-information approach is to be applied to all actions and preferences, and the knowledge to be used is knowledge about the features of the various options to act, whereas the analytic-synthetic approach proposed here applies the 'stability with respect to new knowledge' criterion only to *ways of deciding* (including intrinsic preferences); and the knowledge that eventually may undermine this stability is not limited *a priori*; however to a great extent it will be meta-knowledge about the various ways to decide. Second, the full-information approach is holistic; it speaks of a certain input, namely full information, and of the respective output, i.e. the preference between two actions; it does not speak of the deliberation in between. The analytic-synthetic approach, on the other hand, has been named so precisely because of the analysis of the exact ways to decide and because of the meticulous prescriptions of how we should decide. However, the particular features of the full-information account involve several disadvantages compared to the analytic-synthetic approach, wherefore the latter has been adopted here. First, people are never fully informed; and if they were they could not represent vividly all this information during the actual decision phase of the deliberation (they may switch between several vivid representations and thus also between inclinations towards the related options). Therefore, we cannot observe how people with full information decide and hence cannot project what their preference in a particular case will be on this basis. This implies that we cannot know which preferences are rational and which actions are good, according to the full information approach. Second, assuming that someone has full information about some options, the full information approach does not tell us how to decide on this basis, i.e. it does not fulfil its advisory function. Third, because the full information approach presupposes full knowledge it cannot deal with decisions and options that essentially presuppose some sort of ignorance -- like actions of information procurement, actions aiming at providing excitement and surprises (e.g. reading a mystery story).

So far only the strategy for determining the *prudential* part of practical knowledge has been dealt with; now some indications regarding the moral part shall be given. One consequence of the above criticisms of Kantianism and moral realism is that because practical reason or morality cannot create motivational mechanisms, the determination of criteria for moral decisions and moral knowledge has to rely heavily on empirical information about how decisions in favour of moral actions proceed or may proceed. Together with the content skepticism about practical reason (i.e. that pure practical reason cannot establish practical relevances) this leads to foundational internalism (cf. sect. 2), which holds that the content of morality has to be established on the basis of pre-existing motives. Furthermore, because the theory of prudential practical reason and knowledge already fairly generally establishes which kind of knowledge is rationally motivating and because moral knowledge should not and cannot run counter to prudential rationality, the content of moral practical reason and knowledge can only be established within the limits of prudential rationality.

There are several possibilities for doing this.

First, there may be moral motives in a strict sense, i.e. motives that translate some e.g. inborn morality into practice. However, there is much evidence that such an inborn morality does not exist. Second, game-theoretical contractualism is based on the subjects' total utility functions, which however are applied to specific situations, namely situations of possible cooperation, where, according to game-theoretical criteria, cooperative decisions in many situations will be optimum for the agent. Although this kind of ethics has been criticised justly by many normative ethicists as leading to a much too weak ethics only, it seems to be at least a rather robust beginning of a material ethic.

Third, ethics may be based on altruistic motives and on the respective aspect utility function¹¹ that reflects the resulting altruistic preferences. Such altruistic motives are e.g. sympathy and respect. The most urgent problem of such an approach however is that these motives are rather weak and in any case reflect only a small part of our motives so that the resulting moral judgements would not find sufficient motivational assistance.

Fourth, a further approach, which is again based on altruistic motives, therefore, complements these motives with the construction of social norms that include sanctions for violating them.

This is not the right place to discuss these approaches further and to select between them. However, all these approaches lead to definitions of 'moral desirability' and in part also to definitions of 'moral obligation'. And the knowledge that a proper action, according to these definitions, has a certain moral desirability or is morally forbidden would be practical knowledge because, apart from being knowledge, as a consequence of the mechanisms just explained, the knowledge would be motivating, the motivation would be stable with respect to further information and it would have a moral content. In addition, the knowledge about the justification of the general moral criteria as well as the knowledge about the central premises for the application of these criteria in specific situations would be practical knowledge. It would be knowledge that motivates at least a bit to adopt these criteria as one's moral principles and to act in accordance with them; and this motivation would have a morally good content.

¹¹ In multi-attribute utility theory (introductory overviews: Watson & Buede 1987; Clemen & Reilly 2001, chs. 15-16) the total utility of an object is determined by adding the (weighted) utilities of the various attributes or aspects of this object. Aspects of e.g. renting a house may be the house's size, its location, the price etc. The utilities of one and the same aspect (e.g. the respective size) in various objects may be called the "*aspect utility function*" (e.g. the aspect utility function of house sizes). In the same way one may construct e.g. the altruistic aspect utility function, which takes only the satisfaction of our altruistic inclinations by various actions into account.

5. Implementing the Strategy -- Deliberation Analysis and its Implications for Determining Practical Knowledge

The first step in implementing the strategy for identifying practical knowledge is to analyze the various ways to decide. This is not the place to do so in detail. However, the general structure of the systematic decision steps and some details of one exemplary step can be described here.¹²

The general structure of decision is this. The first element consists of more or less inborn or original criteria for intrinsically assessing the outcomes of actions. (In order not to constantly repeat "action and its outcomes" the action itself may be counted as an outcome too.) During a decision these criteria can be applied to appraise the assumed outcomes of actions according to their assumed intrinsically relevant descriptive features. However, often the subjects use stored valuations of intrinsically relevant outcomes or of intermediate outcomes with several intrinsically relevant consequences so that during a particular deliberation the descriptive features of the outcomes need not be considered (again).

The second element of decisions consists of a variety of criteria for aggregating (i) intrinsic valuations of intrinsically relevant outcomes to a prospect valuation of an action itself or of intermediate consequences or (ii) for aggregating prospect valuations of such intermediate consequences to a prospect valuation of the action leading to these consequences. The aggregation takes into account the intrinsic or prospect values of the various consequences and their subjective conditional probability dependent on the intermediate consequence or the action. I said there is a variety or richness of such criteria, which are studied in psychological and economic decision theory (overviews: Camerer 1995; Koehler & Harvey 2004, parts I; III). The agents seem to invent them, on the basis of a rough idea of what a precise prospect valuation would look like, with the aim to more or less approach this precise valuation by a more or less complicated and "expensive" appraisal procedure. The array extends from rather accurate but "expensive" procedures on the one end to inaccurate but "cheap" appraisal procedures on the other end. The most simple appraisal procedure is captured by the scheme for a practical inference (cf. above, sect. 3.3); more complex and exact appraisal procedures are similar to the models proposed in rational decision theory. (In between there are also criteria for a *comparative* valuation of two or more possible intermediate consequences or actions, so that the result of the application of these criteria is only 'a is better than b'; such results may then be combined in a knockout system for identifying the best option.) Probabilistic outcomes very often are not weighted proportionally to their probability (cf. e.g. Kahneman & Tversky 1979). The various criteria are used on different occasions. Which of these many aggregation methods is used in a particular deliberation depends, of course, on the available data; in addition, however, there is some tendency to optimize the decision process: "cheap" but inaccurate appraisal procedures are used for unimportant decisions -- where the gains obtainable by

¹² A much more detailed exposition is given in: Lumer 2007; 2005. A full exposition of a general empirical deliberation analysis is provided in: Lumer 2000 (pp. 128-240; 428-521); and of moral decisions in: Lumer 2002.

using more exact appraisals, which more probably identify the really best option instead of the second-best or a much worse option, are only modest --, more accurate but more "expensive" appraisals are used for more important decisions (cf. Payne et al. 1993). Agents have only a *rough idea* of what a precise valuation would look like; indeed they usually do not have a clear primary criterion for valuation, they only seem to have rather stable criteria for comparing which of two assessment procedures is more exact or in the long run leads to greater gains (Lumer 2005, sect. 7).

Prospect assessments can be used to appraise intermediate consequences of actions and actions proper. Even in more analytical decisions subjects usually do not consider intrinsically relevant outcomes of an action but only its intermediate consequences. This contributes to the fact that people usually do not clearly distinguish between intrinsic and prospect valuations. So after a while they take certain prospect valuations to be basic, i.e. intrinsic, which also leads to immunising such prospect valuations even if the assumptions which led to them in the first place later are rejected. However, insights into the origin of the by now holistic and seemingly intrinsic valuation lead to reopen them to criticism. This is only one of several mechanisms that change the set of seemingly intrinsic valuation criteria.¹³

The third element of the decision procedure consists of the tendency to choose the action with the highest prospect value. The agent may really make a value judgement that a certain course of action is optimum. In most cases, however, he will only put together the information that according to a certain criterion for assessing the prospect value is necessary to make such value judgements and jump from there to the "conclusion" which action should be done.¹⁴

The fourth and only optional element of the decision process are standards for selecting decision criteria, i.e. criteria that say which way to determine the prospect value or immediately the best course of action is optimal in which decision situation. Such standards in most cases are not explicitly known to the agent; he has only a vague idea which assessment procedure may fit the present decision situation. These vague ideas, however, sufficiently often seem to rely on a rationale that leads to the above mentioned tendency to optimize the decision process.

All these elements are in flux. The application or even the development of many of the single criteria and devices depends on beliefs, beliefs about their precision, their costs, the kind of available data, the importance of the decision etc. This provides ample room for influencing the way to decide following the above sketched strategy, i.e. in particular to influence the way of deciding via knowledge about the just mentioned matters, e.g. precision and costs of the application

¹³ More on the dynamics of intrinsic valuation criteria: Lumer 2007, sect. 4.5; Lumer 2000, pp. 205-218.

¹⁴ Most empirical decision theorists assume that in deciding people seek to maximize some sort of prospect value, though perhaps using some of the above described inaccurate procedures, which may not even consider 'desirabilities' (or the like) but e.g. only the descriptive quantities (e.g. a house's size), which however may be assumed to strictly positively co-vary with desirability. The, broadly accepted, optimization hypothesis is contested by the satisficing theory (Simon 1957), which holds that humans strive only to cross a satisfaction guaranteeing threshold. The satisficing theory, however, seems to confuse various forms of optimizing and to overlook *reflexive optimizing*, which may use simple -- and only "satisficing" decision criteria -- for indeed *optimizing the compound* of deliberation and executive action (Lumer 2005, sect. 4).

of a certain assessment criterion. Such a room for influencing the *way* to decide is not included in Hume's theory of action (cf. Hume 1739/1740, II,3,3). As a consequence, knowledge can play a by far more important role in decisions than Hume's theory allows.

On the basis of what has been set out so far, with the help of an example we can now explain how the above introduced stability criterion (for choosing among the various epistemically accessible and motivationally effective ways of deciding and thus for defining the 'good') works, i.e. the criterion for using those ways of deciding that are stable with respect to new knowledge. The example I want to use is the criterion for intrinsic valuation, or more precisely the criteria for *originally intrinsic* valuation, i.e. an intrinsic valuation that does not result from confusion between intrinsic and prospect valuation. There are three criteria of originally intrinsic valuation: 1. simple hedonic, 2. corrected hedonic and 3. feeling-induced valuation. That a person applies such a criterion does not imply that she can formulate it; "applying a criterion" here shall only mean that the person values as if she were consciously applying the respective criterion. There are no further, justificatory cognitive considerations behind these criteria -- otherwise they would not be criteria for intrinsic valuation. The uniformity of these criteria among humans has led to the above claim that these criteria are inborn (in a certain sense).

According to *simple psychological hedonism*,¹⁵ the personal intrinsic value of feelings -- corporal feelings, emotions and moods -- corresponds to the product of their (positively or negatively) sensed intensity and their duration, or more precisely: to the integral of their sensed intensity over time. This hedonic criterion corresponds to Bentham's quantitative hedonism (Bentham 1780/1789, sects. I,1; III,1; IV,2-5).

Corrected hedonism is a more elaborate form of hedonism, which takes the possibility of manipulation into account: Feelings that are not manipulated are valued as in simple hedonism, and so are manipulated negative feelings. Manipulated positive feelings, however, e.g. positive feelings evoked by drug use or by Nozick's experience machine (Nozick 1989, ch. X), are discounted according to the degree of manipulation they are based on (Lumer 2000, pp. 493-521). Corrected hedonism is not a beginner's criterion for intrinsic valuation. Rather, people who first are simple hedonists usually switch to corrected hedonism after having intensively considered the possibility of manipulating feelings. Knowing about this possibility induces them to accept and use the new criterion. However, this knowledge is not a premise from which together with the original simple hedonism the new criterion of corrected hedonism is inferred. Acquiring this knowledge only *triggers* the conception and use of this new criterion.

¹⁵ In addition to the distinction between psychological (i.e. empirical) and rational hedonism one may distinguish between weak and strong psychological hedonism. *Strong psychological hedonism* claims that our (originally) intrinsic valuations are *always* hedonistic; *weak psychological hedonism*, by contrast, claims that our (originally) intrinsic valuations of our own feelings are always hedonistic but that there may be objects other than our own feelings to which we (originally) attribute intrinsic desirabilities. Because, in the following, feeling-induced intrinsic valuations are assumed to be another form of empirically existing intrinsic valuations, here, of course, always weak hedonism is meant.

Finally there are *feeling-induced intrinsic valuations* (Lumer 1997, sect. 3; 2000, pp. 477-493). If the various emotions and corporal feelings we have are sufficiently strong they induce specific intrinsic desires that are a response to the respective feelings. Rage e.g. induces an intrinsic desire to punish the object with which one is furious; pity induces the intrinsic desire to have the other person's situation improved; happiness induces the intrinsic desire that other persons share this happiness etc. Feeling-induced intrinsic valuations are created automatically by the respective feelings and their intensity co-varies positively with these feelings, however with some delay. This implies that once the feeling has faded away the feeling-induced intrinsic desire vanishes too.

How does the strategy for identifying practical knowledge deal with these empirically present criteria for intrinsic valuation? The three criteria are parts of the psychologically possible ways to decide. So we have to choose among them according to the 'stability with respect to new knowledge' and 'mere temporal stability' criteria. Now, following the just given description of the three criteria for intrinsic valuation, it is obvious that feeling-induced intrinsic valuations are not temporally stable. Therefore, they have to be discarded as a normatively unacceptable way to establish intrinsic valuations. Furthermore, simple hedonism is not stable with respect to new knowledge because, as a reaction to acquiring knowledge about the possibilities of manipulation, it is replaced by corrected hedonism. This implies that simple hedonism must also be discarded. Finally, corrected hedonism for its part seems to be stable and should, therefore, be adopted as the only normatively acceptable way to establish personal intrinsic valuations. As a consequence we can define '(personal) intrinsic desirability' in a corrected hedonist manner. (The intrinsic desirability of x for a person s is y iff x is a feeling of s and if y corresponds to the corrected integral of x 's sensed intensity over time.) This definition and its justification as well as its correct application are the first pieces of practical knowledge identified by the analytic-synthetic approach.

With the help of this definition of 'intrinsic desirability' and applying the just sketched strategy to the other parts of our ways of deciding, we then can define the most precise notion of a 'prospect desirability' of states of affairs and thereby also the 'prospect desirability' of actions and the predicate 'that an action a for the subject s is the best among a certain set of options a^o '. In addition, less precise but easier to apply secondary notions of a 'best option' should be defined and rules for their use be established etc.

What, finally, would prudential practical knowledge then be? The knowledge that a certain option for oneself is the best one in one of the normatively defined meanings of 'good' would be the central and primary prudential practical knowledge. In addition, the knowledge about the most important premises of such optimality judgements would be less central, prudential practical knowledge, e.g. the knowledge about the value of the single options or about important consequences of these options. Furthermore, the knowledge about which decision criterion to follow in a certain situation would be practical knowledge. Finally, all the meta-knowledge that has an impact on determining the various definitions of 'prospect desirability' and of 'intrinsic desirability' as well as the knowledge that leads to determining the rules for applying these concepts would be prudential practical knowledge, e.g. the knowledge about the possibility of manipulating

feelings or the knowledge about the instability of feeling-induced intrinsic desires. All this is practical knowledge because under empirically realizable epistemic conditions and as a central element of deliberation it motivates at least a bit to act or to abstain from acting in a certain way and, in addition, from a prudential normative perspective it should motivate so. Here I could not enlarge upon moral knowledge. However, section 4 roughly outlined how foundationally internalist concepts of the moral good and our duties may be justified. Knowledge about these criteria and their justification as well as knowledge about what is morally good or obligatory, according to these criteria, is practical knowledge as well.

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