

Chapter 9

Practical Reason**§ 1. The Appetition of Pure Practical Reason**

The fundamental *Realerklärung* of **Reason** is [the power to Self-regulate all non-autonomic acts of the Organized Being](#). Contained in this brief statement is a host of Critical issues, including some of the historically knottiest problems with which philosophers have wrestled for over two millennia and with which psychology researchers are confronted constantly. Unraveling all these issues is not a trivial undertaking, and the discussions and deductions required occupy four full chapters in *CPPM* (chapters 12, 13, 19, and 20). In this book we have space to do no more than present the outcomes of these considerations and the reader who wishes to see the details of the arguments must consult *CPPM* for the full coverage of these issues. To portray just a glimpse of the kinds of issues involved, they include the following ideas: choice; conscience; lack of conscience; free will; the development of value structures; the development of personal moral and ethical codes of behavior; the "sense of duty"; criminal behaviors; anti-social behaviors including anti-social personality style and anti-social personality disorder; selflessness; selfishness; rational thinking; irrational thinking; neurosis; motivation; the development of rational maxims, and tenets; the ideas of good and evil; and the panoramic diversity with which all of these are exhibited by different individuals and even by the same individual under different circumstances and at different times. All of these are manifested in social experience, and for each and every one the ground of its possibility lies in pure Reason and the intelligible Nature of the Organized Being.

Kant introduced the idea of the categorical imperative and it is almost certain he held it to be true that every human being is born with an innate "moral law" built right in. It is probably true that Kant is more famous for his moral philosophy than for any other part of his life's work. At the same time, there has been and continues to be no shortage of scholars who have hotly disputed Kant's moral theory. We might as well get one important thing out of the way right now so that Kant's historical record does not obscure the principles we have to discuss here: Kant erred in his belief that each of us comes with a built-in moral law, and his *statement* of the categorical imperative suffered from a (no doubt unintended) metaphysical fallacy of subreption¹: he obtained it from the theoretical Standpoint instead of from the practical Standpoint (which is the only Standpoint in which this Idea obtains objective validity). What we find in this book is

¹ A fallacy of subreption is the confusion of what belongs to understanding with what belongs to sensibility [KANT (2: 411-417)].

that the categorical imperative is a practical formula of equilibration and that *Homo sapiens* does not come equipped with an *a priori* moral law built right in but, rather, with an *a priori* capacity and drive to Self-develop a moral code. That this development is personal means, among other things, that one person's Self-developed moral code will in at least some ways differ from another person's – sometimes differing so greatly that two people view each other's Self-developed moral codes as not being moral at all and possibly even immoral. Piaget put his hand on this situation quite nicely when he wrote, "Logic is the morality of thought just as morality is the logic of action" [PIAG14: 398]. The categorical imperative of pure practical Reason is not a moral law but it is the ground of the possibility for the Organized Being to develop moral laws. All objective ideas of categorical imperatives belong to the theoretical Standpoint but these arise from and correspond to practical hypothetical imperatives (which belong to the practical Standpoint) in Reason's manifold of practical rules. There is only one pure and *a priori* categorical imperative, it belongs to the power of pure practical Reason alone, and it is a formula that does not recommend as an "ought to" but, rather, carries in the practical dimension of organized being the intelligible force of a fundamental law that cannot be gainsaid.

Having gotten this point out of the way, let us begin by looking at what it means for an act of the Organized Being to be non-autonomic. The terms "autonomic" and "non-autonomic" always refer to the causality of somatic events. **Causality is the notion of the determination of a change by which the change is established according to general rules.** An **event** is the totality of appearances of an occurrence. The object of the representation of an event is called an *Unsache*-thing (a "happening"). An **occurrence** is a single act with its result. A **somatic event** is the totality of the appearances of the occurrence of a change in *soma*. A somatic event is **autonomic** if an objectively sufficient ground in an objectively valid object exists for a determinant judgment that the causality of the event is not the causality of freedom. This means nothing less than that the entire appearance of the event is represented as connected to concepts of real objects entirely through a series of Relations of causality & dependency that need nowhere involve the concept of choice in the originating ground of the event. **Choice is the practical capacity of an Organized Being to make a representation the object of an appetite.** An act of choice implies expression in an action and this expression is either via motoregulatory expression or ratio-expression or both.

A somatic event is **non-autonomic** if causality for the event must be attributed to choice. In neuroscience the way this is usually phrased is to say that a "motivational state" exists in the brain such that the Organized Being's behavior is not wholly determinable from external stimuli or by stimuli from the body's peripheral nervous system (e.g., due to the effects of a disease, injury, being hungry, cold, etc.). Psychology and neuroscience both find it necessary to posit the

existence of "motivational states" in order to try to explain what appears to be the non-externally-determined responses easily observable in human behaviors and actions. Our Critical theory agrees with this presupposition *insofar as appearances are concerned* because of the principle of emergent properties in *nous-soma* reciprocity. But *community*, not causality, is the basis for it.

It is perhaps already apparent to you that to apply the *Realerklärung* of the power of pure Reason we must understand the idea of "choice." To do so, we must first explain "appetite." Both of these ideas draw their objective validity from the practical Standpoint of Critical metaphysics.

§ 1.1 Appetite and Appetitive Power

Kant drew an important distinction, one that has long been largely lost in English, between the ideas of appetite (*Begierde*) and desire (*Begehren*).² The idea of desire belongs to aesthetical reflective judgment and is an idea of the judicial Standpoint. Appetite, on the other hand, belongs to practical Reason and is an idea of the practical Standpoint. Kant explains the idea of appetite in the following way:

Appetite (*appetitus*) is the self-determination of the power of the Subject through the representation of something in the future as an effect of the same [i.e., the representation]. Habitual sensuous appetite is called *inclination*. That desire without application of power to the production of the Object is *wish*. These can be directed at objects for whose production the Subject feels himself incapable, and is then an *empty* (idle) wish. The empty wish to be able to eradicate the time between desire and the acquisition of the desired is yearning. The undetermined appetite (*appetitus vaga*) in consideration of the Object which only drives the Subject to get out of his present state, without knowing what he will come to, can be called the peevish wish (the not gratified). [KANT (7: 251)]

The first sentence in this quote is the Critical *Realerklärung* of appetite. To properly understand this explanation, we must dissect it and flesh out its practical implications. First, we note that this explanation contains both a "what" and a "how." The "what" – which we might call the logical essence of the character of appetite – is that appetite is a *Self-determination*, i.e. a determination of the Subject (the Organized Being) by the Subject himself. The idea of Self-determination declares the *Dasein* of a noumenal *Unsache*-thing (the making of the determination) and places the *power* of this determination in the *intelligible* character³ of the Organized Being, which then stands as *original cause* of the event. **Cause is the notion of the agency of a substance in containing the ground of the actuality of a determination of change.** Original cause is the *unconditioned* cause that grounds all other causes standing under it in a

² Dictionary definitions define "appetite" as a particular species of "desire." In Critical epistemology this is quite wrong and the ideas of appetite and desire, while related, have entirely different Objects.

³ Recall that we must view the Organized Being from both the theoretical and the practical Standpoints. From the theoretical Standpoint, the Organized Being is phenomenon, and this we call its physical character. From the practical Standpoint, the Organized Being is a *noumenon*, and this we call its intelligible character, the human being as an intelligence.

series of concepts of appearances. This idea has none but *practical* objective validity. However, because the idea of original cause involves a series of conditioned causes in appearances (and therefore theoretical judgments of appearances), its grounding acroam is the cosmological Idea of Modality from the *judicial* Standpoint⁴: *The I of transcendental apperception is the unconditioned condition for thinking the Dasein of any object.*

It is when we shift our gaze from the "what" (context of *Dasein*) to the "how" (context of *Existenz*) that we must move our deliberations into the practical Standpoint. In the quote above, Kant explicitly mentioned two different species of appetites, namely the habitual sensuous appetite (inclination) and the appetite that "only drives the Subject to get out of his present state." In the case of the latter, we must carefully note that "undetermined" in Kant's quote means only that the Object as object is undetermined, i.e. that the Organized Being has no *objective* representation of what the future effect *will be*. The Self-determination here is only a determination to abolish a presently existing state in which the Organized Being finds itself. We will call this species of appetite an **instinct**. Kant drew two distinct classes of appetites standing under the general idea of appetite: sensuous appetites and appetites of understanding (rational appetites). The first has its transcendental place with receptivity, the second with the spontaneity of judgmentation. He writes,

The appetites can be divided into sensuous appetites and appetites of understanding. The sensuous appetites are appetites of sensation and of impression. Appetites of understanding are appetites of the effect of deliberation, and these are appetites going to appetite in general. Whereupon it follows that it makes of the totality of appetites in us one agreement; it goes not as to the state of agreement but to the harmony of all our appetites in general. [KANT (25: 578-579)]

Kant also provided a three-fold modal classification of appetites in general:

Propensity is different from actual appetites. It is what is possible to desire, and is a predisposition of the Subject to appetite.

Instinct is a blind appetite: [it] is an appetite we have where we still do not know the object itself. It also goes to appetite for the cognizance of objects . . .

Inclination. It is an enduring subjective movement. The effect of instinct is an instant, but inclination is enduring. [KANT (25: 796-797)]

Here Kant is guilty of introducing a terminological ambiguity since he previously described inclination as a habitual sensuous appetite but here he generalizes the term a bit to put it in the same context with the other two named types of appetite. Propensity is problematical (a "predisposition") and its concept carries the Modality of possibility. Instinct is assertoric and its concept carries the Modality of actuality. Inclination, in his usage here, is a made-necessary

⁴ Recall that the judicial Standpoint "bridges the gap" between the theoretical and the practical.

(necessitated) appetite. However, he is in no way saying that the appetite itself is non-contingent or is something the Organized Being is apodictically driven to realize. Such an interpretation would insert an implication of inevitability, beyond the regulatory control of the Organized Being, into the context of the appetite of inclination. This is as much as to say it is the "fate" of the Organized Being to act from inclination. Such an implication is invalid because of the negative principle of *in mundo non datur fatum* in the synthesis in continuity of Meaning. Loosely put, an inclination is necessitated *only* if practical Reason does not *veto* the expression of the action that would follow upon the Self-determination of an appetite of inclination. In the case of such a veto, one can not say there *was* an appetite actually determined because appetite implies action:

All appetites have reference to activity, to realize the object of the appetite. They presuppose that the object must be within our mastery; for otherwise the activity is vain when we have it not in our power. [KANT (25: 1109)]

The manifold of Desires (desire + desiration) is not a representation of an appetite, although it does provide the *materia ex qua* for appetites. An appetite as representation is a representation of practical Reason. The capacity to make such a representation is called **appetitive power**. It plays a role somewhat like the role the synthesis in sensibility plays in perception, only in its case the *materia* it is given to work from is provided by reflective judgment and its outcome stands as act for the realization of an action⁵:

Appetitive power presupposes feeling *Lust* or *Unlust* and recognition of this. [KANT (25: 1334)]

All representations refer to the object as Object of knowledge, but they can also be regarded as acts, and then the ground of the production of the same Object lies in the representation. Herewith then corresponds the *capacity of the soul*⁶ *to become, through the representation of an object itself, the cause of the actuality of the object*, = and this is the appetitive power, which one can just as validly determine as *causality of the representation in regard to its Object*. [KANT (29: 1012-1013)]

Although acts of reflective judgment and animation of the Organized Being as a whole by *psyche* are co-determining via the synthesis in continuity, an act of reflective judgment by itself is not sufficient to produce a motoregulatory expression of action. A negative act of practical Reason is also required, namely that the action and the reflective judgment that determines it not be vetoed by the executive power of practical Reason. Intelligible causality – what we call the

⁵ Recall that **act** is the determination of a *Kraft* as a cause of accidents. **Action** is change in appearance of accidents and, thusly, is a change of state.

⁶ There is no supernatural connotation attached to Kant's use of the word "soul." Kant uses this word to designate the human being as an intelligible object of inner sense, i.e. it is a synonym for human being as noumenal being. The acroams of Rational Psychology forbid attributing objective validity to the spiritual idea of a "soul" in the religious connotation of that word.

causality of freedom – resides in practical Reason:

Causality is the determination of a cause through which it becomes a cause, or a determination of the Relation of a thing as cause to a determined effect. Thus cause is always to be distinguished from causality . . . The capacity to produce Objects through one's representations is the appetitive power. The appetitive power rests on the first principle: *nihil appeto nisi quod placet, nihil avertō nisi quod displicet* ⁷. [KANT (29: 893-894)]

Appetite is a cause immediately determined by appetitive power. From this one easily sees that the logical essence of practical Reason is intimately bound up with a notion of causality which, as psychological causality, is tied to the ideas of choice and will. But what are these ideas?

§ 1.2 Choice and Will

We are now entering into a topic that has been called a philosophical and historical minefield. It is not out of place to mention that ideas of choice and will have been and still are a religious minefield as well, as in, e.g., the contradictorily opposed views on this subject between many Protestant faiths vs. Catholicism. We must therefore tread cautiously here, scrupulously avoiding reifying either idea and remaining strictly within the practical Standpoint of the Critical theory. The Self-determination of an appetite takes place "through the representation of something in the future as an effect of the representation," and this carries with it at least the flavor of teleology – a flavor regarded by physical scientists as being about as welcome as a prostitute setting up shop at a wedding reception would be. If indeed there is found any teleology in the ideas of choice or will in their Critical *Realerklärung* from the practical Standpoint, we must bear in mind that these same ideas, when viewed from the theoretical Standpoint, must *also* satisfy the requirements of physical causality under the category of causality & dependency, where no ideas of final causes are objectively valid. The theory must, in other words, satisfy Margenau's Law or it will have neither practical nor theoretical objective validity.

The standard English dictionary definitions of choice and will do not satisfy this requirement, nor do ideas of choice and will produced out of an ontology-centered metaphysic. What kind of ideas are choice and will? Since we are in the practical Standpoint, let us begin with what we look for in appearances as indicative of the *Dasein* of something that can be called choice or will. Kant tells us,

Choice . . . means to make something the object of one's appetite. [KANT (28: 589)]

Will is thought as a capacity to determine oneself to acting in conformity with *the representation of certain laws*. And such a capacity can only be found in rational beings. [KANT (4: 427)]

⁷ "I seek nothing but what seems good, turn away from nothing but what displeases."

These are merely descriptions, not explanations or definitions. But they are descriptions that tie the ideas of choice and will to the idea of appetitive power in practical Reason. Examining this linkage further, Critical analysis finds:

Appetitive power in conformity with concepts, so far as its ground of determination for the act falls in itself, not the Object, is called a capacity *to do or to refrain as much as one likes*. So far as it is combined with consciousness of the ability for its act to bring forth the Object, it is called *choice*; if not combined with this same deed the act is called a *wish*. Appetitive power whose inner ground of determination falls within the reason of the Subject . . . is called *will*. Will is therefore the appetitive power considered not so much in regard to the act (as choice is) but rather in regard to the ground of determination of the choice to act, and has itself no proper prior ground of determination as such, but rather is practical reason itself so far as it can determine choice.

Choice and even mere wish can be contained under will so far as reason can determine appetitive power in general. Choice that can be determined by *pure reason* is called *free choice*. That which is only determinable through inclination (sensuous impulse, *stimulus*) would be *animal choice* (*arbitrium brutum*). Human choice is by comparison one such that is certainly affected but not determined by impulse, and is consequently not pure in itself (save for acquired proficiency of reason) but can still be determined to acts out of pure will. *Freedom of choice* is that autonomy of its *determination* because of sensuous impulse; this is the negative idea of [freedom]. The *positive* is: the ability of pure reason to be in itself practical. [KANT (6: 213-214)]

This brief passage from *The Metaphysics of Morals* provides us with the answer to the question I raised above, namely: what kind of ideas are choice and will? It also carries us straight onto another historically contentious battlefield, namely the ideas of *free* choice and *free* will. We will begin to deal with these shortly. But as for choice and will, we see from the quote above that these are none other than ideas of the *Modality* of appetitive power. Appetitive power is not a process of judgment. Its standing in the logical organization of *nous* is analogous to the standing of the synthesis of sensibility in understanding. Acts of appetitive power are adjudicated by the process of practical judgment. Appetitive power is a synthesis of activity regarded as the ability of an Organized Being to be Self-determining in its actions. The Modality of appetitive power is therefore to be regarded as the metaphysical *nexus* of the power of pure practical Reason.

The idea of **choice** is the general idea of the determination placed in the context of practical Reason. Its logical essence is assertoric, i.e., the appetite synthesized by appetitive power is an activity specifically realized by practical Reason's regulation of the non-autonomic behavior of the Organized Being. The idea of **will** is the general idea of the determining factor placed in the context of practical Reason. Here the activity is not merely asserted but, rather, is one that is *necessitated under a practical tenet* the Organized Being has *made* for itself by means of the process of practical judgment. A **tenet** is a practical fundamental principle, from a general determination of will, that contains multiple practical rules under it. It is represented in the manifold of rules constructed and structured by the process of practical judgment.

What is the idea of Modality that corresponds to the general idea of the determinable in the context of practical Reason? The logical essence of this idea is that it is of a merely problematical character and this character allows us to identify the idea. In the earlier quote Kant tells us that the Modality of choice is a connection of appetitive power where there is conscious combination with the ability to realize an Object. (Here we must also bear in mind that such an Object can only have a *practical* object, i.e. an **objective**, because Reason knows no cognitions and feels no feelings). This presupposes that the action to be expressed is one where strictly practical knowledge that the action will satisfy a purpose is presented. This is to say there is a meaning implication for the action by which the outcome of the action can be judged in relationship not merely to expedience for the purpose but in terms of satisfaction of the purpose. (Recall that an ability is the exhibition of a change in appearance). The form of such an act of appetitive power is called a **deed**.

An act is called a *deed* so far as it stands under laws of obligation and hence so far as the Subject, in doing it, is regarded from the freedom of his choice. By such an act the agent is regarded as the *author* of the action, and together with the act itself this can be *imputed* to him if one previously knows the law by virtue of which an obligation rests on these. [KANT (6: 223)]

We will see later there are two forms of calling something a deed and these are called, respectively, forms of maxims and forms of laws.

However, Kant also said it is possible for the act of appetitive power to *not be combined* in the form of a deed. **Obligation in the wide sense implies a determining ground for the act originating from the manifold of practical rules** but not all determinations of appetitive power carry the *mark* of an obligation *before the fact* of the action. This is what Kant means by the term **wish**. We are accustomed by long usage of this word to regard a "wish" as a kind of longing for something without our taking any specific action to fulfill it. But this is not the Critical explanation of Kant's term. All appetites reference activity and an appetite that *does nothing* is a contradiction in terms. **The Modality of wish refers to an act of appetitive power responding to a need (*Bedürfnis*) of Reason without prior practical knowledge of what will satisfy this need**, i.e., with consciousness of the lack of a sufficient determining ground from which the satisfaction of the need follows. In psychological terminology, we might call an appetite determined with the Modality of wish *groping* (if the action goes beyond a mere effect in *soma* to affect the environment) or *yearning* (if the action proceeds no farther than merely to affect *soma* through motoregulatory expression and judgmentation through ratio-expression). Kant explains this further by making an analytic division between wish and the other two Modalities so that one can speak of

. . . two classes of appetite: *appetitio practica*, i.e., the representation of the possibility of

making it actual, therefore an appetite according to which the representation is qualified so that the Object can become actual; and *appetitus minus practica*, which one calls *wish*, an appetite combined with consciousness that it does not stand in our control to be able actually to produce the object.⁸ Nevertheless, the two classes of appetites still join in that they aim at a representation of the Object by virtue of which they set in themselves the ground of the possibility of producing the object, only with the difference that in the first case the ground of determination is sufficient, but in the latter case the causality is insufficient. [KANT (29: 1013)]

§ 1.3 Freedom and Practical Relation in Appetition

Spontaneity is the capacity of an Organized Being for acting as an agent in affecting itself or its environment through the production of representations. It is a *noumenal* idea we can attribute only to the *intelligible* character of an Organized Being because spontaneity is not an objectively valid idea of causation for sensible objects in the phenomenal world. This is because our knowledge of experience is constructed through the work of the categories of understanding and these have objective validity only insofar as appearances are concerned:

In all appearances of an event the causality of the cause of the event is itself an event. Now if all causes themselves have causes, then there is nothing in the world except nature. Now since there is nothing in the sensible world except events, we can go to infinity; everything that we will come to know will still be either event or effect. For were it not an event, it would not be an Object of experience at all. Experience subsists just in this, that my perceptions are connected with each other by the combination of *causa* and *causato*.⁹ Were this not, then my perception is not much more than a dream that has merely private validity for me – but can never be called experience. We thus come to experience no event in the world which would be the first . . . But there is no actual infinite series of causes but rather merely a regression [that] is infinite.

If an event ensues from a cause which is no event, then *sponte accidit*¹⁰ is said of it. It happened first because no event precedes it. Freedom is the capacity for starting a series of states oneself. If something is an action of nature, then it is already a continuation of the series of states; if it is an action of freedom then it is a new state: that is the transcendental concept of freedom.

If I want to explain an event in the world and I conduct this from the general laws of nature, then that is a natural event. In the world as a series of appearances, we cannot and

⁸ We must understand the phrase "does not stand in our control" to mean that *at present* the Organized Being does not know what it must do to realize a satisfaction in an Object. We must not take this phrase to mean there is something in nature that apodictically hinders and prevents fulfillment of the satisfaction because to so regard this phrase is to reify its concept and take the context beyond the horizon of possible experience. If we do this, we misunderstand the phrase to refer to something transcendent and we let ontology slip stealthily back into the center of our metaphysics. Wish is the *potential* for being able to construct practical tenets, and before an Organized Being can choose or will, it must be able to wish.

⁹ "cause and causing." The latter term refers to a *causatum* = a rule for the determination of a change under the condition of a cause.

¹⁰ "to happen of its own accord." Kant is telling us that when one commonly says something is spontaneous then this is the same as saying that it happened of its own accord for no reason that can be attributed to a phenomenon in the sensible world. This is as much as to say it happened "by chance" or that it "was fated to happen." But *in mundo non datur casus* and *in mundo non datur fatum*, and so to say this lacks validity. To say of some physical event that it "happened at random" is to say we *know* no *causal* explanation for it. E.g., laws of quantum mechanics speak to what *can* happen but not to the *causality* of what *does* happen.

must not explain any event from spontaneity; only the reason of human beings is exempted from this. That does not belong to the series of appearances. It is independent of the laws of nature, and just in that subsists freedom. With respect to the powers of mind, a human being belongs to the noumenal world – for through understanding he can know things as they are, as e.g. his moral relationships, truth, etc., and in this view his acts are free – as well as the phenomenal world, insofar as through his acts he belongs to the chain of appearances. [KANT (29: 860-862)]

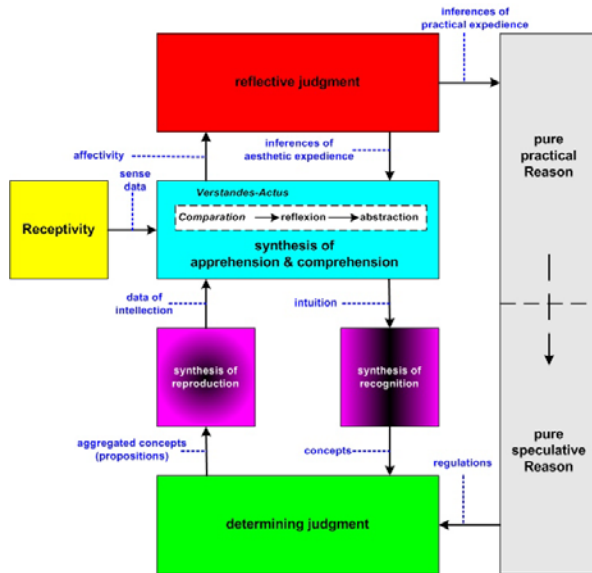


Figure 9.1.1: The cycle of thought.

Why does Kant say that human reason is exempted from the restriction against explaining anything in terms of spontaneity and is the sole thing that enjoys this exemption? The answer here is one of the crucial consequences of the Critical theory and is easily understood by examining our diagram of the cycle of thought (Figure 3.4.1, reproduced here as Figure 9.1.1). In our logical anatomy of *nous*, time is a representation (a pure form of intuition) constructed in the synthesis of apprehension.

Now, everything represented in sensible form is bound to representation in time. However, in our logical organization of *nous* Reason is set outside of sensibility and therefore *nothing in its logical essence is bound to representation in time*. Reason is a *noumenon* and all *noumena* are supersensible Objects. Precisely because Reason is a *noumenon* (and our explanations of it therefore belong to Slepian's facet B – the mathematical world), *acts of Reason do not fall under the jurisdiction of the category of causality & dependency*, hence are not part of the series of appearances in sensible Nature, and consequently pure Reason does not belong to sensible Nature or the laws of sensible Nature (although the sensible effects of its acts do). We do not judge the *Dasein* of Reason on the ground of appearances but rather from the primitive fundamental ground of *transcendental apperception*. An Organized Being's knowledge of its own *Dasein* is its knowledge of the *one and only* noumenal object for which one's holding-to-be-true is absolute and absolutely certain, and this is the transcendental ground for both the idea of pure Reason and for being able to place the power of Reason outside the series in time of sensible appearances. To use a poetic phrase, the noumenal world is a land outside of time.¹¹

¹¹ Kant was not the first to set up such a division. In *The Confessions*, Book XI, St. Augustine divided the universe into a divine (timeless) world and a temporal world to resolve the contradictions in *Genesis*.

As phenomenon the Organized Being belongs to the phenomenal world and all concepts of its phenomenal Nature are strictly bound to representation in the series in time. As *noumenon*, the Organized Being belongs to the noumenal world and here our representations of its noumenal character *cannot* be bound to the empirical series in time (and, thus, when we set down theory – and all theories are representations – in regard to this noumenal character, our representations call upon the objective idea of a *mathematical objective time*, the time we *measure* using clocks). If we invoke ideas of spontaneity in our theory, in order to bind and unite the theory as a *system*, we can only do so with objective validity for the case of the Organized Being and not for other appearances in sensible Nature. It is from here that we come to the Critical idea of *freedom*.

We view appetitive power as the causality of representation in regard to its Object. Because of the transcendental place occupied by appetitive power in the logical organization of *nous*, this type of causality differs from causality in appearances (**physical causality**) and is given the name **causality of freedom** in metaphysics and **psychological causality** in psychology. When we call an Organized Being an *agent* this is as much as to say the Organized Being contains in itself the power to originate sensible changes in the appearances of Nature. If all such changes could be strictly tied to the effects of stimuli, either from the environment or from the effects of receptivity in the senses, then we would have no ground to posit the idea that the Organized Being has the ability to originate change. However, empirical science finds itself unable to explain a great many human actions on this basis, of which those behaviors we call *intentional* make up the prototypical examples.

This leads psychologists and neuroscientists to posit what is known as the motivational subsystem of the brain. The central supposition in making this hypothesis is that eventually science will find an explanation for all human behaviors that can be grounded and completely explained strictly and solely on the basis of empirical series of appearances ("cause and effect chains") without the need to introduce the supersensible idea of "mind." Under the current paradigm followed by these sciences, this is a necessitated supposition because these sciences make a real division between "mind" and "body" and attempt to treat mind as a surface phenomenon (an "epiphenomenon") or an emergent property ("brain causes mind"). However, the real mind-body division is without objective validity (under the acroams of Rational Psychology) and emergent properties have objective validity only under a Relation of community and *never* under a Relation of causality & dependency. The paradigm is a consequence of an ontology-centered pseudo-metaphysic that must ultimately fall back on a copy-of-reality hypothesis that even *empirical* psychology is able to refute.

In the Critical system, the term **pure** means [containing nothing that belongs to sensation or](#)

experience. Acts of appetitive power are *categorically* regulated in conformity to a single master formula called the categorical imperative of pure practical Reason. Now, Reason knows no cognitions and feels no feelings, which is to say perceptions can in no way *ground the determination* of appetitive power. Reflective judgment provides the matter for the determination of an appetite and this matter arises from general sensation (including feelings) in sensibility. But this matter can never be the *cause* of determination of appetite because acts of *pure* Reason can take nothing from sensibility. Because there is nothing in any representation other than matter of representation and form of representation, and the determination of appetitive power can not with validity be laid to the matter of reflective judgment, the determination of appetite can only be laid to the *pure form* of the determination and this belongs to (takes its transcendental place in) the power of Reason alone.

We regard the idea of freedom from two sides. **Practical freedom is the negative idea of freedom as *autonomy of appetitive power from being determined sensuously by stimuli*.** To say something is determined by stimuli means that a sensuous stimulus (which is represented in sensibility alone) contains a sufficient *causatum* for the determination. This is the same as to say the determination is *bound by* sensibility. The idea of practical freedom asserts that sensibility does not represent a sufficient *causatum* for the determination of appetite. From the theoretical Standpoint, the idea of practical freedom can never be other than problematical because a theoretical idea of freedom can never be grounded in any actual sensuous experience, and this is why practical freedom is called the negative idea of freedom. The positive idea of freedom is **transcendental freedom: *independence from the laws of appearances due to the ability of pure Reason to be a practical Reason*.** It is the idea of a *noumenon* and cannot be represented as any object of possible experience. Rather, it stands as the original source for those series of appearances by which we call the Organized Being an agent, and its theoretical *use* is grounded in experience because,

[If reason] as pure reason is actually practical, it demonstrates its reality and that of its ideas by achievement, and all specious reasoning against the possibility of it being so is futile. [KANT (5: 3)]

By the power of practical Reason the Organized Being *gives laws to itself*. Now,

Since the mere form of the law can only be represented by reason and therefore is no object of the senses – hence, too, does not belong under appearances – thus the representation of the same as the ground of determination of will differs from all grounds of determination of events in nature according to the law of causality, because with these the determining grounds must themselves be appearances. But if no other ground of determination of the will than merely that of the universal law-giving form can serve as a law for this, then such a will must be thought of as totally independent of the natural law of appearances respectively to one another, namely the law of causality. But such an

autonomy is called *freedom* in the strict, i.e. transcendental, sense. Therefore a will which the mere law-giving form alone can serve as the law is a free will. [KANT (28: 29)]

To be *bound by* stimuli in the synthesis of appetite means the immediate sensation and concepts immediately associated with the perception of that sensation are all that go into the making of an appetite. But if the synthesis of appetite is not so bound, then the making of the appetite is called a *free act* of the Organized Being. Thus we have our Critical *Realerklärung* of "free will" and of "free choice" as well. We need not (and, indeed, cannot) introduce any spiritual factor or supernatural element into these ideas at all. We must, however, bear in mind that acts of appetitive power *expressed* are expressed as appearances and these expressions *are* bound to the law of causality & dependency in understanding. Hence *every* objectively valid idea under the causality of freedom is also and always bound in appearances to physical causality, and so the theoretical judgment of every idea under the causality of freedom has to be such that the idea conforms to Margenau's Law, which constrains every mathematical expression of ideas of practical Reason and its acts.

To say the *determination* of appetitive power is not bound to sensation does *not* mean the act itself is wholly independent of sensation. Form without matter is an empty representation. The composition of the act and its action does contain a matter of representation, provided by reflective judgment, and so while Reason is pure and its executive power is *a priori*, appetites themselves, *as* appetites, *are not*. Two distinct types of appetite are easily distinguished:

That which is the cause of appetite is *causa impulsiva*¹² or *elater animi*¹³. Now if they arose from sensibility then they are called *stimuli* and their effect [is called] *appetitus per stimulos*¹⁴ or sensuous appetite. Otherwise they spring from understanding; consequently they are called *motiva*¹⁵, their action *appetitus per motiva*¹⁶ or intellectual appetite. [KANT (29: 895)]

These two form a contrary pair and are nothing else than Relations of appetite to expedience. For an intellectual appetite the Relation to expedience is **expedience per motiva** and to it corresponds the general idea of internal Relation taken in the practical context of appetitive power. For a sensuous appetite the Relation is **expedience per stimulos** and to it corresponds the general idea of external Relation taken in the practical context of appetitive power. We obtain the transitive Relation from the synthesis of the other two, i.e. as a sensuous appetite seen as an intellectual appetite. We call this Relation **expedience per liberum** and it denotes the capacity of the Organized Being to elevate mere sensuous expedience to the status of a maxim for acting on a

¹² "impulsive cause"

¹³ "driver of the mind"

¹⁴ "stimulated appetition"

¹⁵ "motives"

¹⁶ "appetition by motives"

reasoned judgment of an idea as *a principle of objective happiness*. These three Relations provide the physical *nexus* between appetite and the manifold of Desires.

§ 1.4 Composition of Act and Action in Appetitive Power

Acts of teleological reflective judgment are impetuous in character but the expression of its representations (the manifold of Desires) through motoregulatory expression of actions cannot proceed unless this mere desiration is made an appetite by practical Reason. The power to do this is the fundamental *Kraft* of practical Reason and the matter of combination in appetitive power.

Action is the matter of a *Kraft*. To understand this properly, it is important that we appreciate the functional distinction between Desires (which are represented by reflective judgment) and appetites (which are representations of appetitive power). Metaphorically speaking, the role of reflective judgment is legislative inasmuch as this act puts forth specific *details* of actions to be expressed (through motoregulatory expression in *psyche*). But, like the legislation proposed by the U.S. Congress, these representations do not take effect until and unless they gain the consent of practical Reason, the role of which can thus be likened to that of the executive branch of the U.S. government. Where the metaphor breaks down is that, unlike the veto power of the President of the United States, the veto power of practical Reason cannot be overridden by reflective judgment. A **rule** is an assertion made under a general condition. While acts of teleological reflective judgment make assertions (of expedience), these assertions must be validated under a general condition the executive power of practical Reason alone contains. Practical **validation** is a determination of appetitive power permitting motoregulatory expression of all or parts of the manifold of Desires, and so we may regard an appetite as *the expression of a rule*.

An appetite so regarded is regarded as an *Unsache*-thing and its ontology falls under the acroams of Relation in Rational Physics. The *context* of appetite as appetite comes under the first Analogy of Experience from the practical Standpoint: *All non-autonomic actions contain an appetite as the persistent in the changeable appearances of the action*. The theoretical ground for objective validity in thinking the *Dasein* of appetite in general is the second Analogy of Experience from the theoretical Standpoint: *Everything that happens (begins to be) presupposes something that it follows in accordance with a rule*. But our practical understanding of the Nature of this something falls under the second Analogy in the practical Standpoint: *Every non-autonomic action is connected in a series in subordination to the practical unconditioned rule of acting to negate the degree of Lust per se*. This is the acroam that connects acts of practical Reason in *nous* with the motoregulatory expression of *psyche*.

Quality in composition of appetitive power is *matter of rule expression by appetite*. In classic

ontology, the most basic quality of anything is usually depicted by saying the thing either *is* or *is-not*. The situation under Kant's Copernican hypothesis is not all that far from this view and we obtain the functions of Quality in appetitive power by subsuming the practical context of appetite under the general ideas of Quality in representation. From the idea of agreement we obtain for our first idea of Quality the **rule of commission**: expression of a presentation in the manifold of Desires serves a purpose of pure Reason under the practical second Analogy of Experience. From the general idea of opposition (*Widerstreit*) we obtain our second idea of Quality, the **rule of omission**: non-expression of a presentation in the manifold of Desires that conflicts with the purpose of pure Reason under the practical second Analogy of Experience. Finally, the general idea of subcontrarity provides our third idea of Quality, the **rule of exception**: validation of expression of a presentation in the manifold of Desires is contingent upon and conditioned by the manifold of practical rules of practical judgment. In this third case, a presentation of Desires (in a sub-manifold within the manifold of Desires overall) sometimes serves a practical purpose by its actual expression, sometimes serves practical purpose by its non-expression (omission).

Act is the form of *Kraft*, and so when we turn to the functions of Quantity in appetitive power we are concerned with ideas of the forms of rules validated in the determination of an appetite. The practical context here is the unity of rules represented by appetites with the overall structure of the practical manifold of rules *constructed* in practical Reason through practical judgment. This does not have to do immediately with *behavior* because Critical **behavior** is the transitive Relation in motoregulatory expression as the synthesis of psychosomatic action and psychonoetic action. Nor does it have to do immediately with *values* because a **value** is the form of an affective perception of a desire presented in an aesthetic Relation of sense of interest understood from the judicial Standpoint. It does, however, have to do immediately with the idea of **value per se**, which is the unity of the value structure regarded as the substratum upon which all particular values are viewed as limitations. **Value structure is the practical manifold of rules insofar as this structure is viewed in a context with the presentations of reflective judgment.** Value structure is the system of self-organizing transformations through adaptation, in relationship to which values constitute conditions for the assertion of rules.

The context of Quantity in appetitive power thus is the context of a rule structure which we understand by subsuming this under the general ideas of Quantity in representation. These ideas speak to the Rational Cosmology of practical structuring in Reason and thus come under its general acroam of Relation in the practical Standpoint, i.e., **the origin of appearances through conformity with an equilibrated structure of practical rules.** Note that we are considering two closely linked but nonetheless distinguishable concepts here, namely the practical rule *per se* and

the *structure* of practical rules. Our three general ideas of Quantity are going to net us three distinct technical terms: (1) the practical rule *per se*; (2) the practical maxim; and (3) the practical law.

The adjective "practical" always implicates action. A **practical rule *per se*** (which in the context of this discussion we will abbreviate to simply "a practical rule") is knowledge ("know-how") for determining some specific action. Subsumed under the idea of appetite, a practical rule is an identification as a *practically singular* representation. What the Organized Being realizes in appearance by the act of representing a practical rule is the accident subsumed under the rule with the rule regarded as the *causatum* of the accident. The manifold of Desires is here judged conjointly with a judicial Object of desire, and because all such Objects are empirical, a constructed practical rule always arises as an *empirical* rule. This does not mean that the origination of a practical rule cannot be innate; the sensorimotor reflexes of a newborn human infant are examples of actions that exhibit the character of an innate rule. However, the fact that such reflexes are improved through practice and undergo adaptations from which habits develop in the infant is sufficient to illustrate that neither the terms "innate" nor "*a priori*" implicate innateness or permanence of *structure*. Reflexes (innate practical rules) do, however, provide a real starting point for the construction of a system of practical fundamental principles.

Regardless of Standpoint, a **fundamental principle** (*Grundsatz*) has the following Critical explanation:

Immediately certain judgments *a priori* can be called fundamental principles so far as other judgments can be demonstrated from them, but they themselves cannot be subordinated to others. For that reason they are also called *Principien*¹⁷ (beginnings). [KANT (9: 110)]

"Immediately certain" here denotes representation as *belief* in judgmentation. From the practical Standpoint as well as the judicial Standpoint, belief denotes representation as a holding-to-be-binding. Recall, too, that *a priori* means only "prior to experience" and so the capacity to make such judgments is necessary for the possibility of experience.

The capacity for a practical rule to be assimilated into a structure implicates a wider context for the idea of fundamental principles because no singular representation by itself constitutes a structure. In this wider context and from the practical Standpoint,

Practical fundamental principles that contain a general determination of will that has several practical rules under itself are **tenets**. They are subjective or **maxims** when the condition is seen by [the Organized Being] as if binding only for the will of the Subject, but they are objective or **practical laws** if and when those are recognized as objective, i.e. binding for the will of every rational being. [KANT (5: 19)]

¹⁷ from *principium* ("beginning"), derived from *princeps* ("first place")

Note well that "binding for the will of every rational being" does not mean that a practical law possesses some mystical force such that the law *is* determining for *all* rational beings. It means that in judgmentation the Organized Being *holds the representation of a practical law to be universal and necessary*, i.e. that in the structure of the manifold of rules the representation of a law is *practically unconditioned* by other *constructed* representations in the manifold of rules. Such a representation is called a **practical hypothetical imperative** of pure Reason. It is *practically* hypothetical (rather than categorical) because *all constructed representations* in the manifold of rules answer to the uncompromising master regulation for equilibration, the formula of which we call **the categorical imperative** of pure Reason, which is *the one and only practical categorical imperative and the fundamental law* of the intelligible Nature of pure Reason.

From this explanation we easily come to the remaining two functions of Quantity in appetitive power. For the general idea of differentiation we have the *practically particular* rule of the **practical maxim**: the act of determination of appetitive power as a conditioned rule in the manifold of rules that stands under the condition of a higher rule. For the general idea of integration we have the *practically universal* rule of the **practical law**: the act of determination of appetitive power as a practically unconditioned rule in the manifold of rules that (currently) stands under no higher rule. This completes our explanation of the 2LAR structure of appetitive power in pure practical Reason.

§ 2. Regulating Acts of Reason

Figure 9.2.1 illustrates the 2LAR structure of appetitive power we have just discussed. The appetitive power of practical Reason is a homologue in Reason to the power of imagination in the

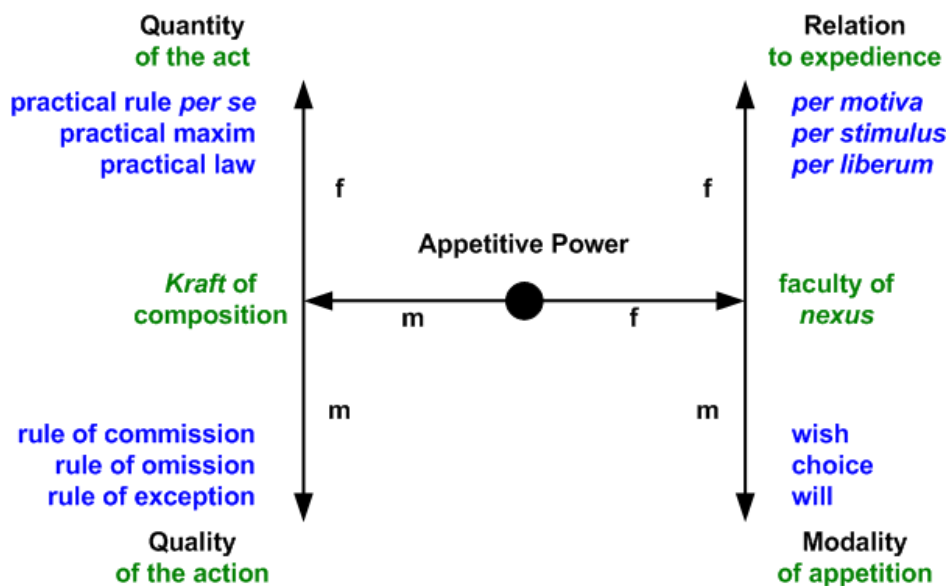


Figure 9.2.1: 2LAR structure of appetitive power.

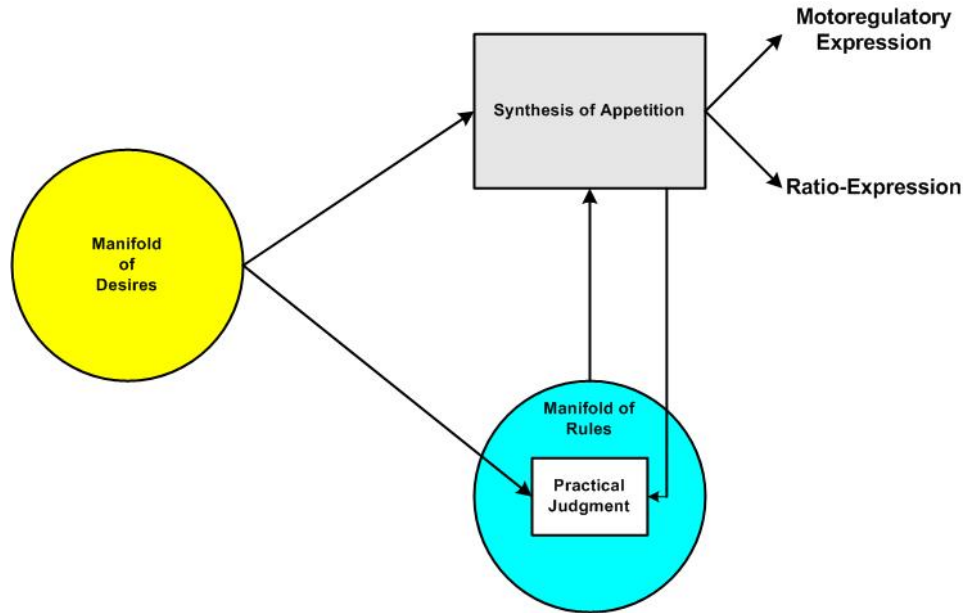


Figure 9.2.2: Critic structure in practical Reason.

synthesis of sensible representations. Like imagination, it provides a bridge. In this case, that bridge runs between representation in the manifold of Desires and the process of practical judgment. Unlike imagination, appetitive power provides no direct feedback into the process of reflective judgment but instead exercises the executive power of practical Reason: over reflective judgment through the veto power of practical Reason in the motoregulatory expression of *psyche*; in ratio-expression to speculative Reason; and in adaptation of the manifold of rules in practical Reason. Its homologue to the synthesis of imagination in apprehension is the **synthesis of appetite** in practical Reason, which is *reasoning insofar as it pertains to the regulation of actions*. Also unlike sensibility and imagination, there is no requirement for a homologue to the transcendental schemata in this process because the **practical notions** of pure Reason (*rules for the synthesis of rules in the manifold of rules or for the production of an appetite*) are not rules for the reproduction of Desires and are never applied to perceptions. Desires are not subsumed under one another in the manifold of rules but, rather, this manifold deals with *the legality of actions*.

§ 2.1 The Intelligible and Empirical Nature of Free Reason

We call this organization of the manifold of Desires, the synthesis of appetite, the process of practical judgment, and the manifold of rules, illustrated in Figure 9.2.2, a **critic structure**. This name is adopted from a branch of mathematical neural network theory known as reinforcement learning [BART]. In that theory, a critic is an abstraction of whatever process supplies evaluation-learning feedback to a learning system. The critic structure of Figure 9.2.2 differs in some important ways from the critic function typically used by neural network theorists, but its role is

the validation or invalidation of actions implicated by reflective judgment and this function is sufficiently similar to the function of the critic in artificial reinforcement-learning systems to justify the name.

There is yet another difference in comparison between appetitive power-critic structure and the synthesis in sensibility; understanding this difference is utterly fundamental to understanding the power of pure Reason. In making any representation of the faculty of Reason, including the one shown above, we can legitimately speak of acts of Reason as *logically* preceding or *logically* following other acts, *but we cannot impute from this a time-order in inner sense*. The pure intuition of time belongs to sensibility alone and the processes of Reason stand altogether outside sensibility. Reason is never an appearance; only effects of reasoning can be appearances in *empirical* Nature. That we not only can but *must* represent the processes of Reason in terms of the logically antecedent and the logically posterior is due to the thinking Nature of the human being, namely that all cognitions are representations in intuition and, hence, must be ordered in a sequence. *Logical ordering* in the theory of the power of pure Reason is merely a species of *objective* time, which is itself merely the supersensible Object of an idea. *Objective time is a mathematical parameter*, a pure *noumenon*, and its only point of connection to Slepian's facet A comes through *defined measurement procedures*, i.e., through the *defined interpretation* of the function and appearances of clocks.

Pure Reason as an object is a mathematical object, a denizen of facet B, and as such is already homogeneous with other mathematical objects such as objective time. But because it stands entirely outside the process of synthesis of the pure intuition of time in inner sense – indeed, it *regulates* this process – it cannot, with objective validity, be regarded as being bound to time-order in inner sense in any way whatsoever. Reason as object is an entirely *practical* object, and this has the most profound consequences in Critical epistemology. In *Critique of Pure Reason* Kant writes,

Supposing now one could say reason has causality with respect to appearances; could reason's act then be called free even though in its empirical character (the mode of sense) it is all precisely determined and necessary?¹⁸ This [empirical character] is once again determined within the intelligible character (the mode of thinking). We know not the latter¹⁹, but it is indicated through appearances, which properly make known only the mode of sense (empirical character). Now the act, so far as its cause is to be attributed to the mode of thinking, nevertheless does not at all ensue from it according to empirical

¹⁸ Kant means that the empirical *use* of Reason is exhibited in appearances, which must always be determined under the category of causality & dependency in understanding. Hence we have the series of appearances in which empirical Reason appears to be necessarily determined with respect to subjective time.

¹⁹ We never have immediate experience of acts of pure Reason, hence we "know it not" but rather *deduce* this character *theoretically* from experience in accordance with our Critical acroams.

laws, i.e. such that the conditions of pure reason *precede*, but on the contrary only such that their effects in the appearance of inner sense precede. Pure reason, as a merely intelligible capacity, is not subject to the form of time, and hence not subject to the conditions of the time sequence. The causality of reason in the intelligible character *does not arise* or start working at a certain time in producing an effect. For then it would itself be subject to the natural law of appearances, so far as this determines causal series in time, and its causality would then be nature and not freedom. Thus we could say: if reason can have causality with respect to appearances, then it is a capacity *through* which the sensuous condition of an empirical series of effects first begins. For the condition that lies in reason is not sensuous and does not itself begin. Accordingly, there takes place here what we did not find in any empirical series, that the *condition* of a successive series of occurrences could itself be empirically unconditioned. For here the condition is *outside* the series of appearances (in the intelligible) and hence not subject to a sensuous condition or to any time determination through any passing cause. [KANT1: B579-580]

We understand appearances in Nature as being conditioned in a series according to physical causality and dependency, but the category of causality & dependency obtains its *Realdefinition* by reference to the transcendental schema of succession in time and time is nothing other than the intuitive form of inner sense. The intuition of time belongs to sensibility but Reason stands outside sensibility and is not subject to conditioning by the pure intuition of time at all. Rather, ***pure Reason directs time-determination*** and we are not required to *conceptualize* Reason as being *bound* to determination in time. Reason cannot rightly be said to respond to sensuous presentations (and so is a *free* process under the Critical explanation of freedom) but, instead, we must say that what is sensuously presented is *a schema of the acts* of Reason.

For the Organized Being as a *phenomenon*, we have no theoretical option but to regard sensuous conditions and natural effects in appearances as having in some way an effect on the determination of choice; Reason cannot run riot in total disregard of the presentations of reflective judgment and sensibility. These presentations must somehow or other enter in to the determination of pure Reason's acts and here the question is, "How?" Kant gives us a long answer for this:

Nevertheless, this very same cause in another regard also belongs to the series of appearances. The human being is himself appearance. His choice has an empirical character, which is the (empirical) cause of all his acts. There is not one of the conditions determining human beings according to this character which is not contained in the series of natural effects and obeys laws according to which no empirically unconditioned causality is encountered among what happens in time. Hence no given act (since it can be perceived only as appearance) can begin absolutely from itself. But of reason one cannot say that before the state in which it determines choice another [state] precedes in which this state itself is determined. For since reason itself is no appearance and is not subject at all to any condition of sensibility, no time sequence takes place in it in regard to its causality, and thus the dynamical law of nature, which determines the time sequence according to rules, cannot be applied to it.

Reason is thus the unceasing condition of all voluntary acts under which the human being appears. Even before it happens, every one of these actions is determined beforehand in the empirical character of the human being. In regard to the intelligible

character, of which the empirical one is only the sensuous schema, no *before* or *after* applies, and every act, irrespective of the time relationship in which it stands to other appearances, is the immediate effect of the intelligible character of pure reason, which therefore acts freely without being determined dynamically by outer or preceding grounds of time in the chain of natural causes, and this freedom can not only be regarded negatively, as independence from empirical conditions (for then the capacity of reason would cease to be a cause of appearances), but also indicated positively through a capacity for beginning a series of occurrences from itself, so that in [reason] itself nothing begins, but as the unconditioned condition of every voluntary act it allows of no conditions prior to it in time, whereas its effect begins in the series of appearances but can never constitute an absolutely first beginning in this series. [KANT1: B580-582]

To say an effect "begins" means nothing more and nothing less than that its first appearance is represented in an intuition at a definite moment in time. Acts of pure Reason *per se* are never represented in an intuition and because of this we cannot say they "begin." Even so, all acts of Reason are bound to conformity with the formula of the categorical imperative of pure practical Reason and this conformity, or its lack, can only be judged by means of the *actions* that stand as matter to these acts. Action is change in appearance of accidents and this is how presentations of sensibility and reflective judgment enter into the determinations of Reason – not as *grounds for* acts of Reason but as *signs of* conformity or lack of conformity of actions with the dictate of the categorical imperative. In this practical context, *the manifold of rules constructed by the process of practical judgment is a constituted system of rules for empirically validated conformity of practical acts with the master regulation of the formula of the categorical imperative*. It is because these rules must be empirically validated that the highest rules (practical laws) in the manifold of rules can never be more than practical *hypothetical* imperatives.

Reason is neither a cognitive nor an affective power; it is *practical*. Activity (the union of the matter of action and the form of act) is its special province in the functional invariant of organization that defines what it is *to be* an organized being. Intelligible in its determining and regulating *character* as a *Kraft*, it is empirical in its *use* and this is the foundation for the validity of and requirement for **Margenau's Law: any expression of a teleological causality (purpose), in order to be objectively valid, must be convertible into a mathematical form that expresses physical causality**. The empirical and the intelligible characters of the Organized Being are a real whole, two sides of one and the same thing, and Margenau's Law is the rule of transformation by which mathematical secondary quantities of free Reason are reciprocally linked with principal quantities for Reason's relationship to empirical Nature in facet A under Slepian's principle.

The class of differential equations that express physical causality in closed systems are those in which objective time, *t*, appears only as an independent parametric variable and not in explicit form, e.g. as a coefficient in the differential equation. Such equations are used in physics to understand laws of nature (*not* equations of motion), and these mathematical laws are what lead

in turn to conservation laws (e.g. conservation of matter-energy, conservation of momentum) in physics. Examples include Hamilton's principle in physics and the differential equation form of the Hamilton-Jacobi-Bellman equation of optimal system theory²⁰. For a more detailed discussion of this mathematical character of physical theory, the reader may consult chapter 19 of [MARG]. We will not pursue this in depth here in this book because the discussion would take us too far afield from the topics at hand.

When we turn to intelligible causality (causality of freedom), the proper mathematical framework is not the differential equation form but rather the integral form of equation.²¹ Here the parametric objective time variable disappears in the solution to the integral since the integral itself spans the entire domain of the parametric variable t . Such equations are common in science; an example is provided by the equation known as the Fourier transform

$$F(\omega) = \int_{-\infty}^{\infty} f(t) e^{-i\omega t} dt,$$

one example of which is the transform

$$\int_{-\infty}^{\infty} e^{-a|t|} e^{-i\omega t} dt = \frac{a}{a^2 + \omega^2}.$$

Equations of this sort are "timeless" in the sense that the objective time parameter t disappears from the solution. The integral equation itself is set squarely among the secondary quantities of the mathematical facet B of theory and in order to possess objective validity it must be possible to transform the integral equation into a differential one of the type named above that serves to yield up principal quantities in conformity to Slepian's principle. The branch of mathematics that deals with this is called the calculus of variations. Our Critical epistemology *sets requirements* on the mathematics we may employ in our theories and on our objectively valid employment of them. *Objective time per se* takes its *real* context in experience *only* from the means by which we make measurements using clocks; as a real object, it is entirely a denizen of the mathematical world of facet B. It is not a real entity of facet A, and to treat it as one is a transcendent illusion.

§ 2.2 The Categorical Imperative and the Manifold of Rules

The Organized Being is born without any *objective* knowledge, in the form of innate ideas, to serve it in pure Reason's regulation of specific empirical actions. Its apriority is functional and

²⁰ Readers with adequate mathematical preparation who are interested in learning more details about Hamilton-Jacobi-Bellman optimization can consult any of a number of textbooks on optimization theory, e.g., Frank L. Lewis, *Optimal Control*, NY: John Wiley, 1986.

²¹ For the sake of brevity, we will not consider difference equations here; suffice it to say the argument in that case is equivalent to the one presented here for differential equations.

structuring; to the extent we call it knowledge, we must call it "know-how" knowledge. The physiology of its *soma* provides the Organized Being with innate reflexes, observable at birth, and the mental physiology of its *nous* in teleological reflective judgment provides it with the ability to connect sensibility with motoregulatory expression in the form of practical desiderations. Appetites made of the *materia ex qua* of such Desires we designate by the term **instinct**. This term was once used very commonly in psychology but through over-usage it went out of favor early in the twentieth century. Reber's *Dictionary* calls it "a term with a tortured history indeed." Psychologists have employed a number of ad hoc definitions for it over the years, but the logical essence of instinct was probably best described by the philosopher and Nobel laureate Henri Bergson. Bergson said quite a lot about it in his *Creative Evolution*; we can boil down to the essentials what he had to say with the following excerpts:

Now, if we look at intelligence . . . we find that it also knows certain things without having learned them. . . But this innate intelligence, although it is a faculty of knowing, knows no object in particular. When the new-born babe seeks for the first time its mother's breast, so showing that it has knowledge (unconscious, no doubt) of a thing it has never seen, we say, just because the innate knowledge is in this case of a definite object, that it belongs to *instinct* and not to *intelligence*. Intelligence does not then imply the innate knowledge of any object. And yet, if intelligence knows nothing by nature, it has nothing innate. What, then, if it be ignorant of all things, can it know? Besides *things*, there are *relations*. The new-born child, so far as intelligent, knows neither definite objects nor a definite property of any object; . . . But in whatever way we make the analysis of thought, we always end up with one or several categories, of which the mind possesses innate knowledge since it makes a natural use of them. Let us say, therefore, that *whatever, in instinct and intelligence, is innate knowledge, bears in the first case on things and in the second on relations*.

. . . Can the form, without matter, be an object of knowledge? Yes, without doubt, provided that this knowledge is not like a thing we possess so much as like a habit we have constructed,— a direction rather than a state: it is, if we will, a certain natural bent of attention. . . Let us adopt then words sanctioned by usage and give the distinction between intelligence and instinct this more precise formula: *Intelligence, in so far as it is innate, is the knowledge of a form; instinct implies the knowledge of a matter*. . . What is innate in intellect, therefore, is the tendency to establish relations, and this tendency implies the natural knowledge of certain very general relations, a kind of stuff that the activity of each particular intellect will cut up into more special relations. . . The difference that we shall now proceed to denote between instinct and intelligence is what the whole of this analysis was meant to bring out. We formulate it thus: *There are things that intelligence alone is able to seek, but which, by itself, it will never find. These things instinct alone could find; but it will never seek them*. [BERG: 147-151]

Over the years science has adequately documented the fact that the earliest constructed knowledge in the life of the infant is inherently practical; this is something Piaget gets at with his idea of the *Obs.OS* we discussed earlier. Knowledge of an object as *thing* lags the development of this practical constructed knowledge. Practical constructed knowledge as Bergsonian intelligence belongs to the process of practical judgment and the construction of the manifold of rules. In our

earlier discussion, what distinguished a practical maxim from a practical law is that the former is practically subjective whereas the latter is practically objective. [Practical objectivity in relationship to tenets means the Organized Being holds the tenet to be universally binding](#). Now, a tenet is "bound" only to the determination of the will of the Subject. To be universally binding means there is no condition whatsoever, known to or acknowledged by the Organized Being, under which the law would not be viewed as binding. To take action in accordance with a practical law is seen, by the Subject, as a [practical obligation](#). If this idea of a practical law has *real* objective validity, what does this imply?

If one assumes that pure reason can contain in itself a practical ground, i.e. suffice for determination of will, then it gives practical laws; but if not, then all practical fundamental principles will be merely maxims. In a pathologically-affected will²² of a rational being there can be found a conflict of maxims known to it by practical laws . . . In practical knowledge, i.e. that which has to do only with grounds of determination of will, those tenets one himself makes are therefore not yet laws under which we may unfailingly stand, because reason in the practical has to do with the Subject, namely with appetitive power according to its special property to be able to put in order various rules. The practical rule is always a product of reason because it prescribes act, as means, to action, as end. [KANT (5: 19-20)]

That we each do in fact experience conflicts among our *theoretical* maxims from time to time is so well known that it hardly bears discussing. The key point Kant makes in the quote above is found in the remark that the special property of appetitive power is the ability *to put in order various rules*. This is a structuring act and the structure resulting from it is what we are calling the manifold of rules. The manifold of rules is a knowledge structure constructed out of *practical* experience. The matter of this construction (Desires) is obtained from reflective judgment and the form of the structure is one we may represent using graphs in the same manner as we earlier made our formal representations of the manifold of concepts. The only difference is that the manifold of concepts is constructed under the rules of the categories of understanding while that of the manifold of rules is constructed under a different set of rules, belonging to the process of practical judgment, we will be calling *the categories of freedom*. By analogy with our earlier terminology, we will call the representations in the manifold of rules by the name **practical concepts** and the categories of freedom by the name **practical notions**. [Practical concepts are rules for acting](#) and they are [learned through experiencing](#) and, with understanding, [co-determine experience](#).

However, just as the categories of understanding produce only what we have called "local" laws of understanding and the process of determining judgment does not determine the manner of its own employment, so too is the practical case for the categories of freedom and the process of

²² Kant does not use the word "pathological" in any medical connotation. In Greek, *pathos* means "passion"; Kant is referring to the influence of feelings on one's reasoning.

practical judgment. But unlike determining judgment, the use of which is regulated by the orientations of speculative Reason (Figure 9.1.1), the process of practical judgment stands under an overall *master* regulation, and we call the formula of this master regulation **the categorical imperative**. The special character of the categorical imperative is: **it is the supreme *a priori* law commanding acts of equilibration**.

We earlier introduced the principle of happiness, which states that the disposition to act on the basis of the matter of Desires (to make an appetite from this matter) is a pure purpose of practical Reason. Attainment of a judicial state of happiness is judged (in reflective judgment) as having been achieved when there is a complete real negation of the feeling of *Lust per se*. Practically, the state of *Existenz* achieved here is one of a robust closed cycle of activity in which there are no innovations, and this is the *Realerklärung* of equilibrium. The master regulation of the categorical imperative *commands categorically* that the activities of the Organized Being be directed to seek and maintain this condition and to abolish anything antagonistic to this state of *Existenz*. **Equilibration is the synthesis of a balance between assimilation and accommodation (adaptation) in which the outcome is a state of equilibrium.** The *process* of equilibration is the idea of integration in the faculty of pure consciousness.

It is in this context that we find the Critical *Realerklärung* of the ideas of good and evil. **Good is the Object of practical Reason by which an object is represented as a *positive and necessary* object of appetitive power.** It is a practical representation of the power of Reason and refers to the choice to effect or maintain the actuality of an object of representation in judgment. The notion of good is contained in the act of practical determination of appetitive power according to practical tenets and not in the objective of the action the Organized Being undertakes. If we speak at all of "the good" of an *object*, we speak only of a necessitated association and not of any real property of the object. **Evil is the Object of practical Reason by which an object is represented as a *negative and necessary* object of appetitive power.** It is a practical representation by the power of Reason that refers to a choice to effect or maintain the non-actuality of an object of representation. The notion of evil is contained in the act of practical determination of appetitive power according to practical tenets and it, likewise, is not the notion of any object *per se*.

Yet the master regulation of the categorical imperative can only be a *formula* for a supreme condition of determination because practical Reason knows no objects *per se* and feels no feelings.

But if I think of my categorical imperative I know immediately what it contains. For here the imperative contains, besides the law, only the necessity of the maxim to be in conformity with this law; but the law contains no condition to which it would be limited, so that nothing remains with which the maxim of the act is to conform but the remaining

universality of the law in general, and that conformity alone the imperative represents as necessary. [KANT (4: 420-421)]

Kant offered several *theoretical* descriptions (objective descriptions in the theoretical Standpoint) by which the fundamental character of the categorical imperative could be illustrated. Of these, the objective description coming closest to the practical essence of the categorical imperative was

Act so that the maxim of your will always can hold good at the same time as a principle of universal legislation. [KANT (5: 30)]

It is important for us to understand, however, that this statement is a mere description of how the structuring acts of practical judgment are to be *oriented* by the formula, which is to say: the description is an ideal representing what the master regulation of Reason would achieve if it were actually possible to complete and perfect the manifold of rules. The *Realdefinition* of the categorical imperative is as was stated above: it is a formula commanding acts of equilibration.

The matter of the manifold of rules (practical rules *per se*, maxims, and laws) are structured by practical judgment in a hierarchy of higher vs. lower rules, series, and so on in a formal structure that is, mathematically, representable in the same way by which we earlier represented the manifold of concepts. Practical rules *per se* are structured to stand under practical maxims; practical maxims in their turn are structured to stand under practical laws. The earliest practical rules are made possible by instincts from reflective desiration so that the *appetites* corresponding to these Desires have a *role* analogous to that of the earliest intuitions of sensibility, from which come the Organized Being's first concepts. In this sense, we can call *practical* judgmentation the faculty of *practical* rules of the Organized Being, just as we call understanding the faculty of *cognitive* rules.

Nonetheless, because all rules in the manifold of rules are products of experiencing, the highest rules in any given state of construction of the manifold cannot be called categorical in any but a speculative sense. They are, in other words, ***practically hypothetical imperatives*** because the march of on-going experience can overturn them if they come into conflict in a new situation or occurrence of experience. There is only *one* practically categorical imperative. Acts of practical judgment will always aim to conserve the *structure* of the manifold of rules, but any practical law in this manifold that comes into conflict in actual experience will be accommodated, e.g. demoted to the status of a mere maxim, because regulation by the categorical imperative cannot be gainsaid and this formula cares nothing for the matter *in* the manifold.

Here we must point out a crucial distinction that must be made between the practically hypothetical imperatives of the manifold of rules and speculative *concepts* of these imperatives that eventually come to be recognized in the manifold of concepts. It is possible in the manifold

of concepts to post an idea of an action imperative as a concept that stands under no higher concept in the manifold. Such a concept is a *theoretically categorical imperative* because the Organized Being has recognized no condition under which this concept stands conditioned. However, **every theoretically categorical imperative corresponds to no more than a practically hypothetical imperative**. This is why efforts in philosophical theories of ethics and rights have historically been frustrated in finding a single, universal, incontrovertible, and all-embracing moral categorical imperative in Kant's moral philosophy. Moral perfection can be sought after and ethics improved, but we should not expect to *complete* the ideal because, like all ideas of Nature, concepts obtained by experience are at root contingent. Nell put it this way:

It was assumed that it could be discovered when an agent's maxim was inappropriate to his situation or to his act, or when the agent was acting on the basis of a mistaken means/ends judgment. But when we act we are not in that position. Once all reasonable care has been taken to avoid ignorance, bias, or self-deception, an agent can do nothing more to determine that his maxim does not match his situation. Once an agent has acted on his maxim attentively, he can do no more to ensure that his act lives up to his maxim. We cannot choose to succeed, but only to strive. . . We can make right decisions, but not guarantee right acts. [NELL: 127]

We must conclude that *the* categorical imperative is not itself a moral law, although it is the ground of the possibility for an Organized Being *to construct its own* moral law(s) in the far less romantic sense that morality is the logic of actions. It is also the ground for the easily observable fact that human beings are frequently in honest disagreement with one another on questions of morality and ethics.²³ But this point takes us off on a tangent to moral philosophy and ethics theory; we will pursue it no further in this book. *The* categorical imperative of pure practical Reason does not *cajole* as an "ought to" but *commands* absolutely, and thereby *earns* the title of **supreme Law of pure Reason**.

§ 3. Practical Judgmentation of Rules

None of the Organized Being's three processes of judgment – determining, reflective, and practical – work in isolation. All operate in interaction with one another through the process of judgmentation, as Figure 9.1.1 illustrates. This is no less true for the manifold of rules than it is for the manifold of concepts and the manifold of Desires.

In our considerations of the determination of appetitive power, we must deal with two outcome pathways, namely the veto power of Reason in motoregulatory expression and the ratio-expression of practical Reason in speculative Reason. The first has a negative character, the

²³ The practical and non-objective character of the categorical imperative is also the ground for such facts as the reality that there are criminals and individuals who exhibit antisocial personality disorders, a point discussed in more depth in *CPPM*.

second a proactive character in judgmentation. Both spring from the same source, namely the uncompromising dictate of the categorical imperative and its absolute insistence on a system of practical laws held-to-be-binding universally and with necessity in the practical structure of rules.

§ 3.1 The Veto Power of Practical Reason

Kant had a fondness for describing the motives of an Organized Being metaphorically in terms of the mainspring of a clock (*Triebfeder*). A **mainspring** denotes a **motive** in the connotation that motives are "what make us go" just as the mainspring of a clock is "what makes the clock go." We express an idea similar to this in English when one says, "I'm all wound up." A mainspring is a representation that serves as a condition for a *causatum*²⁴ of spontaneous activity. The object of a mainspring is called an **elater animi** ("driver of the mind") and is defined from the practical Standpoint to be a ground of determination for (or a source of the possibility of) producing represented, determining, or impelling causes.

It should by now be readily apparent that pure practical Reason can possess no *a priori* objective ideas of motives. The sole criterion available for validation of Desires and their associated connection to actions via motoregulatory expression is strictly formal, namely whether or not this expression of Desires is congruent with the Organized Being's constructed manifold of rules. Acts of teleological reflective judgment (desirations) are impetuous and form a *nexus* in the sensuous Nature of the Organized Being. These acts Kant called *pathological* in origin, a term he uses to denote the physical Nature of the Organized Being, wherein we view causality in terms of physical causality & dependency under the category of understanding. In the earliest stages of life the Organized Being has at first no, and later a very limited, base of experience and, therefore, has no extensive structures of either concepts or rules. Under this condition, *any* act of desiration is *a priori* congruent with the manifold of rules because there is as of yet nothing in this manifold with which the act of desiration can come into conflict. As Kant put it,

[We] find our nature as sensible beings so constituted that the matter of appetitive power (objects of inclination, whether of hope or fear) first rears itself, and we find our pathologically determinable self, even though it is entirely unfit to give universal legislation through its maxims, nevertheless striving beforehand to make its claims primary and originally valid, just as if it constituted our entire self. This propensity to make oneself according to subjective determining grounds of choice into the objective determining ground of will in general can be called *self-love*. [KANT (5: 74)]

We stated this principle earlier as the principle of happiness. However, as construction of the manifold of rules progresses (and is accompanied by construction of the manifold of concepts), impetuous acts of teleological reflective judgment can and do come into conflict with the

²⁴ A *causatum* is a rule for the determination of a change under the condition of a cause.

established manifold, and it is here where the intelligible Nature of Reason begins to assert itself. Desires that would not be congruent with the manifold of rules if they are made into appetites present a condition of innovation upsetting the equilibrium of the Organized Being. To make such an appetite actual (that is, to express it) violates the formula of the categorical imperative and gives rise to the rejection (veto by practical Reason) of the innovative Desires.

This act of pure practical Reason, which *enforces* the dictate of the categorical imperative, has its consequences in affective perception. The direct pathway for this Self-effect is provided through the kinaesthetic feedback from *psyche* to sensibility. Here, however, the feeling in the affective perception is not a consequence of *soma* in regard to the physiological senses of body but, rather, is a consequence of *nous* acting (via *psyche*) upon itself. This might be labeled a "non-sensuous feeling" inasmuch as its transcendental place lies entirely in the spontaneity of the Organized Being. We call this feeling **Self-respect**:

But though respect is like a feeling, nevertheless it is not *received* through influence²⁵ but is *self-produced* feeling through an idea of reason²⁶ and therefore specifically distinguished from all feelings of the former kind, which are brought about by inclination or fear. What I know immediately as a law for myself I know with respect, which merely means the consciousness of the *subordination* of my will under a law without intervention of other influences on my sense. Immediate determination of will through law and the consciousness of the same is called respect, so that this is regarded as an *effect* of the law on the Subject and not as cause of the same. Respect is properly the representation of a value prejudicial to my self-love. Hence it is something which is regarded neither as an object of inclination nor fear, though it has at the same time something analogous to both. The *object* of respect is hence exclusively the *law* and indeed that which we lay upon *our self* and yet as in itself necessary. [KANT (4: 401fn)]

Manifestation of this capacity for Self-respect is not possible until the Organized Being has not only made some progress in its construction of its manifold of rules but also encounters in experience occurrences that come into conflict with this structure. The resulting loss of equilibrium is then the original mainspring for acts of accommodation in both the rule structure and in checking the impetuous acts of teleological judgment. Because the transcendental place for the origination of accommodation lies in pure practical Reason and its categorical imperative, the practical judgment supercedes all merely sensuous considerations, and this is the transcendental ground for not only saying the Organized Being has a *willpower* but also for saying practical Reason has a capacity for *free* will.

Respect and not pleasure or enjoyment of happiness is thus something for which no feeling preceding reason is possible as a fit ground (because this would be aesthetic and pathological), as consciousness of immediate constraint of will through law is hardly an

²⁵ That is, influence from the external environment or the state of *soma* through receptivity.

²⁶ Specifically, what we term a *practical* idea in the manifold of rules and not a concept in the manifold of concepts.

analog of the feeling of *Lust*, although in relationship to the appetitive power it does just exactly the same thing but from another source. [KANT (5: 117)]

When one considers that in Kant's day the word *biology* had not yet even been coined and that psychology as a science did not yet exist, it is little wonder Kant managed to convince himself that the logical essence of the categorical imperative was the same as what he called "the moral law within in me"; what other name did he have to call it by in his day? It does *in deed* have the sort of negative connotation most philosophers concede to ideas of morality. Kant wrote,

What is essential in every determination of will by the moral law is that, as a free will – and so not only without the cooperation of sensuous impulses but even with the rejection of all of them and with infringement upon all inclinations so far as they could be opposed to that law – it is determined solely by the law. So far, then, the effect of the moral law as mainspring is only negative, and as such this mainspring can be known *a priori*. For all inclination and every sensuous impulse is based on feeling, and the negative effect on feeling (by infringement of the inclination that takes place) is itself feeling. Hence we can see *a priori* that the moral law, as ground of determination of will, must by thwarting all our inclinations effect a feeling that can be called pain, and here we have the first and perhaps the only case in which we can determine *a priori* from concepts the relationship of a cognition (here it is one of pure practical reason) to the feeling of *Lust* and *Unlust*. [KANT (5: 72-73)]

If we substitute "the categorical imperative" for "the moral law" in this quote, we have our proper understanding of veto power in practical Reason's Self-regulation under the dictating formula of the categorical imperative.

§ 3.2 Ratio-expression

The veto power of Reason is the ground for what we earlier called type- α compensation behaviors. If, however, this were the only regulating capacity to be found in practical Reason the level of *intelligence*, as the capacity for adaptation of mental structures in the Organized Being, would be quite limited and the equilibria that could be established thereby would be decidedly lacking in robustness. Fortunately for us, sensorimotor expression is not the only capacity of mind we find in human beings. We also possess the capacity *to think* and **thinking is cognition through concepts**. Pure practical Reason, itself non-cognitive, also possesses the *Kraft* for determining the Organized Being's thinking actions. We call this *proactive* character of Reason **ratio-expression**.

As stated earlier, the Organized Being exhibits the capacity to conceptualize its developed practical maxims and hypothetical imperatives. This shows up not only in pragmatic concepts of prudence (and, yes, self-interest) but even goes so far as to be manifested in what we might as well call developed rules of thinking. An engineering education, for example, consists largely in instruction and practice in how to properly think about solving problems. Speculative Reason is the capacity for immediately orienting the employment of determining judgment in the making of

cognitions.

It is no doubt evident that most such developed maxims of thinking and attitudes do not merit the title of what we normally call moral judgments. Indeed, this is one facet of human thinking that points out the non-equivalence of the categorical imperative and "moral law" as the latter term is commonly used. Piaget et al. documented a number of experimental examples of childish thinking that we, as adults, would not regard as moral laws but which nonetheless exhibit the force of moral laws in children's early views of right and wrong [PIAG14]. Many of these childish tenets are whimsical and even amusing to the adult, but they are quite serious matters to the child. The capacity of reflective judgment to incorporate cognitive factors in acts of reflective judgment is constituted by a special form of instinct that we can justly if unromantically call *conscience*. Like Kant, we typically regard this notion in moral terms. We have just seen that we must not equate the categorical imperative and the practically hypothetical imperatives of the manifold of rules exclusively with morality unless, like Piaget, we regard morality as the logic of actions. Kant provided the following explanation of conscience:

Conscience is an instinct to direct oneself according to moral laws. It is no mere capacity but an instinct, not to judge but to direct oneself. We have a capacity to pass judgment on ourselves according to moral laws. Yet of this capacity we can make use as we please. But conscience has a driving might to summon us before the tribunal against our will on account of our acts. Thus it is an instinct and not merely a capacity for judgmentation. It is on its own an instinct to direct and not to judge. [KANT (27: 351)]

An instinct is an appetite for an activity without cognition of an object of desire. If we replace the term "moral laws" in the quote above with the phrase "practical laws" we arrive at our general *Realerklärung*: **conscience is an instinct belonging to the class of *appetitus per motiva* that pairs with a feeling of *Unlust* arising from lack of Self-respect.** Actions taken under this appetite are generally aimed at the accommodation of the manifold of rules so as to re-establish a practically universal structure of practical rules and tenets. These actions proceed by ratio-expression to negate the feeling of *Unlust* through the discovery of some representation expedient for abolishing lack of Self-respect. Among other results, this ratio-expression grounds the possibility for the Organized Being to formulate for itself ideas of *theoretically* categorical imperatives, and many of these we do come to regard as moral laws. However, we remind ourselves once more that a theoretically categorical imperative is merely the reflection of a practically hypothetical imperative. Aristotle held that ethics and morality are *learned*, and here our Critical epistemology leads us to conclude that Aristotle was right to say this. As the Jesuits used to be fond of saying, "Give us the boy and the man is ours for life."

But Critical conscience goes well beyond confinement to only moral laws and ethics. Those

who study the phenomenon of antisocial personality disorder sometimes remark that the antisocial personality has his own decidedly "immoral" version of the Golden Rule: Do unto others *before* they do unto you. As distasteful as you and I find this, the antisocial personality does appear to hold this tenet as a universal law and often is utterly lacking in what the rest of us typically call "a conscience." As police officers often say, "He's only sorry he was caught."

The first principles of ratio-expression are none other than the transcendental Ideas *from the practical Standpoint*. The transcendental Ideas are the regulating principles of pure Reason that orient all non-autonomic activities of the Organized Being. A review of these Ideas (see chapter 2) quickly shows that these principles contain no *a priori* ideas of objects but, rather, are Ideas governing the outcomes of acts of reasoning. Specific conceptualized instantiations of these outcomes are understandings obtained by experiencing. Judgumentation of these specific achievements is adjudicated in terms of *a standard gauge of pure Reason* and we call this standard gauge by the name *perfection*. **Transcendental perfection is completeness of the whole and mutual harmony and connection of the whole.** We will discuss perfection in more detail in chapter 12, where we will see that *perfection of knowledge* is three-fold: logical (for determining judgment); aesthetical (for reflective judgment); and practical (for practical judgment). This discussion is postponed at present because before getting to it we need to present two other major topics, namely the motivational dynamic (chapter 10) and the *momenta* of practical judgment (chapter 11). Once we have these in hand, we will be in a position to properly understand Critical perfection in Reason's regulation of the non-autonomic acts and actions of the Organized Being.

There is, however, an important question we must deal with at this point. Earlier and throughout this book, the transcendental Ideas have been called the fundamental acroams of Critical metaphysics proper. But here it has just been stated that the transcendental Ideas in the practical Standpoint *are* the first principles of ratio-expression and thus the fundamental laws of pure *speculative* Reason. The question is: How can the transcendental Ideas be both?

The answer is simple but somewhat subtle. Let us ask: In pure metaphysics centered on epistemology, what sort of principles can claim to be metaphysical *first* principles (acroams)? Obviously, what must be required of them is that they arise from nowhere else then the *phenomenon of mind*. Epistemological first principles must be principles by which we come to have human knowledge. Such principles can therefore be none other than the principles of pure Reason and these principles, as stated earlier, are *regulative* and not *constitutive* principles.

But if they are regulative principles of pure Reason, how do we come to know about them as Ideas? Here we find the great genius of Kant's method. As each of us knows from our own experiences, mind can reflect upon itself. This is what Kant has done. *He turned the power of*

pure Reason back upon itself and made Reason use its own regulative principles to bring forth an understanding of these same principles. By digging down to the bedrock of what Ideas mean and do, he has *through analysis of the experience of understanding* put the actions of the phenomenon of mind to work *to produce the concepts of its Nature*, and these concepts state the Ideas of pure metaphysics proper. This is what Kant meant when he said **philosophy is knowledge through concepts, mathematics knowledge through the construction of concepts**. Kant's accomplishment was no easy task; it was the labor of his entire adult life.

This is why we call the transcendental Ideas *acroams* and not axioms. Quite clearly, there is very little that is "self evident" about the truth of the transcendental Ideas. If they were self-evident truths (as the original definition of an axiom once required), it would not have taken millennia from the dawn of philosophy to put them into words. The *acroams* of metaphysics proper can only be laws of the phenomenon of mind, and if they are laws of the phenomenon of mind they are, at once, also the laws *governing how mind works*.

This also puts us in position to better understand the role of axioms in mathematics. Since the publication of Gödel's theorems in 1930, mathematicians have been forced to give up the long cherished idea that mathematical axioms were self-evident truths about nature itself. The period known in the history of mathematics as "the crisis in the foundations" brought to a close the centuries-old philosophy of rationalism and the belief that human beings could understand every aspect of nature through pure thought. However, those who turned to the rather extreme opposite view that "mathematics is just a game with rules *called* axioms," and could never be more than this were mistaken. Mathematical axioms deduced with objective validity *from the acroams of Critical metaphysics proper* will be far more than merely "rules of a game." A system of mathematics based on objectively valid axioms so deduced, when we finally have one, will be Critical mathematics, and it will be this part of mathematics where we will be able to establish mathematical constructs capable of yielding up *real certainty through principal quantities* of Slepian's facet B. Most of present day mathematics does not satisfy this requirement (as is discussed in *CPPM*), but we may rightly expect and anticipate that when mathematicians take up the task, science will find itself in possession of a great gift purchased from their labors.

Returning now to the topic of ratio-expression in practical Reason, the next step in our present treatise must involve the explanation of how Reason goes about carrying out its practical task. For this we must dive deeper into the questions of motivation and the topic of the motivational dynamic in rational judgmentation. Psychologists and neuroscientists reading this will, most likely, be alert to the anticipation that these issues are not trivial. So, without further ado, let us proceed to chapter 10 and examine the motivational dynamic of judgmentation.