Chapter 19

Fourth Epilegomenon: The Transition to Practical Judgment

All willing arises from want.

Schopenhauer

§ 1. Regulated Actions

We now begin the final part of this treatise on the phenomenon of mind, namely the exposition of the power of pure Reason. In a number of ways this is the most challenging part of our theory owing to the peculiar aloofness of Reason from all sensational attributes of the Self in Reason's role as the supreme regulator and executive of all non-autonomic actions of the Organized Being. All our considerations in this realm of *nous* must be regarded exclusively from the practical Standpoint because the *Dasein* of pure Reason is exposed only through actions. The objective validity of all our constructs in the theory of Reason can be only a practical objective validity because the *Realerklärung* of pure Reason can only be understood through ideas of its causality (the causality of freedom). The theory of pure Reason is the theory of a phenomenon of mind that must be regarded as an *Unsache*-thing in our understanding of it through ideas of phenomenal appearances. It therefore has to be understood in terms of *processes*, one of which we have called the process of practical judgment, another of which we call the power of choice.

Kant said very little on the topic of practical judgment, and indeed one is bound to wonder if Kant drew a clear distinction between the Critical metaphysic of pure Reason and the applied metaphysic of moral theory. It is in any event the case that he expressed all his objective exemplars *in concreto* of the categorical imperative in terms of "the moral law within me." However, in all cases "the moral law" of his theory was expressed in terms of an "ought to," and this is not sufficient to describe Reason as the supreme executive of the capacities for actions in an Organized Being, nor to understand the categorical imperative as the supreme pure and *a*

priori law of the faculty of *nous*.

It is not difficult to imagine that "the moral law" (if one is willing to assume such a tendency as innate in human nature) could be overcome by sensuous desires, and could therefore express nothing stronger than an "ought to." One can even call the feeling of self-satisfaction that can occur when one "resists temptation" and follows one's own moral code a "moral satisfaction" (or, at least, a moral consolation). But in the difference between "the moral law" and the categorical imperative of pure practical Reason lies something far stronger than a mere "ought to." Kant himself provides us with a hint that he might have recognized this is so:

> In another place . . . I think I have reduced the difference between *pathological* Lust and *moral* Lust to its simplest terms. *Lust* that must come to pass before observance of the law in order to act pursuant to this is pathological and conduct follows the *order of nature*; but *Lust* which the law must go *before* in order to be felt is in the *moral order* . . . Those who are accustomed merely to physiological explanations will not get into their heads the categorical imperative from which these laws result dictatorially, even though they feel themselves compelled irresistibly by it. Being unable to *explain* what lies entirely beyond that range (*freedom* of choice) . . . they are stirred by the proud claims of speculative reason, which makes its power so strongly felt in other fields, to band together in a general *call to arms* for the omnipotence of theoretical reason [KANT9: 143 (6: 378)].

Here the key phrase is "the categorical imperative *from which these laws result dictatorially*". A supreme *law* must command and require, not cajole and persuade. All objective ideas of moral laws can be no more than hypothetical imperatives from the practical Standpoint (even if they are *theoretically* offered up categorically). The practical categorical imperative of pure Reason provides the transcendental ground of the possibility for an Organized Being to make for himself moral maxims and laws, but the categorical imperative as a law is not restricted to merely this.

Furthermore, in spite of its commanding position (in transcendental place) in the phenomenon of mind, Reason cannot stand immune from effects due to the other capacities of *nous*. This is because we logically view Reason as one of the "parts" within our mental anatomy of the Organized Being, and "organized being" is a term that means each of these parts is reciprocally a cause in the determination of the other parts and, *at the same time*, an effect determined by each of these other parts. The division of *nous* in terms of the various processes and powers we have discussed cannot be regarded with objective validity other than as a mere *logical* division. If we were to place Reason above the other capacities and say it is a cause which does not "itself" suffer effects from these other capacities, then we would have made a *real* division within *nous* in violation of the condition of objective validity in our theory. Reason so reified would be an homunculus (*res cogitans*) and the theory would fall by the same objections as those which bring down Descartes' homunculus.

Therefore, we must undertake a *transition* from the part of the Critical metaphysic that deals

with those capacities where the sensational enters in (sensation in objective perception, feeling in affective perception) to that part of the Critical metaphysic where possible sensation can play no role as a determining factor (as it does in determination of Quality under the category of reality in determining judgment or in the empirical external agent-patient Relation under the sensorimotor idea, i.e. *soma* → *nous*). This transition must *set the context* for the idea of a faculty of Reason in terms of the *Existenz* of the Self. The theory of pure Reason then takes its place in the phenomenon of mind as a theory of the Organized Being's *Kraft* of Self-determination. We saw in Chapter 13 (§3.4) that there is evidence from empirical psychology in favor of the idea of a capacity of pure practical Reason acting according to a formula of a categorical imperative. Let us next see if we can find something in *soma* that ties in with the idea of Self-determination.

A key acroam for this search is the principle of emergent properties.[1] Regardless of what we uncover in our investigation of Reason, all its mental representations are still required to stand in thorough-going reciprocity with *soma*. Here we will begin by looking at another of Damasio's ideas, namely that of the somatic *proto-self*.

§ 1.1 Damasio's Proto-self

I think it likely that only medical neuroscientists, whose medical practices expose them to a myriad of eerie effects brain damage through injury or disease can produce, are in a position to most deeply appreciate the empirical correlations found between brain structures and the phenomenon of mind. Working through experiment and observation, followed by hypothesis, followed by theoretical modeling, and returning again to experiment and observation, neuroscience strives to build up our understanding of the brain-mind relationship. Biological neuroscience strives to identify the brain structures that appear to be involved, and to understand the physiological mechanisms through which these structures function. Although careless habits of speech sometimes render the theories of neuroscience in teleological-sounding language, the theories of neuroscience are nonetheless mechanistic (what Kant often, without prejudice, termed "pathological"), i.e. they are understood under the notion of physical causality. This, as we have previously noted, is both correct and necessary because the practical objective validity of ideas of mental purposiveness under the causality of freedom *requires* that all such ideas be capable of a dual expression in terms of the notion of physical causality in appearances of *soma*.

Dr. Damasio is recognized as one of today's leading scientists in this field, and his views on this subject merit our respectful attention. Although no strictly *empirical* findings can ever serve as *proofs* of any acroams of *nous*, all epistemological principles (and the ontology that stems from

[1] Recall that emergent properties is the transitive Relation in the sensorimotor idea.

them) have real consequences for empirical experience. In his quest for a scientific understanding of the phenomenon of consciousness, Damasio's researches have led him to propose (as an hypothesis) a model for the brain structures that serve as a correspondent in *soma* to the noetic phenomenon of consciousness. He calls part of this model the *proto-self*.

> First, the composition and general functions of the living body remain the same, in terms of their quality, across a lifetime. Second, the body changes that continuously do occur are small, in terms of their quantity. They have a narrow dynamic range because the body must operate with a limited range of parameters if it is to survive; the body's internal state must be relatively stable by comparison to the environment surrounding it. Third, that stable state is governed from the brain by means of an elaborate neural machinery designed to detect minimal variations in the parameters of the body's internal chemical profile and to command actions aimed at correcting the detected variations, directly or indirectly . . . The system is made up of not one but many units, the most important of which are located in the brain stem, hypothalamus, and basal forebrain sections of the brain. In short . . . the part of the organism called the brain holds within it a sort of model of the whole thing. This is a strange, over-looked, and noteworthy fact, and is perhaps the most important clue as to the possible underpinning of consciousness.
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> I have come to conclude that the organism, as represented inside its own brain, is a likely biological forerunner for what eventually becomes the elusive sense of self. The deep roots of the self, including the elaborate self which encompasses identity and personhood, are to be found in the ensemble of brain devices which continuously and *nonconsciously* maintain the body state within the narrow range and relative stability required for survival. These devices continually represent, *nonconsciously*, the state of the living body, along its many dimensions. I call the state of activity within the ensemble of such devices the *proto-self*, the nonconscious forerunner for the levels of self which appear in our minds as the conscious protagonists of consciousness: core self and autobiographical self . . . If this idea is correct, life and consciousness, specifically the self aspect of consciousness, are indelibly interwoven [DAMA1: 22-23].

This idea of the somatic proto-self states that there are some parts of brain activity that serve a necessary regulative function, without which the living organism could not survive, and, more importantly, that this regulative function is one upon which depends the conditions under which the appearance of self-consciousness is possible through other parts of brain activity. An important aspect of this proto-self is that these activities are actions of which we are not consciously aware. *Perception* is not involved in this function, and this limitation is quite necessary if the explanation of the proto-self is to fit in its proper context without becoming a circular argument. A second important aspect of this idea is that this proto-self is defined as a state of activity; thus, it is not the ensemble of brain structures that constitutes the proto-self, but instead this proto-self *subsists in* the activity. It is this subtle but critical point that makes it possible to tie Damasio's idea to the noetic phenomenon of consciousness through the role played by the proto-self in somatic regulation.

> *The proto-self is a coherent collection of neural patterns which map, moment by moment, the state of the physical structure of the organism in its many dimensions.* This ceaselessly maintained first-order collection of neural patterns occurs not in one brain place but in many, at a multiplicity of levels, from the brain stem to the cerebral cortex, in structures that are interconnected by neural

> pathways. These structures are intimately involved in the process of regulating the state of the organism. The operations of acting on the organism and of sensing the state of the organism are closely tied. The proto-self is not to be confused with the rich sense of self on which our current knowing is centered this very moment. *We are not conscious of the proto-self.* Language is not part of the structure of the proto-self. The proto-self has no powers of perception and holds no knowledge . . . Besides, proto-self is not an interpreter of anything. It is a reference point at each point in which it is [DAMA1: 154].

Dr. Damasio lists several brain structures required to implement the proto-self [DAMA1: 155-156]. This list is not considered exhaustive, but includes: 1) nuclei in the brain stem that regulate body state and map body signals from spinal cord pathways, the trigeminal nerve, the vagus complex, and the area postrema; 2) the hypothalamus; 3) the basal forebrain; 4) the insular cortex, the S_2 cortices, and the medial parietal cortices (all within the somatosensory cortex). The scientific basis for this hypothesis comes from case studies of various patients who have suffered damage to specific brain regions leading to, for example, coma, persistent vegetative state, or locked-in syndrome. This evidence also indicates that neither Reason nor judgment are the immediate correlate of the proto-self.

> It looks like sleep, it may sound like sleep, but it is not sleep. There is a universal history for the presentation of coma, and the clinical description is likely to read as follows: Without any warning, the patient collapsed, was suddenly on the ground, and was breathing with some difficulty; he never responded to his wife or to the paramedics when they came to take him to the hospital; he never responded to anyone in the emergency room; he still did not respond to the physicians four days later . . . [The] fact is, he has indeed had a stroke and is in a coma, a very abnormal state from which no amount of regular stimulation will awaken him.
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> You can talk to him, you can whisper in his ear, you can touch his face or squeeze his hand, you can perform all the manipulations required to evaluate such situations, but he won't wake up . . . The brain is the problem. It has been damaged by a stroke in a small but critical region. The observable result is a suspension of wakefulness, emotion, attention, purposeful behavior. The result you could infer from your observation is that consciousness has been suspended as well. Not only is he unable to report any evidence of a conscious mind at work, but he gives none of the indirect signs that he might have one . . . It is possible that his coma will persist and that death will eventually ensue. It is also possible that his deep coma will become lighter and eventually turn into a permanent state of unconsciousness known as persistent vegetative state.
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> If the condition evolves into a vegetative state, the patient will begin showing cycles of apparent sleep and wakefulness, which will succeed each other in a seemingly normal way. This is something you can tell from two sources of evidence. First, his electroencephalogram (EEG) will change and may show, during a certain number of hours each day, the patterns characteristic of sleep or wakefulness. Second, he may begin to respond to stimuli by opening his eyes. Unfortunately, neither piece of evidence indicates that consciousness is returning; all it indicates is that wakefulness has returned . . . If the patient becomes vegetative, his control of autonomic functions such as blood pressure and breathing may also normalize. Otherwise, in rare patients and on rare occasions, there may be isolated instances of coordinated movements of head and eyes, isolated stereotypical utterances, an isolated smile or tear. In essence, however, during the seemingly wakeful part of a day, patients in vegetative state have no behavior whatsoever, neither spontaneously nor in response to a prompt, that betrays the presence of consciousness. Emotion, attention, and purposeful behavior do not return in the vegetative state. The reasonable assumption, which is corroborated by the reports of rare individuals in whom consciousness did return eventually, is that consciousness is still out of the picture [DAMA1: 236-238].

We must infer from this that Damasio's proto-self is not in a one-to-one correspondence to the power of practical Reason. Observations such as those on comatose or vegetative-state patients appear to require that the afflicted areas must involve factors in addition to Reason. First, the judicial character of practical Reason is seen as that of a veto power of motoregulatory expression, and so if the process of reflective judgment were operating normally in these patients, motoregulatory expression should not be stifled; it should be "uncontrollable" (at least in terms of responsiveness to externally applied stimuli[2]). The implication here is that damaged brain areas minimally must affect the noetic process of teleological reflective judgment. Second, however, those rare manifestations of stereotyped coordinated actions mentioned above in vegetative patients *are* consistent with an hypothesis that a process of practical Reason is affected by the somatic condition (loss of veto power), although clearly normal reflective judgment functions have not returned. Furthermore, the absence of conscious spontaneity is consistent with what would be expected if the process of determining judgment fails to receive regulative orientation from speculative Reason. Determining judgment does not control its own employment, and in the absence of direction from speculative Reason the inner loop in the cycle of thought cannot operate – thus no memory function nor thinking-based spontaneity is possible. There can be no empirical appearance of consciousness and purposive behavior if the *nexus* of pure consciousness dissolves. We will return to this topic in Chapter 21 when we discuss the key autonomic process upon which this *nexus* depends – namely, the synthesis of inner sense (pure intuition of time).

The central idea in Damasio's hypothesis of the proto-self is this: The neural patterns in which it subsists represent the current state of the organism. Damasio calls this representation a "first-order map" and the brain structures involved in its generation are those structures also involved in biological regulation. *Changes* in this map, and in another signaling complex associated with how the organism is affected by interaction with objects (also regarded as a first-order map), result in another pattern of activity from other brain structures, that, in effect, "describes" the changes taking place in the proto-self and the "object map." In this "second-order map" subsists what Damasio calls the organism's "core consciousness," to which corresponds what he calls the *core self*.

[2] Recall that motoregulatory expression falls under the adaptive *psyche*, and that *psyche* is not a functional faculty but instead is the faculty of animating principles of the reciprocity of *nous* and *soma*. Thus, it is not proper to say that it is *psyche* (motoregulatory expression) that is disrupted by the stroke, but rather that the reciprocal sides of *soma* and *nous* have been affected. The breakdown of the mind illustrated in comatose patients implies that reflective judgment and Reason are not functioning. This does not necessarily imply that affected somatic structures correlate *immediately* with either process. From what is presently known of the neurobiology of arousal, it seems more likely that the affected somatic structure is the correlate of an *autonomic* process upon which the processes of pure consciousness depend, namely *time*.

> I see core consciousness as created in pulses, each pulse triggered by each object that we interact with or that we recall. Let's say that a consciousness pulse begins at the instant just before a new object triggers the process of changing the proto-self and terminates when a new object begins triggering its own set of changes. The proto-self modified by the first object then becomes the *inaugural* proto-self for the new object. A new pulse of core consciousness begins.
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> The continuity of consciousness is based on the steady generation of consciousness pulses which correspond to the endless processing of myriad objects, whose interaction, actual or recalled constantly, modified the proto-self. The continuity of consciousness comes from the abundant flow of nonverbal narratives of core consciousness [DAMA1: 176].

The compatibility of Damasio's hypothesis with the theory presented in this treatise is obvious. His "pulse of core consciousness" is a clear corollary to our "moment in time" marked by an act of reflective judgment. The "changes in the proto-self" as events unfold, while not identified as such by Damasio, are possibly representations of a somatic action of equilibration; this interpretation seems especially likely when one considers that some brain structures involved in generating the proto-self are also structures that regulate body state. That Damasio's core consciousness mechanism is based upon the unfolding of somatic events in objective time is a hypothetical correlate to Kant's theory of the pure intuition of inner sense (subjective time), which is the theory of an *a priori* process of synthesis that has objectively valid context only with respect to *kinesis*. As we said when we discussed the *Realerklärung* of equilibrium, if all *kinesis* were to cease, there could be no ground for the marking of a moment in time, hence the synthesis of the pure intuition of time would be an empirically meaningless idea.

Only the findings of future research will tell if Damasio's hypothesis continues to be supported by empirical evidence. However, at our present state of knowledge the Damasio model provides us with some not-small amount of encouragement because *something like* the Damasio model *must* be the consequence in *soma* of the theory of *nous* that has been presented in this treatise. The proto-self by itself is not the correspondent of pure Reason but appears to have something to do with it, and with reflective judgment as well, because of the role of its brain structures in the regulation of body state.

§ 1.2 Regulation in Regard to the Autonomic and the Non-autonomic

We have used the term "regulation" in three different contexts within this treatise. As we come to the discussion of practical judgment and the power of Reason, it is important to distinguish the different senses in which this term is used. Let us begin with the dictionary definitions. The verb "regulate" is there defined as follows:

> **regulate**, *v.t.* [L. *regulatus*, pp. of *regulare*, to rule, to direct, to regulate.]
> 1. to control, direct, or govern according to a rule, principle, or system.
> 2. to adjust to a particular standard, rate, degree, amount, etc.; as, *regulate* the heat.

> 3. to adjust so as to make operate accurately, as a clock.
> 4. to make uniform, methodical, orderly, etc.

From this we come to the noun as:

> **regulation**, *n.* 1. the act of regulating; the act of reducing to order, or of disposing in accordance with rule or established custom.
> 2. the state of being regulated.
> 3. a rule, law, order, or direction from a superior or competent authority regulating action or conduct; a governing or prescribed course of action.

Used as a descriptive term, the adjective *regulative* is defined:

> **regulative**, *a.* 1. regulating; tending to regulate.
> 2. assumed by the mind as the basis or condition of all other knowledge; furnishing fundamental or guiding principles.

The transcendental Ideas are regulative in a *practical* sense of the second definition above (although not in the sense of innate objective concepts or ideas).

The brain structures of which Damasio speaks in discussing the proto-self are those which "regulate body state." Specifically, these structures are involved in the so-called *autonomic* functions of homeostasis (control of body temperature, blood pressure, water balance, metabolism, blood glucose, carbon dioxide, and pH levels, etc.). Reber's *Dictionary* defines "regulatory behavior" as:

> **regulatory behavior** **1.** In biology, any behavior that serves to maintain balance or equilibrium. Used here in the sense of the maintenance of homeostasis. **2**. By extension to psychological systems, daily rituals and habits that help maintain emotional stability.

We have defined Reason as "the power to direct and regulate the spontaneity of an Organized Being insofar as this spontaneity is not autonomic." Under this definition the somatic structures involved in Damasio's proto-self appear to be poor candidates for the role of somatic substrates for the power of Reason. This, however, brings up the issue of what is specifically meant by the term "autonomic." Taken in the most general sense, the psychological definition of autonomic is (Reber):

> **autonomic** **1.** Self-controlling or self-regulating. **2.** Independent. **3.** Spontaneous.

Now, as it turns out, all three of these definitions run into important difficulties.

In the case of the third definition, we have already seen that spontaneity is not an idea that can be applied with objective validity to appearances in sensible Nature (*in mundo non datur fatum*). Spontaneity has only practical objective validity, and this only in regard to psychological Nature (where its standing is due to our inability to trace an objectively valid causal chain back to anything other than the *Dasein* of the Organized Being; beyond this point our speculations

become transcendent and, according to the psychological Idea, without objectively valid standing). The third definition runs afoul of Modality in the law of continuity on the side of *soma*. This is to say, it is *one-sided* with respect to *psyche* and can only be applied on the side of *nous*. This definition withholds from us the possibility of identifying a somatic counterpart that could be said to be autonomic, and therefore equally prevents us from identifying a non-autonomic somatic correlate (if there is no autonomic correlate, the designation 'non-autonomic' is without definable real context).

The second definition runs into the problem of *incompleteness*. Independence is the idea of a characteristic mark of external Relation in our general 2LAR of representation. More specifically, it is a negative mark of external Relation, i.e. that no external Relation exists. Now, every idea of external Relation requires two objects, and the second definition has a problem because it does not specify the second object (of which the first is said to be independent).[3] We will not be able to use this second definition unless we can complete it by providing it with a Critical context.

The problem attending the first definition is ontological. The word "self" as used in this definition is not intended to implicate the Self (*Existenz* of an Organized Being). The intention in the use of this word is to implicate internal Relation in a thing. To apply this definition it is necessary to make the presupposition that we have a concept of the object to which the definition may be applied. In this case the issue becomes one of how we can apply the definition with objective validity, and this in turn depends on the objective validity of the concepts of internal Relation with regard to a *thing*. For example, Leibniz asserted the autonomy of his monads (i.e., monads theoretically possessed freedom); the problem, of course, is that in his case the entire object concept lacks real objective validity. Monads were supposed to lack all external Relations, and Kant went to some lengths to show that there likewise were no objectively valid concepts of any internal Relation for monads. In the case of physical things ('material' things – i.e. "dead" matter), Kant's applied metaphysic of Nature likewise shows that we can have no objectively valid concepts of internal Relation for the thing-in-itself as material thing. Only the external and the transitive Relations have the possibility of real objective validity in determination for material things.[4] We can say of a physical system, e.g. the thermostat-and-furnace that heats your house, that it is automatic (an automaton), but not that it is autonomic.

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[3] An even worse difficulty attends if we try to make independence the idea of a characteristic mark of the transitive Relation. The law of community (third Analogy of Experience) *requires* reciprocal determination of objects coexistent in time.

[4] In nuclear physics, the current theory holds that "particles" such as a proton are "internally" composed of things called "quarks" (rhymes with "corks"). This theory is not a model of an internal Relation; once "quarks" have been "broken out" in the ontology of nuclear physics, they are material things and the theory deals with external and/or transitive Relations among them.

And so it is that if we are to apply our definition of Reason we must establish an objectively valid meaning for the words "autonomic" and "non-autonomic" in the context of the Organized Being. Here a good place to begin is with a Critical review of how biology employs the term "autonomic" with regard to "the autonomic nervous system."

The autonomic nervous system (ANS) is part of what is called the peripheral nervous system (PNS), a designation that means the nerves which lie outside the central nervous system (brain and spinal cord). The ANS is one of two subdivisions of what is called the efferent division of the PNS[5]; the term "efferent" means that signals go from the central nervous system to effector cells in the muscles, organs, and other tissues of what some call the "body machine" (i.e. that part of *soma* that does not include the brain and spinal cord). Nerve endings in the ANS control smooth muscles of the viscera, cardiac muscles, glands, the gastrointestinal tract – in fact, all effector tissues other than the skeletal muscles. The name "autonomic nervous system" was given to this structure because at one time it was thought that its parts were not under voluntary control, i.e. that "the mind" or "the will" played no part in how this system functioned. Indeed, the term "involuntary nervous system" was once used synonymously for the ANS.

However, this picture turns out to be not so simple as was once supposed. Over the past few decades experimental evidence has been found indicating that at least some of those functions once thought to be "autonomic" (in the sense of being independent of conscious control) are in fact not. The first significant challenge, in the western world, to what was then the traditional view of the autonomic nervous system came in 1961 when G. Razran published a paper reporting that the Russian psychologist M.I. Lisina had demonstrated voluntary control of vasodilation in human subjects.[6] This finding was later disputed after Lisina's paper became available in English.[7] In the late 1960s a landmark series of experiments was carried out by N.E. Miller and his co-workers which received a great deal of attention and did much to further challenge the traditional view.[8,9,10,11] It was later found by a number of investigators, including Miller, that it

[5] The other division is called the somatic division. It consists of motor neurons whose endings go only to skeletal muscles. For an elementary overview of the peripheral nervous system see [VAND: 212-217].
[6] G. Razran, "The observable unconscious and the inferable conscious in current Soviet psychophysiology," *Psychological Review, 68,* 81-147.
[7] M.I. Lisina, "The role of orientation in the transformation of involuntary reactions into voluntary ones." In L.G. Voronin et al. (Eds.), *Orienting reflex and exploratory behavior*, Washington, DC: American Institute of Biological Sciences.
[8] DiCara, L.V. & Miller, N.E. (1968), "Changes in heart rate instrumentally learned by curarized rats as avoidance responses," *Journal of Comparative and Physiological Psychology, 65,* 8-12.
[9] Miller, N.E. & Banuazizi, A. (1968), "Instrumental learning of curarized rats of a specific visceral response, intestinal or cardiac," *Journal of Comparative and Physiological Psychology, 65*, 1-7.
[10] Miller, N.E. & DiCara, L.V. (1968), "Instrumental learning of urine formation by rats: Changes in renal blood flow," *American Journal of Physiology, 215,* 677-683.

was difficult to replicate these findings, which cast considerable doubt on the earlier reports. Nonetheless, a number of studies carried out after the 1968 publications appear to have confirmed in a convincing fashion that voluntary control of at least some functions previously thought to be autonomic is possible.[12] The principal condition thought to be necessary for this to take place is some sort of feedback (e.g. "biofeedback") observable by the subject. This usually requires some sort of external instrumentation of physiological responses in order for the subject to learn to control these responses, but such control has been demonstrated (by subjects who have learned to do so) without this external biofeedback instrumentation [BUCK: 164-201].

All this makes the *empirical* identification of "autonomic" behaviors very problematical. The evidence in hand today appears to tell us that a full closure of the activity loop (motoregulatory expression to conscious presentation in sensibility to motoregulatory expression) is necessary for voluntary control of the "autonomic" nervous system to be possible. However, it is not clear if this is a *sufficient* condition. And, of course, the traditional "autonomic" functions are by definition capable of being expressed *without* conscious mental control.

What such somatic phenomena tell us is that mind-body reciprocity[13] in an Organized Being is not a simple one-for-one reciprocity in appearances. One can get a haircut with no apparent effect of this being registered in any known mental phenomenon. Nor, it seems, can an overweight person "exert mind over matter" to "think herself thinner" and see a corresponding result on the bathroom scale. Such absences of reciprocal effects in actual experience illustrate that mind-body reciprocity is an apparently not complete reciprocity. Indeed, considerations similar to these were important factors in Descartes' dualism:

> Now my first observation here is that there is a great difference between a mind and a body in that a body, by its very nature, is always divisible . . . Although the entire mind seems to be united to the entire body, nevertheless, were a foot or an arm or any other bodily part to be amputated, I know that nothing has been taken away from the mind on that account . . .
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> My second observation is that my mind is not immediately affected by all the parts of the body, but only by the brain, or perhaps even by just one small part of the brain, namely, by that part where the "common" sense is said to reside. Whenever this part of the brain is disposed in the same manner, it presents the same thing to the mind, even if the other parts of the body are able meanwhile to be related in diverse ways. Countless experiments show this, none of which need to be reviewed here [DESC1: 56-57].

As a neuroscientist Descartes left something to be desired. Nonetheless, the phenomenon of apparently incomplete mind-body reciprocity is a something that requires dealing with. We could call this "the Cartesian question."

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[11] Miller, N.E. (1969), "The learning of visceral and glandular responses," *Science, 163*, 434-445.
[12] Miller, N.E. (1978), "Biofeedback and visceral learning," *Annual Review of Psychology, 29*, 373-404.
[13] Note: mind-body reciprocity is technically not the same as *nous-soma* reciprocity.

The key consideration here is that our empirical knowledge of the Self is knowledge of appearances only. The individual's concept of his or her Self is a model of *Existenz*, and its roots are laid far back at the point where the demarcation line – the judgment of a real division between the Self and the not-Self – was first laid down in thinking. We do not have the power to reach through the appearance and come to experience the Self as *Ding an sich selbst*. What we can do is recognize that what is to be taken as appearance of the body in thinking is subject to rules of thinking (habits of thought) by which we draw the separation between "me" and "not me," and that these rules all have an entirely *practical* basis. When my hair is attached to my head, I "have a reason to think" it is part of my Self. But when it lies on the floor of the barbershop, I regard it as "my hair" but still am content to have the barber sweep it up and throw it in the trash bin. It is "mine" but no longer a part of "me."

The determination upon which such judgments turn, once the Self vs. not-Self division has been made in one's concepts of Nature, is the transcendental place to which the idea of a cause has been assigned. When the efficient cause of an effect appears to be objectively valid only through psychological causality, the causal agent is the transcendental Subject; where psychological causality is ineffectual (produces no object of change in appearances of *soma*), then the cause is placed wholly in sensible Nature and comes strictly under the notion of physical causality and dependency in appearances. Where I perceive my Self to be affected through a causality laid to an object on the other side of my demarcation between my Self and the not-Self, then whatever object is the one apparently affected (or immediately assigned as "the point where I am affected") I assign to *soma*. Science can help us improve the clarity and distinctness of such object concepts, but even so the determination of objects rests at last with the processes of judgmentation in thinking.

We are now in a position to understand the Critical *Realerklärung* of the term "autonomic." **A somatic *event* (*Unsache*-thing) 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 connected to concepts of real objects entirely through a series of Relations of causality and dependency that need nowhere involve the concept of *choice*. For example, in the observable actions of an amoeba we do not find any need to regard amoebic behavior as involving any factor that cannot be strictly laid to physical Relations of causality and dependency. We then say that an amoeba, as an organism, is an entirely autonomic organism. We need not posit an amoebic mind to explain amoebic actions. We do not find ourselves in the position to say the same of a human being because the idea of a material thing contains no objectively valid concept of any noetic

object in its sphere (no monads, no "pontifical cells," no atoms of happiness, no sad electrons, no quarks of curiosity, no "molecules of ingenuity," no "vital force," etc.), but the phenomenon of mind is part of the logical essence in the appearances of a living human being.[14]

§ 1.3 Non-autonomic Regulation

A somatic event is non-autonomic if we must posit choice in the causality of its appearance. In neuroscience the way this is usually phrased is that a "motivational state" is said to exist in the brain such that the organism'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," etc.). Psychology and neuroscience 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 readily observable of human beings. It is the presumption of present-day neuroscience and neuropsychology that ultimately it will be possible to explain such behaviors from brain state and brain activity, i.e. that herein we will find the "hidden variables" needed to reduce behavior to explanation purely in terms of physical causality. The Critical Philosophy agrees with this presumption *insofar as appearances are concerned* because of the principle of emergent properties in *nous-soma* reciprocity. However, to be able to say that such-and-such a somatic state and this-and-that somatic signaling activity "explains" (at the level of *soma*) the *psychological* character of *mind*, we must also clearly understand the principles and organization of the mental phenomena we seek to explain. Lacking this piece of the puzzle, no robust and testable theoretical predictions from a somatic theory are likely to be forthcoming.

We have previously (Chapter 15) looked at the psychological ideas of motivation, drives, and so on. The most common usage of the term "drive" is that a drive is a motivational state produced by either: (a) deprivation of a needed substance (e.g., food); or (b) presence of a noxious stimulus. "Need states" are regarded as producing "drive states," and "drive states" are regarded as states that motivate behaviors. Psychology likes to distinguish two types of drives:

> **nonregulatory drive:** any drive that serves functions other than those of maintaining consistent body states necessary for survival of an individual organism;
>
> **regulatory drive:** any drive that functions so that the organism seeks out substances that serve to maintain consistent bodily states necessary for survival.[15]

[14] In the case of a comatose victim of a stroke, there is no longer evidence of a "mind at work." However, this person, prior to the stroke, did evidence this in his appearances, and we regard this person as "the same person" (albeit severely unhealthy) and can lay the non-appearance of mental activity to the loss of somatic function through the reciprocity principle.

[15] These definitions are taken from Reber's *Dictionary of Psychology*, 2nd edition.

The "sex drive" is typically regarded as an example of a nonregulatory drive, while hunger or thirst are typically taken as examples of regulatory drives. However, assuming that drive states exist we should ask: Is it objectively valid to regard *any* drive state as "nonregulatory"? Certainly any behavior regarded as purposive is to some greater or lesser degree *organized* behavior. Even the rambunctious limb flapping an infant engages in is somewhat organized behavior (i.e. a "circular action" if not a Piagetian "circular reaction" proper; it is difficult to tell *what* this behavior should or should not be called a "reaction" to, but actions are appearances and appearance events are understood by the category of causality & dependency). Organized behavior that can be called purposive – by which I mean it must be attributed to a psychological causality – *is* rule-based behavior under the definition of a "rule" we have stated previously. Rule-based behavior is, by the definition of the word "regulate", *regulated* behavior. The usual examples of so-called "nonregulatory drives" involve organized actions, and so "nonregulatory drive" is in this sense an oxymoron.[16]

There is a meaningful difference between the idea of a "drive" and that of a "drive state." The term "drive state" has the connotation of a particularly determined *nexus* of *Existenz*. Damasio's "inaugural proto-self" is an idea having this flavor of connotation. A "drive" is, on the other hand, regarded as a "that-in-the-matter-of" a represented *Existenz* which in some sense is an energetic or, to use the proper Critical term, a *moving power* (the power to be the cause of *kinesis* in appearances of this *Existenz*). Thus, "drive state" is primarily an idea of Relation, while "drive" is primarily an idea of Quality. A full representation of this *Existenz* must also take into its account an accompanying idea of Quantity and an accompanying idea of Modality. When a purposive behavior is regarded as *chosen* under a rule of a non-autonomic regulation of actions, we can make a provisional guess that the form of the matter (Quantity) of an *Existenz*-regarded-as-a-motivational-state should be called a **want**, recognizing that this term is still entirely too vague and will require a *Realerklärung* before we are through. The choice of this term is "motivated by" the condition that we are regarding the behavior as grounded in the causality of freedom, and the term "want" carries the connotation of some representation *in concreto* of a "particular standard" (see definition 2 of "regulate") regarded as a condition that satisfies "that which drives the regulated action." As for Modality (matter of the *nexus*), this must be seen as having the flavor of a *manner* or *type* of "motive" (in the sense of the word "motive" as a subjective ground for determining the behavior). Again, this idea of a **type-of-motive** is still too

[16] In psychology the adjective "regulatory" is used to mean "maintaining body homeostasis or emotional stability." Biology uses the term more broadly and in a manner consistent with how "regulation" is used by engineers in control theory.

vague and we will require a *Realerklärung* for it as well.

To fill in some of the blanks, we can again turn to Damasio's model to obtain a provisional, if problematic, *example* of the sort of considerations involved in the idea of non-autonomic regulation. Damasio calls this part of his model "assembling core consciousness":

> The continuity of consciousness is based on the steady generation of consciousness pulses which correspond to the endless processing of myriad objects, whose interaction, actual or recalled constantly, modifies the proto-self. The continuity of consciousness comes from the abundant flow of nonverbal narratives of core consciousness.
>
> It is possible that more than one narrative is created simultaneously. This is because more than one object can be engaged at about the same time, although not many can be engaged simultaneously, and more than one object can thus induce a modification in the state of the proto-self. When we talk about a "stream of consciousness," a metaphor that suggests a single track and a single sequence of thoughts, the part of the stream that carries consciousness is likely to arise not in just one object but in several. Moreover, it is also probable that each object interaction generates more than one narrative, since several brain levels can be involved. Again, such a situation seems beneficial because it would produce an overabundance of core consciousness and ensure the continuity of the state of "knowing" [DAMA1: 176-177].

In our detailed discussion of teleological reflective judgment in the previous chapter, we deduced the *momenta* of teleological reflective judgment and its presentations of expedience in desiration. However, nothing said there implied that reflective judgment can not or does not present a multiplicity in the manifold of Desires. Teleological judgment implicates actions, but it does not have the final authority over whether or not a particular presentation of Desire is to be realized as an appetite in an action. Nor is the *realization* of an action instantly expressed in an observable organized appearance of behavior (because of the veto authority of practical Reason). Damasio's idea of multiple "narratives" is an idea consistent with the view of teleological reflective judgment presenting a multiplicity of possible, and possibly opposing, expedient actions. When in the act of a judgment of desiration different action connections are in opposition (in the *Entgegensetzung* sense) and yet real opposition (cancellation, *Widerstreit*) is contrary to formal expedience, then an *arbitration* of the conflict ensuing from the teleological judgment is required. This arbitration is nothing else than an *act of choosing*, and it belongs to practical Reason (in a free determination of appetitive power). The action that *does* then ensue is a regulated but non-autonomic action.

§ 2. The Impetuousness of Reflective Judgment

But is the picture presented at the end of §1 consistent with our theory of reflective judgment? Can teleological reflective judgment present in its act connections to actions in which a real opposition (*Entgegensetzung*) is set up? After all, teleological reflective judgment cannot operate

contrary to its own rules. Would not opposing action connections cancel, thus not be presented?

Here it is important to appreciate the significance of the utterly non-objective character of presentations of reflective judgment. The process of teleological reflective judgment is in possession of utterly no objective knowledge of the Nature of the *actions* its *act* implicates. To put this another way, teleological judgment as a capacity does not know *a priori* that two specific motoregulatory expressions will cancel one another. The real opposition is in the action expression, not in the judicial act that implicates both actions in the same moment.

This may be difficult to appreciate through introspection because we are not objectively conscious of the constitution of a motoregulatory action. I undertake to type this sentence and my fingers move to execute my intention. I have no more conscious perception of the specific control of the muscles in my fingers and hands than I do of causing my heart to beat. We become aware of the consequences of motoregulatory expression through kinaesthetic perceptual feedback, but we are not aware of any "feeling of innervation." William James wrote:

> A powerful tradition in Psychology will have it that something additional to these images of passive sensations is essential to the mental discrimination of a voluntary act. There must, of course, be a special current of energy going out from the brain into the appropriate muscles during the act; and this outgoing current (it is supposed) must have in each particular case a feeling *sui generis* attached to it, or else (it is said) the mind could never tell which particular current, the current to this muscle or the current to that one, was the right one to use. This feeling of the current of outgoing energy has received from Wundt the name of the *feeling of innervation*. *I disbelieve in its existence*, and must proceed to criticize the notion of it, at what I fear may to some prove tedious length . . .
>
> We find accordingly that most authors have taken the existence of feelings of innervation as a matter of course. Bain, Wundt, Helmholtz, and Mach defend them most explicitly. But, in spite of the authority which such writers deservedly wield, I cannot help thinking that they are in this instance wrong, – that the discharge into the motor nerves is insentient, and that *all our ideas of movement*, including those of the effort which it requires, as well as those of its direction, its extent, its strength, and its velocity, *are images of peripheral sensations, either 'remote' or resident in the moving parts, or in other parts which sympathetically act with them in consequence of the 'diffusive wave.'*
>
> *A priori*, as I shall show, there is no reason why there should be a consciousness of the motor discharge, and there is a reason why there should not be such a consciousness . . .
>
> The circumstantial evidence for the feeling of innervation thus seems to break down like the introspective evidence. But not only can we rebut experiments intended to prove it, we can also adduce experiments which disprove it. A person who moves a limb voluntarily must innervate it in any case, and if he feels the innervation he ought to be able to use the feeling to define what his limb is about, even though the limb itself were anæsthetic. If, however, the limb be totally anæsthetic, it turns out that he does not know at all how much work it performs during its contraction – in other words, he has no perception of the amount of innervation which he exerts. A patient examined by Mssrs. Gley and Marillier beautifully showed this [JAME2: 771-785].

Psychology and neuroscience have rendered their verdict in the case of the feeling of innervation in favor of James. Our ability to make highly coordinated non-reflex movements is learned, and this learning process builds upon the baby's discovery of its own body.

Observation 77. – At 0;6 (0) Jacqueline looks at my watch which is 10 cm. from her eyes. She reveals a lively interest and her hands flutter as though she were about to grasp, without however discovering the right direction. I place the watch in her right hand without her being able to see how (the arm being outstretched). Then I again put the watch before her eyes. Her hands, apparently excited by the contact just experienced, then proceed to move through space and meet violently, subsequently to separate. The right hand happens to strike the watch: Jacqueline immediately tries to adjust her hand to the watch and thus manages to grasp it. The experiment is repeated three times: it is always when the hand is perceived at the same time as the watch that the attempts become systematic. – The next day, at 0;6 (1) I resume the experiment. When the watch is before her eyes Jacqueline does not attempt to grasp it although she reveals a lively interest in this object. When the watch is near her hand and she happens to touch it, or it is seen at the same time as her hand, then there is searching, and searching directed by the glance. Near the eyes and far from the hands, the watch is again simply contemplated. The hands move a little but do not approach each other. I again place the object near her hand: immediate searching and, again, success. I put the watch a third time a few centimeters from her eyes and far from her hands: these move in all directions but without approaching each other. In short, there are still two worlds for Jacqueline, one kinesthetic and the other visual. It is only when the object is seen next to the hand that the latter is directed toward it and manages to grasp it. – That evening, the same experiment with various solid objects. Again and very regularly, when Jacqueline sees the object facing her without perceiving her hands, nothing happens, whereas the simultaneous sight of object and of hand (right or left) sets prehension in motion. Finally it is to be noted that, that day, Jacqueline again watched with great interest her empty hand crossing her visual field: The hand is still not felt to belong to her [PIAG1: 110].

§ 2.1 The Somatic Basis of Movement

Today we know a great deal more about the organization of the neural motor system than was known in James' time. The principal parts of this system include the spinal cord, the brain stem, the cortical motor areas, the cerebellum, the thalamus, and the basal ganglia. The neural networks involved in this system receive extensive feedback from the sensory networks in the brain and spinal cord and are modified through experience.

> For voluntary motions to be well timed and accurate, they require coordinated tactile, visual, and proprioceptive information about the movement in progress. Voluntary movements thus depend on integration of the motor and sensory systems. The cerebellum and the basal ganglia have an important role in motor integration; they receive sensory input and modulate the timing and trajectory of movements. These structures are essential for accurately timed and smoothly executed movements.
>
> Like the cerebral hemisphere, the cerebellum has a cortex that overlies white matter and deep nuclei. Whereas much of the input to the cerebral cortex passes through relay nuclei in the thalamus, input to the cerebellum excites both the three deep cerebellar nuclei . . . and the cerebellar cortex. In turn, the cerebellar cortex also influences activity in the deep cerebellar nuclei. It is, in fact, in the deep nuclei that most of the output axons of the cerebellum arise. The cerebellum is involved in the initiation and timing of movements.
>
> The basal ganglia consist of three main components: the caudate nucleus, the putamen, and the globus pallidus. The caudate nucleus and putamen together are termed the corpus striatum and are involved in regulating the speed of movements. The control of movement by the cerebellum and basal ganglia is mediated by brain stem and thalamic motor nuclei. This is in contrast to the motor cortex, which controls movements directly through projections to motor neurons.[17]

[17] J.P. Kelly, "The neural basis of perception and movement," in [KAND: 283-295].

Our description of the organization of the motor system is classified into two main subdivisions: the motor control hierarchy and the regulative control system. The spinal cord, brain stem, and cortical motor areas are placed in the hierarchy subsystem, while the cerebellum and basal ganglia are assigned to the regulative division. In addition, the characterization of movements is classified in terms of three classes: reflex responses, rhythmic movements, and voluntary movements.

> *Voluntary movements*, reading, manipulating an object, or playing the piano, represent the most complex actions. These movements are characterized by several features. First, they are purposeful. They may be initiated in response to a specific, external stimulus or to the will. Second, voluntary movements are goal directed. Finally, movements are largely learned and their performance improves greatly with practice. As these skilled movements are mastered with practice, they require less or ultimately no conscious participation . . .
>
> *Reflex responses*, the knee jerk, the withdrawal of a hand from a hot object, or coughing are the simplest motor behaviors and are least affected by voluntary controls. Reflexes are rapid, somewhat stereotyped, and involuntary responses that are usually controlled in a graded way by the eliciting stimulus.
>
> *Rhythmic motor patterns*, walking, running, chewing, combine features of voluntary and reflex acts. Typically only the initiation and termination of the sequence are voluntary. Once initiated, the sequence of relatively stereotyped, repetitive movements may continue almost automatically in reflex-like fashion.[18]

Basic reflexes are initiated and controlled almost entirely (some claim entirely) by neural networks in the spinal cord. They do not require a "go-ahead" from the brain in order to be executed. However, it is possible for many, perhaps all, of the basic reflex movements to be "overridden" by command signals descending from the brain. For example, if you touch a hot object the reflex response will be to snatch your hand away. However, it is also possible to override this reflex deliberately and keep a grip on a hot object. Present day theory holds that, at the level of the spinal cord neural networks, voluntary movement commands descending from the brain "co-opt" the spinal cord's basic reflex networks by, in effect, re-routing sensory feedback signals within the spinal cord itself. One name given to this theory is "the generalized reflex afferent" model.[19] The spinal cord is also thought to contain special neural networks, called central pattern generators, that coordinate and control complex rhythmic movements without the intervention of descending command signals coming from the motor areas of the cerebrum. For example, a cat that has had its cerebral control pathways to the spinal cord severed and then is suspended in a harness with its feet on a moving treadmill can still execute well-coordinated walking movements. Newborn infants also exhibit rhythmic stepping when placed (with

[18] C. Ghez, "The control of movement," in [KAND: 533-547].

[19] A. Lundberg, K. Malmgren, and E.D. Schomburg, "Reflex pathways from group II muscle afferents. 3. Secondary spindle afferents and the FRA: a new hypothesis," *Experimental Brain Research* (1987), **65:** 294-306.

appropriate suspension) on a moving treadmill.

> How do the motor systems integrate motor commands with ongoing sensory information so as to control the complicated mechanical machinery of the musculoskeletal systems? This is achieved by distributing feedback, feed-forward, and adaptive mechanisms among three levels of motor control: the spinal cord, the descending systems of the brain stem, and the motor areas of the cerebral cortex . . . These different levels of the motor systems are organized both hierarchically and in parallel. The lower levels have the capacity to generate complex spatiotemporal patterns of muscle activation in the form of reflexes and rhythmic motor patterns. The hierarchical organization enables higher centers to give relatively general commands without having to specify the details of the motor action.
>
> By means of their parallel organization, the motor systems can issue commands that can act directly on the lowest level of the chain to adjust the operation of reflex circuits. For example, the corticospinal tract controls pathways descending from the brain stem but, in addition, it also controls spinal interneurons and motor neurons directly. The combination of parallel and hierarchical mechanisms results in an overlap of different functional components of the motor system, similar to that which we encounter in the sensory systems . . .
>
> The lowest level of the hierarchy, the *spinal cord*, contains neuronal circuits that mediate a variety of automatic and stereotyped reflexes. These reflexes can function even when the cord is disconnected from the rest of the brain . . . Even simple descending commands can produce complex effects through these interneurons. It is now known that the same networks of interneurons that organize reflex behavior are also involved in voluntary movements . . .
>
> The next level of the motor hierarchy, the *brain stem*, contains three neuronal systems . . . whose axons project to and regulate the segmental networks of the spinal cord. The brain stem systems integrate visual and vestibular information with somatosensory inputs and play an important role in modulating spinal motor circuits in the control of posture . . .
>
> The highest level of motor control consists of three areas of the cerebral cortex: the *primary motor cortex*, the *lateral premotor area* (or premotor cortex), and the *supplementary motor area*. Each area projects directly to the spinal cord through the corticospinal tract as well as indirectly through the brain stem motor systems. The premotor and supplementary motor areas also project to the primary motor cortex. The lateral premotor and supplementary motor areas are important for coordinating and planning complex sequences of movement. Both areas also receive information from the posterior parietal and prefrontal association cortices . . .
>
> In addition to the three hierarchical levels . . . two other parts of the brain also regulate motor function – the cerebellum and basal ganglia. The cerebellum improves the accuracy of movement by comparing descending motor commands with information about the resulting motor action. The cerebellum does this by acting on the brain stem and on the cortical motor areas that project directly to the spinal cord, monitoring both their activity and the sensory feedback signals they receive from the periphery . . .
>
> The basal ganglia receive inputs from all cortical areas and project principally to areas of the frontal cortex that are concerned with motor planning. Diseases of the basal ganglia produce a range of motor abnormalities including loss of spontaneous movements, abnormal involuntary movements, and disturbances in posture.[18]

Interestingly, the basal ganglia also have a role in cognitive function and there are some who think the basal ganglia might perhaps subserve all the functions served by the cerebral cortex.[20] The neural circuitry of the cerebral motor cortices and the cerebellum are extensively modified through experience. This is sometimes called “motor learning.”

[20] L. Côté and M.D. Crutcher, “The basal ganglia,” in [KAND: 647-659].

§ 2.2 The Noetic Connection

Although a great deal has been learned about the somatic organization of the motor system, neuroscience has been markedly less successful in pinning down where and how "will" comes into the somatic picture. This is hardly surprising considering the great difference between the mechanistic appearances of *soma* and the intelligible shoreline of *nous*. Basically, no one knew exactly what to look for in *soma* because no one had a clear enough picture of the mental "anatomy" and "physiology" of the processes of *nous*. Some insight has been gained from knowledge obtained from those people who have had the misfortune to suffer strokes, injuries, tumors, or other diseases of the brain, but this has provided not nearly enough data for a reliable picture to emerge. Further complicating the mechanistic picture are findings coming out of "split brain" studies. These are studies of commissurotomy patients, i.e. patients who have had their corpus callosum[1] and anterior commissure surgically cut as a drastic step taken to control severe epilepsy. These studies have given rise in recent years to the speculation that each cerebral hemisphere has its own separate "consciousness" and its own separate "mind." Although this proposal has the support of some of the world's leading neuroscientists[2], it does not yet command universal acceptance as a proven fact. Kolb and Whishaw[3] write,

> Careful and sometimes ingenious studies of patients with commissurotomies have provided clear evidence of the complementary specialization of the two cerebral hemispheres. It must be recognized, however, that as interesting as these patients are, they represent only a very small population and their two hemispheres are by no means normal. Most of these patients had focal lesions, which caused the initial seizure disorder, and some may have had brain damage early in life, leading to significant reorganization of cerebral function. Thus, generalizations and inferences must be made cautiously from these fascinating patients [KOLB: 187-188].

We will have more to say about the "split mind" hypothesis in Chapter 22. Here we will mention only one of the interesting phenomena that has been observed, namely that of intermanual conflict (more popularly known as "alien hand"). This phenomenon is sometimes observed in people who have suffered damage to either the supplementary motor area or the corpus callosum, sometimes due to a stroke and more often after a commissurotomy. In the alien hand phenomenon, one of the person's hands acts contrary to the task being performed by the other hand. For example, the person might be buttoning his shirt with one hand while the other hand unaccountably proceeds to unbutton it. He is unable to exert control over the "alien hand." As you can well imagine, this condition is to say the least extremely inconvenient and annoying.

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[1] The white matter that carries information between cortical areas of the two cerebral hemispheres.
[2] Supporters of the "split mind" proposal include Nobel laureates Roger W. Sperry and Eric R. Kandel as well as renowned neuroscientists Michael S. Gazzaniga and Joseph E. LeDoux.
[3] Neuropsychologists at the University of Lethbridge.

Alan J. Parkin, an experimental psychology professor at the University of Sussex, has studied many cases of alien hand. He writes:

> The supplementary motor area (SMA) . . . springs into action when the brain prepares to execute a complex volitional bodily action. It does not actually trigger the action itself – instead it acts rather as a motor executive, sending 'move it' signals to the neighboring motor cortex, which in turn sends the 'get moving' message to the appropriate muscles . . . Brain scans show that, in a normal brain, the SMA on both sides of the brain is activated even when action is consciously planned for only one side of the body.
>
> The activation on the side that is not actually going to move is pretty weak, but it may be enough to cause movement unless it is stopped. Normally, this inhibition comes from the SMA on the side that is actually meant to move . . . This message passes through the corpus callosum, so in split-brain patients it does not get through. As a result both SMAs send 'move it' messages to their respective limbs, even though the conscious brain had plans to move only one . . .
>
> Say there is some simple task to be done like opening a door. The dominant hand duly does the deed. Then the alien hand – dragging along behind, as it always will – arrives on the scene. The task it came to help with has been done. But the hand 'knows' it was sent to do something in the area and – without the leadership of a conscious, thinking mind – it does the closest thing there is to the open-door maneuver it came to do: it closes it.[4]

Two things about the data on motoregulatory expression in the SMA and Parkin's hypothesis are pertinent to our discussion here. The first is the consciously-unintended activation of parts of the brain not serving the conscious and objectively intended movement and the need for inhibitory expressions of somatic activity required to prevent the unintended movement from taking place. In split-brain patients, or in patients who have suffered stroke damage to the part of the SMA that transmits or receives the inhibitory signals, this "don't go" function is incapacitated. The second thing is the not-consciously-ordered change in the action effected by the alien hand. Here Parkin's hypothesis is that the action carried out is, in some sense, related to the intended effect produced by the other hand, but since that effect is no longer possible (because it has already been accomplished), the alien hand appears to carry out the most closely related action sequence still possible. As Parkin puts it, the alien hand is "trying to be helpful," but since the motor action is at root not objectively cognizant, the result is anything but "helpful."

According to the theory presented in this treatise, the noetic counterpart to the activating somatic expression is teleological reflective judgment, and the noetic counterpart to the inhibiting expression is the process of practical Reason. Teleological judgment involves only affective perceptions and is entirely non-cognitive. However, for a number of years now there has been a spreading folklore that the left hemisphere of the cerebrum is devoted to "analytical" (i.e. "objective") tasks, while the right hemisphere is devoted to spatio-perceptual (non-verbal, non-analytical or "touchy-feely") tasks. Asymmetry of brain function between the hemispheres has

[4] A.J. Parkin, "The alien hand," in *Mapping the Mind*, Rita Carter, Berkeley, CA: University of California Press, 1998, pg. 52.

led to the popularization of unscientific characterizations such as “the left-brain person” (e.g. a bookkeeper) and “the right-brain person” (e.g. a musician). Does this in any way suggest that the teleological judgment function is “right brain” and, therefore, inconsistent with a function that involves both hemispheres (as in the alien hand phenomenon)?

The answer, of course, is no. The popular myth is nothing more than a general misunderstanding among laypersons about what the neuroscientist means when he or she talks about lateralization of brain function. Kolb and Whishaw discuss the issue of what lateralization studies do and do not tell us about brain function. We quote them here at length:

> Laterality studies provide an important complement to the study of neurological patients and have served as the basis for much of the current theorizing about the nature of cerebral asymmetry. It should be recognized, however, that these studies are a very indirect measure of brain function and are far from being the ideal tools they are often assumed to be . . .
>
> Measures of laterality do not correlate perfectly with invasive measures of cerebral asymmetry . . . Measures of laterality do not correlate very highly with each other. We might expect that tachitoscopic and dichotic measures of laterality in the same subjects would be highly concordant, but they are not. Perhaps these tests are not really measuring the same things after all.
>
> There is no simple way to correlate individual differences in the neural pathways to the cortex, or in the functional representations in the cortex, with individual performance on the laterality tests. Individual differences in the brains of normal subjects almost certainly add a great deal of variability to the results, but there is currently no way to identify a systematic relationship between anatomy and performance.
>
> The strategies that subjects adopt in laterality tasks can alter performance significantly . . . Subjects can also enter tests with preconceived biases that may affect performance results. Finally, laterality effects may simply be a result of experiential rather than biological factors. Suspicion about laterality effects is reinforced by the observation that repeated testing in the same subjects does not always produce the same results.
>
> Skepticism regarding the usefulness of laterality research reaches its peak in an insightful and provocative book by Efron. His thesis is that the apparent right-left difference in laterality studies can be explained entirely by the way in which the brain “scans” sensory input . . . Efron has done numerous experiments of this sort and has concluded that the brain has a tendency to scan information serially. If this is so, then it must necessarily examine some stimuli before others. If there is a tendency to examine stimuli in one visual half-field earlier than those in the other half-field, this would result in a left-right performance asymmetry without involving any hemispheric differences in processing capability . . . Efron does not argue that the two hemispheres are functionally and anatomically identical. He does argue that the evidence of laterality does not constitute an explanation and that we should be very skeptical when we read about descriptions of hemispheric “specialization.” What, indeed, is actually lateralized? [KOLB: 198-200].

> We have shown how the two hemispheres of the human brain are both anatomically and functionally asymmetrical. Three important points must be emphasized . . . lest we leave the reader with three common misunderstandings.
>
> First, many functions of the cerebral hemispheres are not asymmetrical but symmetrical . . . Furthermore, we must recognize that the functional differences between the two hemispheres are not absolute, but relative. Just because sodium amobarbital renders one hemisphere aphasic does not mean the language functions are only carried out in the aphasic hemisphere.
>
> Second, cerebral *site* is at least as important in understanding brain function as cerebral *side*, a fact that is often overlooked when people theorize about cerebral organization . . . Perhaps it is best to think of the functions of the cerebral cortex as being localized, and of hemispheric side as being only one step in localizing them.

> Third, although it is tempting to conclude that the function of the left hemisphere is "language," the appropriate conclusion is that the left hemisphere is involved in processes that are necessary for certain aspects of language. Similarly, the right hemisphere appears to be specially involved in other types of processing, such as that required for visuospatial functions. While there has been a popularization of work on cerebral asymmetry and an extrapolation of neuropsychological results to the analysis of cultural and sex differences, to name only two, we must remember that it is a long inferential leap from the data available to explanations of what they mean. At present it is safe to conclude that we do not know what processes the two hemispheres are specialized to perform [KOLB: 209-210].

The different regions of the brain are enormously interconnected with one another, with feedback loops within feedback loops within feedback loops. Furthermore, viewed as a biological system, the brain is a highly *nonlinear* multi-feedback *time-varying* system. It is well known in the science of system theory, and well documented for countless systems of enormously less complexity than the brain, that cutting feedback pathways or damaging signal transformation functions within such systems not only can but usually *does* produce dramatic and fundamental changes in the operational character of the system. That is one reason why engineers always design systems to be as simple as possible. Speaking as a system theorist, it is utterly unsound to regard the plentiful but still fragmentary experimental data on lateralization effects as factually *proving* much of anything at the present state of our knowledge. Hypothesis must never be mistaken for proof, much less for knowledge of fact. It is to be noted as well that the noetic organization developed to this point in this treatise is also constitutive of such a nonlinear multi-feedback time-varying[5] system. It is not going to be an easy task to identify specific somatic substrates and their signals in detail with the *processes* of noetic representation.

Concurrent activation of both sides of the SMA is entirely consistent with the noetic model of teleological reflective judgment implicating motoregulatory expressions without any objective representation of the outcome such an expression will produce. Naturally, objective perception in sensibility is one factor in the synthesis of judgments of formal expedience, but this does not mean that the teleological judgment regards, so to speak, the objective perception as a determining factor in the act of implication. Remember: marking the objective perception is one of the acts of representation for which the process of reflective judgment is responsible. Cognitive *learning* of intended objective outcomes requires nothing more than a syncretic intuition in which the *materia in qua* has been structured with the *modus* of succession in time, and reflective judgments are not conditioned by the pure intuition of time.

This brings us to something that is important to discuss lest a misunderstanding ensues through a quite natural theoretical *saltus*. In order for us to *theoretically understand* the various

[5] Time-varying because, for one thing, construction of the manifold of concepts is an open-ended construction. That is why we use the Piagetian definition of "structure" in this treatise.

roles played by the different processes of *nous*, we have to "picture" the theory to ourselves (i.e. make a contextual *nexus* of concepts), and this we can do in no other way than to present this "picture" in terms of concepts of objective time and objective space. When we experimentally examine the somatic appearances of motoregulatory expression, we likewise "picture" these appearances *theoretically* in terms of these same concepts of objective time and space. The somatic evidence quoted above has an objective-temporal sequence: SMA activation *followed by* appropriate inhibition (in healthy people) or lack of the same (in people with "alien hand").

But when we consider the logical division of *nous*, it is *not* objectively valid to make any statements of *a priori* temporal ordering rules for the acts of reflective and practical judgments. Reflective judgment and the power of Reason are, epistemologically, not bound to the condition of inner sense (i.e. the pure intuition of time). *Nous* is supersensible, and only appearances of the effects of noetic acts come under the rule of the pure intuition of time. We cannot say with objective validity that acts of reflective judgment and practical judgment are *necessarily* either concurrent or sequential.[6] This means that we cannot *a priori* take objective-temporal examination of somatic signaling sequences in a manner implicating "*first this* from teleological judgment and *then that* from practical judgment," and then use the appearances of these sequences to *conclude with certainty* substrata for faculties of reflective vs. practical judgment. Any *hypothesis* of this sort is going to belong to an *empirical* science proper of mental physics, and the dubitable character of all empirical sciences will be present in this one as well. The applied metaphysic needed to go from the foundations presented in this treatise to an empirical science of mental physics is going to be a crucial part of giving birth to this new science.

However, one thing we *can* assert now is what I will call the *impetuous character* of reflective judgment. All acts of reflective judgment are based upon the principle of formal expedience. *Objective* intent in outcomes that follow *in concreto* as appearances are not immediate factors of the judicial act, by which I mean that reflective judgment makes no warranty of success to follow, nor does it "care" what outcome ensues except insofar as that outcome brings with it a consequence in the feeling of *Lust per se*. It "cares" only about the formal expedience it judges by its acts at each moment in subjective time. As the structure of cognitions develop more fully, and as the kinaesthetic representations in *Gestaltung* become more topologically organized, so also will develop a structure of expedient *conditions*, and this development is justly called the development of intelligence on the affective, motor, and conceptual planes of knowledge. But *thinking* is cognition through concepts, and although reflective judgment *judges*, it does not *think*.

[6] We can speak of *logical order* for a mathematical *model* but not of *real order in subjective time*.

Now, we have for the word “impetuous”:

> **impetuous**, *a*. [L. *impetuosus*, from *impetus*, a rushing upon, from *impetere*, to rush upon; *in*, in, upon, and *petere*, to seek.]
> 1. rushing with great force and violence; furious; forcible; fierce; raging; as, an *impetuous* wind, an *impetuous* torrent.
> 2. acting suddenly with little thought; rash; impulsive.
>
> **impetuousness**, *n*., the state or quality of being impetuous.

The second definition of impetuous above is a reasonable description of the character of the acts of reflective judgment.

§ 3. The Task of the Appetitive Power of Reason

Aesthetical reflective judgment combines affective perceptions into the representation of a matter of desire. Teleological reflective judgment combines through these affective perceptions a *nexus* of desiration, and in doing so its acts make the empirically meaningful connections of noetic representation with motoregulatory expression. The combination of these two sides of reflective judgment in one representation constitutes the manifold of Desires, which presents consciousness and Reason with the *matériel* for possible actions. Yet, for all this and even granting the immediate effect of teleological judgment on motoregulatory expression, this presentation is still nothing more than the manifold of Desires and is not yet an appetite. Appetite is the *realization* of an act of Desire[7] through determination of the appetitive power (*Begehrungsvermögen*) of practical Reason. Practical Reason has “the last word” in whether the expedient *possible* action judged in reflective judgment is also to be an *actual* action.

Now, in this task the power of practical Reason is in a most curious and sublime position. It lacks all cognition of the appearance of an object of Desire (hence also lacks this for the object of an appetite) because this form of representation belongs to the process of determining judgment and the representation in an intuition. But it also lacks all affective perception as well, for the presentation of affective perception falls to the process of reflective judgment and affective sensibility. Reason neither knows the object of appearance nor feels the state of the Subject. How, then, is it possible for such a cold and cognitively dark Reason to regulate the non-autonomic functions of the Organized Being and to do so purely *a priori*?

It is this very question that underlines all other questions of the objective validity of such ideas as choice and will, automaton materialism, and, yes, that which James called spiritualism theory and Descartes portrayed with his homunculus. The answer to this question is the linchpin

[7] That is, the *acting to make actual* the presentation in an object.

of the Critical Philosophy, around which the unity of the theory revolves.

In other forms and guises this question has been with philosophy since its beginning. Likewise it has entered religion through religious theology (and in Christianity the philosophy of Plato has been a root of this theology). “What is the nature of ‘reason’?” is a question that often divides science and religion into opposing camps. The history of this question therefore has two sharp edges, and owing to that history the exposition of pure Reason runs the risk of serious misunderstanding from the normally unexamined presuppositions each of us has acquired in the course of growing up. Because of this I think it is prudent to set the context of the task of the appetitive power by first briefly reviewing two commonly presumed backgrounds, in the light of which the main dividing line of how Reason is to be properly viewed can be examined. In this way, we will be better able to clearly pick out the differences, and to more firmly grasp the proper Critical context of this question for science.

§ 3.1 The Platonic and Aristotelian Traditions of the Power of Reason

No merely historical dividing line is all that perfect, but in Western culture the principal differences in viewpoint as regards the power of Reason are well represented by the philosophical differences separating Plato and Aristotle. As we carry out this review, it is best to keep in mind that the topic of our review is the *power* of pure Reason and not the form of the process of reasoning or its examples (as, for instance, in the study of logic and the syllogism). An excellent review of the latter can be found in Adler’s *Syntopicon* [ADLE v.3: 546-568].

For both Plato and Aristotle the idea of ‘reason’ is embedded in each man’s idea of ‘soul’. We have previously noted that ‘soul’ means something very different for Aristotle than it does for Plato. The Platonic tradition of ‘soul’ is very much theological; it is central to the very un-Greek-like religion that makes up the core of Plato’s philosophy.

The Platonic Tradition of Reason

For Plato reason is “the pilot of the soul.” The character of the Platonic human soul is three-fold. He first divides ‘soul’ into an immortal part and a mortal part; the latter he further divides in two, a ‘spirited’ part and an ‘appetitive’ part. Plato presented this picture in several places within the corpus of his writings. We will look at three of these, beginning with his *Phaedrus*:

> All soul is immortal, for that which is ever in motion is immortal. But that which imparting motion is itself moved by something else can cease to be in motion, and therefore can cease to live; it is only that which moves itself that never intermits its motion, inasmuch as it cannot abandon its own nature; moreover, this self mover is the source and first principle of motion for all other things that

are moved . . .

The self mover, then, is the first principle of motion, and it is as impossible that it should be destroyed as that it should come into being: were it otherwise, the whole universe, the whole of that which comes to be, would collapse into immobility, and never find another source of motion to bring it back into being.

And now that we have seen that that which is moved by itself is immortal, we shall feel no scruple in affirming that precisely that is the essence and definition of soul, to wit, self-motion . . . And if this last assertion is correct, namely that 'that which moves itself' is precisely identifiable with soul, it must follow that soul is not born and does not die.

As to the soul's immortality then we have said enough, but as to its nature there is this that must be said . . . Let it be likened to the union of powers in a team of winged steeds and their winged charioteer. Now all the gods' steeds and all their charioteers are good, and of good stock, but with other beings it is not wholly so. With us men, in the first place, it is a pair of steeds that the charioteer controls; moreover, one of them is noble and good, and of good stock, while the other has the opposite character, and his stock is the opposite. Hence the task of our charioteer is difficult and troublesome.

And now we must essay to tell how it is that living beings are called mortal and immortal. All soul has the care of all that is inanimate, and traverses the whole universe, though in ever-changing forms. Thus when it is perfect and winged it journeys on high and controls the whole world, but one that has shed its wings sinks down until it can fasten on something solid, and settling there it takes to itself an earthy body which seems by reason of the soul's power to move itself . . . What we must understand is the reason why the soul's wings fall from it and are lost . . .

Now within the heavens are many spectacles of bliss upon the highways whereon the blessed gods pass to and fro, each doing his own work, and with them are all such as will and can follow them, for jealousy has no place in the choir divine. But at such times as they go to their feasting and banquet, behold they climb the steep ascent even unto the summit of the arch that supports the heavens . . .

Of that place beyond the heavens none of our earthly poets has yet sung, and none shall sing it worthily. But this is the manner of it, for assuredly we must be bold to speak what is true, above all when our discourse is upon truth. It is there that true being dwells, without color or shape, that cannot be touched; reason alone, the soul's pilot, can behold it, and all true knowledge is knowledge thereof. Now even as the mind of a god is nourished by reason and knowledge, so also is it with every soul that has a care to receive her proper food; wherefore when at last she has beheld being she is well content, and contemplating truth she is nourished and prospers, until the heaven's revolution brings her back full circle . . . Of the other souls, that which best follows a god and becomes most like thereunto raises her charioteer's head into the outer region, and is carried round with the gods in the revolution, but being confounded by her steeds she has much ado to discern the things that are; another now rises, and now sinks, and by reason of her unruly steeds sees in part, but in part sees not. As for the rest, though all are eager to reach the heights and seek to follow, they are not able; sucked down as they travel, they trample and tread upon one another, this one striving to outstrip that. Thus confusion ensues, and conflict and grievous sweat. Whereupon, with their charioteers powerless, many are lamed and many have their wings all broken [PLAT5: 492-495 (245c-248b)].

In this myth, reason is represented by the charioteer. As presented here, we see no clear demarcation of a "mortal soul." Plato changes the story somewhat in *Timaeus*:

As I said at first, when all things were in disorder, God created in each thing . . . all the measures and harmonies which they could possibly receive. For in those days nothing had any proportion except by accident, nor was there anything deserving to be called by the names which we now use . . . Now of the divine He himself was the creator, but the creation of the mortal he committed to his offspring. And they, imitating Him, received from Him the immortal principle of the soul, and around this they proceeded to fashion a mortal body, and made it to be the vehicle of the soul, and constructed within the body a soul of another nature which was mortal, subject to terrible and

> irresistible affections – first of all pleasure, the greatest incitement to evil; then, pain, which deters from good; also rashness and fear, two foolish counselors, anger hard to be appeased, and hope easily led astray – these they mingled with irrational sense and with all-daring love according to necessary laws, and so framed man. Wherefore, fearing to pollute the divine any more than was absolutely unavoidable, they gave to the mortal nature a separate habitation in another part of the body, placing the neck between them to be the isthmus and boundary, which they constructed between the head and the breast, to keep them apart. And in the breast, and in what is termed the thorax, they incased the mortal soul, and as the one part of this was superior and the other inferior, they divided the cavity of the thorax into two parts, as the women's and men's apartments are divided in houses, and placed the midriff to be a wall of partition between them. That part of the inferior soul which is endowed with courage and passion and loves contention, they settled near the head, midway between the midriff and the neck, in order that being obedient to the rule of reason it might join with it in controlling and restraining the desires when they are no longer willing of their own accord to obey the word of command issuing from the citadel [PLAT3: 1192-1193 (69b-70a)].

That these two myths do not reconcile with one another is pretty clear. In the first, the "fall of man" is more or less a self-wrought accident due to the "unruly steeds of the soul" which reason – the charioteer – fails to be able to control. One would have to say that our outlook according to this myth is none too bright unless perchance our wings should heal. In the second myth, it is not so much a case of the fall of man as it is the mischief of God letting his "offspring" – which I suppose a Christian would recognize as the angels – take charge of the creation of mortals. In either event, elements from both myths are easily recognizable in one or more of the various religious doctrines held to by various religious sects of today.

Plato delivered a third way of looking at all this, which although less obviously mythological is not all that less specious, in *Republic*. This presentation requires a bit closer attention on our part because the argument is an inference from introspection not all that much out of line with the sort of arguments used to ground the practical objective validity of ideas in Kant's theory. Plato's argument here is long and somewhat convoluted, and full justice to it will not be done by the fragments of the argument about to be quoted. In this argument, the three "parts" of the human 'soul' are: the rational (wisdom), the appetitive (sobriety), and the high-spirited (bravery).

> But, said I, the intended meaning of this way of speaking appears to me to be that the soul of the man within him has a better part and a worse part, and the expression of self-mastery means the control of the worse by the naturally better part . . . [Its] operation is unlike that of courage and wisdom, which residing in separate parts respectively made the city, the one wise and the other brave. This is not the way of soberness, but it extends literally through the entire gamut throughout, bringing about the unison in the same chant of the strongest, the weakest, and the intermediate . . . So that we should be quite right in affirming this unanimity to be soberness, the concord of the naturally superior and inferior as to which ought to rule in both the state and the individual . . .
>
> But now the city was thought to be just because three natural kinds existing in it performed each its own function, and again it was sober, brave, and wise because of certain other affections and habits of these three kinds . . . Is it not, then, said I, impossible for us to avoid admitting this much, that the same forms and qualities are to be found in each one of us that are in the state? They could not get there from any other source. It would be absurd to suppose that the element of high spirit was not derived in states from the private citizens who are reputed to have this quality . . . or the

> quality of love of knowledge . . .
>
> But the matter begins to be difficult when you ask whether we do all these things with the same thing or whether there are three things and we do one thing with one and one with another – learn with one part of ourselves, feel anger with another, and with yet a third desire the pleasures of nutrition and generation and their kind, or whether it is with the entire soul that we function in each case . . .
>
> What, then, said I, should we affirm about them? Is it not that there is a something in the soul that bids them to drink and a something that forbids, a different something that masters that which bids? . . . And is not the fact that that which inhibits such actions arises when it arises from the calculations of reason, but the impulses which draw and drag come through affections and diseases? . . . Not unreasonably, said I, shall we claim that they are two and different from one another, naming that in the soul whereby it reckons and reasons the rational, and that with which it loves, hungers, thirsts, and feels the flutter and titillation of other desires, the irrational and appetitive . . .
>
> These two forms, then, let us assume to have been marked off as actually existing in the soul. But now the *thumos*, or principle of high spirit, that with which we feel anger, is it a third, or would it be identical in nature with one of these? . . . That which we think about the spirited element is just the opposite of our recent surmise. For then we supposed it to be part of the appetitive, but now, far from that, we say that, in the factions of the soul, it much rather marshals itself on the side of reason . . . Is it not then distinct from this, too, or is it a form of the rational, so that there are not three but two kinds in the soul, the rational and the appetitive? . . .
>
> We have to assume it as a third, he said.
>
> Yes, said I, provided it shall have been shown to be something different from the rational, as it has been shown to be other than the appetitive.
>
> That is not hard to be shown, he said, for that much one can see in children, for they are from their very birth chock full of rage and high spirit, but as for reason, some of them, to my thinking, never participate in it, and the majority quite late [PLAT1: 672-683 (431a-441b)].

The common threads in Plato's philosophy of the soul are found in his three-way divisions of the "factions" of the soul. Reason is the rational, the 'charioteer' and that which is divine and rules the 'soul' from 'the citadel' of the head. The 'superior mortal soul' is the "steed of good and noble breeding" that strives to control the 'worse part in us' and endows us with courage and passion. The 'inferior mortal soul' is the "steed of ill-breeding" in the appetites that deters us from 'the good.' Plato's three arguments do not mesh together all that well, but this summary is not, on the whole, particularly unfair to his point of view. The crucial point for our purposes in this treatise is that Platonic 'reason' is a *supernatural*, not merely supersensible, entity. Descartes' homunculus is its bosom philosophical companion, and its utter unsuitability for science is clearly evident. The connotations of Plato's 'reason' can play no part in our theory.

The Aristotelian Tradition of Reason

If we say that Platonic reason has its head in the clouds, we equally would say that Aristotelian reason plants its feet in the earth. Indeed, there is a something of the flavor of Aristotle in Kant's theory. The crucial difference is that which is made by Kant's Copernican hypothesis, which replaces with Kantian epistemology the Aristotelian ontology.

In Chapter 12 we saw that for Aristotle ‘soul’ is the “entelechy of a natural body having life potentially within it,” i.e. the “complete actuality” of matter that is “potentially capable of living.” It is the “account” or “essence” of what it is to *be* a particular living being. For Aristotle body and soul are not separable; body plus soul constitutes the living being. The Aristotelian correlate of the power of Reason is the “rational soul.” Aristotle devotes a great deal of time to refuting the theories of Plato and other philosophers on the question: What is soul?

> Some say that capacity to produce movement is first and foremost the characteristic of soul. But because they believe that nothing can produce movement which does not itself move, they have supposed that soul is one of the things which move . . .
>
> Those then who have interpreted the soul in terms of motion have regarded the soul as most capable of producing movement. But those who have referred it to cognition and perception regard the soul as the first beginning of all things – some regarding this first beginning as plural and some as singular. Empedocles, for instance, thought that the soul was composed of all the elements, and yet considered each of these to be a soul . . . In the same way, in the *Timaeus*, Plato constructs the soul out of the elements. For he maintains that like can only be known by like, and that from these first beginnings grow the things which we perceive . . .
>
> But men differ about the first principles of things, both as to their nature and quantity, especially those who make them corporeal from those who make them incorporeal, and from both of these differ those who combine the two and explain the ultimate principles as compounded of both . . .
>
> These, then, are the traditional views about the soul and the grounds upon which they are held.
>
> In the first place we must investigate the question of movement. For perhaps it is not merely untrue that the essence of the soul is such as those describe it to be who say that the soul moves or can move itself, but it may be quite impossible that movement should be characteristic of it at all [ARIS9a: 19-31 ($403^{b}28$-$406^{a}1$)].

We have previously looked at Aristotle’s hierarchy of ‘souls’. In his view, “desire” is the “appetite for what is pleasant,” and animals have the ‘appetitive soul.’ Man, however, is the ‘rational soul’ for only humankind has the power of mind and intellect.

> Concerning that part of the soul . . . with which the soul knows and thinks, we have to consider what is its distinguishing characteristic, and how thinking comes about. If it is analogous to perceiving, it must be either a process in which the soul is acted upon by what is thinkable, or something else of a similar kind. This part, although impassive, must, then, be receptive of the form of an object, i.e., must be potentially the same as its object, although not identical with it: as the sensitive is to the sensible, so must mind be to the thinkable.
>
> It is necessary then that mind, since it thinks of all things, should be uncontaminated, as Anaxagoras says, in order that it may be in control, that is, that it may know; for the intrusion of anything foreign hinders and obstructs it. Hence the mind, too, can have no characteristic except its capacity to receive. That part of the soul, then, which we call mind (by mind I mean that part by which the soul thinks and judges) is, before it thinks, not actually any real thing. So it is unreasonable to suppose that it is mixed with the body; if so it would acquire some quality, e.g. warmth or cold, or would even have some organ like the sensitive faculty; but in fact it has none. It has been well said that the soul is ‘the place of forms’, except that this does not apply to the soul as a whole, but only in its thinking capacity, and the forms occupy it only potentially, not actually [ARIS9a: 163-165 ($429^{a}10$-$429^{a}29$)].

We can see here Aristotle’s “wax tablet” view of the mind taking shape. Mind (‘the part of the soul that knows’) has to be, he tells us, either a *process* or *like* a process. It can have no ‘nature’

of its own, other than having ‘a capacity’; i.e., a process is not a *thing* with properties but rather is a property of a thing. Aristotle’s ‘part of the soul that knows’ is a copy-of-reality faculty. Yet this passive character is a view that seems contrary to what we typically regard as the primary character of reasoning, i.e. a dynamic of thinking. Aristotle is ready for this objection.

> When the mind has become the several groups of its objects, as the learned man when active is said to do (and this happens when he can exercise this function by himself), even then the mind is in a sense potential, though not quite in the same way as it was before it learned and discovered; moreover the mind is then capable of thinking of itself . . .
>
> The problem might be suggested: if the mind is simple and passive and has nothing in common with anything else, as Anaxagoras says, how can it come to think at all? For it is when two things have something in common that we regard one as acting and the other as acted upon. And our second problem is whether the mind itself can be an object of thought. For either mind will be present in all other objects – if, that is, mind is an object of thought in itself and not in virtue of something else and what is in thought is always identical in form – or else it will contain some common element, which makes it an object of thought like other things.
>
> Or there is the explanation which we have given before of the phrase ‘being acted upon in virtue of some common element,’ that the mind is potentially identical with the objects of thought but is actually nothing until it thinks. What the mind thinks must be in it in the same sense as letters are on a writing table which bears no actual writing; this is just what happens in the case of mind . . .
>
> Since in every class of things, as in nature as a whole, there is something which is their matter, i.e. which is potentially all the individuals, and something else which is their cause or agent in that it makes them all – the two being related as an art to its material – these distinct factors must be present in the soul also. Mind in the passive sense is such because it becomes all things, but mind has another aspect in that it makes all things: this is a sort of positive state like light; for in a sense light makes potential colors into actual colors. Mind in this sense is separable, impassive and unmixed, since it is essentially an activity; for the agent is always superior to the patient, and the originating cause to the matter [ARIS9a: 167-171 ($429^{b}6$-$430^{a}19$)].

If right about now you’re thinking something like, “Boy, I’d hate to have to take a class from this guy,” move over; you’re in good company. Aristotle is trying to tell us that mind has two factors in its essential nature. The first is the passive affection in which mind becomes that-which-is-thought. But the second is a “productive factor” in the rational soul that makes that-which-is-potentially-in-thought into actual thinking. Before anything arrives at its fullness of completion (entelechy), it must first suffer a process of formation (*enérgeia*), the second ontological moment or character of Aristotelian form.

Still, if mind is of such a passive character and a wax tablet upon which nature writes as she will, why is it that thought is not a chaos of random and directionless activity – a kind of mental Brownian motion? This is where the appetitive soul comes into the picture. In Chapter 12 we looked at Aristotle’s theory that mind and appetite were to be considered as possible sources of motion, but that whenever mind or imagination was involved with producing motion, appetite was also present. Therefore,

> That which moves, then, is a single faculty, that of appetite. If there were two movers, mind as well as appetite, they would produce movement in virtue of a common characteristic. But, as things

> are, mind is never seen to produce movement without appetite (for will is a form of appetite, and when movement accords with calculation, it accords also with choice), but appetite produces movement contrary to calculation; for desire is a form of appetite. Now mind is always right; but appetite and imagination may be right or wrong. Thus the object of appetite always produces movement, but this may be either the real or the apparent good; and not every good can excite movement, but only practical good. Practical good is that which is capable of being otherwise.
>
> It is clear, then, that movement is caused by such a faculty of the soul as we have described, *viz.*, that which is called appetite . . . Now appetites may conflict, and this happens whenever reason and desire are opposed, and this occurs in creatures which have a sense of time (for the mind advises us to resist with a view to the future, while desire only looks to the present . . .) . . . The instrument by which appetite causes movement belongs already to the physical sphere; so it must be considered among the functions common to body and soul. But for the present we may say briefly that the motive instrument is found where a beginning and end coincide [ARIS9a: 189-191 ($433^{a}21$-$433^{b}23$)].

Now, strictly speaking, what Aristotle is discussing here is 'motion in place" (locomotion) and not general motions (changes) in the mind. He draws a distinction between the practical mind (the mind that makes calculations with an end in view) and the speculative mind, this distinction being based upon 'the type of end that it pursues'.[8] Although Aristotle is very ambiguous regarding what brings order to thinking, his wax tablet model with the accompaniment of the second factor of its agency seems to imply that appetition is responsible for the form this ordering takes (because "will is a form of appetite"). This interpretation is bolstered by Aristotle's position that soul and body are inseparable and that appetite "must be considered among the functions common to body and soul." However, since Aristotle did not amplify on his idea of the "agent mind" (*noûs poietikós*), other interpretations are possible; indeed this "agent intellect" was a popular theme among the medieval Scholastics:

> *Reply Obj. 4.* The phantasm is both illuminated by the agent intellect and, beyond this, the intelligible species is abstracted from it by the power of the agent intellect. The agent intellect illuminates the phantasm because just as the sensitive part acquires a greater power by its conjunction with the intellect, so by the power of the agent intellect the phantasms are made more fit for the abstraction from them of intelligible intentions. Furthermore the agent intellect abstracts the intelligible species from the phantasm, since by the power of the agent intellect we are able to take into our consideration apart from individual conditions the natures of species, in accordance with whose likenesses the possible intellect is informed.
>
> *Reply Obj. 5.* Our intellect both abstracts the intelligible species from the phantasms, in so far as it considers the natures of things universally, and nevertheless understands these natures in the phantasms, since it cannot understand the things of which it abstracts the species without turning to the phantasms, as we have said above [AQUI: I. Q.85, ART. 1].

In Aristotle's system, "mind" (what in this treatise we call the power of Reason) is carefully set apart from the sensuous, imaginative, and appetitive characteristics of the living being. This is, of course, the classical interpretation which holds rational reason as something apart from the sensuous and emotional. Aristotle's "mind" is "calculating" rather than sensuous or emotional, as

[8] see the earlier quote in Chapter 12.

befits something regarded as part of a "rational" soul, and we see this reflected in the quote by Aquinas given above. Desire and appetite, on the other hand, are regarded by Aristotle as being more or less in control of things generally, with training, education, and self-discipline being required to overcome or alter appetitions. And this is more or less the popular view today as well.

§ 3.2 Appetitive Power in the Critical Philosophy

As we have just seen, the traditional Greek view sets appetition apart from the rational faculty of man and ties it to sensuous desires. This is more or less the common viewpoint that has been handed down to us in modern times. Desire, along with emotion, is often regarded as inimical to thinking and reasoning, and as something to be "mastered" through the intellect. "Selflessness" is often taken to be the ideal of moral behavior, and in this context "selflessness" is usually taken to be synonymous with the suppression of one's own desires and appetites in favor of "doing what is right" or, often, "obedience to the will of God." It is this viewpoint that is contested by Ayn Rand and her followers.

> An irrational morality, a morality set in opposition to man's nature, to the facts of reality and to the requirements of man's survival, necessarily forces men to accept the belief that there is an inevitable clash between the moral and the practical – that they must choose either to be virtuous or to be happy, to be idealistic or to be successful, but they cannot be both. This view establishes a disastrous conflict on the deepest level of man's being, a lethal dichotomy that tears man apart: it forces him to choose between making himself *able* to live and making himself *worthy* of living. Yet self-esteem and mental health require that he achieve *both*.[9]

In Kant's system appetitive power not only is *not* separated from pure Reason; it is part of the *Kraft* of pure practical Reason. Because we have been through a lengthy treatment of the judicial Standpoint and reflective judgment in the past five chapters, the reader may at this point find it helpful to review Chapter 12, §2–§4. We have seen that the process of reflective judgment is legislative inasmuch as it is through reflective judgments that the Subject builds a system of Nature, including the structuring of an expedient *practical* logic of actions and, indirectly through the acts of determining judgment, concepts of objective maxims and laws. Pure practical Reason, on the other hand, is *executive*. To use a simile: reflective judgment is like the U.S. Congress in that it "drafts pieces of legislation"; practical Reason is like the U.S. President and the executive branch of government in that it has the power to "veto" this legislation and to regulate the enforcement of that which is not vetoed. Where the simile breaks down is that reflective judgment cannot "override the veto" of practical Reason. On the practical plane, an appetite is a cause of action determined by the appetitive power of practical Reason.

[9] Nathaniel Brandon (1963), "Mental health versus mysticism and self-sacrifice," in *The Virtue of Selfishness*, Ayn Rand (ed.), NY: Signet, 1970.

The notion of causality in general is determination of a change according to a general rule, and the act of this determination is the act through which that-which-is-determined becomes a *causatum* rather than a mere representation. Appetitive power makes the determination of an appetite and, thus, stands in the role of the cause of spontaneity in the Organized Being insofar as the *form* of this spontaneity is concerned. Here we have two distinct forms of spontaneous action that we must take into account. The first is the expression of physical activity, and this is regulated by practical Reason through its veto power over motoregulatory expression. The second is the expression of mental activity (thinking and judgmentation), and this is regulated by practical Reason via the power of *speculative* Reason. **Speculative Reason is the homologue in the noetic division to motoregulatory expression in the psychic division**. I call acts of speculative Reason **ratio-expression**. One task that still lies before us in this treatise is to determine if practical Reason's authority over speculative Reason is exercised as a veto (as in the case of motoregulatory expression), or if instead practical Reason exerts a positive directive control over ratio- expression, or if it has both these characteristics.

In one way Aristotle's placement of appetition apart from the rational capacity (speculative Reason) was not wrong. The mistake in his theory comes down to three errors. The first is that his philosophy does not assume Kant's Copernican hypothesis. The second is that Aristotle viewed desire and appetition as being potentially in conflict with the rational mind; under the Copernican hypothesis there is no inherent conflict because speculative Reason is subordinate to practical Reason's appetitive power. The third error is his "wax tablet" copy-of-reality hypothesis (which follows from the first error) by which "reality" is "impressed upon" the mind. It is almost possible to see Aristotle's "*noûs poietikós*" or "agent intellect" in the role of practical Reason if we think of appetitive power as "leaving its mark" on speculative Reason.[10]

In Chapter 13 (§8.5) it was pointed out that practical Reason has a need to call upon speculative Reason in achieving higher and better levels of equilibration. The Piagetian inferences *Coord.S* and *Coord.O* are features of type II regulatory interactions that are not observables in the Piagetian sense.[11] What they provide for are the equilibration of Piagetian "negations" that are overlooked in the structuring of type I interactions. From the theoretical Standpoint the transcendental Ideas are principles for the ratio-expression of the mandates of the categorical imperative through speculative Reason. This expression leads, slowly but eventually, to the structuring of concepts of objective tenets which then serve to help coordinate the three major processes of judgmentation so far as practical choices are concerned.

[10] Such a view would not be compatible with Aquinas' picture of the "agent intellect" quoted earlier.
[11] You may wish to review Chapter 9 (§2) or to glance back at Figure 18.5.1.

In short, the appetitive power of practical Reason stands in the role of master regulator of the spontaneity of the Organized Being. The role it fills is that which Piaget assigned to the idea of "will," i.e. a "regulation of regulations." The idea of appetitive power is the idea of the causality of freedom made more specific. As Kant said, the special property of appetitive power is that it puts in order the various practical rules in accordance with the dictate of the categorical imperative. A rule is a function that asserts something under particular conditions, and from this point of view all elementary practical rules, all maxims, and all hypothetical imperatives are rules. Except for those innate motoregulatory capabilities responsible for reflex schemes at birth, all these are *constituted* rules (in the Piagetian sense of a constituted function). However, the categorical imperative is *not* a rule because its dictate is unconditional. It is the absolute determining formula of the power of Reason and the functional invariant of spontaneity. To use another metaphor, the categorical imperative of pure Reason is the supreme law as the *Constitution* of *nous* in the Organized Being. To continue the metaphor, the process of practical judgment is the Supreme Court. Where this metaphor breaks down is that this Constitution of noetic power has but a single article and admits no amendments.

§ 4. The Manifold of Rules

We discussed earlier the presentation of a manifold of Desires in the *nexus* of desiration by teleological reflective judgment. Now, reflective judgment presents "all in a moment" as it marks a moment in subjective time, and it presents its non-cognitive representations in combination. It is clear that if practical Reason is to veto anything at all in motoregulatory expression or is to be able to direct in whatever fashion ratio-expression through speculative Reason, the determination of appetitive power *must be selective*. It cannot be an all-or-nothing operation if *learning in experience* is to be possible. Indeed, the idea of being selective is tightly bound to the idea of *choice*, and appetites represent choices. We therefore face once again another transcendental problem to be solved, namely: What is necessary for the possibility of selectivity in pure practical Reason?

A representation of Desire becomes an appetite only through a determination of appetitive power. We have previously noted that all appetites are properly regarded as activity in response to *Lust* and *Unlust*[12]. Sensuous appetites are those based upon sensation, while appetites of understanding are appetites of deliberation involving cognitive appraisals. Practical rules for the

[12] Chapter 12, §2.1.

production of actions that direct attention to specific cognitions we have termed practical concepts.[13] Practical concepts differ from concepts of understanding (which are judged by determining judgment and connected in the manifold of concepts). A practical concept is not the concept of the appearance of an object; rather, it is a representation of Reason in which rules of action are judged in the process of practical judgment. A practical concept, once formed, is a rule under which particular conditions in sensibility are to be joined with an action scheme. It is, of course, the job of reflective judgment to make connections between sensibility and motoregulatory expression in an action scheme. However, sensibility contains representations of imagination, and here the act of the presentation of a practical rule is productive in the exercise of the Organized Being's capacity of spontaneity to bring a representation into sensibility through the free play of imagination and determining judgment. Determining judgment does not determine its own employment, but instead is tasked by speculative Reason. The practical concept, therefore, is to be regarded as a representation of an appetite (by practical Reason) by which speculative Reason expresses the regulation of spontaneity in thinking.

We can easily note the similarity between this idea of the practical concept, as a rule for the employment of *judgmentation* in the reproduction of *actions*, and that of the concept of understanding as a rule for the reproduction of intuitions. In our model of the cycle of thought (figure 9.3.1), concepts of understanding work within the inner loop: synthesis of apprehension → the synthesis of recognition → determining judgment → the synthesis of reproduction. The practical concept, on the other hand, operates within the outer loop: practical Reason → speculative Reason → determining judgment → synthesis of reproduction → synthesis of comprehension → reflective judgment → and back to practical Reason. This outer loop is what we have termed the process of judgmentation (*Beurtheilung*) in general. **The regulation of this outer loop through the determination of appetitive power is called *reasoning***.

However, we must always bear in mind that Reason represents no objects of appearances. Its representations are *practical* and always go either to the determination of appetitive power or to the orientation and regulation of determining judgment. All appetites arise from a synthesis[14], and we can call reasoning so far as it pertains to the regulation of actions the **synthesis of appetition**. Practical concepts are therefore *rules for the synthesis of appetites*.

Reasoning understood in this way is, of course, of a somewhat different character than what traditional (non-Kantian) thinking holds it to be. The traditional view looks at reasoning as a kind of logical-cognitive process, and of course logical *thinking* is a by-product of reasoning as it has

[13] Chapter 13, §8.3.
[14] Chapter 12, §3.2.

just been described here. But well-ordered thinking *is not the fundamental basis* of reasoning. That which we think about we think about *because we choose to think about it*. Thinking is cognition *through* concepts (the inner loop in the cycle of thought). Reasoning *regulates* thinking. That reasoning should be fundamentally based on the synthesis of appetites is perhaps at first a seemingly odd idea. However, it is an idea consistent with what we can observe in the behavior of human beings.

In Chapter 15 we took a brief look at the opposed views of Zajonc ("preferences need no inferences") and Lazarus ("cognition is primary"). At root their debate was over whether "emotions" set the agenda for "cognition" or "cognition" sets the stage for "emotions." Both men, however, acknowledged that his own position is not "completely proved" by known facts (and both men without hesitation held that the other's position was unsupported by facts). I mentioned in Chapter 15 that at least part of the problem was that these two eminent researchers did not agree on their definitions of "emotion" and "cognition." Lazarus commented,

> Definitions do not arise out of the blue; they are an integral part of a theory that helps delimit the phenomena of interest and organize observations . . . The conception that the meaning or significance of a transaction is crucial to emotion forces us to restrict its definition to some psycho-physiological phenomena and to reject others as outside its purview. The searching question is what an emotion is or is not. Zajonc evades this question. Thus, he takes me to task for doing what any good theorist should do with definitions, but he does not do himself – namely, specify the phenomena of interest . . . Zajonc and I are separated by a philosophical difference . . . Zajonc could be called a neo-positivist, whereas I am more of a constructivist, and we differ on the role that theory plays in shaping our observations and our interpretations of nature.[15]

Now, our model of the cycle of thought (figure 9.3.1) and the organization of information flow in judgmentation and reasoning (figure 17.5.1) show that the processes of mental activity form multiple "feedback loops" in the organization of *nous*. It is well known in system theory that in such a system it is notoriously difficult, and to a degree somewhat problematic, to identify a particular signal or representation of information as "primary" or "originative" (although in some cases it is possible to posit an "originating cause"). However, if the discussion is about "primacy" in a psychological phenomenon, what is meant by "primacy" is an important meaning implication and not one to be lightly passed over. The empirical *Realerklärung* of a meaning is the action, and so, in the Lazarus-Zajonc debate, I contend that "primacy" means *that which determines the action following from a representation* (whether this representation is affective or cognitive). But the action is ultimately determined by the appetite, and the appetite is determined by the appetitive power of practical Reason. Therefore, the synthesis of appetition in reasoning should

[15] R.S. Lazarus, "On the primacy of cognition," *American Psychologist*, vol. 39, no. 2, Feb., 1984, pp. 124-129.

be held to be "primary" for the psychological treatment of the phenomena in question. Whatever an "emotion" might be is therefore a secondary issue so far as the whole of the phenomenon is concerned.

Practical concepts do not lie innate within the power of pure Reason. (Again, if they did we would have a violation of the Copernican hypothesis and fall into the trap of rationalism). The practical concept is the product of a synthesis in judgmentation. Along with the rule specified by the practical concept, we also have a second type of practical rule, namely the practical motor rule for motoregulatory expression. (And we have seen that the kinaesthetic feedback arising from motoregulatory expression provides the *materia* for the topological synthesis of the *Gestaltung* of the intuition of space). Both types of rules find homogeneity in that both types of rule specify the form of assertion of an action. Next, we set beside this the special property of appetitive power – namely, that appetitive power brings order to various rules, i.e. synthesizes a *rule structure*.[16] When we discussed the practical subsumption of practical rules in Chapter 13 we noted that, just as concepts have a scope in determining judgment, so also practical rules have a scope in practical judgment.[17] The structure of a multiplicity of practical rules is a **manifold of rules**, and so the possibility of organized and specified (chosen) actions implies the *Dasein* of the manifold of rules in *practical* Reason.

We could have perhaps anticipated this deduction from the discussion in Chapter 9 of Piaget's interaction structures (figures 18.5.1, 9.2.1, and 9.2.2). While these structures are transformations with self-organizing rules, the construction of these structures requires a higher level of regulation, and this is precisely what practical Reason effects in its capacity as the executive regulator of all non-autonomic activities of the Organized Being. The synthesis of the manifold of rules, like the synthesis of cognition, must involve a regulation of appetitive power (which represents appetites) by practical judgment (which structures the manifold of rules). Here the role of appetitive power is analogous to the synthesis in sensibility in the inner loop of the cycle of thought, while the role of practical judgment is analogous to that of determining judgment in this loop. One important difference between these, however, is that appetites express actions, as do practical concepts and motor rules, and so the presentation of an appetite by appetitive power is a representation already homogeneous with the aliments of practical judgment. Consequently, practical Reason does not require a capacity analogous to imagination in the synthesis of cognition.[18]

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[16] Chapter 13, §4, and §8.3. Also, [KANT4: 17-18 (5: 19-20)].
[17] Chapter 13, §8.2.
[18] Intuitions are representations of appearances whereas concepts are rules. Imagination brings homogeneity to them by means of the transcendental schemata.

This, then, is the broad answer to the question with which we began this section. The capacity for selectivity in appetitive power is made possible through the regulation of appetitive power by practical judgment. The inferences of practical expedience from reflective judgment "feed" appetitive power, much as receptivity "feeds" the synthesis in sensibility. But the outcome of the determination of appetitive power (the appetite) is not driven solely by inferences of practical expedience (which would be a kind of "receptivity" in appetitive power), but also takes in the contributions of practical judgment from the manifold of rules (which is a spontaneity in the determination of appetitive power). Thus we see within the capacity of pure practical Reason yet another functional organization for adaptation as the equilibration between assimilation (of inferences of practical tenets in the manifold of rules) and accommodation (in the judgment of the combination of appetitive representations in this manifold).

This is the broad answer to the question, but it is clearly not the *detailed* answer. The latter requires the exposition of the synthesis in appetitive power and the *momenta* of practical judgment. In addition, we must pursue our inquiry into the details of speculative Reason regarded as capacity of ratio-expression. These topics are going to occupy us from now through the next chapter of this treatise. As we have done throughout this treatise, we will approach these tasks "from the outside in," peeling back the layers from phenomena to the transcendental requirements that are their conditions of possibility, and stopping only when we reach the boundary line that divides transcendental objective validity from transcendent speculation. We will begin by exploring the character of practical judgments.

§ 5. The Flavor of the Categories of Freedom

The *momenta* of practical judgment must be pure and *a priori* rules ("know-how") for the combination of rules in the structure of a manifold of rules. That these *momenta* must be pure is an obvious requirement because of the isolation of pure practical Reason from all sensible conditions. That they must be *a priori* is likewise clear, because the appetites of understanding are action rules in the employment of determining judgment, hence are necessary for the possibility of experience. The supreme law of pure Reason is the categorical imperative, which is unconditioned by sensibility and, therefore, is the fundamental formula of the causality of freedom. For that reason, we will call the *momenta* of practical judgment **the categories of freedom**.

Now, in *Critique of Practical Reason*, Kant produced a table he called the "categories of freedom." Even a brief inspection is going to show these are not *our* categories. But here is where

we will nonetheless start, with an inspection of these non-fundamental ideas in order to begin to capture the flavor of the *pure* categories of freedom.

As I have already mentioned several times, Kant admixed his discussion of the metaphysics proper of pure practical Reason with an applied metaphysic of morals in *Critique of Practical Reason*. Nothing demonstrates this better than the entries in his table. The full name he gave to these moral categories was "the categories of freedom in consideration of the ideas of good and evil" [KANT4: 57-58 (5: 66)]. Kant provided not one word of deduction or explanation for any of the entries in this table.[1] In that abracadabra – presto! style of his that is so often sublimely irritating to Kant scholars, he simply plopped down his table with the remark, "I add nothing further here to elucidate the present table, since it is intelligible enough in itself" [KANT4: 58 (5: 67)], leaving it to we members of the herd of philosopher-swine who came afterwards to gaze in wonder at the pearls cast before us. He did, however, remark that they "are determined solely through the moral law." Here is Kant's table.

Quantity	**Relation**
Subjective, according to maxims (*intentions of the will* of the individual)	To *personality*
Objective, according to principles (precepts)	To the *state* of the person
A priori objective as well as subjective principles of freedom (*laws*)	*Mutual* of one person to the state of another
Quality	**Modality**
Practical rules of *commission* (*praeceptivae*)	The *permitted* and *forbidden*
Practical rules of *omission* (*prohibitivae*)	*Duty* and *contrary to duty*
Practical rules of *exception* (*exceptivae*)	*Perfect* and *imperfect* duty

Kant's Table of Moral Categories

Kant tells us that this "table of freedom" is to be regarded as "a kind of causality"; specifically, this "causality" is that of free acts *possible through this causality as appearances in the sensible world* [KANT4: 58 (5: 67)]. This statement all by itself should be enough to warn us that we are not dealing here with primitive notions. We are dealing with highly evolved ideas that are to be regarded as "whys" with respect to *moral behavior* as Kant's applied metaphysic views this. If this is not convincing enough, we can look at the "categories" under Relation in this table. Here we see three objective ideas: personality; the state of the person; and mutual Relation

[1] He did later provide some little explanation of these in his *Metaphysics of Morals*.

between two persons. Obviously none of these are primitive notions as they must presuppose the concept of a real division between a Self and a not-Self, and such knowledge is neither innate nor *a priori* in the sense of "knowledge of how-to" for the sake of the possibility of experience.

What Kant is trying to do with this table is to make a representation of characteristics of free choices that can be used to define what constitutes ethical behaviors according to his moral theory. The ideas of Quantity are ideas of the form of composition in the free determination of will in a moral action, i.e. acting from a maxim, from a precept, or from what one regards as a universally binding moral imperative. Those of Quality are ideas of the matter of composition in this, i.e. practical rules of ethical behavior. Those of Relation are ideas of the form of connection in the ground of determination of a moral choice, i.e. as duty *to whom*. Those of Modality connect the ground of the action to the idea of *duty* (morally possible or impossible, morally obligatory, and morally pure or impure under the moral law). He gives brief treatment to these ideas elsewhere, e.g. *The Metaphysics of Morals*, and we will spend a little time with this shortly.

To what extent Kant succeeds in putting together a *science* of ethics is not something with which we will concern ourselves in this treatise. The main point in bringing up Kant's moral categories is that we can make some use of them as examples for understanding the flavor of the underlying *pure* categories of practical judgment as functions representing the causality of freedom under the categorical imperative (rather than under a manifestation of it in terms of "the moral law"). This, of course, speaks only to one side of the total picture, namely to the type of constructed practical concepts that can lead to cognitions of a "moral code of behavior." I think it is perfectly obvious that human beings are *capable* of constructing such a code of conduct, and even of sticking to it. Whether or not it is pragmatically feasible to get all of humankind to agree to the *same* moral code is another matter altogether, and we will spend no time contemplating that topic. What is important for this treatise is the general *character* of not only such self-given ethical ideas, but also *the character of their violations*. Because almost[2] anyone's "code of conduct" will serve our purpose in this, we'll start with Kant's.

§ 5.1 Freedom and Kant's Moral Categories

Kant introduced his moral categories in the context of the Critical concept of good and evil. We recall that "good" means "what one understands as a necessary object of appetitive power"; "evil" means "what one understands as a necessary object of the power of detestation." Good and evil refer to the act of choice, however, and not to the object of desire in appearances. His moral categories, therefore, refer to *modi* of choosing an action.

[2] A person who has suffered a severe brain injury is not a good candidate for serving as an example.

> Now, since the ideas of good and evil, as consequences of the *a priori* determination of will, presuppose also a pure practical principle and hence a causality of pure reason, they do not refer originally to Objects . . . they are rather, without exception, *modi* of a single category, namely that of causality, so far as the determining ground of the same subsists in reason's representation of a law of the same which, as the law of freedom, reason gives to itself and thereby proves itself *a priori* to be practical. However, since acts *on the one side* indeed belong to a law which is no natural law but a law of freedom, and consequently belong to the behaviors of intelligible beings, but *on the other side* yet belong to appearances also as events in the sensible world, the determinations of a practical reason can take place only with reference to the latter and therefore, indeed, conformably with the categories of understanding, but not with a view to a theoretical use of understanding, in order to bring *a priori* the manifold of (sensible) *intuition* under one consciousness, but only in order to subject *a priori* the manifold of *desirations* to the unity of consciousness of a practical reason commanding in the moral law, or of a pure will.
>
> These *categories of freedom* . . . are directed to the determination of a free choice . . .; as practical elementary ideas, these have for their ground the *form of a pure will* as given within reason and therefore within the thinking faculty itself; by this it happens that, since all precepts of pure practical reason have to do only with the *determination of will*, not with natural conditions (of practical ability) for *carrying out its aim*, practical *a priori* concepts in reference to the supreme principle of freedom at once become knowledge and do not have to wait for intuitions in order to acquire meaning; and this happens for the noteworthy reason that they themselves produce the actuality to which they refer (the disposition of will), which is not the business of theoretical concepts. But one must note well that these categories concern only practical reason in general and so proceed in their order from those which are as yet morally undetermined and sensuously conditioned to those which, being sensuously unconditioned, are determined only by the moral law [KANT4: 56-57 (5: 65-66)].

We are going to have to dissect Kant's claims carefully, for there is much here that is controversial.

We will begin with Kant's statement that ideas of good and evil do not "originally refer to Objects." This is a sound enough assertion if we bear in mind that all voluntary actions may be presumed to be undertaken by the Organized Being because in some way or manner the action is regarded as "good to do." Conversely, a possible action declined may be presumed to be in some way or fashion "un-good." It is true that people often invest objects with a quality of "good" or "evil," but this is clearly a mere association. Someone who burglarizes my house is "evil" in my eyes because I would choose that he not do so. Kant calls good and evil *modi* of causality because they refer to choices to take action or to refrain, and the causality of choice-making lies within the practical Reason of the Organized Being.

The *theoretical* difficulty with *understanding* the ideas of good and evil arises because on the one hand we must infer the *Dasein* of an act of choice on the basis of *actions* as appearances in Nature, yet on the other hand the *cause* of the act is vested with the *I* of apperception and therefore the *causality* lies in a *noumenon*. An objective understanding of "good actions" and "evil actions" requires us to make objective concepts of appearances and these fall under the judgment of the categories of understanding. Good and evil are *modi* of causality because our understanding of the appearance falls under the notion of causality and dependency.

Kant's next statement – that "the determinations of practical reason can take place only with reference to" sensible appearances of events – is where the difficulty begins. In view of the position of pure Reason as one in which no cognitions or feelings are presented, what objectively valid meaning can we attach to this statement? What does it mean to say that a determination of practical Reason "references" sensible appearances? Does practical judgment evaluate cognitions or feelings? No. That task, so far as it relates to the ability to choose, belongs to reflective judgment. The only valid interpretation we can make of Kant's statement is this: In every act of choice there are *matters* of choice presented in the *nexus* of desiration by reflective judgment, and the determination of practical Reason must always involve choices from the matter of Desire presented to Reason as formally expedient. It is only insofar as the manifold of Desires *reflects* cognition by means of meaning implications that determinations of practical Reason can be said to be "conformable" to the categories of understanding. To put this another way, actions as appearances are events (happenings) which we apprehend as "unfolding in time"; at every moment in time the conscious presentations of reflective judgment are changing and each new marking of an intuition affords the possibility of a new meaning implication. However, *unity* in subjective time of the action (as an *Unsache*-thing) means that this panorama of momentary meaning implications must be held together in consciousness in an over-arching *practical* implication, i.e. as a "unity of purpose."

Here it is worthwhile to recall James' characterization of "will." From an objective point of view, James tells us, "will" has to be regarded as the feat of maintaining one Jamesian "idea" in the face of numerous and partially conflicting "impulses." Psychologically, then, the *Dasein* of "will" is discovered through the phenomenon of being able to maintain that which we call "the unity of purpose." This is what Kant means by subjecting "*a priori* the manifold of desirations to the unity of consciousness of a practical reason." Now here we face a very tricky question so far as understanding the character of practical judgment is concerned. Pure Reason is not bound by the formal conditions of inner sense (subjective time). Therefore we cannot say that Reason "knows" it must hold together a succession of judicial presentations *in time* to thereby constitute a unity of purpose. Rather, we must suppose that the character of practical judgment is such that it seeks an *affinity* in divers presentations of desiration. We can call this a form of *practical reflexion and abstraction*, i.e. holding to some representation of desiration found in common among divers presentations of desiration.

Kant next introduces his "categories of freedom," and the key question here is: What exactly does he mean by this term? You may have noticed the discontinuity in Kant's argument: One minute he is talking about subjecting the manifold of Desires to a unity of consciousness, and the

next he abruptly switches to “these categories of freedom.” What “these”? Where did a “these” come from? The only trace of a “these” to be found in his text is in his speaking of “determinations of a practical reason.” It follows that the idea of “categories of freedom” refers to determinations of practical Reason. In the quote above he speaks of these “determinations” in a manner that puts them up as *outcomes*. *To make* such a determination requires a synthesis of judgment (practical judgment in this case), and such a synthesis does requires rules (*momenta*) of judgment. But *the determination* is something else. It is not the function of judgment but the “ruling” resulting from that act of judgment as it bears upon the-choice-that-is-made.

Recognizing this now puts the standing of Kant’s moral categories in a clearer light. They are not analogous to the pure *a priori* notions of determining judgment (that is, the categories of understanding). They are to be descriptions of how *objectively* we are to view determinations of appetitive power *insofar as these determinations involve moral reasoning*. Kant calls them “practical elementary ideas” (*praktische Elementarbegriffe*) and says they have their ground in “the form of a pure will as given within reason and therefore within the thinking faculty.” What exactly does this mean?

First, what is a “pure will”? In Kantian terminology the term “pure will” refers to a will that is unconditioned by sensuous factors. But human will is, as Kant says, a “mixed” rather than “pure” will; sensuous factors are sometimes made the basis of our choices. Therefore when he says that the moral categories have their basis in the “form of a pure will” he is speaking of those choices which are based on intellectual maxims or hypothetical imperatives – i.e. choices based on a person’s *objective* “moral code” that he develops for himself and understands through these maxims and hypothetical imperatives. By calling his moral categories “practical elementary ideas” Kant means to reduce the significance of his moral categories to the most basic and yet abstract level he can. He seeks a general *description* of how choices are to be related to “the moral law” (“act so that the maxim of your will always can hold good at the same time as a principle of universal legislation” [KANT4: 28 (5: 30)]). Kant speaks here not as a psychologist, not as an epistemologist, and not as a physical scientist, but rather as a moral theorist. The ideas of the moral categories are “practical” in the sense that they refer to the *practice* of moral living; they are “elementary” only in the sense that *objective* descriptions of moral actions in general, from the theoretical Standpoint, need not be further reduced through abstraction. They are ideas by which we are to understand the moral standing of our choices. That this interpretation is correct is supported by the last sentence quoted above, where Kant speaks of these ideas as progressing *in order* (of experience) from “being morally undetermined and sensuously conditioned” to “being sensuously unconditioned and determined only by moral law.”

Now what about Kant's statement that "practical *a priori* concepts at once become knowledge and do not have to wait on intuitions in order to acquire meaning"? Clearly this cannot refer to ***practical notions*** as *momenta* of practical judgment being given a representation in the manifold of concepts in understanding because these notions are knowledge *a priori* ("how-to" knowledge) that can *never* be presented in an intuition. Only ideas describing their effect in appearances can be made into cognitions. Equally clearly, Kant cannot mean that his moral categories constitute rationalist innate ideas because there are none such. There are different interpretations among scholars as to what Kant had in mind in saying that "practical *a priori* concepts" *become* "knowledge." Knowledge implies his statement means that the choosing Subject immediately "knows his choice" in the sense that *notions* of practical judgment are the "know how" for determining appetitive power. This interpretation implies that Kant's phrase, *praktischen Begriffe a priori*, should be translated as "practical *a priori* notions," which would refer to the *momenta* of practical judgment and not to the moral categories. In my opinion this is the correct interpretation of Kant's meaning. Practical *notions* immediately become "knowledge."

Some scholars think "cognitions" rather than "knowledge" is the correct translation here. This would imply that the concept of a maxim or hypothetical imperative is at once presented through the synthesis of reproductive imagination at the direction of speculative Reason. (This, of course, presupposes that such a maxim or imperative has been previously constructed in understanding; only its summoning would then be *a priori*). In this case, the ground for this summoning would lie with constructs in the manifold of rules (specifically, those rules we have called practical concepts), and these are *a priori* in the sense that they are not objective concepts and therefore are not part of *experience* at all. Once formed, however, they do influence the process of judgmentation and participate in the cognition of experience (because building experience requires acts of the Organized Being, and the manifold of rules plays a part in this).

The difficulty with this interpretation lies in Kant's "and do not have to wait for intuitions in order to acquire meaning." Perhaps this could mean that once the synthesis of comprehension presents its intuition the meaning implication is already in place (waiting for it, so to speak). There is, however, an inherent contradiction here, namely that if the choice is based upon a maxim or hypothetical imperative, the representation of that maxim or imperative must already be given presentation in sensibility in order for reflective judgment to bring it into the *nexus* of desiration. This is why I think the previous interpretation is the correct one to make.

In either event, it is easy to interpret what it means for a *choice* to "acquire meaning" without waiting on an intuition. Intuitions do not *present* meanings; they are *given* meaning implications through reflective judgment. To have a meaning implication denotes a connection to

an action. A determination of appetitive power that allows the action tied to the judicial act to be put into effect immediately *actualizes* a meaning implication.

This puts us in a better position to understand his moral categories as classifications of ethical choices. In form of composition (Quantity), choices are either subjective (determined through constructed maxims of behavior), objective (determined through technical precepts of behavior) or determined from one's own "moral law" (which, as theoretically categorical but practically merely hypothetical, prescribes an "ought to" in behavior). In matter of composition (Quality), choices follow rules for what one ought to do (commission), ought *not* to do (omission), and rules prescribing when and how exceptions may be made (e.g., telling the truth within a 'little white lie': "Does this dress make me look fat?"; "No, my dear"[3]).

The form of the *nexus* in a moral choice in Kant's moral theory speaks to the Relation between the choice and the Object that a moral action serves. In his ethics lectures, Kant recites a catalog of duties one owes to oneself by stint of the fact that, "He who violates duties toward himself throws away his humanity, and is no longer in a position to perform duties to others" [KANT11a: 122-123 (27: 341)]. He likewise cites duties arising from the state of other persons, by stint of *their* humanity, and mutual obligations between oneself and another individual. It is certainly clear and obvious from these moral categories that we are not dealing with primitive and *a priori* practical notions but, rather, with metaphysical considerations going into a universal theory of ethics.

Finally, with regard to Modality not all choices are moral or ethical choices. If a choice has no moral or ethical import, it is permitted. If the act would, on the other hand, violate an ethical principle, it is ethically forbidden. A theory of ethics involves principles of obligation, and these are duties. Finally, not every choice is purely ethical inasmuch as it might necessarily involve other factors of prudence or skill, and yet at the same time involve some sort of obligation to act. These are "imperfect" duties. On the other hand, some obligations are held-to-be-categorical in and of themselves, and these are "perfect" duties.

To sum up, we can see from this analysis that Kant's moral categories are not pure and *a priori* notions of practical judgment. However, the fact that a *moral theory* of the type presented by Kant is possible implies that something subsists in the practical notions that is necessary for the possibility of coming-to-hold such an objective view of ethics. Put another way, practical judgment must be capable of providing the ground for the possibility of conceptualizing actions,

[3] The dress does not "make" her look fat if she *is* fat; it merely fails to hide it. But she did not *say*, "Does this dress hide my extra pounds?" and a prudent man knows better than to answer the question she was really asking.

as appearances, in terms of non-sensuous and rational principles of “right and wrong.” And this is why the moral categories are called the rational ideas of “categories of freedom in consideration of the ideas of good and evil.”

§ 5.2 Antisocial Personality Disorder

Now, what about the phenomenon of people who, in Kant’s words, “make self-love the ground of their maxims” in the extreme – including people whom the rest of us regard as criminals? These people, too, make choices and the causality of freedom applies to them as well. What do their choices tell us about the flavor of practical judgment?

Psychologists define “personality trait” as “a long-standing pattern of behavior expressed across time and in many different situations.” The term implies some hypothetical underlying disposition or characteristic of a person that, in principle, can be used to explain regularities and consistencies in behavior. Psychological normality is generally described as conformity to the behaviors and customs typical for a reference group or culture, and what is regarded as “normal” behavior depends upon the society in which an individual lives. For example, Chinese students invariably stand up when the professor enters their office; American students rarely do. A pathological behavior trait is a behavior trait that is uncommon or alien to one’s reference group. Pathological behavior traits that depart sufficiently from the group norm and are considered inappropriate behaviors within the reference group are called abnormal traits. A person is said to have a *personality disorder* when many such pathological traits are typically found together.

Personality disorders appear to be characterized by three overlapping pathological characteristics. The first involves coping strategies under stressful conditions. The coping strategies of most individuals are diverse and flexible; when one strategy is not working, they shift to another. People said to have a personality disorder tend to practice the same strategies again and again with only minor variations. The second characteristic is adaptability. Normal individuals exhibit flexibility in their interactions such that their initiatives and reactions are proportional and appropriate to the particular circumstances. When constraints on behavior are imposed, the behavior of people in the normal group tend to converge regardless of the individual’s overall personality traits. People said to have personality disorders have few alternative strategies and impose them on conditions for which they are poorly suited with rigidity and intensity. Third, because these people fail to change or adapt their behavior, the pathological themes that dominate their lives tend to repeat over and over.

Psychologists and psychiatrists categorize different behavior traits in terms of clinical syndromes, general medical conditions, the types of psycho-social and environmental problems

the individual encounters, and the individual's global abilities for assessment and functioning in psychological, social and occupational settings. Different types of personality disorders are characterized by specific occurrences of several kinds of pathological behavior traits. The official taxonomy they use is modified from time to time, and the official compendium for abnormal behavior in the United States is the *Diagnostic and Statistical Manual of Mental Disorders* (called the DSM for short). The specific personality disorders described in the DSM were originally organized into three generic subclasses: general personality disorders; sociopathic personality disorders; and sexual disorders. The fourth (1994) edition of the DSM (*DSM-IV*) cataloged twelve types of personality disorders, of which ten were officially accepted and two were provisional.

The sociopathic disorders are characterized by a general lack of appropriate affect, little or no guilt following transgressions, and inability to form emotional bonds with other people. We will examine one such disorder, the antisocial personality disorder. However, first it is relevant to say something about the difference between a personality *style* and a personality disorder. When the traits of the antisocial personality disorder are listed, some readers may recognize factors in this list which in a more mild form would describe some of their own personality traits. This does *not* mean you are a latent antisocial personality. It is a matter of degree. It appears that *all* people show *some* of the traits in one or more of the personality disorders to a lesser degree. Everyone has a personality style but only a minority of people carry a style to levels of excess and rigidity where it becomes a disorder. Millon and Davis describe the difference between an antisocial personality style and the antisocial personality disorder as follows.

> Characteristics of an antisocial personality **style** rather than **disorder** can also be developed by normalizing the diagnostic criteria of *DSM-IV* . . . Whereas the disorder consistently violates social norms through illegal activities . . . the style puts its own value system above that of the group and is occasionally caught up in conflict thereby. Whereas the disorder uses various forms of deceit to achieve its own ends . . . the style is "slippery," tending to finesse critical points and spin objective events to its advantage, without engaging in outright deception. Whereas the disorder is too impulsive to consider the consequences of its actions . . . the style is naturally spontaneous and self-indulgent, but knows when failure to delay gratification would violate social norms or lead to substantial harm to self or others. Whereas the disorder is irritable and aggressive to the point of repeated fights or assaults . . . the style is assertive in creating a felt physical presence.[4]

It is also to be noted that the personality disorders cataloged in *DSM-IV* are not rigid boundaries. It is not uncommon to find two, three, or even four personality disorders present in the same subject. Furthermore, antisocial personality style elements, not carried to the extreme of a disorder, are found in many highly successful and popular normal individuals (as are style traits

[4] Theodore Millon and Roger Davis, *Personality Disorders in Modern Life*, NY: John Wiley, 2000, pg. 108.

from the other DSM classifications). It is therefore best to leave diagnosis to the professionals and resist any temptation to play psychiatrist on the basis of what now follows here.

The criteria for diagnosing an antisocial personality disorder are as follows:[5]

> A. There is a pervasive pattern of disregard for and violation of the rights of others occurring since age 15 years, as indicated by three (or more) of the following:
>
> (1) failure to conform to social norms with respect to lawful behaviors as indicated by repeatedly performing acts that are grounds for arrest
> (2) deceitfulness, as indicated by repeated lying, use of aliases, or conning others for personal profit or pleasure
> (3) impulsivity or failure to plan ahead
> (4) irritability and aggressiveness, as indicated by repeated physical fights or assaults
> (5) reckless disregard for safety of self or others
> (6) consistent irresponsibility, as indicated by repeated failure to sustain consistent work behavior or honor financial obligations
> (7) lack of remorse, as indicated by being indifferent to or rationalizing having hurt, mistreated, or stolen from another.
>
> B. The individual is at least age 18 years.
>
> C. There is evidence of Conduct Disorder with onset before age 15 years.
>
> D. The occurrence of antisocial behavior is not exclusively during the course of Schizophrenia or a Manic Episode.

Although criminal activity is probably the first thing that comes to mind when one thinks about the antisocial personality disorder, in fact only a minority of antisocials come into conflict with the law. "Conduct Disorder" is a general psychiatric term for a variety of behavior *patterns* in which an individual repetitively and persistently violates the rights, privileges, or privacy of others; however, the term is also used for such behaviors as habitual and deliberately offensive use of foul language in work or social settings (e.g., a repetitive pattern of calling female co-workers "bitch" during the course of work-related disagreements).

Most antisocials appear to lack a conscience. Kant apparently believed that everyone "has" a conscience, but that some people simply learned to ignore it and to "put up" with the feeling of *Unlust* that a "guilty conscience" produced. In the case of many antisocials, this, in fact, appears not to be the case. For example, there are some criminals who commit murder for hire. Some of these individuals, arrested and incarcerated for this crime and later interviewed by psychiatrists, evidence a total lack of remorse for their crimes. There is, of course, no guarantee that their self-reported lack of any feelings of guilt are honest; deceitfulness is also a trait of the antisocial personality disorder. However, there is a pronounced lack of affective reaction – an utterly flat,

[5] From the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, American Psychiatric Association, 1994.

unemotive expression that others often perceive as menacing – exhibited by many of these individuals that makes it hard to think their lack of remorse is feigned solely to "impress" or intimidate the interviewer. Furthermore, there is some biological evidence supporting the hypothesis that the apparent lack of conscience in psychopaths is not feigned.[6] Although this evidence is not 100% conclusive, it does argue very strongly that Kant's optimistic opinion about the universal *Dasein* of what most of us call a "conscience" was badly misplaced.

> Nevertheless . . . it appears that there are children who even the best parents could not socialize, children born to normal, traditional, loving, nuclear families, who go on to gross violations of social norms. Cleckley . . . provides such examples, including many who have murdered, conned, and swindled. Cleckley . . . argued that these individuals, now termed **primary psychopaths**, suffer what he called a "semantic aphasia." Semantic refers to meaning, and aphasia is broadly considered a class of disorders related to the understanding or production of language. What Cleckley believed, however, is that psychopaths suffer an inborn inability to understand and express the meaning of emotional experience, even though their understanding of language is normal.
>
> Unable to understand the suffering their behavior creates, they do not develop a conscience, and thus are left without empathy or remorse. Many are shrewd and calculating and struggle to learn the emotional mechanics of interpersonal communication, thus masking their disorder. Nevertheless, the significance of embarrassment, shame, or fearfulness, for example, is just lost on them . . . Some psychopaths have even been known to purchase psychology books explicitly to develop an understanding of human emotional reactions, of "what makes people tick," a "necessary evil" in adapting to an alien world of the empathic and socialized.
>
> In the past several decades, Cleckley's conjecture has been pursued experimentally, with a number of interesting findings . . . Collectively, these and many other studies converge in supporting Cleckley's original hypothesis.[7]

Taken together, then, what do we find here? The person exhibiting antisocial personality disorder has, like the other disorders, a limited repertoire of coping behaviors and a lack of social adaptability in reaction to stress. Their actions tend to be wholly self-serving with a disregard and lack of concern for the approval of others or for how others may be harmed by their actions. In the case of criminal behavior, they feel little or no remorse for their deeds. (As police officers sometimes put it, "He's only sorry he was caught"). It is not the case that these people do not know their society condemns what they do. Quite the contrary. They simply do not care about that except insofar as avoiding punishment or retaliation being visited upon themselves is concerned. It is *not* the case that these people are without "emotion"; they are easily irritated and prone to anger which they do not seriously attempt to control. It *is* the case that they lack empathy for the feelings of other people. In some cases they may even take pleasure in hurting other people. Antisocials are notoriously impulsive and tend to spur-of-the-moment actions.

While these are more or less common features of antisocial personality disorder, it is not the case that all antisocials fit a tight stereotype. Millon identifies five major variants of antisocial

[6] *ibid*. Millon and Davis, pp. 114-117.
[7] *ibid*.

personality disorder (although he cautions that not all antisocials will fall neatly into one of these variant classes):[8]

> **The nomadic antisocial:** Feels jinxed, ill-fated, doomed, and cast aside; peripheral drifters; gypsy-like roamers; vagrants; dropouts and misfits; itinerant vagabonds; tramps; wanderers; impulsively not benign.
>
> **The covetous antisocial:** Feels intentionally denied and deprived; rapacious, begrudging, discontentedly yearning; envious, seeks retribution, and avariciously greedy; pleasure more in taking than in having.
>
> **The malevolent antisocial:** Belligerent, mordant, rancorous, vicious, malignant, brutal, resentful; anticipates betrayal and punishment; desires revenge; truculent, callous, fearless; guiltless.
>
> **The risk-taking antisocial:** Dauntless, venturesome, intrepid, bold, audacious, daring; reckless, foolhardy, impulsive, heedless; unbalanced by hazard; pursues perilous ventures.
>
> **The reputation-defending antisocial:** Needs to be thought of as unflawed, unbreakable, invincible, indomitable; formidable, inviolable; intransigent when status is questioned; overreaction to slights.

Again, let us be reminded that in the antisocial personality disorder these characteristics are carried to an inflexible extreme. A common thread running through the antisocial personality disorder is a total self-centeredness coupled with an extreme distrust of other people leading to active and preemptively impulsive behaviors. Millon has proposed an "evolutionary model" that characterizes the antisocial in terms of the following clinical domains:[9]

> **Expressively impulsive:** is impetuous and irrepressible, acting hastily and spontaneously in a restless spur-of-the-moment manner; is short-sighted, incautious, and imprudent, failing to plan ahead or consider other alternatives, much less heed consequences.
>
> **Interpersonally irresponsible:** is untrustworthy and unreliable, failing to meet or intentionally negating personal obligations of a marital, parental, employment, or financial nature; actively intrudes on and violates the rights of others, as well as transgresses established social codes through deceitful or illegal behaviors.
>
> **Cognitively deviant:** construes events and relationships in accord with socially unorthodox beliefs and morals; is disdainful of traditional ideals, fails to conform to social norms, and is contemptuous of conventional values.
>
> **Acting-out mechanism:** inner tensions that might accrue by postponing the expression of offensive thoughts and malevolent actions are rarely constrained; socially repugnant impulses are not refashioned in sublimated forms, but are discharged directly in precipitous ways, usually without guilt or remorse.
>
> **Autonomous self-image:** sees self as unfettered by the restrictions of social customs and the constraint of personal loyalties; values the image and enjoys the sense of being free, unencumbered, and unconfined by persons, places, obligations, or routines.

[8] *ibid*., pg. 110.
[9] *ibid*., pg. 128.

> **Debased objects:** internalized representations comprise degraded and corrupt relationships that spur vengeful attitudes and restive impulses that are driven to subvert established cultural ideals and mores, as well as to devalue personal sentiments and to sully, but intensively covet, the material attainments of society denied them.
>
> **Unruly organization:** inner morphologic structures to contain drive and impulse are noted by their paucity, as are efforts to curb refractory energies and attitudes, leading to easily transgressed controls, low thresholds for hostile or erotic discharge, few subliminatory channels, unfettered self-expression, and a marked intolerance of delay or frustration.
>
> **Callous mood:** is insensitive, irritable, and aggressive, as expressed in a wide-ranging deficit in social charitableness, human compassion, or personal remorse; exhibits a coarse incivility as well as an offensive, if not reckless, disregard for the safety of self or others.

All in all, the antisocial is a hostile, manipulative, distrustful, impulsive, egocentric and selfish individual – not the sort of person most of us would take as a friend. Using the terminology of this treatise, their maxims and hypothetical imperatives are just about as opposite to Kant's idea of "the moral law within me" as any person's maxims could get. From the psychiatric descriptions we have just looked at it is hard to imagine that such a person could experience much joy in life. But if Kant's "moral law" were *fundamentally* descriptive of the categorical imperative (rather than merely exemplary-descriptive), it would be next to impossible to see how such a person could experience *any* joy or delight in life. Yet that does not seem to be the case for the antisocial personality. The heinous pleasure taken by the Maréchal de Rais in the fifteenth century was previously mentioned. Another extreme (and, fortunately, uncommon) example is provided by Herman Mudgett, who was hanged just before the end of the nineteenth century.

> Mudgett excelled at insurance fraud and the seduction of young women, at least 27 of whom were killed after signing papers that made Mudgett the recipient of their insurance and savings. Drugged with chloroform after a night of prenuptial sex, each would awaken trapped in the elevator shaft of a three-story office building, specially designed by Mudgett to conceal his nefarious activities. Savoring the terror of the trapped girls, he would pump in poison gas and then haul their lifeless bodies onto the dissecting table for the removal of parts that held for him a special fascination.[10]

It is hard to suppose that Mudgett would carry out these elaborate preparations for setting up his sadistic murders if he did not take pleasure in carrying them out.

Still, strange as it may seem, there is a way to regard Kant's objective statement of "the moral law" (which I suspect Kant would view as a very twisted way of looking at it) in a context that fits with the antisocial's attitude toward the rest of us. The objective statement given by Kant was: Act so that the maxim of your will always can hold good at the same time as a principle of universal legislation. Kant's moral theory argues that a rational person, even an antisocial, could not, were he to think things through logically, hold antisocial attitudes and behaviors as capable

[10] *ibid.*, pg. 103.

of prescribing a universal law because this would mean that other people would, by this "law," treat him the same way he treats others. None of the descriptions we have just looked at in describing the antisocial personality disorder includes the adjective "irrational." You and I might think that the antisocial's attitudes and actions – impulsive and spur-of-the-moment as they are – are misguided or even stupid, but they still "make sense" if one accepts the premise held by the antisocial that, given the chance, *we would treat him as he treats us*. In one of the case studies used by Millon and Davis, the antisocial subject expressed her own version of the golden rule as, "Do unto others before they do unto you." In other words, it appears to be the case that the antisocial *does* regard what he or she does as conforming to a "universal law."

Here it is relevant to recall Piaget's observation about the initial radical egocentrism and moral realism displayed by infants and young children. The young child appears to simply presume that everyone sees the world the same way he or she does. Decentralization of the egocentric viewpoint occurs through a socializing process (the "cooperation phase" of the child's development of moral judgment). In the case of the antisocial personality disorder, it appears as if this decentralization is abnormally incomplete when it comes to cognitive appraisal of what some call "emotional intelligence" in regard to the communicability of feeling. Piaget had this to say about the child's earliest conceptions of "justice":

> There are in existence two distinct ideas about justice. We say that an award is unjust when it penalizes the innocent, rewards the guilty, or when, in general, it fails to be meted out in exact proportion to the merit or guilt in question. On the other hand, we say that a division is unjust when it favors some at the expense of others. In this second acceptation of the term, the idea of justice implies only the idea of equality. In the first acceptation of the term, the notion of justice is inseparable from that of reward and punishment, and is defined by the correlation between acts and their retribution.
>
> It seems to us more profitable to begin with the first of these two ways of thinking because it is the one we can relate most directly to adult constraint . . . It is also very probably the more primitive of the two conceptions of justice, if by primitive is meant, not so much what is early in point of time but what is the most overlaid with elements that will be eliminated in the course of mental development. For there exists in certain notions about retribution a factor of transcendence and obedience which a more autonomous form of morality tends to eliminate [PIAG7: 199].

> Very briefly, the result we shall be led to is the following. Two types of reaction are to be found with regard to punishment. Some think that punishment is just and necessary; the sterner it is, the juster, and it is efficacious in the sense that the child who has been duly chastised will in the future do his duty better than others. Others do not regard expiation as a moral necessity; among possible punishments only those are just that entail putting things right, a restoration of the *status quo ante*, or which make the guilty one endure the consequences of his deed; or again, those which consist in a purely reciprocal treatment. Indeed, apart from such non-expiatory penalties, punishment, as such, is regarded as useless, reproach and explanation being deemed more profitable than chastisement. On the average, this second mode of reaction is found more frequently among the older children, while the first is oftener found among the little ones. But the first, favored as it is by certain types of family life and social relationships, survives at all ages and is even found in many adults [PIAG7: 201].

If the conceptualization of "justice" during the child's moral development takes on an abnormal conceptualization of social reciprocity in the antisocial, it then would not be surprising if he or she thinks that other people are just "getting what is coming to them." The "factor of transcendence" of which Piaget speaks in regard to retribution bespeaks of a way of thinking to which we should pay serious regard in light of the pervasive tendency of human reasoning to view things with both naive realism and transcendent speculations. If a person merely thinks that another person will unhesitatingly do him harm, "preemptive retribution" is a behavior trait much easier to understand, even though such an antisocial concept of "justice" is alien to the concept of justice held by the normal population.

§ 5.3 Cognitive Dissonance, Conscience, and Practical Concepts

So far as Kant's moral law is concerned, what is key to the discussion of both normal and antisocial personality traits is that pure practical Reason does not deal immediately with concepts of cognition; it deals purely and *only* with the mere *form* of the manifold of rules structured through practical judgment. Kant's view of conscience as an "inner prosecutor who summons me before an inner tribunal" presupposes what psychology calls a "cognitive dissonance" following an action held-to-be "morally reprehensible." Cognitive dissonance implies, first, a feeling of *Unlust* and a judgment of subjective formal inexpedience by aesthetical judgment. Such a judgment constitutes a disturbance in equilibrium. Second, the transcendental place for the origin for this feeling must arise from cognitions. Specifically, the disturbance in equilibrium is to be looked upon as incompatibility preventing the assimilation of the appearance of the action or its consequences under a concept of a hypothetical imperative of behavior (a cognitive idea of a "moral law" of behavior). However, the action that was taken would have followed from the act of a judgment of expedience that was not vetoed by practical Reason, which therefore implies that the appetite for the act as it was presented in reflective judgment did not come into opposition with the structure of the manifold of rules in practical judgment.

If it is in fact true that the person who exhibits antisocial personality disorder actually feels no guilt or remorse, what this implies is nothing more than that there was no cognition brought to consciousness of any hypothetical imperative in conflict with the action or the appearance of its consequences, thus no cognitive dissonance. Because pure Reason contains no rationalist innate ideas of "right" and "wrong," and *all* ideas of hypothetical imperatives and maxims are constructed in the course of experience, the psychological mystery of antisocial traits is less one of why the antisocial does not exhibit the types of ideas of hypothetical imperatives found in the normal population than it is one of how the normal population comes to construct such practical

ideas in the first place, and how it comes to be that these ideas are similar enough that they come to constitute norms in social mores. The mystery is not so much one of how antisocial traits are developed in a small minority of the population than it is of how the much larger normal population, with its common higher concepts of morality, comes to be.

For example, let us recall our earlier discussion in Chapter 13 of the child's concept of lying. Among younger children, one of the common definitions of a lie hinged on whether or not the lie was believed. A spoken falsehood believed was held by the child as not in fact constituting a lie. The more "unbelievable" the lie, the "naughtier" the lie, i.e. the greater the "moral transgression." It does not seem to me particularly hard to guess at the rational underpinnings of such a view. A successful lie results in no unpleasant consequences, thus no *a posteriori* consequential appearances that would lead to the feeling of *Unlust* and a subsequent disturbance of equilibrium. The far more interesting question is: How is it that older children come to abandon this view?[11] It would not in the least surprise me if it turned out that the antisocial did *not* abandon it on the practical plane of the manifold of rules. Understanding the dictionary definition of a lie is not the same thing as holding-to-be-true that telling lies violates a hypothetical imperative of behavior.

In probing these questions it is useful to take a look at attitudes reflective of antisocial personality *styles* in members of the normal population. In the early 1970s, real-estate-broker-turned-author Robert J. Ringer wrote a best selling business book that was praised by some and excoriated by many [12]. Mr. Ringer's book is not a scientific work nor is it a work of philosophy.[13] It does provide, however, an example of self-reporting from which some useful insights may be gained. Although we will have to assume here that what Mr. Ringer has written regarding his attitudes and outlooks is honestly reported (rather than "author's license"), the fact that his book was popular enough to become a best-seller provides us with a reasonably safe basis to make the hypothesis that his outlook is reflective of a significant number of members of the normal population in the United States.

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[11] It also appears to be the case that for most people the abandonment is not fully complete. There are socially acceptable forms of lying. In the society of the United States, these are called "little white lies." Other countries apparently have their own socially acceptable forms of lying. For example, several times a year I receive email correspondence from prospective foreign students seeking appointments as research assistants. Most of these contain some flowery assurance that the applicant has read my published papers, that I am the most preeminent scholar now living, and that it would be the greatest of honors if only the student could study under my guidance. Although to me all this falls into the category of offensive buncombe, it apparently constitutes a form of socially expected politeness in the students' own cultures.

[12] Robert J. Ringer, *Winning Through Intimidation*, NY: Fawcett Books, 1974.

[13] Mr. Ringer speaks in this book of "my philosophy." However, his usage of that term is in keeping with the common way of speaking often used by Americans which, rather than dealing with questions of philosophy, is best characterized as a loose aggregate of attitudes and opinions.

The central thesis in Mr. Ringer's book is the usefulness of deliberately *intimidating* other people by strictly legal, nonviolent, non-physically-threatening means. He tells us that he came to form this "philosophy" after years of unpleasant experiences in the real estate business, in which he was repeatedly cheated out of money he felt he had legitimately earned. The examples he presents of how he effectively practiced intimidation show that Mr. Ringer does not have an antisocial personality disorder. He is a member of the normal population who happens to have adopted the personality traits of an antisocial personality style. Several "theories" he presents in his book provide us with classic examples of antisocial ideas and maxims. The first of these he calls "the theory of reality."

> This theory emphasizes, first of all, that reality isn't the way you wish things to be, nor the way they appear to be, but the way they actually are. Secondarily, the theory states that you either acknowledge reality and use it to your benefit or it will automatically work against you.[14]

We learn two things from his statement of this "theory." The first is the obvious naive realism attending it. It is true enough that wishing something were so doesn't make it so. It is also true that cognitions of appearances are merely contingent and can be gainsaid later in experience. Nonetheless, "the way they actually are" is a transcendent idea of "reality" as a *Ding an sich*. The second and more significant factor in this "theory" is the idea that if one is not proactive (that is, preemptive) in acting, "reality" will "automatically work against you." This idea is one of the key distinguishing characteristics found in people with antisocial personality disorders. The important difference between the disorder and the style is in the extreme socially unacceptable way in which the disordered antisocial personality acts in preemption.

The second of Mr. Ringer's "theories" of interest to us here is the one he calls the "theory of relativity." Here what is interesting is not so much his statement of the "theory" itself, but rather the example he uses to illustrate it.

> Consider "honesty" for a moment. Without exception, everyone I've ever dealt with defines "honesty" to suit himself; everyone tailors his definition of "honesty" to conveniently fit his own actions. I've yet to meet a man who admits to being dishonest. Have you? On the other hand, have you ever *known* a dishonest man? I'm probably on pretty safe ground if I bet your answer to the first question is negative and your answer to the second question is positive. Contradictions such as this one helped me to develop the Theory of Relativity.
>
> Since I had to deal with many men whom I considered dishonest, yet had never known a man who had admitted to being dishonest, it was obvious that something was causing a tremendous gap. That gap was relativity. Each man interprets honesty – and everything else in life – in his own way. You do; I do; everyone you and I encounter does.[15]

[14] *ibid*.
[15] *ibid.*

Interestingly enough, Mr. Ringer's statement here is not too far off from what the Critical Philosophy tells us. The idea of "honesty" is bound up with the system of values and maxims every individual develops for him- or herself. Where his statement injects an element of speculation is the explicit statement that *every* person regards himself (or herself) as "an honest man" (or woman). We can very much doubt that a professional swindler regards himself as honest; it is likely more the case that "honesty" is not held to be a value – and perhaps in some cases may even be held to be a vice – by the criminal. Had Mr. Ringer replaced the word "honesty" with the word "goodness" and the word "dishonest" with "evil," he would have been closer to the mark. As it is, his example carries an implication that one should expect other people to do whatever they do with a clear conscience because, whatever their actions, they will consider them to be "honest actions."

These ideas lead up to what constitutes Mr. Ringer's central justification for intimidation. He tells us that the business world is exclusively populated by only three "types" of people:[16]

> **Type Number One:** This type lets you know from the outset – either through his words or actions, or both – that he's out to get all your chips[17]. He then follows through by attempting to do just that.
>
> **Type Number Two:** This type assures you that he's not interested in getting your chips, and he usually infers that he wants to see you get everything "that's coming to you." He then follows through, just like Type Number One, and attempts to grab all your chips anyway.
>
> **Type Number Three:** This type also assures you that he's not interested in getting any of your chips, but, unlike Type Number Two, he sincerely means it. That, however, is where the difference ends; due to any one of a number of reasons – ranging from his own bungling to his personal standards for rationalizing what's right and wrong – he, like Types Number One and Two, still ends up trying to grab your chips.[18]

In other words, you should always assume that other people will always try to cheat you because they will. This is nothing else than the "universal law" of the antisocial.

In the rather grim world that Mr. Ringer depicts, what, then, should a person do? He rationalizes that in the long run nothing any person does is all that significant in what is often called "the grand scheme of things," that life itself is little else than a game, and, so,

> I decided I would go for all I could get, as quickly as I could get it, while I still had the opportunity to play. Recognizing that both life and business are just games made it easy for me not to take myself too seriously and, consequently, made it easier to "win." After all, if it's just a game

[16] Mr. Ringer's "theory" runs into a problem with inconsistency here. His description of himself as a naive young man first entering the business world does not fit with any of his "three types" of business people. Nor do any of his later actions fit with any of these three types, although he seems to like to think of himself as a "Type Number One." His self-description conveys prudence but not avarice.
[17] i.e., poker chips. Mr. Ringer uses "chips" as a metaphor for whatever money or other reward is being sought in the undertaking at hand.
[18] *ibid.*

> there's no sense in viewing each move as life or death; there's no reason to be afraid to be aggressive or take chances. The reality is that there's no way you're going to get out of this thing alive, anyway, so why play a conservative game?[19]

Such a maxim of acting if carried to an extreme is nothing short of one of the key symptoms of the antisocial personality disorder. Mr. Ringer himself does not adopt such an extreme maxim. Yet note that he tells us this paradigm "made it easy for me to not take myself too seriously." The implication here is that without this "game paradigm" some other factor would get in the way of carrying out his business tactics. His maxim points toward decreased empathy, although not its total absence (as is found in cases of antisocial personality disorder).

From this background of attitudes and maxims we come to Mr. Ringer's central "theory of intimidation":

> Write this one on the inside of your shirt cuff because it's critical in determining the outcome of most situations. This theory states that the results a person obtains are inversely proportional to the degree to which he is intimidated. (It was in the deals in which I had been the most intimidated that I had taken the greatest financial beatings; and it was in the situations in which I had been intimidated the least that I had made out the best.) It was clear, then, that the first step in organizing my philosophy into usable form was to lay out a specific plan to keep from being intimidated. I had to create a method for trading places with the principal; from now on I would have to be the intimidator and find a way to maneuver the principal into the role of the intimidatee.[20]

As the rest of the stories and anecdotes in his book make clear, Mr. Ringer is in fact *not* willing to go to *any* lengths or commit *any* deed whatsoever in pursuit of his goals. He never physically threatens; he never uses or threatens to use violence; he employs attorneys to take part in business transactions, both to offset other people's attorneys and for the intimidation value the presence of an attorney brings; he brings a large and impressive staff with him when calling on clients; he uses a Learjet and other image-building techniques to convey an impression of success and competence; he makes bluffs that the business deal will fall through unless things can be settled on his terms (and claims to be prepared to let them do so if his bluff is called). All his actions are well within the boundaries of what is tolerated in normal business society. At times the "psych game" he plays borders on being a confidence game, but never actually crosses that line ("spin" rather than deceit). He also attempts to control, as much as possible, every aspect of "the game." All this is a classic picture of the antisocial personality style (with some factors of what psychologists call an "obsessive-compulsive style") but one within business norms.[21]

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[19] *ibid.*
[20] *ibid.*
[21] It may be interesting to note at this point that a great many of the "office politics" and "greed is good" books published in the 1970s and 1980s also strikingly illustrate the antisocial personality style. The same can be said for the single-minded "maximize shareholder value" maxims of management books that downplay or deny corporate social responsibility to either its community or its employees.

Mr. Ringer applies his cognitive appraisal of life and business as a universal law serving to justify the maxims he adopts. He applies his "principles" universally and *a priori* in every business deal into which he enters, almost all of which involve people he has not previously met. Although many of his actions are merely prudent precautions for protecting his legal position in case he would need to file a lawsuit against a seller, he appears to justify the hard work he does in taking these actions on his "principle" that if he does not do these things then the seller *will* cheat him out of his commission. Consequently, he tells us, the sole interest one should serve is always exclusively one's own business interest:

> Because my philosophy was based on reality, all my techniques were either directly or indirectly aimed at the most important reality of all: the necessity of getting paid . . .
>
> Regardless of the "product" or "service," selling is not an end in itself; selling is only a means to an end: receiving "income." Contrary to the emphasis in many "success" and "how to" books, closing deals is not the name of the game; it is only a means to the end of walking away with chips in your hand. Reality dictates that the mere closing of deals will not pay your grocery bills; only getting paid will do that. In business, love, and life in general, "getting paid" is what it's all about.
>
> I, like most people I've known, often hid my eyes from the realities of the jungle because they seemed too "brutal" to accept. But whether or not I accepted them did not change the fact that they were realities. It wasn't until I forced myself to stop being an ostrich that I was able to start making some headway in the jungle. "Brutal" is another one of those freely used, relative words. Relative to the candyland rules of goody-two-shoesism taught in so many "success" books, the realities of the jungle may seem "brutal"; but relative to the fantasies which actually support those rules, the realities of the jungle are comforting.
>
> Based on my interpretation of reality and relativity, the techniques I used were not "brutal" either. I merely fought fire with fire: the techniques were no more brutal than the realities they were intended to reckon with. And realities are nothing more than "things" – not "good" or "bad," not "brutal" or "comforting" – they just *are* . . .
>
> On the other hand, just because you admire an opponent's ability certainly doesn't mean that you should *help* him to get more chips. He'd like you to help him, but, believe me, he doesn't expect it. Like him, you should do what's in *your* best interest . . . And remember: looking out for your best interest does not conflict with your doing a good job at whatever it is that you're supposed to get paid for; it simply means you *do* get paid for the service you render.[1]

This last bit of advice strikes many people as callousness, as a license to use other people solely for one's own ends. The taste it leaves is probably the main reason that those who have excoriated Mr. Ringer's books did so. It implies there is no such thing as a "duty to others" that is not based upon one's "duty to himself" – which in another book[2] Mr. Ringer tells us is one's own personal happiness. Mr. Ringer defines "personal happiness" in a very broad sense that takes in what Kant called (Self) respect, and in this sense Mr. Ringer's "philosophy" does not conflict with the Critical Philosophy. However, that is not really the issue at hand for us here. The point illustrated by what we have just summarily reviewed is *how intellectual maxims and "laws" interact with perception to establish equilibrium in combining actions with cognitions*.

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[1] *ibid*.
[2] Robert J. Ringer, *Looking Out for # 1*, NY: Funk & Wagnalls, 1977.

Howsoever much Mr. Ringer views the sellers with whom he did business as "dishonest" men, he tells us they were not "bad" men because they were merely "playing the game" of business as it is played "in reality" – a viewpoint many people would likely not be inclined to share. In a more vulgar reduction, it is an attitude of "everybody does it, so it's okay." There is little doubt that dueling was regarded in the same way in the eighteenth century, as was the use of sunrise-to-sunset child labor in the nineteenth century, and as is the currently widespread management maxim in today's large corporations that management's sole duty is to the stockholders with none but pragmatic bottom-line considerations of any merit in regard to the treatment of the company's employees or its civic relationships with its community or nation.

The part of the manifold of rules in practical judgment that regulates the employment of judgmentation through speculative Reason is made up of practical concepts. The feeling of *Unlust* we call "conscience" is the perception of a disturbance of equilibrium when the perception of the action or its consequences *ex post facto* cannot be assimilated into objective representations, presented in sensibility, of hypothetical imperatives. The structuring of practical concepts for regulating the construction in judgmentation (*Beurtheilung*) of new forms of ideas, under which assimilation of the action or its consequences is *made possible* in consciousness, is the practical *Realerklärung* of what is commonly called "rationalizing" or "justifying" one's behavior.

Conscience as a feeling is a form of cognitive dissonance taking its context from one's own actions. Other affective perceptions – surprise, puzzlement – that arise when appearances fail to match up with anticipated appearances constitute a second form of cognitive dissonance, and also present a disturbance in equilibrium calling for accommodation in judgmentation. Practical concepts underlie rules for actions expressed through speculative Reason, and the second class of cognitive dissonance is an energetic for appetites of accommodation in judgmentation. To use Mr. Ringer as an example again, how does his "three types of business people" idea deal with coming into contact with people who do not try to "grab all his chips"?

> The most important reality I learned during those three struggling years was that there are basically only three types of people in the business world . . . I firmly maintain that these three types are the only types that exist, with one qualification: they do not include persons who stand to directly benefit as a result of your earning, and receiving, income. The latter type of exception is rare and will stand out like a sore thumb on those few occasions when it does exist.[3]

He goes on to tell us that this relationship does not exist between sellers and real estate brokers. Presumably, then, in any case where a seller does not try to "grab his chips" this atypical non-action is to be attributed to a successful application of intimidation:

[3] *op cit.*, R.J. Ringer, *Winning Through Intimidation*.

> My Dallas closing . . . served as a model for applying my philosophy through the use of specific techniques. It was quick, it was smooth, and there were no last minute anxieties.
>
> There were two factors, in particular, which were very significant in this deal:
>
> The first was that I had used my strong posture – which I had established through image building – to get the seller to sign a commission agreement based on 5½% of the total selling price rather than the normal 3% figure I usually used . . . I thought it would be interesting to see the psychological effects of using a higher commission percentage . . . then when the usual commission-dectomy[4] attempt began, I could always afford to cut the commission down . . .
>
> The second significant ingredient . . . was that I had an "insurance policy" against not getting paid . . . I also had a buyer who was willing to step over the line and make my getting paid one of the conditions of the closing.
>
> There were many reasons why I had this support, but I believe the most important one was the fact that the buyer was smart enough . . . to understand that it was to his advantage to see to it that I was treated fairly . . . With the support of the buyer, plus all of my posture factors, I had every exit covered. The seller had no way to turn and as a result he did not even infer the possibility of a commissiondectomy.[5]

The point of all this is to illustrate by example the kind of reasoning that can be employed in the accommodation of concepts in understanding to reestablish equilibrium following the feeling of *Unlust* called cognitive dissonance. Mr. Ringer presumes that no attempt to cheat him out of his commission was made because the seller could recognize in advance the futility of such an attempt. But nothing short of mind reading could prove that the seller would not have acted the way he did had the circumstances been different. Only Mr. Ringer's "universal law" of the "three types" says differently. The rational accommodation that has been made here is obvious.

§ 5.4 The Ideal of Practical Perfection of Universal Practical Law

Behind cognitions of rules and practices of behavior lies the Organized Being's structure of practical law. In the practical Standpoint a practical law is a structure of rules (including practical concepts of Reason) that regulates the determination of appetitive power. A practical law is held-to-be practically-universal if there are no presentations in judgments constituting a disturbance of equilibrium as a ground for necessitating an action that results its accommodation. All *constructed* practical laws of Reason are hypothetical imperatives, which are rules for the structuring of maxims, and, as such, no hypothetical imperatives are *absolutely universal*. They are merely *held-to-be* universal only so long as there is no need to change their structure. The representation of the *idea* of such a law in the manifold of concepts is a *believed* idea (in the rulings of reflective judgment), and, in the theoretical Standpoint, such an idea has the mere appearance of being a theoretically categorical imperative.

Here is an important distinction that Kant did not spell out for us in *Critique of Practical*

[4] This is Mr. Ringer's term for paying the broker less than the agreed-upon broker's commission.
[5] *ibid.*

Reason. A theoretical-hypothetical imperative is a relatively (not absolutely) general rule for which there are *known applications and exceptions*. Viewed as such, the practical concepts standing behind them, in the manifold of rules of pure Reason, are *substructures* of a more general practical structure. This is to say, the theoretical-hypothetical imperative is a practical *maxim* in the manifold of rules. The theoretical-hypothetical imperative differs from a theoretical-maxim only in terms of its conceptual object. For the theoretical-maxim the concept of the object of the action is that of a *sensible* object of appearance, including concepts of recognition for the Organized Being's subjective state. The theoretical-hypothetical imperative is an idea of a ground of acting from a *supersensible principle* of a relatively general rule of prudence or practice that is sensuously conditioned. The practical concepts standing behind theoretical-maxims are sub-substructures in the manifold of practical rules.

The theoretically categorical imperative is the idea of a ground of acting where no merely sensuous condition or concept of an object of sensible appearance is held-to-be a condition of the rule. The practical concepts standing behind them are practical-hypothetical imperatives, the structure of which is held to carry the force of a practical law of experience in the determination of appetitive power. However, this holding-to-be-binding is not absolute because it is itself regulated by the supreme practical law of the categorical imperative of pure *practical* Reason. We have previously described the categorical imperative as the master regulation of equilibration. From the practical Standpoint we can now also see it as the formula for structuring in the practical manifold of rules. This is to say that the categorical imperative of Reason is the *absolute condition* of all acts of practical judgment. Because the categorical imperative is a law that takes no account of any sensuous factors (and all concepts reproduced in sensibility as intuitions are sensuous factors with regard to the determination of appetitive power), acts of practical judgment under the categorical imperative are called *free acts*, and the regulation of practical judgment under the categorical imperative is nothing else than *the causality of freedom*.

If the process of practical judgment were to succeed in structuring a system of undisturbable hypothetical imperatives, such that no event in experience could produce in reflective judgment a ground for the accommodation of any practical hypothetical imperative, the manifold of rules would then be said to be *practically perfect*. Because there can be no objectively valid guarantee that such a condition is possible to meet in actual experience, the practical perfection of the manifold of rules is *a transcendental Ideal of pure Reason*. As the Object of pure practical judgment, the Ideal of practical perfection is a *noumenon* which, regarded as it is in itself, cannot be exhibited through concepts. However, disequilibrium is a sufficient mark of imperfection in the manifold of rules, and so the practical judgment of this manifold in terms of the Ideal of

practical perfection is a purely *formal* judgment for which there can be naught but negative criteria, as we previously found to be the case in the logical judgment of formal conditions of truth in understanding.

We have thus come to our idea of the fundamental operational character of acts of practical judgment. Practical judgment acts for the practical perfection of the manifold of rules in its combination of practical rules and practical concepts of pure Reason. This is the practical homologue in Reason to the logical perfection of the manifold of concepts in understanding. Indeed, the latter must presuppose the acts of the former because the process of determining judgment does not determine its own employment. The three processes of judgment align with the three *modi* of perfection – logical perfection with determining judgment, aesthetical perfection with reflective judgment, and practical perfection with practical judgment. In logical order of precedence, it is the practical perfection of Reason that stands as the condition of other two forms of perfection. From this consideration we see the *momenta* of practical judgment as the *a priori* functions of acting for the practical perfection of the power of Reason.

§ 6. The Value Structure

We looked briefly at Piaget's idea of "value" as a regulating function of organization in Chapter 14 (§3.4). We are now in a position to develop this idea in the practical context, and to tie it to Reason's non-autonomic regulation of the Organized Being as the realization of a process of perfecting. Piaget saw value as one of four 'categories' of regulating function, the others being Piagetian totality, relationship, and ideal. Above we spoke of the practical manifold of rules as a constructed structure. We can call this a *rational* structure because its construction is carried out wholly within pure practical Reason. Piaget viewed such rational structures as extensions of biological organization.

> The history of science shows that every attempt at deduction to establish continuity between one discipline and another results not in a reduction of the higher to the lower but in creating a reciprocal relationship between the two terms which does not at all destroy the originality of the higher term. So it is that the functional relations which can exist between intellect and biological organization can in no way diminish the value of reason but on the contrary lead to extending the concept of vital adaptation. It is self-evident that if the categories of reason are in a sense preformed in biological functioning, they are not contained in it either in the form of conscious or even unconscious structures. If biological adaptation is a sort of material understanding of the environments, a series of later structures would be necessary in order that conscious and gnostic image may emerge from that purely active mechanism. As we have already said, it is therefore at the end and not at the point of departure of intellectual evolution that one must expect to encounter rational concepts really expressing functioning as such, in contrast to the initial structures which remain on the surface of the organism and of the environment and only express the superficial relationships of these two

terms to each other [PIAG1: 8-9].

Piaget grouped his categories of regulating functions of organization in pairs, which he called "static" and "dynamic" categories (the latter of which is not to be confused with Kant's terminology of mathematical and dynamical categories). Because Piaget described four such categories, it is tempting to try to represent them in terms of the four heads of our 2LAR of general representation (Quantity, Quality, Relation, Modality). However, as Piaget's description makes clear, these categories do not fit together in this fashion. As a formal system, therefore, his categories do not constitute a complete representational system. Nonetheless, these ideas are helpful in setting the context for the transition to practical judgment. We will therefore review them in more detail here:

> The concept of *totality* expresses the interdependence inherent in every organization, intelligent as well as biological. Even though behavior patterns and consciousness seem to arise in the most uncoordinated manner in the first weeks of existence, they extend a physiological organization which antedates them and they crystallize from the onset into systems whose coherence becomes clarified little by little. For example, what is the concept of "displacement groups," which is essential to the formation of space, if not the idea of organized totality making itself manifest in movements? So also are the schemes belonging to sensorimotor intelligence controlled from the very beginning by the law of totality, within themselves and in their interrelationships. So, too, every causal relation transforms an incoherent datum into an organized environment, etc.
>
> The correlative idea of totality is, as Hoeffding has shown, the idea of *relationship*. Relationship is also a fundamental category, inasmuch as it is immanent in all psychic activity and combines with all the other concepts. This is because every totality is a system of relationships just as every relationship is a segment of totality. In this capacity the relationship manifests itself from the advent of the purely physiological activities and is again found on all levels. The most elementary perceptions (as shown by Köhler with regard to the color perception of chickens) are simultaneously related to each other and structured into organized totalities. It is useless to emphasize analogous facts that one finds on the level of reflective thought.[6]
>
> The categories of *ideal* and of *value* express the same function, but in its dynamic aspect. We shall call "ideal" every system of values which constitutes a whole, hence every final goal of actions; and we shall call "values" the particular values related to this whole or the means making it possible to attain this goal. The relations of ideal and value are therefore the same as those of totality and relation[ship]. These ideals or value of every category are only totalities in the process of formation, value only being the expression of desirability at all levels. Desirability is the indication of a rupture in equilibrium or of an uncompleted totality to whose formation some element is lacking and which tends toward this element in order to realize its equilibrium. The relations between ideal and value are therefore of the same category as those of totality and of relation[ship]s, which is self-evident since the ideal is only the as yet incomplete form of equilibrium between real totalities and values are none other than the relation[ship]s of means to ends subordinated in this system. Finality is thus to be conceived not as a special category, but as the subjective translation of a process of putting into equilibrium which itself does not imply finality but simply the general distinction between real equilibria and the ideal of equilibrium. A good example is that of the norms of coherence and unity of logical thought which translate this perpetual effort of intellectual totalities toward equilibrium, and which therefore define the ideal equilibrium never attained by intelligence and regulate the particular values of judgment. This is why we call the operations relating to totality and to values "regulative function" [PIAG1: 10-11].

[6] It is unclear what Piaget means here by "useless to emphasize." Perhaps he merely means "redundant."

This excerpt from *The Origins of Intelligence in Children* contains what is perhaps, in terms of raw expression, the densest compaction of Piaget's epistemological ideas. There is a lot for us to sift through here in dissecting the Piagetian idea of value.

§ 6.1 The Critical Context of Piagetian Value

Piagetian totality and Piagetian relationship are principal ideas going into his description of a structure. Recall that although a structure can contain substructures within it, and that these sub-structures have specific transformations that make them differentiable from other substructures, the self-organizing transformations everywhere within the system must all conserve the systematic structure of the Organized Being as a whole. For example, early sensorimotor reflex schemes are initially uncoordinated; even so, they are schemes within a single totality – namely, that of the Organized Being itself. The eventual coordination of these schemes is possible only because they are schemes within the same overall organization-as-a-whole, and all specific local rules of transformation in substructures are subordinated to the requirement of overall structure in the total system. The idea of a unity in consciousness is one which, stated in other words, is an idea of the Piagetian *totality* in the Organized Being. Piagetian relationships seen in this way are rules of transformation whose functional property is that of binding substructures to the totality of the system as a whole. Every part of an Organized Being must be seen as both the effect of the actions of its other parts and, at the same time, as cause determining these other parts. It is this reciprocity (community) of cause-and-effect that *defines* what it is for a being to be called an *organized* being. Organization is a functional invariant.

Noetic structures can be called the *organs* of *nous*, just as the stomach or the liver are called organs of *soma*. Just as a Relation of reciprocity exists between the state of the stomach and that of the liver, so also we acknowledge reciprocal Relations among the "noetic organs" of mental structures. An important principal difference between noetic organs and somatic organs is just this: Whereas somatic organs are in place and functioning at birth (in a normal, healthy infant), noetic organs (other than innate reflex schemes) are generally not yet formed at birth, and are developed in the march of experience. Noetic organization extends biological organization, and both these logical divisions are substructures within the totality of the organism (Organized Being) as a whole.

But if we liken Piaget's static categories of totality and relationship to the anatomy of the Organized Being, his dynamic categories of ideal and value are likened to the physiology of the Organized Being, in both its noetic and somatic logical divisions as well as in its totality (through the logical division of *psyche*). Piaget likened ideal to the idea of a *goal*, and likened values to the

idea of *means*. Just as a Piagetian totality is a systematic structure of relationships viewed in a static fashion (which is to say, viewed under the category of substance and accident as persistence in subjective time), Piagetian ideal is the systematic structure of Piagetian values viewed dynamically (that is, viewed under the category of causality and dependency). Ideals and values are "totalities in the process of formation." The root idea of all Piagetian ideals, i.e. the idea of the all-encompassing totality-of-ideal in the structure of the system, is equilibrium. In this *practical* context, Piagetian values are means for *organizing* processes of equilibration, all of which in effect serve to produce a more ideal or ever-more-robust equilibrium structure. The regulative function in acts and actions of the Organized Being is the functional invariant of adaptation (whether strictly somatic, strictly noetic, or both reciprocally).

This is the positive view of values from the practical Standpoint. However, because a practical value is a means for organizing processes of equilibration, *knowledge of* the *Dasein* of a "value" can be objectively valid only from a negative perspective. By this I mean: It is not the positive idea of a value that can be originally presented; understood in this way value is a *noumenon*. Rather, it is the presentation of a want or a lack that can be *originally* presented in consciousness. It is in this practical negative sense that the idea of values is tied to the idea of desires since every desire is an "indication of a rupture in equilibrium." The feeling of *Lust* or *Unlust* is in this sense the instrumentation of a desire that stands as an effect to which the cause is laid to a Piagetian relationship between the perception of the feeling and a noumenal value. There are no positive material criteria of values; there are only negative material criteria indicative of a rupture in equilibrium. The objective validity of thinking the *Dasein* of a *noumenon* is vested in the *Existenz* of a phenomenon under the category of causality and dependency.

Because a value regarded from the practical Standpoint is a "means" – that is, a manner – of organizing a process of equilibration, the practical totality of all such "means" constitutes a ***value structure***, i.e., a system of self-organizing transformations through adaptation. The idea of a value structure in an Organized Being has several facets to its representation. From the judicial Standpoint, the value structure reflects the manifold of Desires formed by desiration in teleological reflective judgment from the matter of desire judged in aesthetical reflective judgment. From the theoretical Standpoint, the value structure is reflected in ideas of maxims and imperatives structured in the manifold of concepts. Both Standpoints go to the idea of a relationship between values and perception. But the core idea of the value structure lies with the practical Standpoint and subsists in the idea of the manifold of practical rules as *the rules for organizing behaviors* of adaptation, an adaptation in this sense being the equilibrium between assimilation and accommodation. The judicial and theoretical Standpoints pertain to value

structure as affective and objective phenomena, respectively. The practical Standpoint pertains to the dynamical character of value structure as ground to the other two Standpoints. It is this dynamical factor that is said to subsist in the practical manifold of rules. Thus, value structure is ultimately tied to the causality of freedom, and its transcendental necessity is grounded in the categorical imperative of pure practical Reason.

§ 6.2 Value Structure in the Manifold of Practical Rules

A rule in general is an assertion of a specific activity that takes place under specific conditions. Within the overall process of judgmentation the presentation of a specific condition to practical Reason falls to the process of reflective judgment. The assertion – the 'go-ahead' – of the action falls to the appetitive power of practical Reason. What we may call the matter of a Piagetian ideal subsists in the manifold of Desires presented at each moment in time and standing under the principle of happiness. Such a presentation, however, is only a judgment of formal expedience which, in practical terms, establishes relationship between feelings of *Lust* and *Unlust* and possible rules of action. Such a presentation does not in itself form a structure because the manifold of Desires does not maintain a persistent form. Rather, it changes from moment to moment, and any commonality among successive moments is the product of the full outer loop in the cycle of judgmentation (that is, of the outer loop in the cycle of thought depicted in figure 9.3.1 and the information flow loop involving Reason in figure 17.5.1).

These presentations of reflective judgment are presentations in affectivity properly so-called. They are conditioned in part by factors in sensibility that go into the representation of objective perception (intuition). In this context it is useful to recall Damasio's idea of somatic markers.

> The key components unfold in our minds instantly, sketchily, and virtually simultaneously, too fast for the details to be clearly defined. But now, imagine that *before* you apply any kind of cost/benefit analysis to the premises, and before you reason toward the solution of the problem, something quite important happens: When the bad outcome connected with a given response option comes into mind, however fleetingly, you experience an unpleasant gut feeling. Because this feeling is about the body, I gave the phenomenon the technical term *somatic* state . . . and because it "marks" an image, I called it a *marker*. Note again that I use *somatic* in the most general sense (that which pertains to the body) and I include both visceral and nonvisceral sensation when I refer to somatic markers.
>
> What does the *somatic marker* achieve? It forces attention on the negative outcome to which a given action may lead, and functions as an automated alarm signal which says: Beware of danger ahead if you choose the option which leads to this outcome. The signal may lead you to reject, *immediately*, the negative course of action and thus make you choose from among other alternatives. The automated signal protects you against future losses, without further ado, and then allows you *to choose from among fewer alternatives* . . . Somatic markers may not be sufficient for normal human decision-making since a subsequent process of reasoning and final selection will still take place in many though not all instances. Somatic markers probably increase the accuracy and efficiency of the decision process. Their absence reduces them. This distinction is important and can be easily missed. The hypothesis does not concern the reasoning steps which follow the action of the somatic

> marker. In short, *somatic markers are a special instance of feelings generated from secondary emotions*. These emotions and feelings *have been connected, by learning, to predicted future outcomes of certain scenarios*. When a negative somatic marker is juxtaposed to a particular future outcome the combination functions as an alarm bell. When a positive somatic marker is juxtaposed instead, it becomes a beacon of initiative . . .
>
> Somatic markers do not deliberate for us. They assist the deliberation by highlighting some options (either dangerous or favorable), and eliminating them rapidly from subsequent consideration . . . Think of it as a biasing device [DAMA2: 173-174].

Damasio's hypothesis draws a part of its foundation from considerations of biological mechanisms of regulation that have what is called "survival value." We might think of these mechanisms and their somatic substrates as the somatic counterpart of innate reflex schemes. Somatic markers are thought to develop, in part, from the actions of these parts of the nervous system and the endocrine system.

> The innate neural patterns that seem most critical for survival are maintained in circuits of the brain stem and hypothalamus. The latter is a key player in the regulation of the endocrine glands – among them the pituitary, the thyroid, the adrenals, and the reproductive organs, all of which produce hormones – and in the function of the immune system. Endocrine regulation, which depends on chemical substances released into the bloodstream rather than on neural impulses, is indispensable to maintaining metabolic function and managing the defense of biological tissues against micropredators such as viruses, bacteria, and parasites.
>
> Biological regulation related to the brain stem and hypothalamus is complemented by controls in the limbic system . . . [It] should be noted that the limbic system participates also in the enactment of drives and instincts and has an especially important role in emotions and feelings. I suspect that unlike the brain stem and hypothalamus, however, whose circuitry is mostly innate and stable, the limbic system contains both innate circuitry and circuitry modifiable by the experience of the ever-evolving organism [DAMA2: 118].

Some of the connections to motoregulatory expression established by the process of reflective judgment involve only non-cognitive factors corresponding to the class of appetites that Kant calls instincts. Others establish affective associations for intuition. However, as we noted earlier, these connections do not form as reproducible manifolds (in the sense of the synthesis of reproduction in imagination) – that is, they do not constitute memories properly so-called – but rather should be regarded as *re-stimulated* rather than *recalled* connections. The distinction here between established affective connections and the idea of a structure is somewhat subtle but still important. Affective combinations are "open systems" in the sense that these combinations do not in themselves form a Piagetian totality. We can probably best describe them with regard to form as pathways of information flow in which no *storage* of information occurs. With regard to matter, the term energetics is appropriate.

> People often speak of "affective structures," but this expression can have two meanings. The first meaning is a metaphorical one which is of no concern to us here. The second is a stricter and more profound meaning related to the fact that certain affective systems end up as structures. This would be the case, for example, when interests are projected onto objects in the form of values. In certain

> cases, these may be arranged into "scales of values" resembling seriation structures. Moral and social feelings would be even better examples of affects that crystallize into well-determined structures. Far from contradicting our thesis, however, the existence of structures such as these confirm it. This is because affective structures are isomorphic with intellectual structures and, in fact, result from intellectualization. Such intellectualization exists from the moment feelings are structured. Only energetics remain purely affective. The ambiguity as to whether structures are cognitive or affective stems, at least in part, from the fact that structure and functioning or intelligence and affectivity are indissociable in all behavior. The ambiguity comes from the difficulty of separating the cognitive and affective elements which closely interpenetrate in the most varied situations.
>
> A further source of confusion is the fact that it is easier to recognize a structure than to give a general definition of it. One might, for example, attempt to characterize structure by various oppositions and begin by contrasting *structure* with *energetics*. Unlike energetics, structure is defined without making an appeal to strength or weakness or to more or less. In gestalt theory, when some structure is said to be "more pregnant" than another, it is obviously a question of two qualitatively different structures and not of two structures of different intensity. In contrast to this, a feeling can be stronger or weaker . . . Let us recall in this regard that if affectivity cannot modify structures, it still constantly influences their contents. For example, it is interest and, therefore, affectivity that makes the child decide to seriate objects and decide which objects to seriate. Affectivity will also decide the activity and content of classification operations . . . but in neither case will affectivity change the rules of seriation or classification.
>
> If, alternatively, one wishes to give a positive definition of structure, the most important characteristic is *closure*. A structure is a closed totality . . . Let us make clear, however, that closure does not mean completion. One structure can always be replaced by another structure . . . The closure of a structure designates, therefore, a completeness or stability which is at least provisional but which may be toppled at some later time as the system moves toward a broader and more stable equilibrium. In contrast to this, energetics are always open [PIAG16: 9-11].

In Chapter 18 I commented that "teleological judgment likes laws." This, however, does not mean that teleological reflective judgment makes laws; it makes *rulings*, and this only insofar as the judgment involved is a judgment of formal expedience. It is up to practical judgment to make laws (*structure* the manifold of rules as *regulations*), and it falls to determining judgment to give these laws objective representation through concepts. Reflective judgment is *impetuous*, determining judgment is *discursive*, and practical judgment is *decisive*. Judgmentation is the harmonious equilibration of all three processes of judgment.

It is in this context that Piagetian "will" (Kantian "choice") can be regarded as a "regulation of regulations."

> The act of will, as Claparède rightly said, is a readaptation in the case of conflicting impulses, just as the act of intelligence is a readaptation in the case of the momentary loss of adaptation. This important analogy puts us on the path to a solution . . . If acts of will are compared to intellectual operations, it is obvious that is no longer necessary to make an additional force intervene. In problems of intelligence one encounters conflicts between perceptual experience and logical deduction. The subject must rise above the momentary perceptual configuration. He must free himself from it in order to bring out relationships that were not given in perception at the start. This involves decentration, which permits mastery of the present situation by connecting it with former situations and, if need be, by anticipating future ones. That is how an operation works.
>
> Our thesis here is that it is exactly the same with acts of will. Affective conditions are given which correspond to the perceptual configuration of intellectual operations. It is not a question of rejecting this affective configuration but of going beyond it by "changing perspective" in such a way that

> relationships appear that were not given at the start. There is nothing any more mysterious about this than about intellectual decentration. *The will is simply the affective analogue of intellectual decentration*. The force of the impulses in conflict is in no way absolute; in every case, it is relative to the configuration. The "change of perspective," by modifying the situation, modifies the distribution of constantly varying forces . . . The force of an impulse is not fixed, even if it is the only one in play. We have already seen this in our study of regulations, and it is even more true when two antagonistic impulses are apparent. The force of an impulse depends at every instant on the configuration of the affective field . . . The consecutive modification of forces which occurs in decentration is a field effect . . .
>
> We end with this final formulation: the will is a regulation to the second power, a regulation of regulations, just as, from the cognitive point of view, the operation is an action on actions. The act of will corresponds, therefore, to the conservation of values; it consists of subordinating a given situation to a permanent scale of values [PIAG16: 63-65].

Seen from this perspective, the practical manifold of rules is the value structure which the Organized Being constructs for itself. Construction of this manifold is the act of practical judgment. *Coherence with this structure* in the presentation of reflective judgment is the practical condition for *choice*. That which is contained in the presentation of reflective judgment and can be assimilated into the manifold of rules is *valued*; that which is contained in reflective judgment but cannot be assimilated immediately in the manifold of rules – and thus requires accommodation in judgment – is *disvalued*. From the practical Standpoint, *perception is an evaluation* and *the determination of appetitive power is valuation*. **Valuation is the *practical validation of actions as being in formal compliance with the condition of the categorical imperative of pure practical Reason***. Every act of choice is an act of validation when the immediate consequence of choice is permission of the action implicated in reflective judgment, and every act of choice is an act of *reevaluation* when choice vetoes a possible action. Reevaluation is the act of, as Piaget put it, changing the perspective of perception. **The *expression* of reevaluation is an act of speculative Reason**.

Reevaluation is the first act of accommodation in adaptation, and it concludes with a transformation effected in the structure of the manifold of practical rules. In this practical context, the manifold of rules is the representation of *laws of compliance* with the demand of the categorical imperative. It must be emphasized that this means nothing more than *formal* compliance, not *material* compliance. 'Reason feels not' and knows no objects of appearance:

> If a rational being is to think of his maxims as practical universal laws, he can think of them only as principles that contain the ground of determination of will not by their matter but only by their form . . . Now nothing remains of a law if one separates from it everything material, i.e. every object of will (as its ground of determination) except the mere *form* of universal legislation. Therefore, either a rational being cannot think of *his* subjective-practical principles, i.e. his maxims, as being at the same time universal laws or he must assume that their mere form, by which they are fit for universal legislation, of itself and alone makes them practical laws [KANT4: 160 (5: 27)].

To be fit to be universal legislation means to comply with the pure purpose of practical Reason,

and this is nothing else than the purpose of attaining a perfect state of equilibrium. The manifold of rules is consequently to be seen as the representation of *forms* of actions that serve the purpose of equilibration. Acts of practical judgment are acts to perfect this form.[7] The manifold of rules is the Self-organized standard gauge of compliance in the determination of appetitive power. It is combination in the manifold of rules that sets the practical *Realdefinition* of the value structure of an Organized Being.

§ 7. The Motivational State

This brings us to the practical *Realerklärung* of the idea of a "motivational state." We recall that the idea of motivational state is regarded by neuroscience as a hypothetical entity posited in order to try to explain variations in behaviors that occur in the face of the same external stimulus. Kupfermann, Kandel, and Iversen tell us,

> Motivation is a catch-all term that refers to a variety of neuronal and physiological factors that initiate, sustain, and direct behavior. These internal factors are thought to explain, in part, variation in the behavior of an individual over time . . . With the rise of cognitive psychology a few decades ago . . . motivation, with all its complexity, has become the subject of serious scientific study once again.
>
> The biological study of motivation has until quite recently been confined to studies of simple physiological or homeostatic instances of motivation called drive states . . . Drive states are characterized by tension and discomfort due to a physiological need followed by relief when the need is satisfied.
>
> It is important to recognize, however, that drive states are merely one subtype, perhaps the simplest examples, of the motivational states that direct behavior. In general, motivational states can be broadly classified into two types: (1) elementary drive states and more complex physiological regulatory forces brought into play by alterations in internal physical conditions such as hunger, thirst, and temperature, and (2) personal or social aspirations acquired by experience. Freud and contemporary cognitive psychologists have suggested that both forms, but especially personal and social aspirations, represent a complex interplay between physiological and social forces, and between conscious and unconscious mental processes. The neurobiological study of the second type of motivational states is in its infancy.[8]

Present day cognitive psychology and neuroscience both tend to treat the terms "motivation" and "motivational state" as synonyms. Both also tend to speak of "motivational states" – in the plural – without having a clear definition of what constitutes a motivational state *in general*. Here the situation is quite like what we saw in Chapter 17 in regard to "space" vs. numerous types of "spaces." For what follows the reader may find a review of Chapter 10 (§5) useful at this time.

In this treatise we draw a distinction between "motivation" and "motivational state." In

[7] Kant wrote, "Rational perfection pertains to subordination, aesthetical to coordination: the former to regarding the *concretum in abstracto*, the latter to the *abstractum in concreto*" [AK16: 113]. Rational perfection is another name for practical perfection.

[8] I. Kupfermann, E. Kandel, and S. Iversen, "Motivational and addictive states," in [KANDa: 998-1013].

Chapter 16 (§9.3), we said **motivation is the accommodation of perceptions**. This is our *Realerklärung* of the term motivation. Motoregulatory expression is one means of assimilation of perceptions, and this form of assimilation constitutes the animating principle of somatic organization. Motoregulatory expression may be regarded as the proactive form of assimilation of perceptions, and what is proactive here is the impetuous character of reflective judgment. In this Chapter we have presented the power of speculative Reason as a second process of expression, operating entirely on the noetic plane and affecting the accommodation of perceptions through regulation of the process of determining judgment. This leaves our *Realerklärung* of motivation unaltered, but it adds another dimension to the means by which perceptions are accommodated, namely that of the spontaneity of *nous* in bringing concepts back into the synthesis of apprehension and comprehension.

The assimilation of perceptions can now also be seen to have a reactive form in the regulation of adaptation by the power of Reason. The term ‘reactive’ is used here because unlike reflective judgment, the acts of which immediately implicate possible sensorimotor schemes of action that directly produce accommodation of perceptions through kinaesthetic feedback, the changes (accommodations) produced in perception by acts of Reason are only mediately connected to these acts. What intervenes is the determination of the appetitive power of Reason, which is a synthesis of the presentation in the manifold of Desires with the value structure represented in the manifold of rules. An appetite can be regarded as the rational homologue of an intuition. A key distinction here is found in this important difference: an intuition is an objective perception (a conscious representation); an appetite is not a conscious representation, therefore is not a perception at all. Appetites *indirectly* affect the accommodation of perceptions in two ways: first, through the veto power of pure practical Reason over motoregulatory expression (providing a counterbalance to the impetuousness of reflective judgment); second, through conditioning the form of ratio-expression in speculative Reason. Common to both modes of expression is that the determination of appetite is aimed at achieving equilibrium in the Organized Being. In other words, the accommodation of perceptions (motivation) by acts of Reason is a by-product of acting to assimilate Desire into the manifold of rules, the latter of which also may undergo an accommodation (through practical judgment) in service to Reason’s demand for equilibrium. This is Self-organization, i.e. adaptation, of the general noetic structure of the Organized Being. Any adaptation is in general an equilibrium between assimilation and accommodation.

What, then, is a motivational state? We begin with the idea of a *state*. This is an idea of an *Unsache*-thing (a happening) regarded as a *Sache*-thing. In terms of the categories of understanding, Relation in an *Unsache*-thing is the category of causality and dependency

(theoretical-empirical perspective). Relation in a *Sache*-thing is the category of substance and accident. The category of Relation for the idea of a state, again in theoretical-empirical perspective, is the category of community. The idea of a state thereby falls under the *modus* of co-existence in subjective time (transcendental schema of community), and is an idea pertaining to reciprocal determinations.

§ 7.1 Automaton Theory and the Idea of "State"

This idea of reciprocity is implicit in the mathematical theory of automata. Let S denote a set of states, E denote a set of external stimuli (possible inputs), O denote a set of possible outputs (possible responses of the automaton), δ denote a "state transition function" (mathematically, a mapping rule), and q denote an "output function" (mathematically, another mapping rule). To complete our explanation of the mathematical symbolism, $S \times E$ denotes the set of all pairs made up of states s in S and external stimuli e in E. This means that if s is an element of the set S and e is an element of the set E, then the pair (s, e) is an element of the set $S \times E$.

An automaton is defined mathematically as a quintuple $A = (S, E, O, \delta, q,)$ such that the state transition function defines a transformation δ: $S \times E \rightarrow S$ from any pair of specific state and specific external stimulus to a new state, and the output function defines the outputs that result from the pairing of each specific state and each specific input, i.e., q: $S \times E \rightarrow O$. In the mathematical theory, a function produces one result for each specific (s, e) upon which it operates. The mathematical structure just defined is connected to objective time through the idea of a present state, s_i , a present input, e_i , a present output, o_i , and a next state, s_f . For the present pair (s_i, e_i), δ produces a unique next state s_f and q produces a unique present response o_i . Reciprocity is represented in this theory by the co-actions of the two mapping functions. The *determinism* of an automaton is a consequence of requiring δ and q to produce one result for each pair (s, e).[9]

The automaton example illustrates the most common theoretical definition of a state, namely, "the state of a system at (objective) time t_i is the amount of information at t_i such that together with knowledge of the external inputs (e) over all subsequent (objective) time the behavior of the system is uniquely determined for all (objective) time greater than or equal to t_i ."

[9] This is the "classical" theory of automata. In recent years there has been a steadily-growing interest in non-classical automata theory. There are two "brands" of non-classical automata. The first brand might be called non-deterministic automata, where the idea of probability is added and δ and q become statistical functions. Quantum mechanics, as viewed by a system theorist, falls into this category. The second brand involves the relatively recent idea of "chaos theory," where the system is still deterministic but exhibits properties that fit precise statistical definitions of "randomness." Also, our description here is that of a non-adaptive automaton. An adaptive automaton also contains an adaptation mapping, M, for the structure.

We can, however, spot a few problems with this definition with regard to its context in the Critical Philosophy. The first is the explicit reliance of this definition upon references to objective time. This issue becomes particularly acute when the system being considered involves the power of Reason. This is because Reason occupies a place in the Organized Being that not only has no reference to objective time, but also is not bound to the condition of sensible appearance, i.e. Reason is not conditioned by subjective time. This is because Reason is not an object of perceptible appearance and therefore is not bound to the transcendental schemata. Indeed, the very idea of transcendental freedom and the Idea of the *I* of transcendental apperception as the unconditioned cause of free acts in the appearance of the Self base their objective validity, in part, on the autonomy of Reason from the condition of inner sense.

Naturally, in order to obtain a *theoretical* understanding of Reason we have no choice but to somehow or other tie our concepts of it to *some* idea of time. This is because a *model* of Reason must be capable of exhibition in appearances, and thereby the *model* comes under the condition of inner sense (time). However, in conceptualizing this model we are not permitted to require of it strict natural causality in its successive appearances in time, as is done in the case of classical automata theory. What this means is that the idea of *uniqueness* in state determination contained in the classical definition of a state of a system given above is not an *a priori* objectively valid idea for a system that contains pure Reason as a part of its makeup.

This situation is not wholly unlike the situation we find in modern quantum mechanics. In quantum mechanics uniqueness and strict determinism in the classical sense are replaced with ideas of probability and what the theory determines are statistical expectations. Going farther, in the theory of quantum electrodynamics (QED) objective time becomes merely a parameter in the mathematical description of the system, and particles are allowed in QED theory to move backwards in time *from* the future *to* the present and *on into* the past. (In QED theory particles moving backwards in objective time *appear* as antiparticles moving forward in time). Although this idea usually seems very strange to non-physicists, predictions made by this theory have been observed in the laboratory, and everything so far has been found to be in agreement with the theory. The jolting strangeness of this theory becomes less strange once one has gotten used to the idea that objective time and the pure intuition of time are not the same, and that objective time in natural descriptions is no more than a mathematical idea of the mathematical *form* of a physical theory. Although in appearances the pure intuition of subjective time puts an arrowhead (so to speak) on the direction of time (through the transcendental schema of causality and dependency), noumenal objective time has no arrowhead on it and other objects are not “carried along” by it. Past, present, and future are ideas we can hang onto the idea of subjective time, but the objective

time of physics admits to no necessity for these concepts.

What, then, of the idea of causality with regard to objective time? It turns out that system theory often finds itself forced to deal with system models in which the behavior of the system "now" (i.e. at time t_0) depends not only on past events (time $t < t_0$) but also on "events that haven't happened yet" (time $t > t_0$). Such systems are called "two-sided" and are very common in models of communication systems. Two-sided systems are typically encountered when a system having some number of mathematical dimensions, N, is modeled using a lower number of mathematical dimensions, M < N. In such models, "now" is always a relative objective time determined by what, ever since Einstein's work, has been called a "local clock." The idea of a local clock means that objective time is defined for a particular spatial location (where the local clock is) and events are only "past" or "future" with regard to what time it is according to the local clock. That which has not yet appeared at time t_0 but which appears at time $t_f > t_0$ is a "future event," while that which appeared at time $t_p < t_0$ is a "past event"; t_0 is "now." In communication system models the two-sided problem arises because the transmitter and the receiver are often physically separated by a significant distance, and therefore have different local clocks, but the communication channel is described by a reduced-dimension signal model using the local clock at the receiver.

When the two-sided problem arose in the 1940s and 1950s it presented a significant mathematical (and pseudo-philosophical) problem for the theory of automata. What was needed was a more rigorous mathematical definition of "state" and a more searching examination of what precisely was to be meant by the term "causal" in system theory. The first of these was provided by the mathematician Nerode in 1958[10], and the second was the subject of a long development which by the mid-1970s had born considerable mathematical fruit[11]. The mathematics involved is much too advanced to go into in this treatise, but the bottom line of all this work can be briefly high-lighted. First, objective time as described above is regarded as merely a descriptive parameter that provides what in mathematics is called an "order structure" for defining a logical Relation of an hypothetical *Consequenz*. Second, a state is regarded as what in abstract system theory is known as a Nerode equivalence class. This idea is difficult to describe precisely without resorting to mathematics, but in essence it is a representation similar to that described earlier except that now S acquires a specific *rule of construction* based on classes of possible input sequences. Third, when the system is time-varying – that is, when δ and q are functions of the objective time parameter t – the dependence of δ and q on t must also be factored into the definition of S. (This is sometimes called the "augmented" or "extended" state representation).

[10] A. Nerode, "Linear automaton transformations," *Proc. Amer. Math. Soc.*, **9**: 541-544, 1958.
[11] R.M. De Santis, "Causality theory in systems analysis," *Proc. IEEE,* vol. 64, no. 1, Jan., 1976, pp. 36-44.

A reasonable question to raise at this point is this: How do all these automaton-theoretic and system-theoretic ideas pertain to the idea of a motivational state in the *Existenz* of the Organized Being? This is what we shall take up next.

§ 7.2 The Modeling of Motivational State

The most important ideas contained in all this for our purposes here are these: 1) any theoretical model of motivational state must be described in terms of an objective time parameter regarded as a "local clock" for which "now" corresponds to the marking of a moment in time in sensibility; 2) this objective time is not bound to determination by the category of causality and dependency and must instead be viewed merely as a logical ordering for representing the forms of a generalized state, a generalized state transition function, and a generalized response function; 3) the generalized response function must take into account all representations of *nous* capable of affecting the accommodation of perception at the next moment in subjective time; 4) the generalized state transition function must constitute a set of transformation rules for the accommodation of noetic representations in both the manifold of rules in pure Reason and the manifold of concepts in determining judgment. This last requirement comes about because both these structures affect accommodation of perception; they constitute *generalized state variables*.

Although the modeling requirement for these formal mathematical functions is known *a priori* (because they are constructs *defined* to constitute an approach for constructing a formal model), there are many details regarding how the mathematical models of the transition and response functions are to be constructed which *cannot* be determined *a priori*. For example, the function for describing the logical connection of the manifold of Desires to specific motoregulatory actions is not known *a priori* and must be investigated experimentally. We know there must be such a function, but understanding its details through empirical appearances of human behavior and human neurobiology belongs to a *natural* science of mental physics. Metaphysics does not answer all our scientific questions; it informs us of what is required to achieve a science proper. However, there *are* transcendental requirements laid upon any empirical doctrine (and upon the applied metaphysic that connects it to metaphysics proper), and these doctrinal requirements, because they are transcendental requirements, can *only* be known *a priori*. These requirements are what we have to understand in this treatise.

The formal framework, as we have presented it to this point, has made specific reference to the field of automaton theory, and this demands a further discussion in light of what has been said earlier in this treatise with regard to the automaton theory of mind. The first point we must emphasize is that the automaton theory so devastatingly attacked by William James (and still

clung to by many present-day scientific materialists) is the classical, deterministic automaton theory. It is mind-as-machine in a purely mechanical connotation. This, however, means that this theory subjects itself to being bound strictly to the category of causality and dependency, which we have seen is an invalid presupposition for the ideas of the process of reflective judgment and the power of pure Reason. But all the same, sensible appearances of the *Existenz* of the Self *must* be bound by physical causality (category of causality and dependency) because these appearances are understood as phenomenal *objects*.

Where classical automaton theory missteps is in its failure to distinguish between subjective and objective time. In the classical theory, there was only "time" and it was not recognized that this "time" was itself not merely an object but a *supersensible* object – a *noumenon*. Failing to recognize this leads to antinomies of causality and, in particular, leads to a conceptualization of psychological causality (the causality of freedom) in which are embedded concepts lacking real objective validity. Objective time serves an important role in the theory of *nous*, but this role is none other and nothing more than as a mathematical modeling rule of transformation by which, to quote Margenau once more, "a purpose can be transformed into a cause." More specifically, objective time in its application to our problem is nothing more than a rule for mathematically representing the form of motivational state. Furthermore, this *noumenal* idea can have none but a *practical* objective validity, and this validity must eventually be understood strictly in terms of what we find to be necessary for the possibility of experience in the *exhibition of observable behaviors*. Any concept of this objective time that projects beyond what is strictly necessary for the possibility of experience will carry our idea of this *practical objective time* beyond the horizon of empirical knowledge and into the realm of the unknowable transcendent.

We are, furthermore, in no position to state *a priori* what form *empirically based* rules science will be able to discover for constructing state transition and response functions. To put this another way, we cannot tell *a priori* whether an automaton theory with practical objective validity will take on a form falling into the class of deterministic automata (e.g. chaos theory) or whether, like modern physics, we will succeed only in coming up with a non-deterministic (e.g. statistics-based) *theoretical* understanding of practical objective time in the *Existenz* of *nous*. What we *do* know is that probability is a *noumenon*, that its idea takes its practical objective validity only from the *phenomenon* of statistical regularity in appearances[12], and that the idea of probability is in no way innate in human knowledge [PIAG23]. Kant had the following to say

[12] A *statistic* is an observable measurement and belongs to sensible experience. Probability is an *idea* posited by science and put up as the intelligible Object "behind" the phenomenon of statistical regularity. *In mundo non datur casus*.

about probability:

> To the doctrine of the certainty of our knowledge belongs also the doctrine of the cognition of the probable, which is to be seen as an approximation to certainty.
>
> By probability is to be understood a holding-to-be-true from insufficient grounds, which however have a greater relationship to the sufficient than the grounds of the contrary. Through this explanation we distinguish probability (*probabilitas*) from mere *likeness* (*verisimilitudo*), a holding-to-be-true on insufficient grounds insofar as these are greater than the grounds of the contrary.
>
> The ground of holding-to-be-true can be *objectively* or *subjectively* greater than that of the opposite. Which of the two it is one can only find out by comparing the grounds of holding-to-be-true with the sufficient grounds; for then the grounds of holding-to-be-true are greater than the grounds of the opposite *can be*. With probability then the ground of holding-to-be-true is *objectively* valid, while with mere likeness it is only *subjectively* valid. Likeness is mere magnitude of persuasion, probability is an approximation to certainty. In probability there must always be a standard by which I can appraise it. This standard is *certainty*. For as I shall compare the sufficient with the insufficient grounds, I must know how much is required for certainty. Such a standard, however, falls away in mere likeness, since here I compare the insufficient grounds not with the sufficient, but only with those of the contrary.
>
> The moments of probability may be either *homogeneous* or *heterogeneous*. If they are homogeneous, as in mathematical knowledge, they must be *numbered*; if they are heterogeneous, as in philosophical knowledge, they must be *pondered*, i.e. appraised by their effect; this is but the overcoming of hindrances in the mind. The latter do not give a relationship to certainty, but only of one likeness to another. Hence it follows that only the mathematician can determine the relationship of insufficient to sufficient grounds; the philosopher must be satisfied with verisimilitude as a merely subjective and practically insufficient holding-to-be-true. For in philosophical knowledge, because of the heterogeneity of the grounds, probability cannot be appraised; here the weights are, so to speak, not all stamped. Even of mathematical probability therefore one can properly say only that *it is more than half of certainty* [KANT8: 89-90 (9: 81-82)].

Probability has objectively valid employment in *mathematical* science, but it can only establish, and be established as, *hypothesis* and not certain fact. It can be established and maintained in no other way than through its relationship – as an hypothetical-practical rule – to observable occurrences, and *always* strictly through comparison to *objectively sufficient* grounds for holding-to-be-true.

When probability is reified, as sometimes happens (e.g., when the probability amplitudes of quantum mechanics are explained to the lay public in educational television programs) the explanation is divorced from objectively sufficient grounds for holding-to-be-true. Probability cannot be made into a *thing*. Conclusions drawn beyond this point are mere verisimilitudes which, no matter how subjectively appealing, are no longer valid science proper. In the context of an automaton model of motivational state, this means that if probabilistic ideas are introduced into empirical mental physics, they cannot be used to referee the long-standing battle between free will proponents and mechanism proponents. The only objective validity that can attach to any theory of the rules of relationship in practical objective time is practical objective validity. The ontological standing of practical objective time in the theory of *nous* is tied to the idea of a *state*, and practical objective time cannot be either *Sache*- or *Unsache*-thing.

§ 7.3 The Motivational Manifold

The matter (state variables) of the motivational state consists of concepts (in the manifold of concepts in understanding) and rational rules (in Reason's manifold of rules). It is true that kinaesthetic feedback in the activity loop (figure 17.5.1) affects sensibility. However, the transcendental place of this feedback lies with *soma*, which means these *materia* entering into the synthesis of apprehension belong to the data of the senses (hence to the idea of external stimuli; sense data is an input variable). Strictly within the spontaneity of *nous* only concepts and rational rules affect accommodation of perception (motivation). However, this matter must be combined with a form, which is to say connected in the *nexus* of a **motivational dynamic**. This we will call the motivational manifold. **The motivational state is the unity of this matter and form**.

We begin with the idea of a dynamic. This term sees various technical usages in different fields of science and philosophy, so it is important for us to clearly understand its connotation in our present context. We use it here as a noun, but will begin with the dictionary definition of it as an adjective.

> **dynamic**, *a*. [Gr. *dynamikos*, from *dynamis*, power, strength.]
> 1. pertaining to energy or power in motion; involving or causing energy, motion, action, or change; opposed to *static*.
> 2. of or relating to dynamics.
> 3. energetic; vigorous; forceful.
> 4. relating to or tending toward change.
> 5. in medicine, functional; opposed to *organic*.

Linked to this adjective are two nouns.

> **dynamic**, *n*.
> 1. a motive force.
> 2. dynamics.

> **dynamics**, *n*. [from *dynamic*.]
> 1. that branch of physics which treats of the action of forces on bodies in motion or at rest; kinetics, kinematics, and statics, collectively.
> 2. the motive and controlling forces, physical and moral, of any kind; also, the study of such forces.
> 3. that aspect of musical expression which relates to the power, or loudness, of tones.

The word "dynamic" is an important technical adjective in psychology. Reber's *Dictionary* gives us the following usages.

> **dynamic** **1.** Generally, characteristic of or relating to things that are in flux or are changeable. **2.** More specifically, a label for systems of psychology that emphasize motivation (R.S. Woodworth always referred to his form of functionalism as *dynamic* psychology), those that focus on unconscious processes (Freud and Jung are both considered proponents of a

> dynamic approach) and those that emphasize complex fields of psychological force (Lewin's field theory is a good example). Contrast with **static** and **structural**. See also under **dynamic system**.
>
> **dynamic equilibrium** Generally, the state of a dynamic system in which, although shifting and changing, the overall pattern of forces or energy is in a stable, organized configuration.
>
> **dynamic system** A term applicable to any system in which the several elements are all interwoven or interrelated so that changes in one sector of the system have systematic effects on the rest of the system.

Finally, we have metaphysics' related terms,[1]

> ***dynamis /enérgeia*** The Greek words, used by Aristotle and others, that correspond to the later Latin *potentia/actus* and the English *potency/act* and potentiality/actuality.[2]

In modern non-technical usages, "dynamic" carries an embedded connotation of motion (see definition 1 of the adjective above). Many people tend to regard action or motion as being a something that is somehow part of a dynamic, i.e., that something is not a dynamic unless it is changing. Such a connotation reverses Aristotle's usage of the term *dynamis*. It is okay to look upon action as being a ground for *recognizing* something as being dynamic; but it is not okay to go further and think that action or motion are *ontologically* prior to something being a dynamic. To put it another way, something does not have to 'be active' in order to 'be a dynamic.' A stick of dynamite sitting on the ground is, so to speak, 'static' until someone lights the fuse. But "being able to explode" is the *dynamis* of dynamite whether the fuse is lit or not. Regarded in terms of an ontological moment, "motion" implicates *enérgeia* rather than *dynamis*.

To help sort this out, let us look at a few English terms that are more closely coupled to the idea of dynamic as this noun is being used in the present context here:

> **potency**, *n*. [L. *potentia*, from *potens*, powerful.]
> 1. the state or quality of being potent, or the degree of this; power; strength.
> 2. capacity for development; potentiality.
> 3. something or someone influential or powerful.
>
> **potential**, *a*. [LL. *potentialis*, from L. *potens*, powerful.]
> 1. originally, that has power; potent.
> 2. that can, but has not yet, come into being; possible; latent; unrealized; undeveloped; opposed to *actual*.
>
> **potentiality**, *n*.
> 1. the state or quality of being potential; possibility or capacity of becoming; latency.
> 2. something potential; a possibility of developing, coming to fruition, etc.

A dynamic, as we use it here, is defined to be the representation of the *Existenz* of a potentiality.

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[1] T. Mautner, *The Penguin Dictionary of Philosophy*, London: Penguin Books, 2000.
[2] The classical Greeks had a plethora of meanings for *dynamis*. For Aristotle it meant a potential power.

It is Aristotle's *dynamis* nudged into compliance with the epistemological requirements of the Critical Philosophy.

> We have distinguished the various senses of 'prior', and it is clear that actuality[3] is prior to potentiality[4]. And I mean by potentiality not only that definite kind which is said to be a principle of change in another thing or in the thing itself regarded as other, but in general every principle of movement or rest[5]. For nature also is in the same genus as potentiality; for it is a principle of movement – not, however, in something else but in the thing itself *qua* itself. To all such potentiality, then, actuality is both prior in formula[6] and in substance; and in time it is prior in one sense, and in another not.
>
> Clearly it is prior in formula; for that which is in the primary sense potential is potential because it is possible for it to become actual, e.g. I mean by 'capable of building' that which can build, and by 'capable of seeing' that which can see, and by 'visible' that which can be seen. And the same account applies to all other cases, so that the formula and the knowledge of the one must precede the knowledge of the other.
>
> In time it is prior in this sense: the actual member of a species is prior to the potential member of the same species, though the individual is potential before it is actual[7] [ARIS7: 1657 (1049^b4-18)].

If we speak of a "motive force," the object of which we speak is what Aristotle was getting at with his idea of *enérgeia* in "the becoming actual of the thing."[8] If we speak of a principle or a law by which something can come to take on an actual form (accident of appearance) but which is itself not the matter of that thing, the object of which we speak is what Aristotle was getting at with his idea of *dynamis*.[9] Were we to make a mapping taking Aristotle over into the Critical Philosophy, *dynamis* would be made a characteristic of *Vermögen* and *enérgeia* would be made a characteristic of *Kraft*.

By a *dynamic*, then, we mean a *representation* of the *Existenz* of a *Vermögen* (potential power of organization) for a particular type of spontaneity. **By the *motivational dynamic* we mean the representation of the *Existenz* of the potential power to organize *and regulate* the accommodation of perception (motivation).** This representation, like all representations in general, is combination in a composition (Quantity and Quality) and a *nexus* of connection

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[3] *enérgeia*.
[4] *dynamis*. Aristotle is saying here that *enérgeia* is *epistemologically* prior to *dynamis*.
[5] *kinetikês* or *statikês*, kinetics or statics.
[6] *logos*. "Formula" is "definition" in a stricter or more precise sense, e.g. as in a mathematical definition.
[7] Before an oak tree is a tree it is an acorn. The acorn "has the potentiality to become" an oak tree, and this is what Aristotle means when he says that in an individual potentiality is prior in time to actuality. But the acorn came from another oak tree, i.e. the actuality of the species is said to be prior in time to the potentiality of the individual. There are problems with Aristotle's doctrine of matter, potentiality, form, and actuality, which are nicely presented by Barnes in [BARN: 66-108], but this is of no concern to us in this treatise.
[8] When this "becoming" is "completed" we no longer speak of the *enérgeia* of the thing but, rather, of its *entelechy*.
[9] Aristotelian matter and potentiality are not synonyms. An acorn becomes an oak tree and does not become a potato. Aristotelian potentiality has as much to do with what can not happen as with what can happen. It is in this sense that the potentiality in Aristotelian matter has the character of a law relating matter to the possible form of an Aristotelian substance.

(Relation and Modality). This brings us back around to the four ideas brought up in §1.3: want, drive, drive state, and type-of-motive.

As the representation of the organizational and regulative capacity of Reason, the motivational dynamic has a two-fold scope. On the one hand, it represents a power of practical organization through the realization of actions. This implicates a relationship between the motivational dynamic and *Lust*-organization in the adaptive *psyche*. On the other hand, the motivational dynamic has a regulatory character, which implicates in its capacity the act of determination of appetitive power. Thus, valuation falls within the scope of its idea, and because valuation is the practical validation of actions this implicates a relationship between the motivational dynamic and the manifold of rational rules in practical Reason.

The Motivational Dynamic and *Lust per se*

Lust-organization (Chapter 15, §7.4) is organized adaptation falling entirely within the logical division of *psyche* in the Organized Being model. Its four heads of representation are {schemes, energetics of *Lust*, psychic causality, psychic expedience}. A scheme is a constructed organization of activity; the energetics of *Lust* is the idea of the intensity of an inducement to carry out a scheme; psychic causality is the idea of a *Kraft* of practical causality, in the idea of which the judicial and practical Standpoints of the causality of the Organized Being meet; psychic expedience is the idea of a standard gauge of evaluation in adaptation.

Now, the motivational dynamic belongs to the logical division of *nous*, thus to a different logical division than that of *Lust*-organization. In order, then, to speak of a relationship between the motivational dynamic and *Lust*-organization, we must look for a bridge between these logical divisions. However, we will not have far to look because we have already discussed this bridge. It is *Lust-Kraft*, the anasynthesis of the faculty of pure consciousness and the adaptive *psyche*. We recall from Chapter 15 that *Lust*-organization was deduced as the synthesis of *Lust-Kraft* and sense (the data of the senses). Thus the motivational dynamic stands in a mediate relationship to *Lust*-organization through an immediate relationship to the faculty of pure consciousness.

Because the motivational dynamic represents the capacity to organize motivation, and because motivation is the accommodation of perception, Quantity (want) in the motivational dynamic is an idea of integration. The idea of integration in the faculty of pure consciousness is equilibration, and so the idea of want is an idea of a form of composition in equilibration. Because the motivational dynamic is also the representation of the capacity to regulate motivation its Quality (drive) is an idea of subcontrarity. This is because subcontrarity is an idea of

conditioning (notion of limitation), which in this case refers to the conditioning of appetitive power. Subcontrarity in the faculty of pure consciousness is feeling, which here must be taken in the context of a *practical interpretation* of the feeling of *Lust* and *Unlust*. "Reason feels not," so it is not with feeling *per se* that drive, as matter of composition, is concerned. Rather, it is with its consequences for action that drive is concerned (thus, practical interpretation). What the matter of desire "feels like" is feeling as a subjective formal expedience ("taste" in Kant's terminology).

In Relation (drive state), the motivational dynamic is a representation of the transitive. The general idea of transitive Relation is the idea of that which is in common between two otherwise distinct representations. What the motivational dynamic links together is perception, on the one side, and non-autonomic action on the other. The transitive idea of drive state, as the representation of the organization of motivation, thus aligns, not surprisingly, with practical judgment in the faculty of pure consciousness. Finally, as an idea of the regulation of motivation, Modality in the motivational dynamic (type-of-motive) is a determining factor, and thus aligns with the power of pure Reason in the faculty of consciousness.

The motivational dynamic is therefore the capacity in pure Reason that brings *Lust per se* in the logical division of *psyche* under the command of the categorical imperative. We have previously seen that the process of reflective judgment serves the categorical imperative through the principle of formal expedience in Nature. We have now seen that the animating principles of *psyche* also serve the categorical imperative insofar as non-autonomic regulation of the actions of the Organized Being are concerned. We might have been able to anticipate this from the earlier discussion of the *Lust* principle in Chapter 15 (§7.4). There we discussed *Lust per se* in terms of the orientation in acting according to actions judged expedient (by teleological judgment) for negation of the intensive magnitude of *Lust per se*. What we did not discuss there was how *Lust per se* stood in relationship to the fundamental law of pure practical Reason. We are now in a position to see that *Lust per se* in *psyche* is subservient to *valuation* in practical Reason. Put simply, "I have no *Lust* for that which I do not value." As a "motivated wanting," *Lust per se* is the practical reflection of *the degree of consciousness of incompleteness in the totality of practical perfection*.

The Motivational Dynamic and Valuation

The other hand of the motivational dynamic extends to the determination of appetitive power in the practical act of valuation. Here we have to deal with the synthesis of presentation in the manifold of Desires with the practical structure of perfection subsisting in the manifold of rational

rules. The acts of teleological judgment are impetuous and this impetuousness is restrained only by the transformation of desiration into appetites of Reason.

Valuation is practical validation of possible actions in terms of compliance with the condition of the categorical imperative. Now, the synthesis in Reason represents, on a purely practical plane, structures of rational rules (constructed through acts of practical judgment), while in the manifold of Desires we find no persistently organized structures. In a manner of speaking, reflective judgment does not know the rules in the rational manifold of rules. It falls to the capacity of the motivational dynamic to reconcile the manifold of Desires with the conditions set by the rational rule structure.

In Quantity (want) this reconciliation is an idea of differentiation through comparison. In the impetuous manifold of Desires some of the connections to motoregulatory expression, when combined in the overall context set by reflective judgment, can conflict with the structure of rational rules. Unchecked by the determination of appetite, these connections would injure the structure of practical perfection, and so constitute connections to possible actions that are vetoed by practical Reason. Put another way, these are the Desires of reflective judgment not suited for the legislation of practically universal laws by pure Reason. Other connections of impetuous teleological judgment do not come into conflict with the structure of the rational rules, and so, in the sum of the Organized Being's practical experience, do not come into conflict with the dictate of the categorical imperative. That is, these connections are *not unsuited* for universal legislation. Want in the motivational dynamic is therefore the differentiation of the presentation of reflective judgment into two classes of Desires.

In Quality (drive) the reconciliation in valuation is the idea of opposition. Practical Reason in an active sense can be said to act not so much to validate Desire as to invalidate it. Seen in this way, an appetite of Reason contains the matter of Desire allowable under the conditions of the rational manifold of rules. Here we may recall Freud's idea of "repression" as a "censorship function" (Chapter 14, §4.2). Freud, of course, was speaking of "affect-formation," and inasmuch as motivation is the accommodation of perception, the Quality of the motivational dynamic can be viewed as acting in such a role as Freud envisioned. But the practical context of drive in the motivational dynamic goes to "censorship" of Desires only so far as the composition of appetites compliant with the manifold of rational rules is concerned.

In Relation (drive state) the reconciliation in validation is the idea of the external Relation. Here this refers to the Relation of the manifold of Desires to the manifold of rational rules, and its logical character is that of the hypothetical Relation. The rational manifold of rules stands as a condition for the transformation of mere Desires into appetite. A drive state is Desire conditioned

by rational rule structure.

Finally, in Modality (type-of-motive) the reconciliation in validation is the idea of determination. Its logical character is assertoric. Pure practical Reason does not cajole; it *commands*. That within Desires that passes validation under the manifold of rules constitutes the *elater animi* of appetite.

The Motivational Dynamic and Reevaluation

As a capacity of the power of Reason, the motivational dynamic has a synthesizing function required under the principle of thorough-going unity of consciousness in the Organized Being. In this capacity we find the key relationship between the practical and the speculative powers of pure Reason. Motivation is the accommodation of perception, but this accommodation serves a practical purpose, namely equilibration under non-autonomic regulation by the categorical imperative.

In Quantity (want), this synthesis falls under the idea of identification in our general 2LAR. The possibility of reconciliation between Desires and the rational rule structure is not guaranteed *a priori* for any particular structure of rational rules, and since reconciliation in valuation is a necessary interest of pure Reason, the assimilation of Desires under a rational rule structure requires the possibility of accommodation of this rule structure. But, as Reason judges no objects of sense, such accommodation is made possible through the employment of determining judgment and the synthesis of cognitions. The affective satisfaction of beauty is its trademark in aesthetical reflective judgment, but Reason's interest in reevaluation is exhibited in perception by the aesthetical *momentum* of sublimity. Sublimity is the aesthetical mark of incompleteness, and the synthetical role of want in the motivational dynamic is the *expression* of pure Reason's interest in satisfying extensive completeness of practical perfection.

In Quality (drive), the synthesis falls under the idea of agreement. Again, this is a *proactive* expression of the interest of Reason, this time as an expression commanding actions taken to satisfy intensive completeness in practical perfection. Like want, drive expresses a condition to be met for satisfaction in reflective judgment. Both these *momenta* of composition in the motivational dynamic are manifested as a negative feeling in perception, and the positive character of the identification of want (as a unity) and agreement in drive (as an affirmation) can be viewed as positive only in the context of *grounds for the satisfaction* of Reason.

In Relation (drive state), the synthesis of the motivational dynamic is the idea of internal Relation because it pertains to the general condition of the Organized Being *in toto*. Its logical

character is categorical, as befits its service to the categorical imperative. As the synthetic function of non-autonomic regulation, the motivational dynamic *enforces*; it is the hand of Reason in action.

In Modality (type-of-motive) the synthesis of the motivational dynamic expresses problematically, i.e. it summons forth the determinable within the manifold of concepts and the manifold of rational rules. Reason knows no objects of cognition, and we may justly say that it *gropes* in finding its way to transform disturbances into a structure of equilibrium.

§ 8. Summary

The motivational dynamic is the principal idea in the transition to practical judgment and to the determination of appetitive power in practical Reason. It is a transcendental function in the non-autonomic regulation of the activities of the Organized Being. Its regulatory capacity checks the impetuousness of reflective judgment in motoregulatory expression and at the same time is a stimulus to thinking by means of ratio-expression through speculative Reason.

We have presented the practical *Realerklärung* of the ideas of want, drive, drive state, and type-of-motive. These ideas stand as heads in the 2LAR of the motivational dynamic, the role of which can be likened to that of a gateway to and from the noetic power of pure Reason. The *momenta* of the motivational dynamic reach out *psyche* (through the faculty of pure consciousness) and to speculative Reason (through the synthesizing function of non-autonomic regulation). These *momenta* tie the determinability of appetitive power to the rational manifold of rules adjudicated in practical judgment. Like impetuous teleological judgment, the motivational dynamic does not itself form structures. It is, rather, an instrument of relationship in and function of unity for the totality of structure-building in the spontaneity of the power of Reason.

In the motivational dynamic we also see the practical ground of *Lust per se* in *psyche*. Chapter 15 discussed the functional and organizational aspects of *Lust per se*, as a *Kraft* of the adaptive *psyche*, but did not address its objective ground in the totality of the Organized Being. This ground, under the requirements of our metaphysics proper, can be placed with nothing else than the noumenal *I* of transcendental apperception, and it is this link in *practical* Reason that the motivational dynamic provides. Arousing or extinguishing *Lust per se* is now seen to be grounded in the act of valuation, the expressive function of which is the motivational dynamic.

Of course, we still have much to do before we can claim an understanding of the power of pure Reason. We must still address the construction of the rational manifold of rules by practical judgment. We must still address the topic of practical perfection in Reason. And we must come to

grips with the ideas of choice and will, i.e. of what we have called the *Willkürsvermögen* or "power of choice" in practical Reason. Still, we can perhaps now finally glimpse on the horizon the end of our labors in this treatise as we push on to the core of the faculty of Reason in the next Chapter.

At the center of this core stands the categorical imperative of pure practical Reason. Proactively, the categorical imperative is the law commanding equilibration through actions. The structure of practical rules for achieving equilibrium is governed by the categorical imperative. However, because Reason knows no objects of cognition and knows no feelings in affective perception, the categorical imperative as a law of rational structuring can regulate the acts of pure Reason only in terms of a formal criterion, namely that of *practical universality*. A structured law of Reason (practical hypothetical imperative) or a practical maxim in a substructure of the rational manifold of rules cannot *a priori* be *known* to be *empirically* universal. It can be known to have limitations only through actual experience. Thus, the formal criterion of the categorical imperative is in this sense a negative criterion. ***Reason reconciles experience***.

The expression of reevaluation therefore always has the character of *Unlust*, and the feeling of this rational *Unlust* can be called the feeling of conscience in the general sense. However, as we have seen, conscience in this sense does not automatically denote what most of us call a *moral* conscience. It does not necessarily dictate for empathy or social conformity, as, e.g., is evidenced in the case of the antisocial. The categorical imperative *can be* the ground for the structuring of moral laws of behavior, as the normal members of a culture or society regard them, but only if the value structure constructed by the reasoning Subject takes this form. Ethical behavior, like all behaviors rising above primitive sensorimotor intelligence, is learned behavior.

This finding does gainsay Kant's more romantic idea of conscience:

> So, too, conscience is not something that can be acquired, and we have no duty to provide ourselves with one; rather, every man, as a moral being, *has* one within him originally. To be bound to a conscience would be as much as to say: to have a duty to recognize duties. For conscience is practical reason holding the man's duty before him for his acquittal or condemnation in every case that comes under a law. Thus its reference is not to an Object but merely to the subject (to affect moral feeling by its act), thus an unavoidable fact, not an obligation and duty. So when one says: He has no conscience, what one means by this is: He pays no heed to its verdict. For if he really had no conscience, he could not even conceive of the duty to have one, since he would neither impute anything to himself as conforming to duty nor reproach himself with anything as contrary to duty [KANT4b: 529 (6: 400-401)].

The *instinct* of conscience in the general sense explained here is indeed an "unavoidable fact" and is not something we acquire. But *moral* conscience as Kant saw it is neither a universal fact nor something not acquired in the constructions of experience. And with this, let us move on to our examination of the core of pure practical Reason.