

## Chapter 3 The Basis of Human Social Self-Determination

### § 1. The Problem of the Social Atom

It is easy to criticize the social sciences, as Bloom does [Bloom (1987), pp. 347-371], for their failure to settle the "what is the social atom?" question. It is also really quite unfair to do so. By and large, social scientists *do* know that the individual human being is the social atom of their topics. The problem the social sciences have always faced has been the problem of how to deal with this social atom in a scientifically productive way. Even when, prior to the twentieth century, political science and economics were social-natural sciences, the "human factor" presented what appeared to be insurmountable difficulties insofar as efforts to produce an accurate predictive science *grounded* in the-human-being-as-social-science-atom were concerned. The root of these problems is *metaphysical*, and the social scientists of the nineteenth century can hardly be blamed for failure to resolve the metaphysical issue when *philosophers* could not agree on any scientifically-acceptable and objectively valid resolution of them. Indeed, the lack of anything resembling consensus among philosophers was one of the leading causes of the positivism movement that took hold of science in the nineteenth century. Philosopher C.E.M. Joad wrote,

It is usual to introduce a book on philosophy intended for the general reader with some account of the subject matter of philosophy, the nature of its results and the methods which it pursues. The reader is told that he will not be made free of any definite and agreed body of knowledge; he is warned that philosophers frequently do not even discuss the same questions and that, when they do, it is only to give diametrically opposite answers; and he is informed that he will be asked to take part not in a steady and ordered advance from speculation to knowledge but in a series of marches and counter-marches, in the course of which he will traverse and retrace the same territory in the company of travelers whose concern seems less to arrive at a goal than to obliterate the footsteps of their predecessors. It is conceivable that, if the book is of the lighter sort, he may be regaled at this point with a gibe about blind men searching in dark rooms for non-existent black cats. Nevertheless, and in spite of these drawbacks, it will be clearly intimated to him that the value of philosophy is, indeed, very great, although it happens to be rather difficult to say what it is. [Joad (1936), pg. 9]

Neither Plato nor Aristotle nor Kant had any difficulty expounding upon "the value of philosophy," nor did a number of other classical philosophers. It is, however, difficult to be very convincing when century after century of effort yields so little practical fruit in precisely those arenas wherein the main interests of pragmatically-minded people lie. Cicero, who was certainly no enemy of philosophy and was a rather shrewd judge of his fellow Romans' attitudes, wrote,

The following essay, I am well aware, attempting as it does to present in Latin dress subjects that philosophers of consummate ability and profound learning have already handled in Greek, is sure to encounter criticism from different quarters. Certain persons, and those not without some pretension to letters, disapprove of the study of philosophy altogether. Others do not so greatly object to it provided it be followed in dilettante fashion; but they do not think it ought to engage so large an amount of one's interest and attention. A third class, learned in Greek literature and contemptuous of Latin, will say that they prefer to spend their time in reading Greek. Lastly, I suspect there will be some who will wish to divert me to other fields of authorship, asserting that this kind of composition, though a graceful recreation, is beneath the dignity of my character and position. [Cicero (45 B.C.), I. i]

The history of philosophy exhibits a pronounced cyclic character: the arising of an ontology-centered theory of metaphysics, the formation of a school based on it, the speciation of members

of that school around divers opinions concerning technical details, the disintegration of the school into divers competing and, usually, mutually antagonistic schools, loss of popular confidence that any of these schools are on the right track, the decay of the schools into mysticism as one metaphysical well after another comes up dry, the disintegration of philosophy as a whole culminating in a philosophical Dark Age, a lengthy interregnum, then the birth of yet another new theory of metaphysics and the start of another cycle. Perhaps if "epistemology" had been a word in philosophy's vocabulary in Kant's day<sup>1</sup> and if Kant had been a clearer writer and if he had succeeded in forming a school (instead of just a movement – "German idealism") around the Critical Philosophy then *perhaps* the course taken by the social sciences in the nineteenth century might have been very different. Be that as it may, there is little doubt about the aftermath of the tar-and-feathers punishment metaphysics received at the hands of Comte and others. Bloom, who was himself a philosophy professor, savaged the state of philosophy in the twentieth century (and for this was savaged in turn by others outraged by his scathing polemics – Noam Chomsky called *The Closing of the American Mind* "mind-bogglingly stupid"). Bloom wrote,

Most interesting of all, lost amidst this collection of disciplines<sup>2</sup>, modestly sits philosophy. It has been dethroned by political and theoretical democracy, bereft of the passion or the capacity to rule. Its story defines in itself our whole problem. Philosophy once proudly proclaimed that it was the best way of life, and it dared to survey the whole, to seek the first causes of all things, and not only dictated its rules to the special sciences but constituted and ordered them. The classic philosophic books are philosophy in action, doing precisely these things. But this was all impossible, *hybris*, say their impoverished heirs. Real science did not need them, and the rest is ideology or myth<sup>3</sup>. Now they are just books on a shelf. Democracy took away philosophy's privileges, and philosophy could not decide whether to fade away or to take a job. Philosophy was architectonic, had the plans for the whole building, and the carpenters, masons and plumbers were its subordinates and had no meaning without its plan. Philosophy founded the university, but it could no longer do so. We live off its legacy. . .

[Philosophy] succumbed and probably could disappear without being much noticed. . . Positivism and ordinary language analysis have long dominated, although they are on the decline and evidently being replaced by nothing. These are simply methods of a sort, and they repel students who come with the humanizing questions. Professors of these schools simply would not and could not talk about anything important, and they themselves do not represent a philosophic life for the students. . . [In] sum, the philosophy landscape is largely bleak. . . As it stands, philosophy is just another humanities subject, rather contentless, without a thought of trying to take command in the crisis of the university. [Bloom (1987), pp. 377-378]

Reading these words, it isn't too hard to figure out why so many of Bloom's contemporaries reacted as heatedly as they did<sup>4</sup>. But none of this changes the fact that the positivists were wrong to stereotype all metaphysics as they did, rather than merely limiting themselves to rejecting

---

<sup>1</sup> The term "epistemology" was not coined until 50 years after Kant's death. His word for it was *Kritik*. It is obvious that the crucial factor in Kant's metaphysics – epistemology-centered instead of ontology-centered metaphysics – did not penetrate the cognizance and change the thinking of Kant's contemporaries. Kant's immediate successors – Fichte and Schelling – immediately reverted to ontology-centered prejudices, led to Hegel and, from him, to the expulsion of philosophy from the ranks of science by the positivists [Seelye and Smith (1886), pp. 308-427]. Thus began another long Dark Age for philosophy.

<sup>2</sup> Bloom is referring to the humanities.

<sup>3</sup> Thus spake Comte and the other nineteenth century positivists.

<sup>4</sup> Political philosopher and classicist Martha Nussbaum wrote, "How good a philosopher, then, is Allan Bloom? The answer is, we cannot say, and we are given no reason to think him one at all." All this reminds me of an old adage involving glass houses and the throwing of stones.

particular theories. There is something of an irony here, exhibited by the historical trend that the social sciences have received, and to continue to receive, rather the same lack of respect by some physical-natural scientists as Comte visited upon the metaphysicians (and with far less just cause than Comte had). Nor have the historical criticisms of the social sciences come exclusively from physical-natural scientists. History and political science professor Charles A. Beard wrote, "No science of politics is possible; or if possible, desirable" [Beard (1929)]. History professor E.M. Hulme flatly disagreed that history either is or can be a science [Hulme (1942)]. Those who contend against the thesis that the social sciences can *be* sciences usually premise their conclusions around such things as the uniqueness of each political situation, the fact that different people hold different viewpoints and do so more or less unpredictably, that the experimental methods of physics and chemistry can't really be applied to social science questions, that selection of what material to include in an analysis of, say, history or sociology, is made subjectively, or simply because "man has free will" and therefore is beyond any possible causal analysis.

In regard to the latter two species of objection, it is true that selection of material by particular scientists is subjective. So what? This is no less true of physics or chemistry. As for "free will," the so-called "free will" in question here is an ontology-centered occult quality. That does indeed slam the door of possibility shut but, "The fault, dear Brutus, is not in our stars, but in ourselves<sup>5</sup>." The human capacity of choice (*Willkürsvermögen*) is not an occult quality in Critical metaphysics and it is not invulnerable to the causal analysis science requires<sup>6</sup>. In regard to the uniqueness objection, *every* particular empirical event is in some way unique. That is, after all, why in the physical-natural sciences experimental trials are *replicated*. As for people holding to different views, have you ever found two *stones* in a quarry that are *exactly* alike in every way? No, you have not. And yet earth science and geology exist as special sciences. The "experiment" objection we dealt with in the previous chapter.

All the objections raised in opposing the idea that the humane sciences can *be* sciences are actually objections validly raised against *idealization* in science. If you wish to say there are no *ideal* sciences, go ahead: you'll be right. An ideal is a direction to take, not a destination to be arrived at, in science. Social-natural sciences must deal with the social atom – the individual human being. The key question is: How? That is what we're now going to start discussing.

## § 2. The Organized Being Model

We'll begin with that most famous figment of ontology-centered science fiction, the mind-body problem. Under Critical metaphysics *there is no mind-body problem* because it is not objectively valid to posit a *real* division of a human being into a "mind substance" and a "body substance" in, e.g., the manner of Descartes' *res cogitans* and *res extensa*. No one ever has a sensuous experience of mind-all-by-itself or body-all-by-itself. Such *noumena* are beyond the horizon of possible experience, ghosts in the mystic fogbank of transcendent illusion. Nor is it permissible (again, with objective validity) to posit, as some materialists do, that "mind" is a mere epiphenomenon "caused" by some emergent property of body. There is nothing whatsoever in our scientific understanding of the dead-matter constituents of *body* that provides any objectively valid ground for the *Existenz* of *mental* phenomena. To jam in by fiat some *speculation* of this

---

<sup>5</sup> Shakespeare (1599), I, ii, 134.

<sup>6</sup> Some people, misled as to how quantum physics theory works, think that the quantum theory champions so-called "indeterminism" in science. This is a misconception that physicist Henry Margenau effectively and utterly demolished [Margenau (1977), pp. 356-426]. Indeterminism *means* there can be no valid scientific laws; but without such laws we are left to fall back upon fatalism, which utterly lacks objective validity. *In mundo non datur fatum*. If we embrace fatalism, "It is God's will" is all the explanation one ever needs and there is no further need of *science* at all.

sort is to commit a fundamental error of scientific methodology, namely, to introduce a totally *ad hoc* leap that nothing *whatsoever* in physical-natural science justifies. *In mundo non datur saltus*. William James wrote,

However inadequate our ideas of causal efficacy may be, we are less wide of the mark when we say that our ideas and feelings have it, than the Automatists are when they say they haven't it. As in the night all cats are gray, so in the darkness of metaphysical criticism all causes are obscure. But no one has the right to pull the pall over the psychic half of the subject only, as the Automatists do, and to say that *that* causation is unintelligible, whilst in the same breath one dogmatizes about *material* causation as if Hume, Kant, and Lotze had never been born. One cannot thus blow hot and cold. One must be impartially *naïf* or impartially critical. If the latter, the reconstruction must be thorough-going or 'meta-physical,' and will probably preserve the common-sense view that ideas are forces, in some translated form. Psychology is a mere natural science, accepting certain terms uncritically as her data, and stopping short of metaphysical reconstruction. Like physics, she must be *naïve*; and if she finds that in her very peculiar field of study ideas *seem* to be causes, she had better continue to treat of them as such. She gains absolutely nothing by a breach with common-sense in this matter [James (1890), vol. I, pg. 137].

Although positing a real mind-body division lacks objective validity, it is permissible and objectively valid to posit a merely *logical* mind-body division. This is because here we merely make distinct two *mathematical* objects – mere objects of representation – that we are free to *define* as a means of cataloguing experience. Cataloguing serves the purpose of understanding the *homo phaenomenal* and *homo noumenal* aspects of being a human being. As a merely logical distinction, the division is epistemological rather than ontological. In mental physics we use the term *soma* (Greek for "body") as the label for *homo phaenomenal* human aspects, and we use the term *nous* (Greek for "mind") as the label for the *homo noumenal* mental aspects of experience.

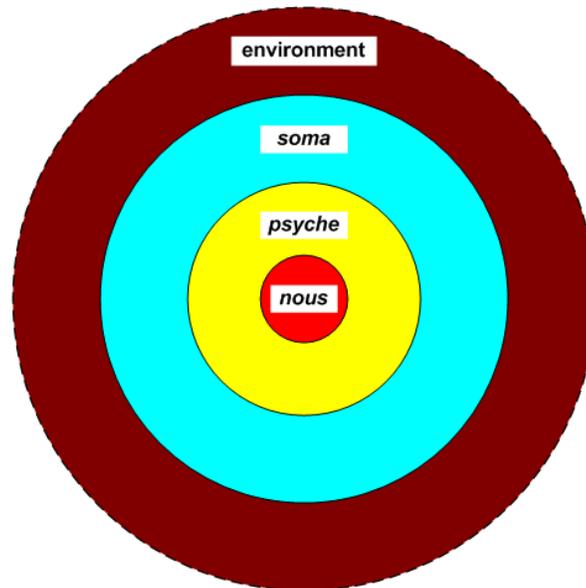
However, even though *nous* and *soma* are merely mathematical objects, we make theoretical *use* of these objects in the context of understanding one and the same real object, namely an individual human being. This means the mathematics of *nous* and the mathematics of *soma* do not stand in utter independence of one another. On the contrary, both mathematical objects must be regarded as *co-determining* each other because they are merely distinguishable aspects of one and the same *real* phenomenon. This idea of co-determination represents yet a third mathematical object, namely the mathematical *constraint* that there be an on-going condition of thorough-going reciprocity between *nous* and *soma*. To this third mathematical object is given the name *psyche*. *Psyche* is be regarded as a faculty of *animating principles* for mind-body co-determination<sup>7</sup>.

To complete the modeling of this purely mathematical representation of a human being, we must recognize that human beings do not exist in isolation from the other real objects of Nature. The individual lives in a physical environment, is affected by this environment, and in his turn is capable of effecting changes in it. Figure 3.1 illustrates this complete model representation of the individual human object. In Critical metaphysics this construct is called *organized being*<sup>8</sup>, and so the model is called the Organized Being model of *Homo sapiens*.

Although to adult understanding the Organized Being model might seem so obvious as to be called self-evident, it is important to understand that this logical arrangement is neither immediate nor innate to human understanding. It is in fact an empirically-developed understanding of one's self, and is wholly alien to a small child's understanding. The evidence of this is found in a body of conclusions from psychological research in the study of child development. Piaget wrote,

<sup>7</sup> The term is taken from the Greek ψυχή (soul; heart; spirit; courage). It has no supernatural connotation in mental physics, nor does it have any significance whatsoever for religious theology.

<sup>8</sup> Kant (1790), 5: 372-376.



**Figure 3.1:** The Organized Being model of *H. sapiens*. The logical dividing line between *soma* and the Organized Being's physical environment is regarded *ontologically* as a real division. The other dividing lines represent merely logical (i.e., mathematical) divisions without ontological significance.

The problem of the child's consciousness of self is extremely complex and it is not easy to treat it from a general standpoint. To arrive at a synthesis it would be necessary to undertake inquiries similar to those we have just concluded on thought, names and dreams for all the contents of a child's consciousness. The problem must, however, be faced . . .

We shall follow a method of regression, and limit ourselves to determining the curve of transformation of the processes studied in the preceding chapters and tracing it back to where we may conjecture what were the original stages. The method, though dangerous<sup>9</sup>, seems the only one possible.

Two conclusions may be drawn from the preceding analyses. The first is that the child is no less conscious of the content of his thought than we are of ours. He has noted the existence of thoughts, of names and of dreams, and a quantity of more or less subtle peculiarities. One child stated that we dream of what interests us, another that when we think of things, it is because "we want to have them," another that he dreamed of his aunt because he was so glad to see her again. Mostly children think they dream because they have been frightened by something, etc. Further, there is present in the child a whole extremely delicate psychology, often very shrewd and pointing in every case to a keen appreciation of its affective life. . . It is possible to feel acutely the results of a mental process (logical reasoning or affective reasoning) without knowing how such a result came about. This is precisely the case with the child . . . a true perception of the contents of consciousness but no knowledge of how these contents were acquired . . .

This paradox [of child's intuition] is closely related to the following facts. The child may be aware of the same content of thought as ourselves but he locates them elsewhere. He situates in the world or in others what we seat within ourselves, and he situates in himself what we place in others. In this problem of the seat of the contents of mind lies the whole problem of the child's consciousness of self, and it is through not stating it clearly that what is in fact exceedingly complex is made to appear simple. It is indeed possible to suppose a mind extremely sensitive to the least stirrings of affective life, a keen observer of the

<sup>9</sup> By "dangerous" Piaget meant it is easy to draw false conclusions and that great care must be taken in formulating and testing hypotheses.

niceties of language, customs and conduct in general, yet hardly conscious of his own self, since he systematically treats each of his thoughts as objective and every feeling as common to all. The consciousness of self arises in fact from the dissociation of reality as conceived by the primitive mind and not from the association of particular contents. That the child shows a keen interest in himself, a logical, and no doubt a moral, egocentricity, does not prove that he is conscious of his self, but suggests, on the contrary, that he confuses his self with the universe, in other words that he is unconscious of his self. [Piaget (1929), pp. 124-125]

Because of some present-day psychological connotations attaching to the phrase "dissociation of reality," the following point is to be noted. When Piaget speaks of "the dissociation of reality" above, he is not referring to anything psycho-pathological. What he means is that the child comes to understand himself as an object among objects in Nature by dissociating things from those things he continues to associate with his own *Existenz*. Furthermore, he regards this dissociation as comprising a real division in Nature, namely, the division between "me" and "not-me." The *ground* for his regarding of the division as a real division arises from his eventual recognition that some phenomena satisfy his own wishes (i.e., that the phenomena answer to his own "will"), and other phenomena dissatisfy because they do not do what he expects them to do. Piaget was able to demonstrate quite conclusively that the infant behaves as if he presumes that everything he experiences answers to the dictates of his own wants and wishes (psychological causality) [Piaget (1952), Piaget (1954)]. He termed this the *radical egocentrism* of the infant. Metaphorically speaking, a newborn baby regards himself as the entire universe. It is for him a monumental achievement when he first begins to draw that real division between Self and not-Self, a point at which the toddler ceases to regard himself as the whole universe and demotes himself to merely being its king.

This consideration is of utmost importance because it determines the entire substratum of early object concepts and habits of thinking that the child develops. These are, indeed, the roots of ideas that we take utterly for granted as well as the seeds of a naive realism characteristic of the psychological development of *every* human being. Again, a metaphysic can be correctly viewed as "the way one looks at the world," and every human being develops for himself such a metaphysic in the earliest stages of childhood. It is not overly-romantic to say that every baby is a little philosopher. However, his conceptions are subjectively grounded (because he forms them *as* he is forming his objective concepts of Nature), unscientific (because they respond to no disciplined maxims of thinking), and I therefore term this naturally-developed system of understanding a *pseudo-metaphysic*. Every one of us has one, and because it is developed through experience, it is peculiar to the individual. The naive empirical character of childish thinking is what biases every person to adopt an *ontology*-centered pseudo-metaphysic. The *study* of metaphysics is an effort to replace a subjective pseudo-metaphysic with an objective and scientific *system* of metaphysics.

The most difficult thing you will encounter in mastering Critical metaphysics is that you must force yourself to overcome a lifetime of ontology-centered habits of thinking. This is not an easy thing to do, because you will initially experience affective reactions unfavorable to the achievement, but it *is* possible. In my own personal case, the study of quantum mechanics made it easier to achieve because, for me, so many of the most basic propositions of quantum mechanics and so many of the experimentally-demonstrable quantum effects constituted nothing short of an outright and full frontal assault on my personal system of pseudo-metaphysics. To me, quantum phenomena were absurdities that were demonstrably true – and this is called paradox. Kant's epistemology-centered metaphysics led me to be able to resolve these paradoxes. Out of my experience comes some advice I can offer you: Embrace those things in your experience that are paradoxical as allies in overcoming the grip of your own habits of thinking. However you come to manage it, you *must* succeed in de-centering your way of looking at the world from ontology and re-centering it on epistemology or you will not liberate yourself from childish habits.

What is characteristic of childish pseudo-metaphysics? Piaget found,

The child is almost as well aware of [the instruments of thought (percepts, images, words, etc.)] as we are but he gives them an entirely different setting. For us, an idea or a word is in the mind and the thing it represents is in the world of sense perception. Also words and certain ideas are in the mind of everybody, whilst other ideas are peculiar to one's own thought. For the child, thoughts, images and words, though distinguished to a certain degree from things, are nonetheless situated in the things. The continuous steps of this evolution [from childish thinking to adult thinking] may be assigned to four phases: (1) a phase of *absolute realism*, during which no attempt is made to distinguish the instruments of thought and where objects alone appear to exist; (2) a phase of *immediate realism*, during which the instruments of thought are distinguished from the things but are situated in the things; (3) a phase of *mediate realism*, during which the instruments of thought are still regarded as a kind of things and are situated both in the body and in the surrounding air; and finally (4) a phase of *subjectivism* or *relativism*, during which the instruments of thought are situated within ourselves. In this sense, then, the child begins by confusing his self – or this thought – with the world, and then comes to distinguish the two terms one from each other. [Piaget (1929), pg. 126]

*Every normally-developing human being* goes through these four stages, although the degree to which the fourth stage is consolidated depends upon experience of a great many social factors. For example, in the ancient world myths and gods were intermingled with the subjectivism of which Piaget speaks. Dreams, for example, were attributed to messages from the gods, and to speak of the devil was enough to make him appear. We can call these still-realistic habits *paleologic thinking*. For example, the following was regarded as real history in Socratic Athens:

"Sinister Dream, go down amid the fast ships of Akhaia,  
enter into Lord Agamemnon's quarters, tell him  
everything, point by point, as I command you:  
Let him prepare the long-haired carls of Akhaia  
to fight at once. Now he may take by storm  
the spacious town of Troy. The Olympians, tell him,  
are of two minds no longer: Hêra swayed them,  
and black days overhang the men of Troy."

The Dream departed at his word, descending  
swift as wind to where the long ships lay,  
and sought the son of Atreus. In his hut  
he found him sleeping, drifted all about  
with balm of slumber. At the Marshal's pillow  
standing still, the Dream took shape  
as Nêleus' son, old Nestor. Agamemnon  
deferred to Nestor most, of all his peers;  
so in his guise the Dream spoke to the dreamer: . . .

On this the Dream withdrew into the night, and left the man  
to envision, rapt, all that was not to be,  
thinking that day to conquer Priam's town.  
Oh childish trust! What action lay ahead  
in the mind of Zeus he could not know – [Homer (*The Iliad*), II. 11-75]

To the Hellenic Greeks, this was not myth but a fact of true Homeric history: Zeus sends a dream to trick Agamemnon into making a disastrous attack upon the Trojans by giving him a false prophecy of victory. Zeus really plans to cause the Greeks to be slaughtered and routed in order to punish Agamemnon in revenge for an injustice he had perpetrated against Achilles.

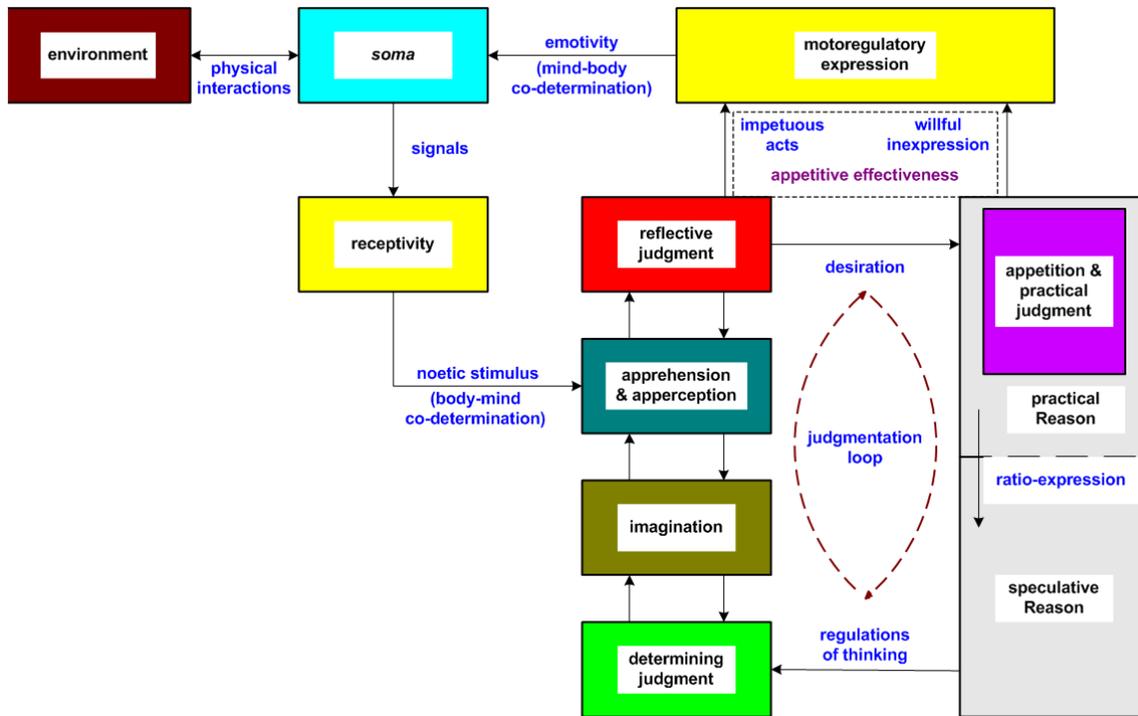
Mental physics explains how an individual comes to believe nonsense like this. I explain in more detail later, but the short version of it is this: pure practical Reason – the regulative process of mind phenomena – regulates for *Existenz* in a complete state of equilibrium in whatsoever way equilibrium is temporarily achievable. The process of practical Reason is affectively cold (feels no feelings), cognitively dark (knows no phenomenal objects), and *practically* expresses its acts in a manner that is best described as *impatient*. If nothing in your experience comes to *actually* contradict your idea that Zeus communicates with you in your dreams, you will be perfectly contented to continue to think that he does because at least once in your experience the idea was efficacious either for negating some state of disequilibrium or for accommodating some condition (e.g., quenching puzzlement about why you had a particular dream) in a way serving to achieve a temporary state of equilibrium. Furthermore, you are naturally inclined to hold on to ideas like this one *because at least once the idea was efficacious*. We will see that a human being has many "instruments of thought" (as Piaget put it) by which he can cling to even the most absurd superstitions and deny the most obvious facts. One purpose of education is to stimulate the learner into *self*-dislodging specious ideas and developing better instruments of thinking.

The paleological stage of childish pseudo-metaphysics is a stage with elements of absolutism in perspective and understanding intermingling with subjectivism and relativism. Piaget wrote,

During the primitive stage, the child feels every conception to be absolute, as if the mind and the thing were one, and only gradually comes to regard the conception as relative to a given point of view. Thus in a new sense, the child begins by confusing his self and the world – that is to say in this particular case, his subjective point of view and the external data – and only later distinguishes his own personal point of view from other possible points of view. In fact the child always begins by regarding his own point of view as absolute. We shall see numerous examples later: the child thinks the sun follows him, that the clouds follow him, that things are always as he actually sees them and independent of perspective, distance, etc. . . . In so far as he ignores that his own point of view is subjective he believes himself the center of the world, whence follow a whole group of finalistic, animistic and quasi-magical conceptions, examples of which occur on every page [of Piaget's book]. These conceptions alone point to the child's ignorance of the fact of subjectivity.

But to be aware of the subjectivity of one's own point of view is relatively an insignificant element in the consciousness of self. This is essentially a feeling of the personal quality of one's desires, inclinations, affections, etc. Yet in relation to these does the child feel its first experiences of pleasure and pain, its first desires, as personal or as common to all? The probability is that the same law holds good here and that the child starts by being convinced for the simple reason that it has never occurred to him to doubt that everything it feels exists by itself, objectively. It is by a series of disillusionments and through being contradicted by others that it comes to realize the subjectivity of feeling. Here again the self results from the dissociation of the primitive consciousness; the primitive consciousness or unconsciousness that a certain state is either pleasurable or painful is directly projected into the surrounding world of reality, first through absolute realism and then through immediate realism, and it is not until this reality becomes broken up that the feeling arises of a given object and a subjective emotion which gives it its personal value. [Piaget (1929), pp. 126-127]

Even into adulthood, some vestiges of what Piaget called mediate realism persist. For example, close study of the philosophies of Plato and Aristotle reveals strong elements of realism embedded in both men's theories. It is not inaccurate to say that Plato's system is laced with what we could call realistic rationalism, while with Aristotle we have realistic empiricism. Yet these two men could not be accused of being primitive-minded thinkers, of being unsocialized, or of failing to pay attention to the general subjectivity of points of view.



**Figure 3.2:** The general mental structure and organization of the Organized Being. The logical divisions of *soma* and *psyche* and the real division of the physical environment are color-coded as per figure 3.1. The remaining blocks in this mathematical model detail the mental anatomy of *nous*.

A Critical issue for us in this book is: *how* does this apparently universal character of the development of thinking and intelligence come about? Mental physics provides the explanation of this in terms of functional capacities making up logical subdivisions of *nous* and *psyche*. Figure 3.2 diagrams the mathematical organization of these *homo noumenal* aspects of being a human being. I will refer to this diagram in many places throughout this treatise. For our purpose here, namely the development of the metaphysic of the Social Contract, it is unnecessary to go into the deeper details of most of these capacities. A general overview of each block in figure 3.2 is found in Wells (2009), chapter 1, with deeper explanations comprising the rest of that book. It suffices for our present purposes to merely highlight the capacities that are key to social behavior in *H. sapiens*, and to present at a relatively high level of exposition their observable effects.

Key to this understanding are the three capacities for judgment found in organized being. In general, **judgment** is the act of subsuming particular mental representations under a general rule, the general rule also being a mental representation. In the strictest connotation, representation is a mental act that produces a mental depiction. Neither the English, German or Latin languages contain a word that specifically distinguishes the former from the latter; both are called representation (*Vorstellung* and *repraesentatio*, respectively) and we are left to draw the distinction between the two different usages from the context in which the word is being used. In mental physics, however, it is often important to draw the distinction explicitly, and so the technical term *parástase*<sup>10</sup> is introduced to specify the depiction made by an act of representation.

In a basic and essential way, the phenomenon of mind subsists in the making of representations. Put another way, representation is the primitive act of the logical division of *nous*. Kant described representation in the following way:

<sup>10</sup> this comes from the Greek word for "depiction."

Representation is mental (internal) determination where a thing is being referred to as if it were separate from myself [Kant (1753-59), 16: 76].

By the phrase "is being referred to" Kant as much as tells us that representation is essentially a *practical* act, i.e., the Organized Being "refers to" the object of a *parástase* by determining his actions on the basis of the *parástase*. This is as much as to say that a *parástase* is an object of *mathematics*. Indeed, this *homo noumenal* character of representation is the foundation for the Critical *Realerklärung* (real explanation) of what is *meant* by the term *life*:

Life is the capacity to begin a state (of oneself or another) from an inner principle. [Kant (1764-68), 17: 313]

Note that this is a *practical* explanation, not a theoretical one. The inner principle he refers to is the principle of representation. A human being is born with an awareness of his own *Dasein* but utterly without any knowledge of the Nature of his own *Existenz*. Kant called this primitive awareness of "I am" as "the *I* of transcendental apperception." Recall Piaget's observation that the behaviors of an infant all point to an unawareness of a distinction between his Self and everything else he eventually comes to understand in terms of a not-Self. As his further work vividly illustrates, the evolution of the child's idea of life, and, more specifically, his assignment of "life" as a quality possessed by things other than himself is (to use Critical terminology) *an inference of analogy*. We call something else "alive" because we understand that something else through characteristics that are in some way similar to characteristics we each understand with regard to our own individual *Existenz*. Baldly put, *I think you* are alive because I understand you, as an object, in terms of many of the same marks and characteristics by which I understand my Self. I *know* I am alive because *I am my own definition* of "alive"; therefore I think *you* are too. The same foundation is at work when I say a blade of grass, a dog, a tree, or an ant is alive.

This finding of Critical epistemology can be put to the empirical test. Piaget and his coworkers have done so. The finding was first reported by Piaget in 1929. It is substantially unaltered in all the subsequent years of his research:

What may be deduced from these facts? They seem to point to the conclusion that the evolution of the notion of life determines the evolution of the notion of consciousness. In other words, it is the child's classification of things into living and non-living which guides him in attributing consciousness to them. There is certainly no definite reasoning or purpose in this, at any rate so far as the younger children are concerned, and this explains the lack of correspondence of the stages between the last two evolutions<sup>11</sup>. But his reflections on "life" accustom the child to regard the movements of nature as of different kinds, and this consideration of types (*i.e.* the type of spontaneous movement) comes gradually to influence his ideas on consciousness.

It is evident from this that the explanation of movement is of extreme importance in the thought of the child. . . . For the time being, it need only be said that the extension of the notion of "life" seems to indicate the presence in the child's universe of a continuum of free forces endowed with activity and purpose. Between magical causality, according to which all things revolve around the self, and the dynamism of material forces the notion of life forms an intermediary link. Born of the idea that all things are directed towards an end and that this end supposes a free activity as a means of attaining it, the notion of life gradually becomes reduced to the idea of force or of being the cause of spontaneous movement. [Piaget (1929), pp. 205-206]

<sup>11</sup> These "last two evolutions" are: (a) a stage when the notion of life is assimilated to spontaneous movements of an object; and (b) a stage when the notion of life is restricted to plants and animals.

The brief conclusion cited here is backed up by an enormous and extremely interesting set of experiments and observations Piaget *et al.* carried out. The manner of the development and evolution of the idea of life comes to have extremely important consequences for the notions and ideas involved in the making of social compacts, as we will see later.

The practical *Realerklärung* of life stated above is stated in its mathematical context. Critical doctrine of method [Wells (2011a)] tells us that a mathematical expression of context is necessary but not sufficient for its complete explanation. In addition to the mathematical context we must also have an empirical context establishing a relationship connecting the explanation to the world of real experience. The empirical context of life is stated thusly: Critical *life is the capacity of an Organized Being to take action in accordance with the laws of appetitive power. Appetitive power is the capacity of an Organized Being to be, by means of its own representations, the cause of the actuality of objects of those representations.* In less academic language, this is to say that a human being has the capacity to Self-determine and realize (make actual) those *physical* expressions that we say are *manifestations of behaviors*. In figure 3.2 you will find appetitive power (process of appetition) lodged within the process of practical Reason<sup>12</sup>.

### § 3. Manifolds of Representation

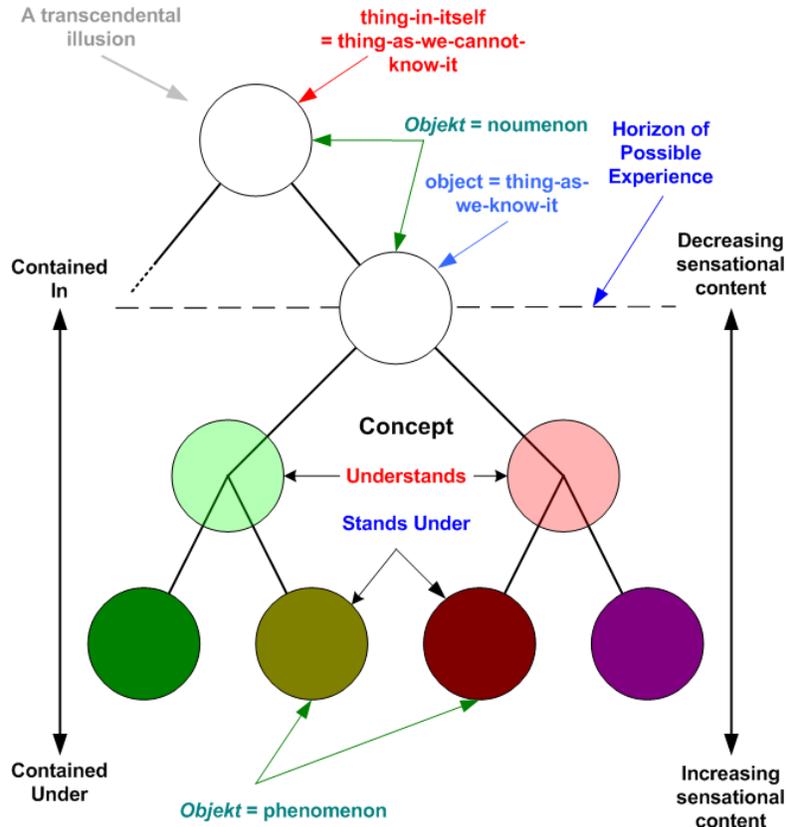
There are several logical types of representations, the distinctions among which are important for understanding mental dynamics. Sensuous representation with empirical consciousness is called *perception*, and perceptions are divisible into non-objective perceptions (called *affective perceptions*; "feelings" and "emotions" are two familiar manifestations of these) and objective perceptions. The latter is divisible into *aesthetical* objective perceptions (*intuitions*) and *logical* objective *parástase* (*concepts*) that can be sensibly *reproduced*, in the *parástase* of intuitions, as percepts through imagination (see figure 3.2). The construction and organization of concepts belongs to determining judgment in figure 3.2. A concept re-presented as an intuition (in the synthesis of apprehension and apperception in figure 3.2) is called a *cognition*. As for empirical consciousness, its practical *Realerklärung* is the following: *empirical consciousness is the representation that a different parástase is in me and is to be attended to.* A *parástase* of empirical consciousness is not a perception but, rather, can be regarded as being a kind of "control signal" or *coordinating act* within the manifold representations of *nous*.

Finally, there are three classes of representation that are never depicted *as themselves* in *sensuous* perceptions<sup>13</sup> (and therefore are never either *objectively* or *subjectively* conscious representations) but which are crucial for the possibility of mental phenomena overall. The three classes fall under a logical *genus* of *practical representation*, and it is convenient to designate their differences in terms of three logical *species* of practical representation: (1) practical *regulations* of pure Reason<sup>14</sup>; (2) *expedient representations* (called *Desires*); and (3) practical and empirically-constructed *rules* of behavior. The first belong to the process of speculative Reason, the second to reflective judgment, and the third to practical judgment in figure 3.2.

<sup>12</sup> Perhaps you are by now experiencing a growing discomfort with the Critical real explanation of life because this explanation is rather explicitly stating that to be alive an entity must exhibit the phenomenon of mind. Epistemologically, this is so. What, then, about such a thing as an amoeba? Isn't an amoeba alive? Yes and no. Epistemologically, no, it is not. There is no reason whatsoever to say an amoeba has a mind. Ontologically, yes *by the technical definition of biological life* as given in Thain and Hickman (2004). But biological life and Critical life are not the same thing and the former *derives from the latter by analogy*. Your discomfort (if you feel any) is owed to residual habits of thinking you developed as a child in your passage through Piaget's documented stages of the child's conception of the notion of "life."

<sup>13</sup> Sensuous perceptions belong to the process of apprehension in figure 3.2. By "never depicted as themselves" I mean the *parástase* is never presented *in* apprehension and apperception.

<sup>14</sup> the process of pure Reason in figure 3.2 is the master regulative (executive) process of *nous*.



**Figure 3.3:** Graphical illustration of the manifold of concepts and the relationships of concepts to objects. An Object (in German, *Objekt*) is the combination of a *parástase* and its object (*Gegenstand*).

The special types of representations operated upon by the processes of judgment are arranged and combined to form *manifolds of representation*. As used in Critical terminology, a *manifold* is the entirety of an arrangement comprised of many units or parts of one kind arranged in such a way as to constitute a faculty. A *faculty* is the form of an ability insofar as that ability is regarded in the context of an idea of organization. Each of the three processes of judgment operates on and forms its own specific type of manifold, which is said to "belong to" that process of judgment. The manifold belonging to the process of determining judgment is called the *manifold of concepts*; that belonging to the process of practical judgment is called the *manifold of rules*; and that belonging to reflective judgment is called the *manifold of Desires*.

The first two of these, the manifold of concepts and the manifold of rules, are constituted as structures. A *structure* is a system of self-regulating transformations such that: no new element engendered by their operation breaks the boundary of the system; and, the transformations of the system do not involve elements outside it. The first restriction on the types of transformations means that the system is self-conserving. The second means that the transformations themselves are wholly contained within, in the present case, the process of judgment to which the manifold belongs. It does not mean that the system has no "inputs" (inlet representations) or "outputs" (outlet representations). An inlet representation is called an *alimant* of the system because it "feeds" the system. In contrast to the first two, the manifold of Desires is not a structure because it is not self-conserving. Affective perceptions are *regenerated*, not *remembered*.

Although our primary concern in this treatise lies with the manifold of rules, its explanation is easier if we begin with the manifold of concepts. Figure 3.3 is a simplified illustration of this.

### § 3.1. The Manifold of Concepts

The manifold of concepts is the Organized Being's self-constructed system of ontology. A human being is born with no innate ideas of objects, as the rationalists long believed, nor does "nature" stamp its impress upon a "wax tablet" of the mind, as the empiricists believed. An hypothesis that such a "copy-of-reality" mechanism exists has testable consequences, this testing has been carried out, and the empirical findings refute the hypothesis conclusively. Piaget wrote,

I think that human knowledge is essentially active. To know is to assimilate reality into a system of transformations. To know is to transform reality in order to understand how a certain state is brought about. By virtue of this point of view, I find myself opposed to the view of knowledge as a copy, a passive copy, of reality. In point of fact, this notion is based on a vicious circle: in order to make a copy we have to know the model we are copying, but according to this theory of knowledge the only way to know the model is by copying it, until we are caught in a circle, unable ever to know whether the copy of the model is like the model or not. To my way of thinking, knowing an object does not mean copying it – it means acting upon it. It means constructing systems of transformations that can be carried out on or with this object. Knowing reality means constructing systems of transformations that correspond, more or less adequately, to reality. . . . Knowledge, then, is a system of transformations that become progressively adequate. [Piaget (1970), pg. 15]

Piaget and Garcia were later able to experimentally confirm the "point of view" Piaget expressed above [Piaget and Garcia (1987)]. The psychological findings, furthermore, are supported by neurological theory. Walter J. Freeman, a respected physician and neuroscientist, wrote,

Our brains don't take in information from the environment and store it like a camera or a tape recorder for later retrieval. What we remember is being continually changed by new learning, when connections between nerve cells in brains are modified.

A stimulus excites the sensory receptors, so that they send a message to the brain. That input triggers a certain reaction, by which the brain constructs a pattern of neural activity. The sensory activity that triggered the construction is washed away, leaving only the construct. That pattern does not 'represent' the stimulus. It constitutes the meaning of the stimulus for the person receiving it.

The meaning is different for every person, because it depends on their past experience. Since the sensory activity is washed away and only the construction is saved, the only knowledge<sup>15</sup> that each of us has is what we construct within our own brains. We cannot know the world by inserting objects into our brains. [Freeman (1995)]

Philosophers prior to Kant, and the great majority of them since, subscribed to the copy-of-reality hypothesis; indeed, all ontology-centered metaphysical theories depend on it in one way or another. Kant stands alone among the great philosophers as the only one (so far as we know<sup>16</sup>) to deny the copy-of-reality hypothesis without resort to skepticism. Kant's epistemology-centered metaphysics profoundly changes the traditional concept of ontology in metaphysics. The *metaphysics* of ontology, which can be called *ontology proper*, is not a theory of things (as tradition has it) but, rather, a theory of how human beings *come to understand* things. Kant noted,

Ontology is the science of things in general, i.e., of the possibility of our cognition of

---

<sup>15</sup> By "knowledge" Freeman means "empirical knowledge," i.e., knowledge of experience.

<sup>16</sup> Protagoras might also have denied the copy-of-reality hypothesis. Fragments of his philosophy suggest in some places that this might be so, particularly in his famous quote, "Man is the measure of all things." But Protagoras' work did not survive the centuries and only scraps and fragments of it, reported by others, have come down to us today. Therefore, we do not know what his views actually were.

things *a priori*, i.e., independently from experience. It can henceforth teach us nothing of things in themselves, but only of conditions *a priori* under which we can know things in experience in general, i.e., principles of the possibility of experience. [Kant (1776-95), 18: 394]

Kant refers here to the Critical metaphysics of ontology proper, which must hereafter be seen as a science of *what is necessary for the possibility of experience* as human beings come to have and know empirical experience. *What* a human being knows – or, more properly, *thinks* he knows – about things is the produce of his mental abilities. It is this produce I call his *empirical ontology* and this is nothing else than a system of objective concepts he *holds-to-be-true*. Critical ontology, then, is a mathematical science (because all its objects are supersensible) of what Kant called *transcendental Logic*. It is, therefore, an *epistemological* science because it does not deal with things "in" nature but, rather, with what we might call "the nature of Nature," while bearing in mind that *Nature* is a "world-model" *each person constructs for himself*. The manifold of concepts is the product of this construction. Kant's system discards the specious notion that "nature" is a thing that does something to us (namely impress its effects on us) and deals instead with the objectively valid question of what a human being *does to himself*. This grounds ontology proper in the only absolute ground of *certainty* possible for a human being, namely, his knowledge of his own *Dasein*. Intellectually I can, like Descartes, doubt everything else, but the one thing I do not really doubt in the slightest degree is the primitive fact *I am*. A human being is *his own measure* of all things.

Now let us turn to examine those key characteristics of the mathematical manifold of concepts that we will find relevant and important for understanding the manifold of rules. Figure 3.3 is a greatly simplified illustration of the structure of the manifold of concepts in graphical form. The vertices in the figure depict concepts, the arcs depict *transformation functions of determining judgment* that connect the matter of concepts in a form of *nexus*. In this graph, some concepts are placed higher up in the drawing and are connected to other concepts placed lower down. The former are, conveniently enough, called *higher concepts relative to* the lower concepts to which they are connected by arcs. The lower concepts are said to be *contained under* a higher concept, and that higher concept is said to be *contained in* all its lower concepts.

The lower concepts are said to *stand under* their higher concepts, while the higher concepts are said to *understand* the lower ones (i.e., to "stand them under" itself or "under stand" them). In this description one can begin to comprehend the *practical* meaning of the word "understanding" in mental physics. It is also why figure 3.2 contains no block labeled "understanding." Understanding is not a process; it is an *outcome* of an overall *process of judgmentation*<sup>17</sup> (refer to figure 3.2). From the *practical* Standpoint of Critical metaphysics, it is a human being's constructed capacity for making a unified structure of *rules for the cognition of objects of experience*. These cognitive rules are different in kind from the *practical* rules contained in the manifold of rules, all of which pertain not to cognition but rather to *learned behavioral actions*. Understanding is best understood as a constructed capacity, and it is a subtle ontological error to turn "understanding" into a substantive *thing* ("the" understanding) as Locke and the other empiricists do when they inject the definite article "the" in front of it as a modifier.

It is not essential for the purpose of this treatise to delve at length into details about the Logic of this construction. If you are interested in knowing just a little more in specific about it, you can first refer to Wells (2011b) and Wells (2011c). If you want to *study* it in great detail, you must resort to Wells (2009) and perhaps even Wells (2006). I recommend edging into it a step at a time by beginning with the shorter works. This is so you can build up a more panoramic "picture" of the theory by looking at the forest before you start examining the bark and leaves of the trees.

<sup>17</sup> "Judgmentation" is a term I introduced as an English translation for Kant's technical term *Beurteilung*.

However, there are some structural properties of the manifold of concepts we do need to take a closer look at because these same structural properties are also found in the manifold of rules. In addition, there are a few differences between the manifold of concepts and the manifold of rules that are equally important to know. We'll begin with the rather harmless sounding statement that a higher concept is contained in *all* its lower concepts. The structural property of significance I want to cover first subsists in the little word "all." The lower concepts differ from one another in terms of their compositional matter (which in percept form is called *sensation*). This is what makes them different vis-à-vis their relationship to the higher concept. The higher concept contains *in* itself only those depictions that all the lower concepts share *in common* with each other. The higher concept is made from lower ones by a process of abstraction (located in the synthesis of apprehension in figure 3.2) in which everything by which the lower concepts differ from one another is discarded and only their common attributes and features remain. Because the sensational content of a concept is the attribute by which that concept typically differs the most from other concepts at its same level (relative to the higher concept), each step "upward" in the series from lower concepts to higher concepts sheds more and more of the sensational matter of conception. Eventually a place in the series is reached where the immediately lower concepts share nothing in common with each other except their forms. At this point, the higher concept is devoid of sensational matter and is called an "empty" concept for that reason. It has a form, but it contains no matter to cast into that form. *It has been made supersensible* (non-intuitive).

Now, sensation is the real matter of sensibility. This is to say that a sensation is a mental depiction of *how* the mathematical objects of *nous* contact the physical objects of *soma* (and, indirectly through *soma*, the physical objects of the physical environment). An empty concept can still be re-introduced into the synthesis of apprehension by reproductive imagination, but it can contribute nothing *material* to the synthesis of a resulting intuition<sup>18</sup>. Its contribution to the synthesis is *purely formal*. The *object* an intuition that is reproduced from the rule of an empty concept is said to be *supersensible* because the intuition lacks the matter of sensation. Therefore, the Object being depicted has an object *incapable of being an object of any real experience*. For example, an ideal mathematical point, line, circle or any other ideal geometric figure is a supersensible object. The transcendental number  $\pi$  in mathematics is a supersensible object. No matter how long you live, you will never have *any* immediate *sensuous* encounter with the number  $\pi$ .<sup>19</sup>

Such an Object is called a *noumenon* and the concept of a *noumenon* is called an *idea*. The place in the ascending series of connected concepts where an idea is first constructed is called *the horizon of possible experience*. Insofar as the object of an idea is regarded as a thing, the idea is the ultimate representation of the-thing-as-we-know-it. But the only knowledge of this object possible for the human being is the knowledge of its connection to its still-sensuous lower concepts. Thus, for example, the *noumenal* Object can be the objectively valid depiction of an *undetermined* cause of a sensible effect, and in this context the idea still retains valid *ontological* significance.

The horizon of possible experience is the end-of-the-line for the ontological significance of concepts. However, the horizon of possible experience is not a brick wall that halts further ascent in the manifold of concepts through the process of judgmentation. The process of pure Reason knows no ontological objects and, consequently, has no practical recognition of the horizon of possible experience. The process of reasoning can and does continue to direct the process of

---

<sup>18</sup> The object of any concept is an intuition. A concept is correctly regarded as nothing more and nothing less than *a rule for the reproduction (or original production) of an intuition*. That is its *practical* use.

<sup>19</sup> You will, of course, have one or more direct encounters with a depiction said to represent  $\pi$ . This I can say with certainty because I've already exposed you to such a depiction *twice* on this page. But the mere *depiction* " $\pi$ " (and here it is a third time!) is not at all the same *thing* as the never-ending object it depicts.

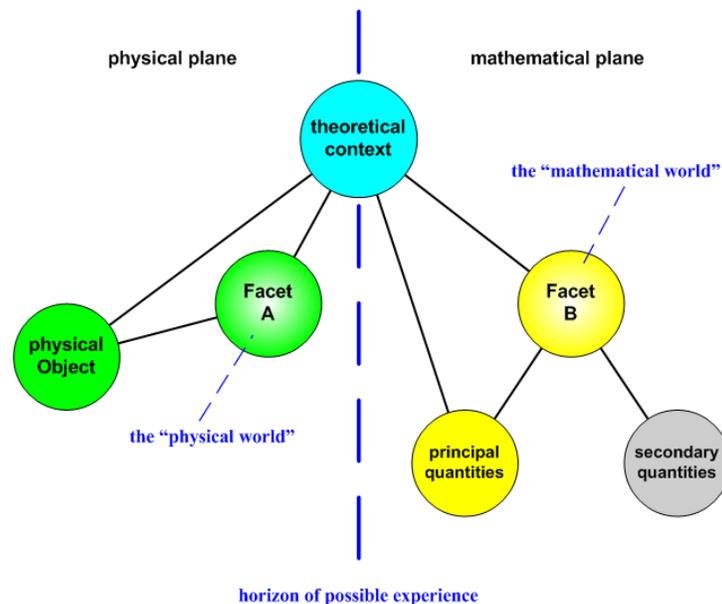
determining judgment to continue its synthesis past this horizon. For all subsequent ideas beyond this end-of-possible-experience, *the objects utterly lack all ontological significance*. This, however, does not mean that the *ideas* utterly lack all possible *practical utility*. There is, after all, a great deal of practical efficacy gained in mathematics through the employment of the idea of a never-ending number called "pi." To put this another way, although these ideas are transcendent with regard to experience (that is, have no empirical meaning), they can still have *epistemological significance*. All objects of pure mathematics are of this sort. It is only when the objects of these ideas are mistakenly held to have ontological significance that we encounter what Kant called *a transcendental illusion*. Making this mistake is called *reifying the object*.

The object of a transcendent idea is a fictitious thing-as-we-cannot-know-it and is called *the thing-in-itself* or *Ding an sich selbst*. The objects of transcendent ideas have epistemological significance as and only as *objects of pure mathematics*. Mental physics calls these objects *secondary quantities of pure mathematics*. It is an important distinction. We do not throw away mathematics merely because none of us will ever come face to face with an ideal geometric point. There are, however, epistemological rules for how secondary quantities *must* be regarded and used in mathematical theories of science [Wells (2011a)].

To use a geometry metaphor, we can regard sensible objects in physical Nature and *noumenal* objects of mathematics as occupying two distinct and orthogonal intersecting planes. Figure 3.4 attempts to illustrate this idea. We call this picture of the relationship between mathematics and natural science *Slepian's two-worlds model*. The vertex situated squarely astride the horizon of possible experience depicts the same *noumenal* Object as the corresponding vertex in figure 3.3.

□ This seems to me like a good place to pause briefly and revisit an earlier idea that I suspect has a fair likelihood of still being one with which you are not yet entirely comfortable. This is the idea that social-natural sciences take teleological causality as their proper notion of causality. It is important to recognize that notions of cause-and-effect *are not actually notions of empirical science*. They are, always have been, and always will be metaphysical notions. Examine the entire corpus of physics and you will never find cause-and-effect being used as a *technical* term.

Physicist Henry Margenau wrote,



**Figure 3.4:** Slepian's two-worlds model of the relationship between mathematics and natural science.

The words *cause* and *effect* are among the most loosely used in our language. Elsewhere in this book, when we faced a similar tangle of usage and desired pentecostal illumination, we turned trustingly to science for a decision on the proper meaning of words. Unfortunately we shall find science of no help in our present quandary, for cause and effect are not primarily scientific terms, despite widespread opinion to the contrary. Science uses them with no less variety of meanings than does common speech, and, it may at once be noted, the more sophisticated mathematical investigations of science do not use them at all. When scientists talk about causality, they do not talk as experts in a technical field, as they do when discussing the meaning of force or energy or enzymes or mutations. [Margenau (1977), pg. 389]

Margenau goes on to discuss causality in the physical-natural sciences in great detail, both as to the history of the usages of the term by the sciences as well as to its practical manifestations in various branches of science [*ibid.*, pp. 389-426]. One of his most important contributions was to point out that causality in science is ultimately based upon the notion of *states* of the system under study. He demonstrated and explained that, despite superficial differences producing an appearance to the contrary, *every* physical-natural science *necessarily* approaches causality questions in this manner. This includes quantum physics, which is widely misunderstood as being in violation of the causality principle *but which in fact is not*. A system *state*, he points out, is a special *mathematical* construct. He tells us,

When the theories of science involve constructs lying near the plane of perception, they are said to be descriptive or phenomenological; when they penetrate more deeply into the constructional realm, they are said to provide explanations. There is no intrinsic difference between scientific descriptions and explanation. Such points are illustrated by reference to physical theories dealing with gravitation.

There is a general schema running through all of physical description, or explanation. The epistemological process usually starts with the construction of physical *systems* (particles, waves, electromagnetic fields – in general any external object is a physical system in a looser sense) which serve as carriers of certain properties. The properties of interest to science are called *observables* . . . To understand atomic physics it is very essential to regard observables as *not* simply possessed by, or assigned to, systems. Thus the concept of *latent observables* is introduced; upon it the whole theory of quantum mechanics is founded.

Finally, a certain set of observables is chosen for the purpose of explaining or describing the nature of the system. This set is said to define the *state* of the system. [*ibid.*, pg. 177]

The crucially central importance of the *mathematical* idea of states and their *definition* lies at the core of the causality issue in science:

The word *causality* will here be used in a very specific sense, not with the quadruple meaning of Aristotle (formal, material, efficient, final cause) or the forty-fold proliferation of causes that occurred in the seventeenth century. It represents a relation patterned after the good old "If *A*, then *B*." Certain obscurities in this relation, however, need to be clarified. Above all it must be stated whether *A* and *B* represent immediate experience, *i.e.* data, or constructs; if the latter, then whether they are *objects* or *states* of objects. Also, the ambiguity inherent in "if" and "then" is to be eliminated, for it is perhaps not clear without comment whether these are to be taken in a conditional or in a temporal sense.

The answers here given are far from obvious at first sight . . . We wish to regard causality as a relation between constructs, in particular as a relation between *states*, or conditions, of physical systems. The principle of causality asserts that a given state is invariably followed, in time, by another specifiable state. Even without closer analysis this formulation will be seen to possess two virtues: It is precise and definite, and it reflects the best practices in the

exact sciences. Later we hope to show that more customary views of causality, in so far as they are meaningful, can always be reduced to this. . . .

We hold that causality is a metaphysical requirement. It demands that constructs shall be so chosen as to *generate causal laws*.

There is no need for revising this appraisal of the causal postulate in the face of modern physics, which is often claimed to have done away with causality. As a strict relation between immediate perceptibles, quantum theory has taught us to deny it. The impropriety of that view should have been, and was, plainly evident to the thoughtful students of classical physics; it was destroyed by Hume long before the day of Heisenberg and Born. But the contribution of these latter men is of greatest significance also, for it shows what strange and unexpected properties the *states* of physical systems must possess in order to be causally related. [*ibid.*, pp. 94-96]

To this I will add, "non-physical systems, too." Once a system is defined mathematically, it belongs to Slepian's Facet B in figure 3.4, and there it matters not at all whether we are speaking of physical systems or social systems. Furthermore, the very notion of causality, a *metaphysical* notion, likewise belongs to Facet B. One of Margenau's most beautiful illuminations was his demonstration that correct scientific laws *are formulated* in such a way that ***no real difference remains*** between physical causality and teleological causality. The difference is one of mathematical form ***and nothing else***. Mental physics denotes this by the name ***Margenau's law***, as I mentioned earlier.

While the proper treatment of this whole issue is one to be carried out precisely and by the use of the *language* we call mathematics, I do not want to take us there in this book because of a regrettable fact: Most social scientists do not have the training in mathematics required to follow it, and would quickly become as lost in the presentation as a typical modern mathematician would become if I were to couch the mathematics in the Diophantine notation of ancient Greece. If a person speaks neither Swahili nor Greek, Swahili is Greek to him. Instead, let us fall back upon Margenau's more reader-friendly explanation:

In the early breath-taking decade of discovery ending in 1935, no simple slogan save "violation of causal reasoning" was deemed sufficiently dramatic to describe the revolutionary qualities of the new knowledge [of quantum physics]. Meanwhile the novel science has had time to settle and to embed itself in the general structure of physics. It is now no longer an illusion to see causality restored, since with the recognition that  $\phi$  functions<sup>20</sup> are states which satisfy a law (Schrödinger's time equation) quite similar to those in the more accustomed branches of science, has come a synthesis with older views.

The causally evolving  $\phi$  states are not immediately tied to single observables; they refer, as we have seen, to aggregates of observations. Classical description had become noncausal because observables, thought to be possessed by physical systems, had been found to be latent and had refused to give consistent values in repeated observations. This necessitated a reformulation of states[.] . . . [Rules] of correspondence of a hitherto unexpected type had to be introduced *to restore causality*. But otherwise the states are just as good as ever, for there are many fields of mathematical science that operate with constructs quite remote from immediate experience. In quantum mechanics, then, the basic mode of description has remained unaltered, while the rules of correspondence have undergone radical changes. [*ibid.*, pp. 418-419]

What Margenau here calls a "rule of correspondence" mental physics calls a *principal quantity of mathematics*. Note again figure 3.4 above. Even today, if one examines different technical

---

<sup>20</sup>  $\phi$  functions are known by a variety of names in physics: De Broglie waves, wave functions, probability amplitudes, wavicles, etc. A system theorist simply calls them the *state functions* of the quantum system.

dictionaries of philosophy, one finds philosophers in a general state of confusion still over the picture presented by quantum physics in the 1930s and really quite unaware that the physicists of that era actually settled the issue for themselves and restored "causality" to physics. Margenau, whose principal occupation was as a well-regarded physicist, knew that; philosophy professors at Oxford, Cambridge and Stanford apparently do not – or, at least, not all of them do. Shame on them. Margenau went on to summarize the situation in quantum physics:

Those who deny causality in quantum physics revive the battle between Kant and Hume. If the causal connection is defined as existing on the [plane of immediate perception], relating immediate observations, then strict causality has been lost in modern physics. But this kind of causality, we fear, had been disavowed many times prior to the present era and was in fact stillborn. For did not Hume himself declare man's belief in it unwarranted, and did not every classical empiricist who interpreted causality as a nexus of immediate experiences expose it as an illusion? Kant's greatest achievement, as we see it, was to destroy the belief that laws of nature involve immediate observations. And if this is true, causality reigns in quantum physics as it did in the classical theory of nature.

Our whole analysis of scientific method, the emphasis we have placed on constructs and verifacts, our view of the rules of correspondence clearly commit us to this last position. We do not hold that scientific reasoning *must* be causal in order to be intelligible or to be valid. Continued adherence to the causal postulate is at present a more radical and unpopular tenet than its disavowal; yet we maintain it because *no deductive theory even before quantum mechanics defined states in terms of immediate observations*, and we should misjudge history and science if we were to ascribe the use of abstract states, states not linked *immediately* with observations, to quantum theory as a pioneer departure. [*ibid.*, pp. 419-420]

The Critical *Realerklärung* of the term **causality** is *the notion of the determination of a change by which the change is established according to general rules*. This is a considerably more succinct statement than Margenau provided, but is nonetheless the same as his. A notion is a pure concept (i.e., a concept that cannot itself be immediately exhibited in an intuition but, rather, can only be exhibited by examples that manifest the concept). This places all notions, including notions of causality and cause-and-effect, in the mathematical plane of human knowledge, where the Objects have epistemological but not ontological significance. □

Ideas of *noumena* standing at the horizon of possible experience are essential in the practice of empirical science. Without them, no science can be unified into a systematic doctrine – which is to say without them there could be no science at all. As essential for the practice of science, correct *noumenal* ideas have *practical* objective validity. Those astride the horizon of possible experience have a dual role to carry out. On the one side, they serve as principal quantities of Critical mathematics because they function as what Margenau called rules of correspondence. On the other side, they have ontological objective validity, but *only* in a carefully restricted way and *only* according to Critical acroamatic laws. Recall James' earlier comment that "in the darkness of metaphysical criticism all causes are obscure." A cause is a *noumenon*, and its objective validity for ontology is limited to the *nexus* it makes with sensible phenomena through a primitive function of determining judgment called *the category of causality & dependency*. At the horizon of possible experience, a cause – or any other *noumenon* – is nothing else than the undetermined Object which, in its concept, unites otherwise diverse sensible phenomena.

Beyond this point, as we move up and beyond the horizon of possible experience to further elucidate *noumena*, we leave Slepian's physical plane of Facet A altogether and move into the mathematical plane of Facet B. Here our ideas, if they are not to be transcendent illusions, are bound to acroams that delimit their *practical* validity. The objects of these ideas, however, have no ontological significance at all. Facet B is a realm from which empirical ontology is exiled.

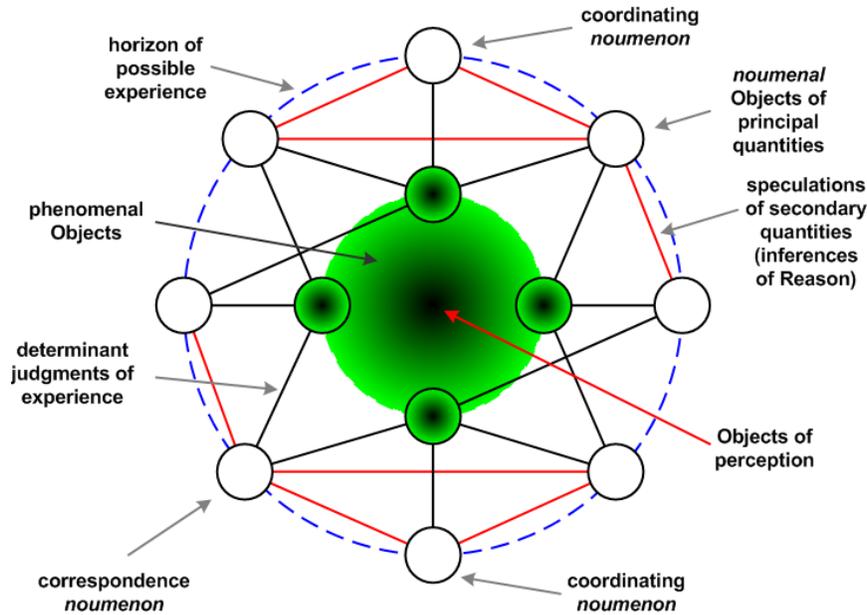


Figure 3.5: Illustration of the structure of scientific empirical ontology.

Figure 3.5 presents an illustration of the structure of Critical scientific empirical ontology. At its core is a region denoted "Objects of perception"; the concepts at this core correspond to what Margenau called "the plane of perception." Kant called the *making* of these concepts "judgments of perception" [Kant (1783), 4: 298]. Moving radially outward (a direction corresponding to moving up the connected series in figure 3.3) we have higher concepts of *phenomena* that progressively contain more *under* themselves and contain less *in* themselves until we reach the concepts of *noumena* at the horizon of possible experience. Kant called the making of these concepts "judgments of experience" [*ibid.*].

At the horizon of possible experience and beyond, we enter the purely mathematical realm of Facet B. All concepts from this point are ideas. Kant called these Objects "Objects of Reason" [Kant (1794-5), 29: 956]. Ideas beyond the horizon of possible experience, if they are *practically* valid, are secondary quantities of mathematics (figure 3.4). Those astride the horizon of possible experience are, as said earlier, principal quantities of Critical mathematics. Of these, we can conveniently identify two classes of *noumena*: (1) correspondence *noumena*; and (2) coordinating *noumena*. The distinction lies in their connections with phenomena. Correspondence *noumena* are the Critical counterpart of what Margenau called "verifacts" and they are characterized by having *two or more* connections to divers concepts of phenomena. They are, in a manner of speaking, the load-bearing members of the structure of a natural science; without them, the entire structure collapses into Platonic fantasy.

Coordinating *noumena*, in contrast, have only a single connection to one concept of a phenomenon. But they also have connections with two or more correspondence *noumena*. They are, again in a manner of speaking, keystones that hold the science together *as a system*. They must have *one* direct connection to a concept of a phenomenon in order to be a principal quantity of mathematics, and this connection provides for the ability to subject them to experiment and observation. But their primary *practical* role is, as the name implies, coordination of theory. Their connection to a phenomenal concept *establishes their real context* with regard to physical Nature, but their principal context is a context in regard to mathematical Nature.

There is an aspect to all of this that might be bothering you, so let's deal with it. You might be

asking, "Doesn't this 'horizon of possible experience' business imply some kind of *absolute* limit to human knowledge?" No. It implies a limit at any given moment in history, but not an *absolute* limit. The reason is because the horizon of possible experience is not a static horizon. **Scientific instruments** are employed to *extend* the horizon of possible experience. For example, in the days of Aristotle and Galen bacteria were objects beyond the possibility of human experience. There was simply no way to detect them. The invention of the microscope brought them, as Objects, within the horizon of possible experience. It made it possible to determine the *Existenz* of what had been an undetermined cause that people of ancient civilizations knew by such names as "evil spirits" or "demons." The ancients were perfectly correct to posit the *Dasein* of the cause of a disease, but were rather recklessly impatient in positing and reifying the *Existenz* of what was, for them, an undeterminable cause<sup>21</sup>.

One lesson to take from this is that the design of scientific instruments capable of expanding the horizon of possible experience depends rather crucially – I would even say it Critically depends – on a Critical understanding of the concepts of *noumena* and *phenomena*. Does looking through the most elaborate kinds of telescopes really "show" us the universe "began" somewhere around 15 billion years ago in a "big bang"? No. Not even remotely. The so-called "big bang" is an hypothesis, not a fact of experience. It certainly should not be, as it currently is, taught to schoolchildren in the guise of a known fact. No speculation that has to be as regularly patched up whenever someone else looks at the sky, and on as almost-regularly-recurring a cycle, as the history of that theory exhibits can be called "established." Personally, I think the big-bang public relations campaign is physics' noisiest genie and it ought to be put back in its bottle.

At a more down to earth level, the science of instrument design is a topic that, anymore, is woefully under-treated in engineering and science curricula. It wasn't always so, but any fair and impartial assessment of science and engineering education today can come to no other conclusion. If we don't fix that, in not that many more decades our scientific instruments of the future will have no more ontological significance than the Oracle of Delphi and every bit as much social impact as the Oracle had on the Hellenic Greeks. This isn't merely my opinion. It is a prediction from the mental physics of human social-Nature. We'll see an example in chapter 11.

### § 3.2. The Manifold of Rules

The logical structure of the manifold of rules is the same as that of the manifold of concepts. It is hierarchical, arranged in series of higher-to-lower rule depictions, and conforms to the same general logical functions of judgment. Its matter-and-context, however, is quite different. A concept is a rule for the reproduction of an intuition, and phenomenal concepts re-introduced into the synthesis of apprehension are capable of being made conscious (of being cognitions). A practical rule in the manifold of rules, on the other hand, is a rule for the production of practical appetites of *actions* and is incapable of being made a percept. An **appetite** is *the parástase of a determined purpose*. Its representation is an act of a human being's power of Self-determination, which is to say it is a determination of how the human being will spontaneously behave as the agent of his own actions.

Viewed from the Standpoint of cognitive understanding, an appetite is regarded as a form of assimilation of perceptions because the stimuli for appetition reside in the representations of the synthesis of apprehension and apperception (figure 3.2). However, the manifold of rules is not immediately connected to apprehension and an appetite is not itself a perception of any kind.

---

<sup>21</sup> Which, I wish to note, is not a character flaw of the ancients. It is, rather, a manifestation of what I earlier called the *impatience* of the process of pure practical Reason. You might find it instructive to ask yourself what sort of *jinn* you believe in because of this same natural impatience in *your* process of practical Reason. *Discipline* in science, when all is said and done, is the practice of *controlling* rational impatience.

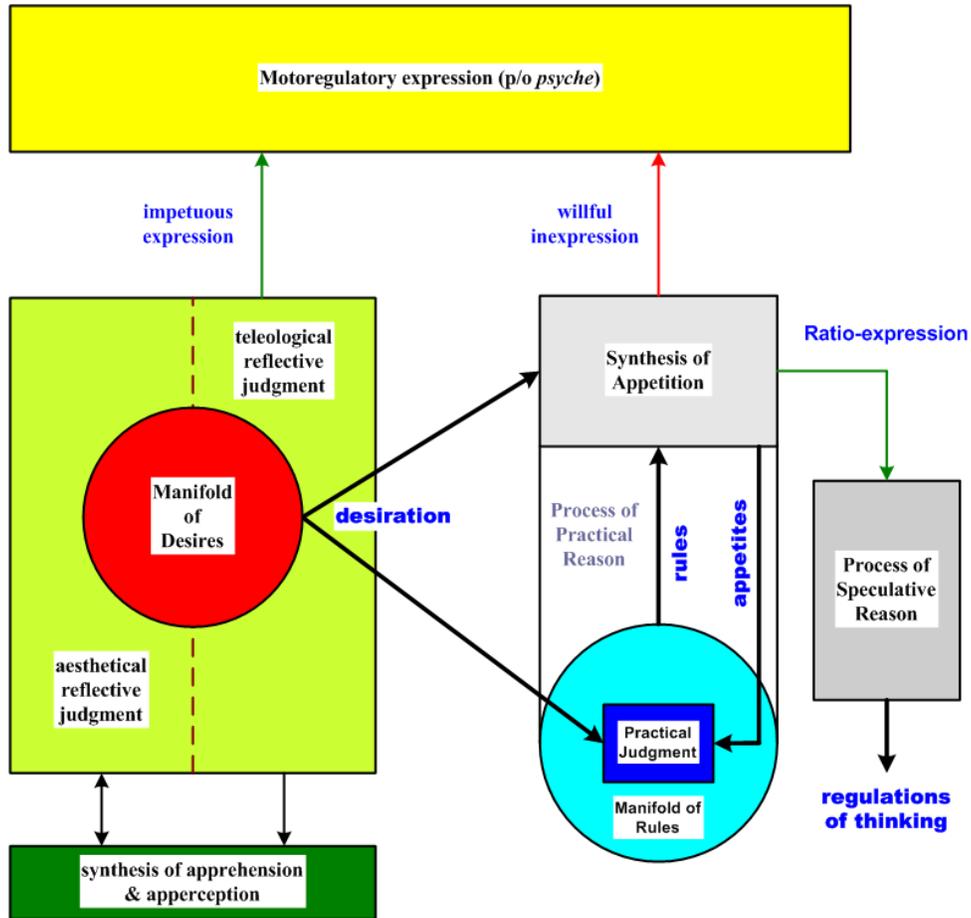


Figure 3.6: Illustration of the process of synthesizing appetitions and practical rules.

Appetition is practical Reason's control process for the expression of actions. In this context, an appetite can be correctly regarded as an empirical *policy* legislated by pure Reason on the basis of actual experience. Figure 3.6 illustrates the processes involved in appetitive synthesis and the construction of the manifold of rules. Standing in between the synthesis of appetition and the synthesis of sensuous apprehension and apperception is the process of reflective judgment. This judicial process is logically subdivided into a sensuous process, aesthetical reflective judgment, and a formal process, teleological reflective judgment. A *parástase* of aesthetical reflective judgment is called a *desire*. The desires synthesized in aesthetical judgment provide the *matter* of reflective judgment. The *form* of reflective judgment is called a *desiration*. Matters of desire combined in a form of desiration constitutes a Desire<sup>22</sup>. A Desire is the unity in affective perception by which it is possible for subjective affects to be transformed into the *parástase* of an appetite, depicted in pure practical Reason, and to be specifically expressed in *soma* via *psyche*.

The process of reflective judgment is governed by a fundamental regulative acroam of Critical metaphysics known as the *principle of formal expedience of Nature*. Simply put, this principle states that the judgments it makes on sensibility are judgments of whether sensible representation

<sup>22</sup> These terms are technical and were introduced by Kant. The word desire is my translation of Kant's term *Begehren*. Desiration is a term I introduced as an English rendering of Kant's term *Begehrung*. Kant did not coin an explicit term corresponding to my term Desire, but in Kantian theory matter and form are always combined in a manifold and so Desire is a logical choice for a term to call this combination. Kant's word for appetite is *Begierde*.

is congruent with the governing law of practical Reason or incongruent with this law. All of these judgments, however, are *subjective* and *affective*, and they are not in the least *objective*. Basically put, reflective judgment judges "feelings" not "things." *Teleological* reflective judgment transforms sensuous representation into *potential* action expression. By this I mean it assimilates perceptions into possible expressions of behavior that, by means of the animating principles of *psyche*, are observable in *soma*. This is what is meant, Critically, by the term *emotivity* (which comes from a Latin phrase meaning "to move out"). In its effecting these transformations we find the practical ground for the real explanation of *meanings*. However, reflective judgment is not the final arbiter of emotivity; practical Reason in its capacity for appetite fills that role. Reflective judgment judges expedience for a *general* practical purpose; but only practical Reason determines *specific* purposes. Thus Reason, the supreme regulating executive power of Self-determination, makes the final determination of whether or not products of reflective judgments are actually expressed. The manner in which it does so is what we discuss next.

Kant, possibly because he made a mistake that we will shortly discuss, is very obscure about this. He never very clearly explained this aspect of the intercourse between reflective judgment and practical Reason explicitly and in just one place and context in his works, although it is implicit in what he did say about it in several divers contexts. To comprehend him, one must synthesize bits and pieces spread over many places in the Kantian corpus in a manner not wholly dissimilar to an airplane crash. Somewhat ironically, Santayana – who was a materialist of sorts in his philosophy – came up with a way of expressing the same thing Kant was trying to say in a manner far clearer than anything Kant managed to come up with:

When consciousness awakes the body has, as we long after discover, a definite organization. . . . On the affinities and reactions [of body] sense and intellect are grafted. . . . It is as the organs receive appropriate stimulations that attention is riveted on definite sensations. It is as the [body] system exercises natural activities that passion, will, and meditation possess the mind. No syllogism is needed to persuade us to eat, no prophecy of happiness to teach us to love. On the contrary, the living organism, caught in the act, informs us how to reason and what to enjoy. The soul adopts the body's aims; from the body and from its instincts she draws a first hint of the right means to those accepted purposes. Thus reason enters into partnership with the world and begins to be respected there; which it never would be if it were not expressive of the same mechanical forces that are to preside over [physical] events and render them fortunate or unfortunate for human interests. Reason is significant in action only because it has begun by taking, so to speak, the body's side; that sympathetic bias enables her to distinguish events pertinent to the chosen interests, to compare impulse with satisfaction, and by representing a new and circular current in the system, to preside over the formation of better habits, habits expressing more instincts at once and responding to more opportunities. [Santayana (1905), pp. 62-63]

We must make some allowances for Santayana's often poetical manner of expressing himself, and where he hints of body-primacy-over-mind we must put this down to his materialistic premises and the vagueness with which he uses mental terminology. Nonetheless, in the essentials what he says here is also Kant's conclusion – although I have little doubt Santayana would have been startled to hear anyone say so.

Kant's metaphysics of *nous* was left in its most incomplete state on precisely the topic of teleological reflective judgment, although he left us in no doubt that this capacity of judgment is in its essence a *logical* capacity of Self-organization. Completion of the Critical deductions to make his theory of teleological judgment complete takes up quite a bit of space in Wells (2006). In the final analysis, however, perhaps the most distinguishing practical mark of the Nature of teleological reflective judgment is its *impetuous* character. In a number of ways, Freud's famous

theory of the id has striking resemblances to how reflective judgment operates, although Freud's idea by no means maps one-for-one onto the process of reflective judgment. It is not difficult to understand why teleological reflective judgment's *parástase* of emotivity is insufficient by itself to account for the known experiences of human behavior. At the beginning of life, the infant has not yet had an opportunity to acquire experiences and, therefore, has yet to construct a manifold of rules and a manifold of concepts. Reflective judgment, therefore, has only innate preferences and innate sensorimotor reflexes – which have their reciprocal correspondents in *soma* – from which to work. Hence, as Santayana put it, mind "begins by taking the body's side" because there is, epistemologically, no other option available without introducing a specious mind-body real division. It is a transcendental requirement that the metaphysical foundations of the theory provide for *all* and *only* what is necessary for the possibility of human experience.

As figure 3.6 depicts, the impetuous expressions of teleological reflective judgment do not project to the sensuous faculty (i.e., the synthesis of apprehension & apperception), and this is why a *parástase* of desiration is never a percept (is never perceived). Although this seems to be a rather obvious fact of experience (I know I can snap my fingers "at my own volition" but *how*, specifically, I effect this is something I never perceive), it apparently was not so obvious in the early days of empirical psychology. There was an early theory, called the theory of the feeling of innervation by Wundt and others, premising that a particular feeling *sui generis* must exist for every muscle excitation stimulated by the brain. William James was the first to challenge this theory and to show that feelings of innervation were in no way necessary to explain psychological phenomena and that there is no evidence they exist at all [James (1890), vol. II, pp. 492-522]. The development of sensorimotor skills is a long process – indeed, the first several years of childhood exhibit the development, through practice, of these skills beginning from very elementary sensorimotor reflexes and a slow development of habits and sensorimotor schemes.

None of this is possible without the synthesis of judgmentation in *nous* (figure 3.2 again). Now, it is important for us to recognize that in this synthesis the process of pure Reason has no *a priori* objective knowledge of objects of experience nor specific *a priori* knowledge of expected outcomes of any specific action of emotivity. Neither does it have any *a priori* predictive power of any subjective effects, arising out of physical expressions of actions, prior to experiencing such outcomes. It is accurately said that practical Reason is a cognitively dark and affectively cold process. Pure Reason, therefore, has not the capacity to prejudge actions prior to the acquisition of experience born of these actions. Metaphorically speaking, reflective judgment "judges all its possible expressive actions as innocent until proven guilty" where "guilty" is to be taken to mean the actual outcome following upon actual motoregulatory expression is one that contradicts the pure practical purpose that practical Reason, as the executive capacity, enforces.

This pure practical purpose is called the ***practical categorical imperative of pure Reason***. The Idea of the practical categorical imperative is a pure logical *formula* to which all acts of Reason must adhere. It is, in other words, the fundamental natural law of Reason, and it dictates that acts of Reason *always aim at establishing a state of mind-body equilibrium*. The synthesis of appetite in regard to motoregulatory expression, therefore, cannot so much be said to express what we commonly call a "free will." On the contrary, it expresses what is probably best described as a ***free won't***. Practical Reason, in the synthesis of appetite, exercises a ***veto power*** over the impetuous acts of teleological reflective judgment. Colloquially put, "Reason doesn't have to know what to do; practical judgment has to learn what ***not*** to do." The manifold of rules is the empirically-formulated regulating structure by which the Organized Being *learns* what it will not do *from* what it will *permit* to be expressed because "it has no reason *not* to express it."

This is something Kant does say explicitly, although his presentation of the theory is befogged somewhat by his one major transcendental error I mentioned earlier. This was his ontology-centered error of *reifying* the categorical imperative into an *innate* "moral law." The manifold of

rules is, as we shall see, the ground of the possibility of those aspects of human behavior we call "moral judgment" and "a sense of ethics," but it is not *essentially* concerned with morality or ethics in the traditional sense of those terms. The categorical imperative is a formula and law for equilibration and nothing more<sup>23</sup>.

Bearing this in mind, in order to understand the Nature of practical Reason we must substitute "the law of the categorical imperative" for Kant's phrases "ethical law" and "moral law" in the following description given by Kant regarding the Critical character of Self-determination:

What is essential in every determination of will by ~~ethical law~~ [the law of the categorical imperative] is: that as a free will it is determined solely by the law, and so not only without the cooperation of sensuous impulses but even with rejection of all of them and with discontinuance of all inclinations so far as they could be opposed to that law. So far, then, the effect of the ~~moral law~~ [law of the categorical imperative] as mainspring<sup>24</sup> is only negative, and as such this mainspring can be known *a priori*. For all inclination and every sensuous impulse is based on feeling, and the negative effect on feeling (by the discontinuance of inclinations that take place) is itself feeling. Hence we can see *a priori* that the ~~moral law~~ [law of the categorical imperative], as ground of determination of will, must effect a feeling that can be called pain by being prejudicial to all our inclinations; and here we have the first and perhaps the only case in which we can determine *a priori* from concepts of the relationship of a cognition (here it is one of pure practical reason<sup>25</sup>) to the feeling of *Lust* or *Unlust*. [Kant (1788), 5: 72-73]

There are no English equivalents for the German words *Lust* and *Unlust*.<sup>26</sup> *Lust per se* (that is, *Lust* plus its contradictory opposite, *Unlust*) is a property of *psyche*; more specifically, it is the power of determining an adaptation to achieve a state of equilibrium. A *feeling* of *Lust* or *Unlust* is an affective perception in sensibility judged by aesthetical reflective judgment.

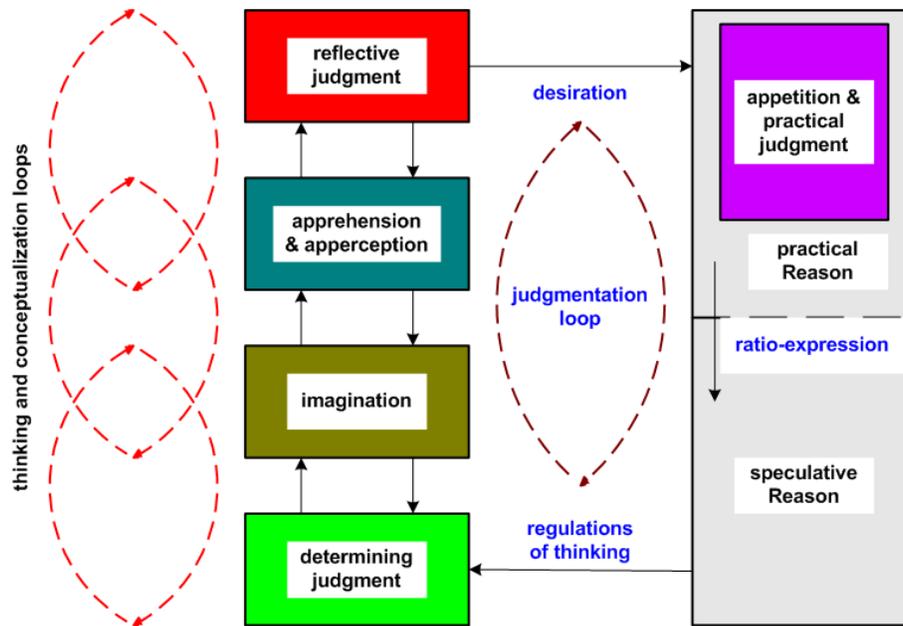
Kant is saying a great deal in the last clause of the quote above: (1) that a human being is capable of developing concepts for understanding his own motives; (2) that such concepts originate through thinking about his own actions as these actions follow from the structure of the manifold of rules; (3) that the introduction of such concepts into the synthesis of apprehension has an effect on the reflective judgment of affective perceptions; and (4) that the feeling produced in this effect can belong to that class of feelings we commonly call *conscience*. Figure 3.7, which is taken out of figure 3.2, illustrates the integrated structure of the thinking and judgmentation processes of *nous*. Practical Reason's drive for equilibrium is a drive for *complete* equilibrium in perception – both affective and cognitive. That Reason does not know *a priori* how equilibrium might be achieved in a particular case, but must instead *grope* to find it using the capacities it has

<sup>23</sup> In some ways, Kant's error is understandable (though not excusable). He had no empirical science of psychology to investigate and lay bare psychological phenomena. He was, therefore, forced to fall back upon introspection, and here introspect failed him through his own set of deeply rooted ontological pre-suppositions. Kant's theory, as he mis-formulated it, held that pathological antisocial personality disorders cannot exist; yet today we know for a fact that they do. Correcting Kant's error also corrects the theory.

<sup>24</sup> *Triebfeder*, the mainspring of a clock. Kant uses this term as a metaphor for that which supplies the energetic for mental activity.

<sup>25</sup> i.e., what Kant elsewhere calls an "idea of reason." This term means the idea of some *noumenon* such as a duty or an obligation. Kant is talking about being conscious of an idea that one has made and placed in the manifold of *concepts*. This idea is a *speculative* understanding of a *practical* law previously constructed and placed in the manifold of rules.

<sup>26</sup> The majority of English translators of both Kant and Freud translate *Lust* as "pleasure" and *Unlust* as "pain." These translations are wholly erroneous and misleading. The "flavor" of the word *Lust* is conveyed by the American colloquialism, "I'm up for that !" The English word "lust" does not descend from the German word *Lust* and does not mean the same thing. *Lust* is pronounced "loost."



**Figure 3.7:** The thinking and judgmentation structure of *nous*. Compare this illustration with figure 3.6.

under its command (through speculative Reason's power to regulate determining judgment and practical Reason's veto power over the impetuous expressions of teleological reflective judgment) says nothing more and nothing less than complex human behaviors are acquired and learned from experience. What psychologists often call "cognitive dissonance" is an affective perception of a disturbance of equilibrium, and as such is as incongruent with the formula of the categorical imperative as is the feeling you experience when your feet shoot out from under you on an icy sidewalk. Assuming you have had this experience (and if you haven't, I'm confident you've had another experience that will do just as well as an example), you know the sort of highly energetic groping of motoregulatory expression that seems to erupt as you lose your balance. So too, but within the non-public confines of *ratio-expression*, is the reaction of Reason to cognitive dissonance.

Although people, including Kant, have a habit of talking about "free will," the Critical theory states, as seen above, that the capacity for human willpower in regard to motoregulatory expression is "only negative" and is only expressible in this "negative" fashion. In regard to motoregulatory expression, in other words, what human beings exhibit is better called "free won't" than "free will." Only a few years ago, a remarkable series of psycho-neurological experiments was reported that demonstrates this very thing [Obhi and Haggard (2004)].

Human beings possess no copy-of-reality mechanism and no objective innate ideas such as the rationalist philosophers posited. Like the manifold of concepts, the manifold of rules is constructed as a by-product of the act of living, and the construction of these structures can justly be called *the learning experience*. One point it is crucial to understand very clearly is the following: A *concept* of a practical rule, produced through thinking and placed in the manifold of concepts, is not a copy of the practical rule in the manifold of rules nor does it carry the same commanding 'force' of a practical rule. You can choose to act "against your better judgment," but you cannot choose to gainsay your manifold of rules. The structure of the manifold of rules is constructed under the dictation of pure Reason's categorical imperative and this **fundamental law** of human Reason simply will not be defied. You might just as well try to defy the law of gravity, after your feet slip from under you on the aforementioned icy sidewalk, as to try to defy the absolute dictate of the categorical imperative. The categorical imperative does not cajole or

entreat; it is not some feeble "I ought to" of mere cognition. It *commands* with all the power of any other fundamental law of Nature.

A mere *concept* of unconscious practical law, on the other hand, is no more privileged in the capacity for a human being to determine himself than any other concept of understanding. Suppose you make for yourself a concept "I will not steal." It's a fine conceptual maxim, but it only *means* (1) you think it is wrong to steal and (2) you can think of no circumstances under which you *would* choose to steal. *That doesn't mean there are no external circumstances under which you would ever steal.* Since starving to death is, to put it mildly, contrary to equilibrium, if you ever faced a choice between choosing to starve to death or choosing to steal food, you might very well decide to take an action contrary to your *hypothetical* speculative maxim "I will not steal." Quite frankly, you'd need the moral resolve of a Gandhi to choose fasting to death when you have the option of not doing so. You *might* choose to do so, but whether or not you actually did it does not depend on your manifold of concepts but, rather, on your unconscious manifold of rules. And to be equally frank about it, you won't ever know what you will choose until the decision is, in a manner of speaking, staring you right in the face<sup>27</sup>.

Here is an actual example. In every society in history of which we have enough knowledge to make a judgment, people are raised to regard unlawfully ending the life of another member of their own social unit as an absolute taboo. Under present-day doctrines of the various Christian churches, this injunction is magnified to take in all of humankind in the Sixth Commandment, which in English language renditions of the Bible is usually phrased<sup>28</sup> as "You shall not kill." It is for a great many people the most powerful of moral injunctions. Yet Gwynne Dyer reported the following interview statement made by one William Manchester, an American veteran of the U.S. Marine Corps during the Second World War:

I was utterly terrified – petrified – but I knew there had to be a Japanese sniper in a small fishing shack near the shore. He was firing in the other direction at Marines in another battalion, but I knew as soon as he picked off the people there – there was another window on our side – that he would start picking us off. And there was nobody else to go . . . and so I ran towards the shack and broke in and found myself in an empty room.

There was a door which meant there was another room and the sniper was in that – and I just broke that down. I was just absolutely gripped by the fear that this man would expect me and would shoot me. But as it turned out he was in a sniper harness and he couldn't turn around fast enough. He was entangled in the harness so I shot him with a .45 and I felt remorse and shame. I can remember whispering foolishly, "I'm sorry" and then just throwing up. . . . I threw up all over myself. It was a betrayal of what I'd been taught since a child. [Dyer (1985), pg. 101]

Dyer goes on to remark,

Yet he did kill the Japanese soldier, just as he had been trained to – the revulsion only came afterward. And even after Manchester knew what it was like to kill another human being, a young man like himself, he went on trying to kill his "enemies" until the war was over. Like all the other tens of millions of soldiers who had been taught from infancy that killing was wrong, and had then been sent off to kill for their countries, he was almost helpless to disobey, for he had fallen into the hands of an institution so powerful and so subtle that it could quickly reverse the moral training of a lifetime. [*ibid.*, pg. 102]

<sup>27</sup> More than one British official of the old Indian Raj remarked, somewhat sardonically, that all of Gandhi's "fasts unto death" always "seem to end up stopping short of death."

<sup>28</sup> As an historical footnote, this English rendering is in fact a mistranslation that can be traced back to the Latin Vulgate translation of the Middle Ages. Latin does not explicitly distinguish between "kill" and "murder," and in Hebrew the Sixth Commandment is "You shall not murder."

If the conceptual tenet of the Sixth Commandment, in its usual English rendering, really was a copy of a practical tenet in the manifold of rules, military basic training could not, as Dyer put it, "reverse the moral training of a lifetime." But it isn't and basic training can.

There is also no room to doubt that at least some people do develop tenets of practical rules by which they commit actions that other people find to be almost incomprehensible or wholly contrary to their own tenets, and that they can conceptualize them well enough to communicate them. Many "duties of honor" fall into this class. For example, one of the Christian corollaries to the Sixth Commandment is a stern moral injunction forbidding suicide. Yet some people hold themselves to be honor-bound to commit suicide under particular circumstances, and they do. Well-documented cases of the Japanese ritual of *seppuku* provide examples of this. So, too, do the actions of present-day suicide bombers. Gandhi's 1947 fast in Calcutta did not end in his death, but there are a great many people, myself included, who think that if the terrorists rioting in Calcutta had not acceded to his demand that they quit to their violence, he would have carried out his threat<sup>29</sup>. Examples like these stand out because of their rarity, and because of the extreme finality of the actions, but there are innumerable examples of far less extreme sacrifices that are encountered fairly regularly everywhere on earth in the normal commerce of living.

Critical theory tells us that examples like these hold not just for concepts usually called "moral precepts," but for *all* concepts of how to act. It says that all concepts of actions are logically preceded by the construction of practical rules in the manifold of rules. This finding can be experimentally tested. Piaget *et al.* have in fact done so, with the following conclusion:

In addition to enabling us to analyze how a child gains cognizance as such, this research has shown us that action in itself constitutes autonomous and already powerful knowledge. Even if this knowledge (just knowing how to do something) is not conscious in the sense of a conceptualized understanding, it nevertheless constitutes the latter's source, since on almost every point cognizance lags, and often markedly so, behind this initial knowledge, which is thus of remarkable efficacy despite the lack of understanding. . . . To sum up, we encounter analogous mechanisms that repeat themselves, but with great chronological differences, on two or even three successive clearly hierarchical levels. The first level is that of the material action without conceptualization, but whose system of schemes already constitutes an elaborate know-how. . . . The second level is that of conceptualization. It derives its elements from the action as a result of cognizance, but adds to it all the aspects of the concept that are now in comparison with the scheme. The third level, contemporaneous with the formal operations at around eleven or twelve years, is that of "reflected abstractions" . . . Its productive mechanism, which consists of second-power operations (operations new but carried out on earlier operations) shows fairly clearly that it is once more a question of abstractions from the previous level [Piaget (1976), pp. 346-349].

This finding is in complete accord with the principles and theorems of mental physics.

Like the manifold of concepts, the manifold of rules is structured as a hierarchy of higher rules standing lower rules under them. We might call this "practical understanding" and regard the rules as analogous to concepts. At the base of the hierarchy are very simple rules amounting to rules regarding a person's very primitive reflex reactions. Above these there are abstract rules that combine divers lower level rules according to commonalities of desiration (refer to figure 3.6 again). These are called *practical maxims*. Above these are rules combining maxims (maxims-of-maxims), etc. until eventually a highest presently-constructed level of rules is encountered.

Now, a higher rule is said to *condition* the rules standing under it and, in its turn, to be

---

<sup>29</sup> Collins and Lapierre (1975), pp. 353-360.

*conditioned* by even higher rules that it in turn stands under. At the top level there are no still-higher rules that have as-of-yet been constituted, and these (currently) highest rules are said to be ***practically unconditioned***. They are the highest of the empirically-developed rules, but not the highest rule in the mental system because this highest-of-all-rules is the categorical imperative itself. The practically unconditioned empirical rules are called ***practical hypothetical imperatives*** and they constitute the human being's set of most-fundamental empirical rules of behavior. They *command* a human being's every act of Self-determination.

Even so, they are called *hypothetical* imperatives because they are contingent upon actual experience and answer *unconditionally* to the categorical imperative (which is itself utterly unaffected by experience). The categorical imperative dictates the construction of a structure of practically-universal *laws* of behavior. Practically-universal in this context means the Organized Being has never *yet* experienced any circumstance in which its actions according to this rule structure result in anything except an eventual equilibrium state. Yet empirical circumstances are certainly known to "introduce new experiences" and, in doing so, what has up-to-now had the practical appearance of being perfectly universal can be discovered to have exceptions to the existing rules. When (not if) this happens, the Organized Being responds to it through the dictate of the categorical imperative to *make an accommodation to its rule structure for the purpose of restoring the appearance of a manifold of universal practical law*. During this process, what had been an unconditioned rule (hypothetical imperative) can come under a *new* and still-higher practical rule. (In point of fact, a minimum of two rules have to be involved in this because the process of practical abstraction makes abstraction *from* lower rules). When this process is completed, the Organized Being has made a new practical hypothetical imperative and one or more former hypothetical imperatives have been "demoted" to become conditioned high-level maxims. Like the manifold of concepts, the manifold of rules is an *open* structure.

Unlike the manifold of concepts, there is no horizon of possible experience for the manifold of rules. Practical rules are not cognitions of objects, nor are they cognitions of affective perceptions. Pure Reason is an objectively dark and affectively cold faculty. Insofar as this is concerned, Freud's idea of the superego bears many similarities to practical judgment and appetite (although, again, the comparison is not a one-to-one mapping from Freud's superego onto the manifold of rules or *vice versa*).

Because practical rules *never* refer to objects of understanding and only pertain to permitted and unpermitted forms of expression (motoregulatory- and ratio- expression), their validity is practical, not objective. Furthermore, because they are constructed in whatever form they end up taking, they are, for the Organized Being, *contingently-absolutely valid* until *actual* new experience gainsays Reason's constructed universal "practical code of behavior."

Human beings develop a habit of conceptualizing their practical rules of behavior. This, in point of fact, is an inevitable outcome of ratio-expression because doing so serves to help the person establish more-robust equilibration structures. As is the case with other concepts, this process is gradual and one of building up higher and higher levels of abstraction in the manifold of concepts. When the conceptualization involves an attempt to cognitively understand one's own practical-hypothetical imperatives, the concept so formed will be one that is not conditioned in the manifold of concepts by still-higher concepts. It will be, in other words, an as-of-yet unconditioned *theoretical tenet*. When such a concept pertains to fundamental social mores or to fundamental matters of self-respect or self-interest it bears the technical designation ***theoretically-categorical imperative***. But, because the idea is merely a by-product of reflective judgments pertaining to behaviors, even at its most sublime refinement it is still nothing more than a conceptualization of the appearances of practically-hypothetical imperatives. This is why even the most refined of a person's theoretical conduct-tenets has the efficacy of no more than an "ought to" in what we will soon be calling *the person's private moral code*.

#### § 4. A First Look at some Implications

In this chapter the Critical mental physics basis of human Self-determination, including social Self-determination, has been outlined in broad strokes. I have not gone into deep detail here – that level of coverage would take another entire book – and acquiring deep expertise in this topic requires you to study mental physics and Critical metaphysics in depth. The descriptive exposition I have given is adequate for most of what follows in this treatise, and in those places where it is not I will specifically supplement it with some additional mental physics.

We have now reached the point where we can begin to examine the mental physics of empirical behaviors in social contexts. The most important of these contexts, insofar as the Idea of the Social Contract is concerned, begins with this idea of what I just called the person's private moral code. What is a moral code? How is it generally structured? Does everyone have one? Are they the same for each person or are they different? The answer to the third question is "yes." The answer to the fourth question is, "no, they are not all the same" and, in fact, there is no reason to think any two people ever build for themselves codes that are *identical* in every way. In what ways are they alike and in what ways are they different? The answers to these questions, as well as to the first two, we begin to dig out in chapter 4.

#### § 5. References

- Beard, Charles A. (1929), *Research in the Social Sciences: Its Fundamental Methods and Objectives*, Wilson Gee et al. (eds.), chap. 9, NY: Macmillan.
- Bloom, Allan (1987), *The Closing of the American Mind*, NY: Simon & Schuster.
- Cicero, Marcus Tullius (45 B.C.), *De Finibus Bonorum et Malorum*.
- Collins, Larry and Dominique Lapierre (1975), *Freedom at Midnight*, NY: Avon Books.
- Dyer, Gwynne (1985), *War*, NY: Crown Publishers, Inc.
- Freeman, Walter J. (1995), "The lonely brain," in *Mapping the Mind* by Rita Carter, Berkeley, CA: University of California Press, 1998, pg. 146.
- Homer (*The Iliad*), Robert Fitzgerald (tr.), Garden City, NY: Doubleday & Co., 1974.
- Hulme, Edward Maslin (1942), *History and Its Neighbors*, NY: Oxford University Press.
- James, William (1890), *The Principles of Psychology*, in two volumes, NY: Dover Publications, 1950.
- Joad, Cyril Edwin Mitchinson (1936), *Guide to Philosophy*, NY: Dover Publications, 1957.
- Kant, Immanuel (1753-59), *Die Vernunftlehre*, in *Kant's gesammelte Schriften, Band XVI*, pp. 76-775, Berlin: Walter de Gruyter & Co., 1924.
- Kant, Immanuel (1764-68), *Reflexionen zur Metaphysik*, in *Kant's gesammelte Schriften, Band XVII*, pp. 227-745, Berlin: Walter de Gruyter & Co., 1926.
- Kant, Immanuel (1776-95), *Reflexionen zur Metaphysik*, 2nd part, in *Kant's gesammelte Schriften, Band XVIII*, pp. 3-725, Berlin: Walter de Gruyter & Co., 1928.
- Kant, Immanuel (1783), *Prolegomena zu einer jeden künftigen Metaphysik, die als Wissenschaft wird auftreten können*, in *Kant's gesammelte Schriften, Band IV*, pp. 253-383, Berlin: Druck und Verlag von Georg Reimer, 1911.
- Kant, Immanuel (1788), *Kritik der praktischen Vernunft*, in *Kant's gesammelte Schriften, Band V*, pp. 1-163, Berlin: Druck und Verlag von Georg Reimer, 1913.

- Kant, Immanuel (1790), *Kritik der Urtheilskraft*, in *Kant's gesammelte Schriften, Band V*, pp. 165-485, Berlin: Druck und Verlag von Georg Reimer, 1913.
- Kant, Immanuel (1794-5), *Metaphysik K 3*, in *Kant's gesammelte Schriften, Band XXIX*, pp. 941-1040, Berlin: Walter de Gruyter & Co., 1983.
- Margenau, Henry (1977), *The Nature of Physical Reality: A Philosophy of Modern Physics*, Woodbridge, CN: Ox Bow Press.
- Obhi, Sukhvinder S. and Patrick Haggard (2004), "Free will and free won't," *American Scientist*, vol. 92, no. 4, pp. 358-365.
- Piaget, Jean (1929), *The Child's Conception of the World*, Joan and Andrew Tomlinson (tr.), Savage, MD: Littlefield Adams, 1951.
- Piaget, Jean (1952), *The Origins of Intelligence in Children*, Margaret Cook (tr.), Madison, CN: International Universities Press, Inc., 1974.
- Piaget, Jean (1954), *The Construction of Reality in the Child*, Margaret Cook (tr.), NY: Basic Books, Inc.
- Piaget, Jean (1970), *Genetic Epistemology*, NY: W.W. Norton & Co., 1971.
- Piaget, Jean (1976), *The Grasp of Consciousness. Action and Concept in the Young Child*, Cambridge, MA: Harvard University Press.
- Piaget, Jean and Rolando Garcia (1987), *Toward A Logic of Meanings*, Hillsdale, NJ: Lawrence Erlbaum Associates, 1991.
- Santayana, George (1905), *Reason in Common Sense*, 1st ed., vol. I of *The Life of Reason*, NY: Dover Publications, 1980.
- Seelye, Julius H. and Benjamin E. Smith, translators (1886), *A History of Philosophy in Epitome* by Albert Schweigler, revised from the 9th German edition, NY: D. Appleton & Co., 1886.
- Shakespeare, William (1599), *Julius Caesar*.
- Thain, Michael and Michael Hickman (2004), *Dictionary of Biology*, 11th ed., London: Penguin Books.
- Wells, Richard B. (2006), *The Critical Philosophy and the Phenomenon of Mind*, available on the Wells Laboratory web site.
- Wells, Richard B. (2009), *The Principles of Mental Physics*, available on the Wells Laboratory web site.
- Wells, Richard B. (2011a), "On Critical doctrine of method in brain-theory," March 31, available on the Wells Laboratory web site.
- Wells, Richard B. (2011b), *Unabridged Glossary of the Critical Philosophy and Mental Physics*, available on the Wells Laboratory web site.
- Wells (2011c), "On the synthesis of polysyllogisms in Critical Logic," April 21, available on the Wells Laboratory web site.