

CHAPTER 5

Consciousness

Whatever this is that I am, it is a bit of flesh and a little breath, and the governing Reason

Marcus Aurelius

§ 1. The Phenomenon of Consciousness

For each of us our own individual consciousness is perhaps the most basic fact which with we are confronted. Yet this primitive and elemental phenomenon has for ages proven to be difficult to break down, define, or even understand. What *is* consciousness and what may we infer about it? These are questions long been debated by philosophers and naturalists.

First and foremost, what most of us mean when we speak of someone or something as “being conscious” is almost synonymous with the word “awareness.” The dictionary defines consciousness as

consciousness, n.

1. the knowledge of what is happening around one; the state of being conscious.
2. the totality of one's thoughts, feelings, and impressions; mind.

syn. - feeling, attention, sensation

This definition requires in turn an elaboration of the word “conscious.”

conscious, a. [L. *consciūs*, knowing, aware, from *conscire*, to know with, be cognizant of; from *con-*, with, and *scire*, to know].

1. having a feeling or knowledge (*of* one's sensations, feelings, etc., or external things); knowing or feeling (*that* something is or was happening or existing); aware, cognizant.

2. able to feel and think; awake.

3. aware of oneself as a thinking being; knowing what one is doing and why.

4. painfully aware of oneself; self-conscious; embarrassed.

5. accompanied by awareness of what one is thinking, feeling, and doing; intentional; as, *conscious* humor.

6. known to or felt by oneself; as, *conscious* guilt.

syn. - aware, sensible, felt, known, cognizant, apprised.

These definitions describe the “feel” or *experience* of consciousness, i.e., consciousness in *phenomenal* terms. Taken together, we can call consciousness as described above *empirical* consciousness. There is little disagreement about consciousness as described by these terms. The philosophical difficulties do not begin to emerge until we attempt to get “behind” the experience

of consciousness and talk about consciousness *per se*. Note that the second definition given above equates “consciousness” with “mind.” This equation is an instance of trying to get behind the phenomenon and address the “what is” aspect, to grasp consciousness as a thing-in-itself.

For Locke consciousness is inseparable from thinking and is what “gives” each of us one’s own personal identity:

(We) must consider what a *person* stands for; - which, I think, is a thinking intelligent being, that has reason and reflection, and can consider itself as itself, the same thinking thing, in different times and places; which it does only by that consciousness which is inseparable from thinking, and, as it seems to me, essential to it: it being impossible for any one to perceive without *perceiving* that he does perceive. When we see, hear, smell, taste, feel, meditate, or will anything, we know that we do so. Thus it is always as to our present sensations and perceptions: and by this every one is to himself that which he calls *self*: - it not being considered, in this case, whether the same self be continued in the same or divers substances [LOCK: 222].

The clamor begins when speculation asks if consciousness merely accompanies thinking, or is a cause of thinking, or is some substance which thinks (and, if so, if this substance is material or immaterial), etc. Locke and Descartes part company at this point. Leibniz would post a “consciousness monad.” For Hegel consciousness was “the self-contained existence of spirit.”

If we look at what are perhaps the extreme opposite ends of the spectrum of views that have been advanced on this question, we may place “spiritualists” on the one end and “materialists” on the other. The spiritualist view oftentimes looks at consciousness in terms of what has been called the “theater of the mind”; it is but a short step from here to viewing consciousness as a kind of “spectator” or homunculus watching the play of sensations and impressions. Such a view is spiritualism taken to the extreme. Materialists, on the other hand, oppose this view heatedly. In the materialist view, there is *no* “thing” corresponding to the idea of consciousness. Rather, the phenomenon of consciousness is a no-thing that somehow or other is merely the outcome of complex brain activity. That which we call consciousness would be nothing other than patterns of neural signaling – electrical impulses racing down neuronal axons or chemical transmitters stimulating electrochemical reactions in target cells. Physicalism, behaviorism, and functionalism all tend to lean in this direction in various degrees.

A person who holds either of these extreme views often finds it difficult to even consider the possibility that there may be some kind of middle ground in this great debate. For a materialist to move away from his end of the spectrum, he must grant (or feels he must grant) some validity to the idea of a “spirit.” This is something a committed materialist is simply unwilling to do. The materialist must say, “We do not understand (yet) how brain function produces the phenomenon of consciousness but we will some day in the future when we learn more about the brain.” This is a mere expression of *an article of faith*. There is absolutely nothing contained in our present understanding of neuroscience that does more than *hint* at any theory capable of explaining the

complex phenomenon of consciousness. Yet materialism must hold to this article of faith if it is to have any rational justification for the goal of explaining “mind” solely in terms of “brain.”

For the spiritualist the difficulty in moving toward the center is perhaps a bit more foggy but is nonetheless real. The spiritualist is just as convinced that “brain science” *cannot* and *never will* explain the “essence of our humanity” in cold, clinical, physical terms as the materialist is convinced that it *will*. For the extreme spiritualist this gulf is produced by the famous mind-body problem – the view that corporeal matter is incapable of perception, feeling, and thought and, therefore, there *must* be something other than the “corpuscular” atoms at work here. Leibniz, with his “immaterial atoms” (the monads), was a spiritualist in this sense. To this view the materialist will respond, “Just because you cannot conceive how it could be possible does not mean that it is *impossible*.” The spiritualist, in turn, can reply, “Okay. Show me how it is possible.” To this, the materialist can only reply, “Give us time. We’ll figure it out.”

The entire debate resembles nothing so much as Cicero’s dialog in which Cotta the Academician, Velleius the Epicurean, and Balbus the Stoic debate the nature of the gods.¹ Unable to marshal positive arguments that could stand up to the criticisms of the other two, each philosopher found himself instead making *negative* arguments to refute the others’ views. Their debate ends without consensus.

It seems clear to me that calling the other fellow’s view “absurd” does nothing to advance our understanding. We can, however, inquire if the debate is over a question that even *has* any possibility for objective validity *in the question itself*. If the question is not framed in objectively valid terms then it is not a question for science because science proper is a systematic doctrine of objectivity. Equally, the question can be a “question of spiritualism” only if we maintain both the positivists’ attitude that philosophy is not and cannot be a science and we refuse to distinguish philosophy from religious theology. To do this trivializes philosophy and rewards sophism.

§ 2. Consciousness and Transcendental Apperception

If we are to get behind the experience of the phenomenon of empirical consciousness and try to understand the *noumenal* idea of consciousness, we must proceed only from a starting point at which we can find a transcendental ground establishing the objective validity of our object. Put another way, how shall we look at the question: *What do we mean by consciousness?*

From our previous discussion of Rational Psychology in Chapter 4 we already have an idea of what we may *not* do. We can not take the apparent innate awareness and certainty of one’s own *Dasein* and push this knowledge into the *transcendent* idea of a soul. As was said earlier, the

¹ Cicero, *De Natura Deorum*.

idea of soul is an idea we can neither prove nor disprove on objectively valid grounds. Materialists never tire of pointing out the utter lack of any objectively valid ground for “soul theory.” What must also be realized, however, is that to assert the non-existence of soul is likewise a positive assertion – i.e., the materialist position, too, is a “soul theory.” This is something William James bluntly pointed out in his *Principles of Psychology*. Fortunately we need not be bound by either of the extremist positions because there is another way to look at the question, namely from the viewpoint of Kant’s Copernican perspective.

Underlying the entire elaboration of empirical consciousness we find one primitive and necessary Idea. This is the Idea of the transcendental Subject – the *I* whom we say predicates empirical consciousness. If my empirical consciousness is exhibited in awareness (“I am aware-of-*X*”), cognizance (“I know *Y*”), feeling (“I feel *Z*”), and so on, there must first be the “I” in which all such empirical statements share a common unity. In Chapter 3 we called this unity of consciousness by the name *transcendental apperception*. Without this *pure* and *original* “sense” of one’s own immediately-certain *Dasein*, the idea of experience is meaningless; there can be no experience without the transcendental Subject whom we say *has* the experience.

We must take a care not to read too much into the meaning of the term transcendental apperception. The use of the word “I” in our description of it can easily be taken too far. After all, does not an “I” necessarily imply a “not-I” – a “something” relative to which this “I” is delimited – as well? However, the carving up of the world in terms of “the part which is ‘me’ and the rest which is not” is a determination of experience, and the term transcendental apperception does not refer to experience but, rather, to the grounds for the *possibility* of experience. The *I* of transcendental apperception must be regarded in this pure and *a priori* context. The existence attributed to this transcendental *I* is existence only in the sense of “being present” – that is, existence *only* in the connotation of *Dasein*. The representation of *Self* consciousness – e.g., “I am a person” – is *empirical* and requires the representation of the existence of this Self in the manifold of experience. Such a representation of “my own existence” is a representation that includes *Existenz* as well as *Dasein*. *Existenz*, as we recall from Chapter 3, is representation in terms of *nexus* (form); *Dasein* is existence represented in terms of the matter of representation. Thus, when we speak of the *I* of transcendental apperception we mean nothing more than the proposition that the conscious Subject is something *actual* and real without any statement of how this Subject is actual or in what the Nature of its being real subsists. We do not say this transcendental *I* is soul or spirit or, least of all, some conglomeration of atoms; we do not, in fact, say anything at all about it beyond the assertion “I am ____.” The blank is left to be filled in by experience.

If the *I* of transcendental apperception is nothing else than the transcendental substratum upon which mind builds all one’s acquired knowledge and experiences, this still leaves us with

the question of manner in which this construction is to take place. Now, we call these constructs of mind ‘representations’ and we regard the logical faculty of *nous* in terms of its power to “make” these representations. In addition, we say all these representations share a common connection of unity “in” the empirical Subject. My representations are, before anything else, *mine*. The idea of a mental representation has no real meaning whatsoever unless this idea is represented in relationship to the Idea of the *Dasein* of transcendental apperception. The reality of the *Existenz* of a representation can, logically, take no other form than this.

It follows, then, that if we are to represent the reality of mental representations, we can do so only through the *representation that a representation is "in me"* – thus as a property inherent in the empirical Subject. It is to this “representation that a representation is in me” that we give the name *pure consciousness*. Pure consciousness is a transcendental idea of the faculty (an organization) of a power we may describe as the “inner sense” of the state of an Organized Being. Graf Dohna, a student in Kant’s 1792-1793 lectures on metaphysics, recorded in his notes the following description of this idea of inner sense:

We name only one inner sense - the faculty of the consciousness of one's own *Dasein* - in time empirical apperception, in general pure apperception [KANT19: 374 (28: 672-673)].

Dohna also attended Kant’s lectures on logic, where he recorded:

The general that lies as ground of all knowledge is representation . . . Cognition is reference of the representation to an object combined with an act in the mind, consciousness (representation of our representation), which obscure representations are missing [KANT8a: 440 (24: 701)].

We find thus far in Kant’s pure consciousness two factors. First, we have the idea of something called “inner sense” which, as an *a priori* factor in pure consciousness, must be viewed as a structure. This idea implicates both a power and a process of formation (*Gestaltung*) by means of which come the empirical representations to be connected in the consciousness of the empirical Subject (the representation that is in me). Second, we have the idea of the power to *make* this connection in consciousness (the *representing* of the representation that a representation is in me), and this we will call the power of **apperception**. The first of these ideas pertains to the composition of representational matter. The second pertains to the capacity for making such a representation conscious (i.e. to make a mere representation into a *perception*) and is an idea of a *nexus* in the manifold of inner sense.

To complete our representation of inner sense – that is, to complete our idea of pure consciousness – we must have a more detailed breakdown of these ideas, which is to say we must make a representation of the details involved in these ideas. The elaboration of these details will constitute our idea of the faculty of consciousness as the idea of the organization of inner sense for the empirical Subject.

§ 3. The Principle of the Unity of Consciousness

An acroamatic principle is a transcendental principle of Critical epistemology. Our fundamental principle of the unity of representation in *one* consciousness is such a principle, since we get this idea from the logical and rational argument that all mental representations made by the Subject are represented in and by a *single* faculty of consciousness. It is clear that this principle can never be gained by experience because this principle is an *a priori* transcendental ground of the possibility of experience. Furthermore, the idea of a faculty of consciousness, no matter how clear and certain it seems to us that such a faculty actually exists in some sense, is still the idea of a *noumenon*. We can no more have a direct experience of pure consciousness than we can have a direct experience of a soul. The *Critical* difference between these two ideas is this: the faculty of consciousness is an idea necessary for the possibility of experience, while the idea of a soul is *not* necessary for the possibility of experience.

But while the principle of the unity of consciousness can never be given in experience, this principle still has logical *consequences* pertaining to observable *facts* of experience. If these facts undeniably contradict the consequences of this acroamatic principle then we can say that this principle is *refuted*. Now, practitioners of psychology often must deal with patients suffering from particular neuroses which, at first sight, might appear to contradict our principle of unity. The old clinical term for this class of mental disturbances is *hysterical neurosis* – a classification that includes so-called “multiple personality disorders” (popularly and mistakenly called a “split personality”²). In addition, there seems to be a great deal of popular misconception about another phenomenon – namely hypnosis – that would seem to argue against the principle of the unity of representation in *one* consciousness. In view of the central importance of this principle to our theory, we must take a look at these facts and see whether or not they provide an empirical refutation of this principle.

§ 3.1 Hysterical Neurosis

It is clearly a practical impossibility to attempt anything like a complete study of hysterical neurosis within the pages of this treatise and, in any event, your author is not qualified to conduct such a complete survey of the field. Instead, then, we must rely on professional summaries reported by qualified psychologists for both our data and their interpretation. Even in this we must be brief.

² The term "split personality" refers to an individual who is "split off from reality." Such a condition is not a neurosis but a *psychosis* - a term that includes paranoid, affective, and schizophrenic reactions and which has nothing whatever to do with "multiple personalities."

Strictly speaking, health professionals in the United States ceased to use the term “neurosis” in 1987. It was regarded by the American Psychiatric Association as too vague to be of much practical use. Since, however, our purpose here is philosophical rather than medical or therapeutic, there seems to be no harm in using the term, and it is probably more widely known than the list of more specific clinical terms now used by the health profession.

Conversion Hysteria

Conversion hysteria is the loss of sensory or motor functions without any organic pathology.

One of the most constant symptoms in persons suffering from hysteric disease in its extreme forms consists in alterations of the natural sensibility of various parts and organs of the body. Usually the alteration is in the direction of defect, or anæsthesia. One or both eyes are blind, or color-blind, or there is hemianopsia (blindness to one half the field of view), or the field is contracted. Hearing, taste, smell may similarly disappear, in part or in totality. Still more striking are the cutaneous anæsthesias. The old witch-finders looking for the "devil's seals" learned well the existence of those insensible patches on the skin of their victims, to which the minute physical examinations of recent medicine have but recently attracted attention again [JAME2: 132].

What does conversion hysteria have to do with the principle of the unity of consciousness? The late 19th century psychologists Pierre Janet and A. Binet discovered (1889) that these patients actually *do* have sensibility to the afflicted regions of their bodies during times of anæsthesia. This sensibility, they reported, takes the form of a *secondary consciousness* “entirely cut off from the primary or normal one, but susceptible of being *tapped* and made to testify to its existence in various odd ways” [JAME2: 132-133]. Other psychologists of the period (quoted by James) similarly found that hysteric blindness is in fact not “real” blindness (in the sense of actual loss of visual sensibility). James gave a summary account of these findings in Chapter VIII of *Principles of Psychology*.

Now, the existence of these “secondary consciousnesses” does indeed seem to contradict the principle of the unity of consciousness. James writes

It must be admitted, therefore, that *in certain persons*, at least, *the total possible consciousness may be split into parts which coexist but mutually ignore each other*, and share the objects of knowledge between them. More remarkable still, they are *complementary*. Give an object to one of the consciousnesses, and by that fact you remove it from the other or others. Barring a certain common fund of information, like the command of language, etc., what the upper self knows the under self is ignorant of, and *vice versa*. M. Janet has proved this beautifully in his subject Lucie [JAME2: 134-135].

James goes on to describe Janet’s experiment in some detail. The patient’s behavior does indeed seem to support the hypothesis that the patient’s *empirical* consciousness is “split.”

However, does the appearance of a secondary empirical consciousness imply that this “split” goes “all the way down” to *pure* consciousness and the unity of transcendental apperception? Empirical consciousness, we recall, involves the knowledge and awareness of both the *Dasein* and *Existenz* aspects of cognition. Empirical consciousness, in other words, is a phenomenon, the context of which takes in the phenomenon of *Self*-consciousness (in the ordinary sense of that term), and this empirical consciousness is a *constructed* presentation of *Existenz*. It is, in short, a part of the thinking Subject’s making of a “world model.” Pure consciousness is, in contrast, the idea of the innate and *a priori* power of presentation in the Organized Being. It connects representations to the “sense” of one’s own *Dasein*. The latter (transcendental apperception) utterly lacks any elemental structure of *Existenz*. It is this *Existenz* aspect that must be provided, both as to the form of a *nexus* (connection) in the manifold of representations (pure consciousness), and the composition of a matter in this manifold (empirical consciousness).

We therefore are faced with an enormously difficult task in trying to determine if the obvious fragmenting of the patient’s *Existenz* structure in perception also extends to the patient’s pure “sense” of *Dasein*. Put simply, does conversion hysteria affect only the reasoning and judgmentation functions (by which the power of thinking and cognition is regulated) or does it actually “cut the mind in two”? If the former is the case then the principle of the unity of consciousness (which refers only to pure consciousness in transcendental apperception) is not refuted; if the latter is the case then this principle is false.

The empirical evidence appears to indicate that the former is factually the case – i.e., that the splitting of consciousness does not extend beyond empirical consciousness. There are several observable phenomena that argue in favor of this. In the first place, Janet was able, using his “method of distraction” [JAME2: 133], to induce the secondary consciousness to “steal” perceptual powers (such as sight) from the primary consciousness “at will.”

Similarly when the sight of certain things was suggested to the subconscious Lucie, the normal Lucie suddenly became partially or totally blind. “What is the matter? I can’t see!” the normal personage cried out in the midst of her conversation, when M. Janet whispered to the secondary personage to make use of her eyes. The anaesthetics, paralyses, contractions and other irregularities from which hysterics suffer seem then to be due to the fact that their secondary personage has enriched itself by robbing the primary one of a function which the latter ought to have retained. The curative indication is evident: get at the secondary personage, by hypnotization or in whatever other way, and make her *give up* the eye, the skin, the arm, or whatever the affected part may be. The normal self thereupon regains possession, sees, feels, or is able to move again [JAME2: 135].

It is difficult to see how this “transferral” of perceptive and motor powers could take place if the patient’s mind was truly and completely “severed” by his affliction. How, so to speak, does the secondary personage “know where to go to get” command of these powers or faculties if the hysteric’s “split consciousness” truly extends all the way down to the level of *Dasein*? If the unity

of pure consciousness was in fact destroyed in conversion hysteria the patient should have not one but two or more distinct and disjoint manifolds of representation. The fact that transference of sensible and motor powers *does* take place implies that the *nexus* of representation is, in fact, intact and that only the patient's reasoning and judgmentation functions are affected.

A second phenomenon that argues in favor of this interpretation is that symptoms of conversion hysteria can be produced *or eliminated* by hypnosis. Thanks to the movies and other works of imaginative fiction, there is a great deal of popular mumbo-jumbo attached to the phenomenon of hypnosis. For instance, many people have come to think that hypnosis somehow renders a person "unconscious" or otherwise produces some kind of "abnormal mental state" in which the hypnotized person is somehow "not in control" of him or her self. In at least the case of healthy individuals, nothing is farther from the truth. Nobel laureate Richard Feynman once described his experiences with being hypnotized:¹

He started to work on me and soon I got into a position where he said, "You can't open your eyes."

I said to myself, "I bet I *could* open my eyes, but I don't want to disturb the situation: Let's see how much further it goes." It was an interesting situation: You're only slightly fogged out, and although you've lost a bit, you're pretty sure you could open your eyes. But of course, you're not opening your eyes, so in a sense you can't do it.

When the real demonstration came he had us walk on stage, and he hypnotized us in front of the whole Princeton Graduate College. This time the effect was stronger; I guess I had learned how to become hypnotized. The hypnotist made various demonstrations, having me do things that I couldn't normally do, and at the end he said that after I came out of hypnosis, instead of returning to my seat directly, which was the natural way to go, I would walk all the way around the room and go to my seat from the back.

All through the demonstration I was vaguely aware of what was going on, and cooperating with the things the hypnotist said, but this time I decided, "Damn it, enough is enough! I'm gonna go straight to my seat."

When it came time to get up and go off the stage, I started to walk straight to my seat. But then an annoying feeling came over me: I felt so uncomfortable that I couldn't continue. I walked all the way around the hall.

I was hypnotized in another situation some time later by a woman. While I was hypnotized she said, "I'm going to light a match, blow it out, and immediately touch the back of your hand with it. You will feel no pain."

I thought, "Baloney!" She took a match, lit it, blew it out, and touched it to the back of my hand. It felt slightly warm. My eyes were closed throughout all of this, but I was thinking, "That's easy. She lit one match, but touched a different match to my hand. There's nothin' to *that*; it's a fake!"

When I came out of hypnosis and looked at the back of my hand, I got the biggest surprise: There was a burn on the back of my hand. Soon a blister grew, and it never hurt at all, even when it broke.

So I found hypnosis to be a very interesting experience. All the time you're saying to yourself, "I could do that, but I won't" - which is just another way of saying that you can't.

Nothing at all like the "zombie" image of popular misconceptions of hypnosis is evident in Feynman's account. Quite the opposite: the person under hypnosis experiences *highly focused*

¹ Richard P. Feynman, "*Surely You're Joking, Mr. Feynman!*", N.Y.: Bantam Books, 1989, pp. 54-55.

attentiveness accompanied by a more-than-usual attitude of passiveness and suggestibility. A number of years ago, in the company of some friends, I had the experience of being hypnotized (as part of a then-popular nightclub act put on by a hypnotist²). My own experience was much like Feynman's description, although in my case I can't say that I felt in the least bit "fogged out." I was at all times intensely focused on what going on around me (we were not required to close our eyes), and the hypnotist told us to do various amusing, and sometimes embarrassing, things. What I found was that I was willing to do the things he suggested and, for the most part did so. However, I also declined to do one of the most embarrassing stunts, so I would not agree with Feynman that you "can't" refuse to go along with the instructions of the hypnotist. What seems to me to be the case is that hypnosis tends to produce a willingness, even a desire, to cooperate with the hypnotist; but, at all times, one remains fully in control of oneself – even, I would say, to a greater than usual degree.

If these anecdotes are reasonably representative descriptions of the typical case of hypnosis then it appears quite evident the ability of hypnosis to affect hysteric patients is indicative of the on-going presence of a unity in pure consciousness. What seems primarily to be affected by hypnosis is a complex of attitudes and desires in the hypnotized subject. But if this is in fact the case, the implication is that it is the reasoning and volitional processes of perception and judgmentation – the manifestations of merely empirical consciousness – that is affected by conversion hysteria. James wrote

How far this splitting up of the mind into separate consciousnesses may exist in each one of us is a problem. M. Janet holds that it is only possible where there is abnormal weakness, and consequently a defect of unifying or co-ordinating power. An hysterical woman abandons part of her consciousness because she is too weak to hold it together. The abandoned part meanwhile may solidify into a secondary or sub-conscious self. In a perfectly sound subject, on the other hand, what is dropped out of mind at one moment keeps coming back at the next. The whole fund of experiences and knowledge remains integrated, and no split-off portions of it can get organized stably enough to form subordinate selves. The stability, monotony, and stupidity of these latter is often very striking.

All these facts, taken together, form unquestionably the beginning of an inquiry which is destined to throw a new light into the very abysses of our nature. It is for this reason that I have cited them at such length in this early chapter of the book. They prove one thing conclusively, namely, that *we must never take a person's testimony, however sincere, that he has felt nothing, as proof positive that no feeling has been there.* It may have been there as part of the consciousness of a "secondary personage," of whose experiences the primary one whom we are consulting can naturally give no account [JAME2: 137-138].

² Most psychologists take an extremely dim view of the use of hypnosis by entertainers. They regard it as something that contributes to the mysticism and mumbo-jumbo that popularly surrounds hypnosis, criticize the usual lack of proper controls, and generally doubt the qualifications of the hypnotist. In all this they are usually right. I took part in this little episode mainly to see for myself how factual and accurate were my friends' descriptions of their own previous experiences with this fellow. Plus, of course, they dared me to try it.

While Janet's (and James') view of conversion hysteria is expressed in terms of an actual "splitting" of consciousness, this view is not the only hypothesis that has been advanced as a possible explanation of what it is that occurs during conversion hysteria. J. Breuer and Freud, for example, take a quite different view of this phenomenon.

In contradistinction to Janet's views, which in my opinion admit the most manifold objections, are those advocated by J. Breuer in our joint communication. According to Breuer, the "basis and determination" of hysteria is the occurrence of peculiar dream-like conscious states with a narrowed association capacity, for which he proposed the name *hypnoid states*. The splitting of consciousness is secondary and acquired, and originates because the ideas emerging in hypnoid states are isolated from associative communication with the rest of consciousness.

I can now demonstrate two other extreme forms of hysteria in which it is impossible to show that the splitting of consciousness is primary in the sense of Janet. In the first of these forms I could repeatedly show that the splitting of the content of consciousness was an arbitrary act of the patient, that is, it was initiated through an exertion of the will, the motive of which can be stated. I naturally do not maintain that the patient intended to produce a splitting of his consciousness; the patient's intention was different, but instead of attaining its aim it produced a splitting of consciousness.

In the third form of hysteria, as we have demonstrated by the psycho-analysis of intelligent patients, the splitting of consciousness plays only an insignificant and perhaps really no rôle. This includes those cases in which there had been no reaction to traumatic stimulus and which were then adjusted and cured by ab-reaction. They are the pure *retention hysterias*.

If the splitting of consciousness in acquired hysteria is due to an act of volition, we can explain with surprising simplicity the remarkable fact that hypnosis regularly broadens the narrowed consciousness of hysteria, and causes the split off psychic groups to become accessible. For we know that it is peculiar to all sleep-like states to remove that distribution of excitement which depends on the *will* of the conscious personality.

We accordingly recognize that the characteristic element of hysteria is not the splitting of consciousness but the ability of conversion, and, as an important part of the hitherto unknown disposition of hysteria, we can mention the psycho-physical adaptation for the transference of a great sum of excitement into bodily innervation. . . With this turn, we - Breuer and I - come near to the familiar definitions of hysteria of Oppenheim and Strümpel, and deviate from Janet, who assigns to the splitting of consciousness too great a rôle in the characteristics of hysteria. The description here given can lay claim to the fact that it explains the connection between the conversion and the hysterical splitting of consciousness [FREU2: 82-83].

What we must conclude from all this is the following: While the phenomenon of conversion hysteria seems to clearly demonstrate that at least the empirical consciousness may become "split up" to some depth or degree, we can not draw from this any factual statement as to "how deep" this split may go. In particular, we cannot accept conversion hysteria as conclusively providing a counterexample that refutes the acroamatic principle of the unity of pure consciousness in transcendental apperception. In actual point of fact, the existence of transferability of sensible and motor abilities in hysteric patients seems to point to the *preservation* of the unity of consciousness *at some level*. The empirical evidence cannot, of course, absolutely confirm this, but neither does it refute it.

Dissociated States

Hysterical neurosis can also take on other forms in which the sufferer, in a sense, “disowns” part of his or her own identity. These phenomena are collectively called dissociated states. Forms in which this dissociation may appear include somnambulism (sleepwalking), amnesia (loss of memory of one’s own identity), and – in rare and extreme cases – multiple personality.

Of these three, it is the phenomenon of multiple personality that interests us here. The person exhibiting a multiple personality disorder appears to develop two or more independent personalities which alternate in consciousness [RUCH: 432-434]. According to Ruch and Zimbardo, the different personalities are usually, but not always, unaware of each other. Probably the most well-publicized case is that of “Eve White” reported by Thigpen and Cleckley in 1954.³ In this case, “Eve” exhibited three distinct personalities (Eve White, Eve Black, and Jane). The Eve Black personality was fully aware of Eve White’s activities, but Eve White was entirely unaware of Eve Black.

In any case where one (or more) of the “personalities” is cognizant of the other it is very difficult to see this disorder as substantially different, in terms of consciousness, from our discussion above of Janet’s “secondary consciousness.” Indeed, it would seem as if the Breuer - Freud “hypnotic state” explanation might well be a better description of the situation than would a Janet-like description involving any “split” in consciousness (although clearly the multiple personality phenomenon is quite distinct in its character from conversion hysteria). A narrowed capacity for awareness, without the need to invoke a fundamental split into distinct consciousnesses, would seem to serve adequately as a descriptor of this disorder.

Put another way, if the process of judgmentation simply refuses to “recognize” or “invoke” certain schemes of thinking (or produces an adaptation in such a “narrowed” scheme), then the entire phenomenon of multiple personality could be viewed as involving nothing more than empirical consciousness. We are all probably familiar with situations in which we say, “I’m not going to think about that right now.” It is not impossible that the person suffering from multiple personality disorder represents an extreme example of this otherwise normal behavior, much like Feynman’s “annoying feeling” that led him to return to his seat via the back of the auditorium. We will have more to say about all this in Chapter 22.

To summarize: On the one hand, the symptoms of hysterical neurosis do appear to offer some evidence that the principle of the unity of consciousness might be wrong. On the other

³ Thigpen, C.H. and Cleckley, H.A., "A Case of Multiple Personality," *Journal of Abnormal and Social Psychology*, 1954, **49**(1), pp. 135-144.

hand, there also exist other plausible explanations that better account for these phenomena. In a healthy individual the sense of *Dasein* we call transcendental apperception is so apparently strong and self-evident that we must admit this principle seems to have very strong grounds for acceptance. It is only in the case of abnormal behaviors such as hysterical neurosis where we find empirical evidence that casts doubt upon the principle. However, as we have seen, these facts are by no means conclusive for this matter.

§ 3.2 Pure and Empirical Consciousness

As the preceding discussion makes obvious, the distinction between pure and empirical consciousness is fundamental to understanding transcendental apperception and its principle of unity of consciousness. Viewed from an empirical perspective, consciousness is that by which we mean that we perceive particular representations with exclusion of others in the manifold of all our representations. Put another way, certain representations are “presented” in inner sense while others remain “latent” and still other *possible* representations of the data of the senses go “unnoticed.” This sense of presentment is, indeed, nothing other than, as Kant said, “a representation that a representation is in me,” provided that in this context we understand Kant to mean that sense of awareness we so closely associate with the word “consciousness.”

Now this sense of presentment has the peculiarity that this “awareness” exhibits itself in degrees. Of some representations we have an acute awareness, a kind of “sense of immediate focus” we call by the name *attention*. For other representations the degree of presentation seems slight; we are vaguely aware of them but “pay them little attention.” Still other representations we ignore so completely that we say we “pay them no attention at all” or are even “oblivious” of them. Yet, while it is our commonplace experience that mind does indeed exhibit this amazing power of selectivity in empirical consciousness, it is equally a commonplace experience that representations of which we have just been “completely oblivious” may, with amazing suddenness, “come to one’s attention” seemingly unsummoned. Thus, hearing an old song on the radio may summon up memories of old friends or events from our distant past not thought of for years. In such cases of *remembrance* we find a powerful argument for the existence of an essential “oneness” of unity built into the very structure of the manifold of representations.

This most peculiar ability of mind seems even more strange when the sudden and unbidden representation suddenly “present” in one’s consciousness is not an “old memory” but rather a “sudden realization” of the presence of a *new* representation. For example, a student deeply engrossed in his studies may be suddenly startled by “noticing” that someone has entered the room, even though that person may have been there for some time and might even have spoken to the student without him “consciously” hearing. A second not-uncommon example is found when one experiences the unexpected “flash of insight” in which some difficult problem or obscure and

ill-understood explanation “suddenly becomes clear.” In his “anthropological didactic” Kant commented on this sort of phenomenon:

To have representations and still not to be conscious of them appears to pose a contradiction; for how can we know that we have them unless we are conscious of them? This objection has already been raised by Locke, who on that account rejected the *Dasein* of such manner of representations. Nevertheless, we can still be indirectly conscious of having a representation although we are not directly conscious of it. Such representations are called obscure, the others are clear, and when their clarity extends from the partial representations to the whole of it and their combination, then they are called distinct representations either of thinking or of intuition [AK7: 135].

Now, since we have rejected the copy of reality hypothesis and along with it Locke’s idea of the mind as a “blank paper” on which experience is written, these commonplace experiences of the workings of our empirical consciousness would be without explanation if we did not admit mind’s role in not only making our representations but, also, its activity in *presenting* them in inner sense. It is this ability to present representations we call the power of pure consciousness. This ability of mind must necessarily be presupposed as *necessary for the possibility* of empirical consciousness and, as such, must be regarded both as an innate power of mind and as an *a priori* power since without it experience is impossible.

It is this act of presentment in inner sense which produces that awareness of the existence of representations (that is, existence in the sense of “being present” – *Dasein*) we call apperception. If we ask, “To whom is this presentation made?” the only answer that can be given is, “to the Organized Being itself.” But as the *I* of transcendental apperception is a pure *noumenon*, we can go no farther than to say ***the faculty of pure consciousness is the logical schema of representation of empirical apperception.***

Taken in totality, pure consciousness and empirical consciousness together constitute what we may call consciousness in general. Empirical consciousness provides matter to the structure given to consciousness insofar as *Existenz* in consciousness (the conscious form of the Subject’s “world model”) is concerned. Pure consciousness is our idea of consciousness with abstraction being made of all empirical content; we must regard it as nothing but the form of the power of presentation, leaving the matter of consciousness to empirical consciousness.

And here, in this distinction between pure and empirical consciousness, we find the ground for the transcendental deduction of the principle of the unity of consciousness. The *presenting* in pure consciousness is made *by and to* a singular Object – the Organized Being as unity of the whole organism. We have no other rational choice but to regard in this way that “sense” of one’s individual *Dasein* of which we have knowledge only through this presentation. But since this *noumenal* Object is absolutely singular, it follows at once that pure consciousness must present in no way other than as a complete unity of consciousness.

§ 4. The Unified Themes of Pure Consciousness

We have so far in this chapter been concerned with matters of terminology, specifically the distinction between what we mean by the terms pure consciousness and empirical consciousness, and with the exposition of the principle of unity of consciousness. What we must now undertake is to examine particular facts and viewpoints from which we can solidify our understanding of consciousness and, above all, deduce its theoretical representation. The reader will recognize in what follows that we are applying Aristotle's *dictum* of beginning with "that which is clearer to us" and paying heed to Bacon's admonition to add "ballast and lead" to understanding to prevent its flying off into transcendent and speculative regions.

Our vehicle for this exposition is provided by the views of several different schools of thought. These views we will call the "unified themes of pure consciousness." In one important way this name is misleading; the views held by the different representatives we shall cite are, in their models, paradigms, and stated conclusions, anything but unified *with each other*. The unity I refer to in calling these the "unified themes" is found in the effort made on the part of these eminent thinkers to unify rational theory and empirical phenomena. With the obvious exception of Kant, the views of these men presuppose metaphysical premises quite different from the premise of the Copernican hypothesis, with the predictable result that they come to different conclusions (when, that is, they come to any conclusions *at all*). Our objective here is not to reconcile their views with each other but, instead, to examine and review the facts and intermediate deductions from which each man reached his scientific position on the question of consciousness. This first step will then be followed in a later section by our own deduction of the representation of pure consciousness.

§ 4.1 James' Pragmatic Theme

William James approaches the question from the viewpoint of his American Pragmatism. For James it was extremely important to draw a distinction between 'philosophical' matters and 'scientific' matters. The former, he felt, have a proper role in guiding science but are to be kept out, as much as possible, from the science of psychology itself. This, in my view, is an improvement over the arrogant blindness of pure positivism, but is, for all that, still a view weighed down by the influence of positivism. The central thesis, if we may call it that, of Pragmatism is stated in James' famous *dictum*: There can *be* no difference anywhere that doesn't *make* a difference elsewhere. Pragmatism is, in a sense, a two-edged sword for it is at once both the source of the greatest strength in James' approach to science *and* the greatest barrier to his development of fundamental unifying scientific principles for this science. James employs the pragmatic dictum in a generally negative manner, using it to debunk and dismiss certain

approaches wherever and whenever he can not see how such an approach could lead to ‘differences somewhere that make a difference elsewhere.’ In this we may detect the influence of Descartes; the pragmatic approach helps to keep James from making untenable presuppositions at the beginning of his theory, but also serves to cut short what he is willing to venture in the pursuit of knowledge – which in places leaves him stranded at “an abyss” where he must “wait for philosophy” to come up with a fresh roadmap.

Accordingly, James’ theory of consciousness comes divided into a philosophical criticism of the idea of the “Self” of consciousness and an empirical examination of *attention* as the empirically most accessible characteristic of consciousness. The former establishes James’ paradigm, while the latter supplies empirical matters of fact. We shall therefore take up each of these topics in turn.

The “Self” of Consciousness

James’ examination of the idea of the “Self” follows a long and winding path. It makes up the second longest chapter in *The Principles of Psychology* (topped only by his examination of the perception of space). Much as we have done here, he divides this examination into an examination, first, of the “empirical self” and, second, of the “self of pure Ego.” The former discussion he uses primarily to illustrate how the idea of the latter inexorably seems to impose itself on any theories dealing with the material, social, and “spiritual” perceptions of the empirical self. He finds in the idea of the empirical self a common theme – that of the role of *continuity* in “feelings” of identity and presence – which he sums up in his description of the essence of the “spiritual” self:

For this central part of the Self is felt. . . It is something with which we also have direct sensible acquaintance, and which is fully present at any moment of consciousness in which it *is* present, as in a whole lifetime of such moments [JAME2: 193].

The difficulty, for James, comes with how one should view this “fully present” sensible acquaintance. What shall we take as “the pure principle of personal identity”? James goes so far as to give this pure principle a name; he calls it the “pure Ego.” The difficulties, he points out, begin the moment one tries to pin down what this idea can, pragmatically, be taken to *mean*. He openly states that *any* view on this “most puzzling puzzle with which philosophy has to deal” is likely to “fail to satisfy the majority of those to whom it is addressed” [JAME2: 213].

James begins his examination of “pure Ego” cautiously enough by reminding his readers of his first character of thought: Every thought tends to be part of a personal consciousness. Those thoughts which seem to be about oneself have, he says, a *feeling* of personal “warmth and intimacy” that is lacking in thoughts of other things.

The sense of our own personal identity, then, is exactly like any one of our other perceptions of sameness among phenomena. It is a conclusion grounded either on the resemblance in a fundamental respect, or on the continuity before the mind, of the phenomena compared [JAME2: 215].

The idea of pure Ego, then, seems to James to be based on precisely the same sort of mental comparisons and likenesses that seem to give rise, in his view, to any other Jamesian “Object” of thought. The reality of the idea of oneself is valid only insofar as the thought of oneself shares, at every sensibly continuous moment, the continuity of these feelings. Where this continuity is broken, James says, this sense of personal identity is lost.

Resemblance among the parts of a continuum of feelings (especially bodily feelings) experienced along with things widely different in all other regards, thus constitutes the real and verifiable "personal identity" which we feel. There is no other identity than this in the "stream" of subjective consciousness [JAME2: 216].

This view, James is quick to point out, is none other than the view of the “empiricist school.” In his view, no other way of looking at consciousness is verifiable and no *unverifiable* theory can make any difference anywhere else. James therefore gives his *scientific* allegiance (although not his *personal* sympathy¹) to the empiricist approach. This allegiance, however, does not prevent him from harshly criticizing that school of empiricism known as associationism. Associationism, he points out, is guilty of ignoring “certain more subtle aspects of the Unity of Consciousness,” and is, in fact, guilty of taking as its grounds wholly insupportable (and therefore non-scientific) metaphysical premises.

In particular, associationism falls victim to the Lockean “atomistic” view of ideas and feelings. In associationism individual “thoughts” and “feelings” become “fused” into a “stream” of thought. The issue here is: the idea of things fusing together necessarily must presuppose some *medium* in which this fusing takes place. Any other view is, in a word, “incomprehensible” [JAME2: 217]. But what could this medium possibly be if it is not a non-phenomenal Self, Soul, or whatever? The associationists, says James, grant reality to individual thoughts and feelings without granting any reality to a medium in which they become collected together and associated. This is, he writes, a fundamental inconsistency and problem with associationism.

If, on the other hand, one refuses to posit “individual” thoughts and merely regards thought in terms of a stream of thought, the difficulty encountered by associationism is at least lessened if not eliminated. Thoughts and feelings, in James’ paradigm, are sensibly continuous and as ‘old’ thoughts and feelings ‘die away’ they are replaced by new ones. This leads him to the idea of the

¹ Elsewhere, James freely admits that in his personal, non-scientific view of things, he is a spiritualist. However, as he conscientiously demonstrates in the *Principles*, he can find no scientific basis for his spiritualism and, therefore, no place for it *in science*.

“present Thought” – the “thought” that exists *here and now* in which the “title of personal identity” is “inherited” or “appropriated” from those thoughts which have gone before, thus forming an unbroken chain of personal identity. There is no “fusing” of individual thoughts in this model because, strictly speaking, there *are no* “individual” thoughts.

Unfortunately, James admits, there is a problem with even this view of things. The stream of thought paradigm cannot help but make out of the present Thought some kind of “Object” capable of “appropriating” the “Object” of bygone thoughts. The present Thought thus becomes its own “medium” – an idea that raises almost the very same difficulties facing associationism. This presents a paradox – how can the present Thought *also* be its own medium? – which James sees no way of escaping other than to bring in the *body* as “the real nucleus of our personal identity.” In the final analysis, then, James comes to the conclusion that pure “Ego” can be scientifically regarded only as “a stream of thought accompanying a stream of cerebral activity, by a law yet unexplained” [JAME2: 221].

We might have anticipated from the Copernican hypothesis that James would come inevitably to this conclusion. There is, however, an important difference between James’ view and that of the Critical Philosophy. For James the individuality of the “stream of thought” and the individuality of “the body” presents a *real division*. The unanswered question, in James’ view, is how this mind-body duality can be resolved by some “yet unexplained” law. The Critical Philosophy, on the other hand, tells us that the division between mind and body has no *real* objective validity; we can view it as a *logical* division, but to view this division as real is a *saltus*. If, therefore, one wishes to view “pure Ego” as “a stream of thought accompanying a stream of cerebral activity” one must view this not as a phenomenon to be explained but, rather, *as a fundamental empirical nexus* in which the “stream of thought” and the “stream of cerebral activity” must occupy *coordinate* positions, neither one taking a position subordinate to the other.

James, of course, does not assume the Copernican hypothesis and so, for him, there continues to be a “reductionist” problem to be solved. He reviews the “spiritualist”, “associationist”, and what he understands as the “Transcendentalist” arguments² for this further reduction, and finds all of them coming up short. Of the spiritualist position, he writes

One great use of the Soul has always been to account for, and at the same time to guarantee, the closed individuality of each personal consciousness. The thoughts of one Soul must unite into one self, it was supposed, and must be eternally insulated from those of every other soul. But we have already begun to see that, although unity is the rule of each man's consciousness, yet in some individuals, at least, thoughts may split away from the others and form separate selves. . .

My final conclusion, then, about the substantial Soul is that it explains nothing and guarantees nothing [JAME2: 225].

² i.e. Kant and the later Neo-Kantians. As mentioned before, James seriously misunderstood Kant’s theory.

In this reference to the “splitting of consciousness” (which we discussed in part above), we find James affirming his acceptance of Janet’s theory and using it as a counterargument to the spiritualist position. It does not *refute* the spiritualist position, since there is enough uncertainty in the hysteric phenomena to leave doubt as to “how deep” this “split” goes. But, on the other hand, the spiritualist theory does nothing to help resolve this question either. Hence it explains nothing.

We have already mentioned James’ criticism of the associationist position. James undertakes a merciless analysis of “the most clear” of the associationist arguments [JAME2: 228-232], ending with the pinning down of associationism at the point where it, too, must retreat to non-phenomenal explanations, at which point the ground gives way beneath it. Associationism, he concludes, does not supply us with explanations and guarantees in any better way than does spiritualism.

Finally, James undertakes to try to examine the “Transcendentalist” position. Here he is faced with what I would characterize as a fundamental problem, namely that James does not claim he actually understands what Kant’s position *is*. What he undertakes to criticize is, in his words, his own *interpretation* of Kant. He has an easier time attacking the views of post-Kantian philosophers – particularly Fichte and Hegel – but his analysis of Kant himself is somewhat wide of the mark.³ His final evaluation of “Kant’s” system is that it is “barren”: the Idea of transcendental apperception, since it is “unknowable”, does not provide “anything in Kant’s conception” that “ought to make us give up our own” stream-of-thought paradigm [JAME2: 233]. There seems to be little good to be gained here by discussing the straw man James set up in place of Kant and succeeded in knocking down. We shall let Kant speak for himself later.

Attention

It is one thing to view consciousness in terms of the rather vague and general “stream of thought” paradigm we discussed above. It is quite another to put some meat on the skeleton by providing a more detailed account of what this “stream of thought” contains in its constitution. In explaining how he views his paradigm of consciousness, James employs the idea of “resemblances” among feelings, particularly the “feeling of identity”, as the essential character of consciousness. This, of course, is a fundamentally empirical paradigm – a “how” rather than a “why” paradigm – and to be of use we must have more details of this “how.” At or near the center of any such description must stand the “thoughts” and “feelings” making up this “stream” of which we are conscious.

James undertakes this description when he takes up the topic of “attention.” He begins this discussion by taking a jab at empiricist philosophy for its failure to pay attention to attention:

³ An unfortunate failing in which James is in good company. Even today, two centuries after Kant, there is a wide divergence of opinion over what Kant was really saying. You are getting my view of it.

These writers are bent on showing how the higher faculties of the mind are pure products of "experience"; and experience is supposed to be of something simply *given*. Attention, implying a degree of active spontaneity, would seem to break through the circle of pure receptivity which constitutes "experience," and hence must not be spoken of under penalty of interfering with the smoothness of the tale [JAME2: 260].

Attention, James argues, cannot be ignored because, in its power of *selectivity*, it shapes and forms the stream of thought and even experience itself.

Millions of items of the outward order are present to my senses which never properly enter in to my experience. Why? Because they have no *interest* for me. *My experience is what I agree to attend to*. Only those items which I *notice* shape my mind - without selective interest, experience is an utter chaos. Interest alone gives accent and emphasis, light and shade, background and foreground - intelligible perspective, in a word. It varies in every creature, but without it the consciousness of every creature would be a gray chaotic indiscriminateness, impossible for us to even conceive [JAME2: 260].

The idea of *interest* is therefore bound up, in some fashion, with the phenomenon of attention, which in turn goes into the "shaping" of consciousness. Since, in James' view, "mind" is (pragmatically) more or less the same as the "stream of thought", attention *per se* forms and shapes the mind (ignoring for the moment the obvious issue of what, if not the mind, "supplies" this interest and attention). As for attention itself,

Every one knows what attention is. It is the taking possession by the mind, in clear and vivid form, of one of what seem several simultaneously possible objects or trains of thought. Focalization, concentration, of consciousness are of its essence. It implies a withdrawal from some things in order to deal effectively with others, and is a condition which has a real opposite in the confused, dazed, scatter-brained state which in French is called *distraction*, and *Zerstreuung* in German [JAME2: 261].

The apparent contradiction of this description with the view of mind as a stream of thought is too obvious to belabor. The "mind" is to "take possession" of the "train of thought" which is itself, in some way, mind? If we read James this way he appears to argue in a vicious circle. Yet, he did not say that attention is "taking possession" of some stream of cerebral activity which then "becomes" the stream of thought. Had he said so, he would dig himself deep into the issues and problems that confront any mind-body duality view. This is one instance where James' pragmatism turns on itself; we shall see another such instance shortly.

But what we *can* take from this description is the entry into the phenomenon of mind, at what seems a most fundamental level, of a factor we have not yet discussed: *interest*. James does not attempt a more fundamental description of "interest". Perhaps he felt this idea to be more or less self-explanatory. Whatever "interest" may be, the role it plays in the above description is clearly *not* an *objective* role. It is the "Object of thought" and *not* "interest" that occupies this place. Interest must, then, be something *subjective*, and its role is an *active* role in the

determination of the stream of thought. We could say, to use an awkward word, that “interest” is what is *purposive* in the representation of thought (although James would almost certainly object to this characterization).

We will argue later in this chapter that the idea of “interest” can be *represented*. Unlike the objective representations with which we have occupied ourselves so far in this treatise, interest viewed as representation will belong to a separate class of representations, which we shall call *affective perceptions*.

Another point worthy of note in the quote given above is the idea that “attention” exhibits itself in degrees. The opposite of attention is distraction or, again in James’ words, the “thinking of nothing in particular” or the condition of a “shell of lethargy.” The “abolition of this condition . . . [is] the awakening of attention” [JAME2: 261-262]. The “active spontaneity” of the mind is, it would seem, more active at some times than at others. Now, the *experience* of such a diversity in the degree of attentiveness is commonplace. We use phrases such as “attention span” to try and quantify this phenomenon, and phrases such as the ability to “hold one’s interest” when we reify “interest” as something that is somehow or other “lodged” in the “interesting Object”. Interest, then, must be counted among the “feelings” that James places within the stream of thought, and his description above leaves little doubt that, logically at least, interest must precede the “Object of thought.” This, of course, is still rather too vague and does not answer any question regarding “pure consciousness.” It does, however, *provide us with an empirical phenomenon for which our theory must account*.

When James ties this idea of attention to the idea of a “span of consciousness” he introduces another issue (and, for the stream of thought paradigm, a kind of paradox) which we shall later have to address. This issue has to do with what James earlier (Chapter 1) called “substantive” thoughts – the “resting place” where change in the stream of consciousness seems to “slow down”:

The question of the "span" of consciousness has often been asked and answered - sometimes *a priori*, sometimes by experiment. . . The number of *things* we may attend to is altogether indefinite, depending on the power of the individual intellect, on the form of apprehension, and on what the things are. When apprehended conceptually as a connected system, their number may be very large. But, however numerous the things, they can only be known in one pulse of consciousness for which they form one complex "object," so that properly speaking there is before the mind at no time a plurality of *ideas* properly so called [JAME2: 262].

What James is getting at here may perhaps be best appreciated by recalling some of his previous examples of Objects-of-thought, e.g., the-pack-of-cards-is-on-the-table. His point here is that the “plurality within” such an Object of thought is not *thought* as a plurality “in” his “single pulse of consciousness.” In a striking way, his description here recalls our earlier quote by Kant on the distinction between obscure representations and clear representations. James’ argument seems

to have much in common with the Kantian representation we call an *intuition*, which, we recall, is a singular representation that, nonetheless, contains a manifold.

This idea of the “oneness” in James’ “single pulse of consciousness” does at least appear to run into some *experimental* issues. One experiment he cites was a study carried out by Jevons in 1871. In this experiment a number of beans were thrown into a box and the experimental subject was asked to “count instantaneously” the number of beans in the box. Jevons found that 6 beans was correctly guessed 120 times out of 147 trials, 5 beans was correctly guessed in 102 out of 107 cases, and that cases involving 4 or 3 beans were always guessed correctly. This and other experiments [JAME2: 262-268] forced James to argue that, apparently between one “pulse of consciousness” and another, the ‘object’ “breaks apart into many pieces” and the mind “tends to let go of the one whilst it attends to another” [JAME2: 263]. Experimentally, it would seem, there is some upper limit to apprehension beyond which a single Jamesian “Object” cannot be sustained. James finds himself taking the position that we can attend to more than one thing only with difficulty and through practice and *habit*. The attention, he says, “oscillates” back and forth among multiple Jamesian “Objects.”

How this can be reconciled with illustrations such as the-pack-of-cards-is-on-the-table is a question James does not address. If, as he seems to say, attention oscillates back and forth between Objects, does he also mean to say that these Objects are connected by the “transitive part” of the stream of thought? It would seem most consistent with his stream of thought paradigm to say that this is precisely what he means. However, in this case how does one reconcile this picture with the idea that the Jamesian Object breaks apart? It would seem as if the stream of thought has whitewater rapids in which one finds hazardous holes and bare rock.

Yet we must not be too swift to criticize, nor have too much fun at James’ expense, for we shall encounter more or less this same issue with the representation of intuitions in the Kantian model. Only after we find a solution in that case will we, with justification, be able to discuss the ramifications these experimental facts hold for James’ paradigm. One possible way to deal with this perplexing issue is by the more or less expedient method of simply defining a “pulse of consciousness” as “that which can be attended to in one moment.” However, the very expediency of doing this should be a warning to us that we might be about to take a leap into transcendent territory.

Varieties of Attention

Having dealt, however briefly, with these apparent properties of attention, James turns to the task of making a catalog of various different manifestations of attention. Here we run into an issue that leads to a surprising point of agreement between James’ somewhat “pragmatically positivist”

approach and that of the Copernican hypothesis. This issue presents itself in the question: in what way, if any, is it valid to attribute the phenomenon of “interest” to the “objects of interest”? James prefaces his discussion of this with a brief observation that

The things to which we attend are said to *interest* us. Our interest in them is supposed to be the *cause* of our attending [JAME2: 269].

In this statement, the word “supposed” looms large. There is, in a commonly held viewpoint, a chain of inferences, from the things that supposedly “cause” the interest to the interest which supposedly “causes” the attention. Are we, however, to accept this as fact? This is what James sets out to investigate.

James characterizes attention in terms of three factors: 1) sensorial or intellectual attention; 2) immediate or derived attention; and 3) passive (non-voluntary) or active (voluntary) attention. These three categories of attention are not independent of each other. For example, James holds that voluntary attention is always also derived attention. From this catalog of types he goes on to single out particular combinations of these characteristics.

1. Passive immediate sensorial attention: This type of attention is stimulated by intense or sudden sense impression *or* by some sort of “instinctive” stimulus. In the “instinctive stimulus” case, James holds that this stimulus is a feeling *aroused* by an objective perception. This sort of stimulus, he says, “characterizes the attention of childhood and youth” [JAME2: 270].

2. Passive derived sensorial attention: Attention of this type is attention stimulated by sense impressions that are connected with previous experience (hence “derived”). James calls these the “motives of attention.”

3. Passive intellectual attention: The class of attention is composed of two sub-classes – immediate and derived. There is, according to James, no clear dividing line between these sub-classes. In passive immediate intellectual attention, “we follow a train of images exciting and interesting *per se*.” Passive derived intellectual attention differs from this only in that the images we attend are interesting only with regard to some “remote end” or else because the images are associated with something else that “makes them dear” to us. In both cases passive intellectual attention may become so “absorbing” in the interest we have in the images that we become oblivious to other stimuli.

4. Active or voluntary attention: This type of attention is attention that is consciously maintained “by a determined *effort*” on the part of the attending Subject [JAME2: 272]. It

requires the deliberate neglect of other stimuli. James writes, “There is no such thing as voluntary attention sustained for more than a few seconds at a time.” We must, he says, continually bring our attention back to whatever the Jamesian Object of this attention was or is.

The evidence James offers for his classification of the varieties of attention is merely anecdotal and he provides no real experimental evidence to support his classification. His division of attention into “kinds” is also not free from defect. The three main divisions (passive / active, etc.) do not stand independently of each other and so we have instances where it is not clear whether attention should be attributed to sensations (passive immediate sensorial attention stimulated by intense sense-impression) or to cognition (passive immediate sensorial attention of the instinctive variety “which characterizes the attention of youth and childhood”).

It is also unclear from James’ description, although he seems to imply it, whether “images” precede attention or *vice versa* (or both). This difficulty is due at least in part to his somewhat vague description of what he means by images.¹ It seems most likely that “images” correspond to the “substantive parts” of the stream of thought since the succession of “substantive parts” makes up what James elsewhere calls the train of thought [JAME2: 155]. “Images” are, in James’ terminology, the “vague consciousness” of “simple objects”; this would seem to imply an attentive process which in succession advances from stimulus to consciousness to interest to attention.

The troublesome element which emerges from such a theory is that it seems to imply the re-assertion once more (albeit in subtle form) of the copy of reality hypothesis. Calling an “image” a “vague consciousness of a simple object” still would seem to make it the consciousness *of* an object, and this is either the copy of reality hypothesis re-appearing in James’ theory or else the “stimulus-to-consciousness” phase of this attentive process must involve significantly more than simple sense-impression. It *is* clear that James did not *intend* for his theory to rely on the copy of reality hypothesis:

(Each) of us literally *chooses*, by his way of attending to things, what sort of universe he appears to himself to inhabit [JAME2: 275].

This, of course, is a very Kant-like statement.

There is another idea that is a close companion to that of attention, namely, *inattention*. Inattention is the ability of the mind to completely ignore (that is, to “not attend to”) *most* stimuli in favor of attending to only a small subset of stimuli. The ability to be inattentive is, without

¹ "The lingering consciousness, if of simple objects, we call 'sensations' or 'images,' according as they are vivid or faint; if of complex objects, we call them 'percepts' when vivid, 'concepts' or 'thoughts' when faint" [JAME2: 160].

doubt, an ability of vital importance. In describing inattention, James quotes Helmholtz' Law: "We leave all impressions unnoticed which are valueless to us as signs by which to *discriminate things*" [JAME2: 296]. Inattention, James tells us, shows itself in various ways. For example, a constant stimulus eventually comes to be "disregarded" by the mind; if this constant stimulus is suddenly removed, its sudden absence "signals" our attention. In this description of inattention we find two more factors in our examination of "what is clearer to us" about attention. First, we have what seems to be a property or quality of "sense-impression" – namely, change – that appears to have a direct connection of some kind with the phenomenon of attention. Second, we have the introduction of the idea of *value* entering into the process of attention. Value, however, is not something that is conveyed by the data of the senses; it is the idea of a strictly *subjective* factor. Like interest, "value" must be regarded as something mind "brings to" the overall process of attention as an "ingredient" of the phenomenon of consciousness.

Hazy as James' description of the process of attention might be, he is more clear regarding its outcome. He lists several psychological effects of attention: 1) the relative intensity of two sensations may be changed when one is attended and the other is not; 2) attention promotes memory; 3) attention plus *anticipation* appears to produce a preparatory "motor innervation" of the brain's motor center for whatever reaction is planned in response to the stimuli one is "attending to receiving"; 4) as a consequence of (3), reaction times to stimuli can be reduced; and, 5) the disturbing influence upon attention is greater when the "disturbing stimuli" belong to different senses than when they belong to the same sense (in terms of the "outer" or "five senses"). James does cite several research results in support of these five observations.

One last topic James discusses is in regard to the question of whether voluntary attention is a 'resultant' (an effect caused by stimulation) or a 'force' (something *acting as* a cause which arises within the mind of the Subject himself – a 'power' independent of external things). Stated concisely, the question is: do objects *draw* our attention (i.e., cause it), or does it lie within one's exclusive power to bestow or not bestow attention "at will"? Or do *both* situations coexist?

In the positivist-mechanistic view of science prevailing in James' day, the first of these possible answers was generally acclaimed to be the correct one. Phrased in more modern terms, the heir to this view is the view that "attention" is an effect produced by somatic conditions and states, i.e., the body and brain cause attention. James acknowledges this as a possible answer to the "effect" question, but he also argues that *the facts do not rule out the possibility* of attention seen as an "original force" in its own right. The question itself goes straight to the heart of another, deeper question: *do we have free will?* [JAME2: 294-295].

From the Copernican perspective, how we must view this question is by now obvious. We reject the copy of reality hypothesis, so it *cannot* be external things that "cause" the phenomenon

of attention. They are merely the objects to which our attention is directed. So far as the “somatic cause” of attention is concerned, *the mind-body division is a logical, not a real division*. If we admit that somatic states can “trigger” or “cause” attention, we may not *factually* rule out the possibility that *nous* or *psyche* (or both) also have this same power. As far as “free will” is concerned, it seems of no use to argue this point before we have even described what the term “free will” means. This we will not do for some time yet, and so it seems the wisest course to leave the “original force” question hanging for now and return to it in Chapter 20.

§ 4.2 Freud’s Theory of “The Unconscious”

Psychology was still a young science in James’ day.² Since his time a number of theories, many of them much more refined than his, have made their appearance (see [RUCH], [BENJ]). I think it is fair to say that in most cases (making exception for Piaget) these theories have been developed without the close and *explicit* concern for philosophical issues that James’ work exhibits. Nevertheless, James’ theory has in it what appear to be some inconsistencies, as our discussion above has pointed out, and as a science psychology has learned a few things since James’ day. Viewing, as he did, the stream of thought as “subjective life” (the partner of the “objective life” studied in physiology and neuroscience), and with his pragmatic injunctions against putting forth unverifiable theories, James tends to stop short of making his psychology (as opposed to his philosophy) systematic. Put another way, James seems to have put forth rational principles and theories rather hesitantly and, seemingly, reluctantly. In James we find much more Bacon than Leibniz, and he certainly seems to have put forth more effort in criticizing the rational elements of others’ theories than in systematizing the rational elements of his own.

In the works of Sigmund Freud we find a much less inhibited psychology. Freud proudly proclaimed himself to be a positivist, although in many parts of his theory we find little evidence of Baconian “ballast and lead” restraining the flight of his understanding or imagination. Still, for all of that, Freud did pay much attention to observable phenomenon and did construct a rational system to go with the “conclusions of fact” he drew from his observations. Much of Freud’s psychoanalysis theory is of no interest to us in this treatise, but his great contribution to psychological theory – the Unconscious – *is* of interest to us at this point in this treatise.

Freud viewed the observable behaviors of people as a kind of phenomenal tip of an iceberg under which one had to posit a complex of unseen “acts” and “processes” which, taken collectively, we call “mind”. Freud seems to have entertained no doubt that, ultimately, these acts and processes have their source in physiological activities – e.g., brain function – but this presupposition does not enter in any important way into Freud’s theory and is not an aspect of

² In the United States psychology was still regarded as a part of philosophy and James was a professor in the philosophy department at Harvard.

Freud's system which is of interest to us now. Physiological theories play little role in Freud's system because, as he himself put it in *The Origin and Development of Psycho-Analysis* (1910), "my point of departure was not, like that of Janet, laboratory researches, but attempts at therapy."

Freud's theory, therefore, makes little or no attempt to "get at" underlying physiological causes of mental illnesses. Rather, he gives his attention to what, one might say, "the mind does to itself."

Psycho-analysis has taught us that the essence of the process of repression lies, not in abrogating or annihilating the ideational presentations of an impulse, but in withholding it from becoming conscious. We then say of the idea that it is in a state of *unconsciousness*, of being not apprehended by the conscious mind, and we can produce convincing proofs to show that unconsciously it can also produce effects, even of a kind that finally penetrate to consciousness. Everything that is repressed must remain unconscious, but at the very outset let us state that the repressed does not comprise the whole unconsciousness [FREU3: 428].

In this brief introductory remark we can find a surprising number of elements that are not without their counterparts in the theory we are developing in this treatise. First, Freud takes more or less as a given that at least one outcome of mental processes is an "ideational presentation" – what we here call a representation. Freud also, without going into detail, allows that some such "presentations" are conscious (apprehended by the mind), while others are not apprehended – a distinction we might phrase in terms of clear awareness vs. unawareness or inattention. Finally, the "state" of such presentations (i.e., conscious vs. unconscious) is held to be the cause of other *effects* in the mental state of the Subject.

In Freud's system mental *processes* are classified as being conscious, unconscious, or preconscious. Although unconscious and preconscious processes are not directly observable, Freud defends his argument that they actually exist on the grounds that such processes are *necessary* because "mental acts are often in process which can be explained only by presupposing other acts, of which consciousness yields no evidence" [FREU3: 428]. He further argues that the employment of the idea of the unconscious in psychological theory is legitimate "inasmuch as in postulating it we do not depart a single step from our customary and accepted mode of thinking" [FREU3: 429]. What he means by this is that science involves rational reduction and the positing of what elsewhere in this treatise we have called supersensible objects. These supersensible objects serve to unify the facts of experience to produce a rational understanding of observable phenomena. The idea of conscious, unconscious, and preconscious processes as constituting the mental phenomenon is, therefore, legitimate in science. Indeed, psychology itself would not be possible as a science unless it made suppositions of this sort.

So far as justifying the hypothesis of the unconscious is concerned, Freud assumes what could almost be called a representationalist position – a position not entirely incompatible with

Kant's:

[Our] most intimate daily experience introduces us to sudden ideas of the source of which we are ignorant, and to results of mentation arrived at we know not how. All these conscious acts remain disconnected and unintelligible if we are determined to hold fast to the claim that every single mental act performed within us must be consciously experienced; on the other hand, they fall into a demonstrable connection if we interpolate the unconscious acts that we infer . . .

We can go further and in support of an unconscious mental state allege that only a small content is embraced by consciousness at any given moment, so that the greater part of what we call *conscious knowledge* must in any case exist for very considerable periods of time in a condition of latency, that is to say, of unconsciousness, of not being apprehended by the mind. When all our latent memories are taken into consideration, it becomes totally incomprehensible how the existence of the unconscious can be gainsaid [FREU3: 428].

Put in more every-day terms, the body of observable evidence and common mental experience seems overwhelmingly to require the existence of an unconscious substratum. It is clear that Freud's Unconscious is consistent with the idea that concepts are rules.

It is interesting to compare what Freud says regarding "latent memories" with a lecture remark delivered by Kant over a century earlier:

Consciousness is the capacity for grasping representations so that we can reproduce them; the skill for that is called the capacity of remembrance, memory [KANT19: 375 (28: 674)].

Freud's "latent memories" and Kant's "concepts" appear to be ideas expressing more or less the same phenomenon. Freud's writings view latent memories as something merely called back into a state of consciousness, whereas for Kant a concept is a rule by which a representation can be reproduced in intuition. In both cases we also find the common idea of a representation that is "grasped" (apprehended) in (or by) "consciousness."

Freud's idea of the unconscious, when it was first proposed, was opposed by those who held the not-unreasonable Lockean position that the idea of an "unconscious idea" was a contradiction. Freud responded to this criticism by pointing out that the very same method of inference by which we each infer that other people "have" consciousness can be turned back upon oneself in trying to explain the common facts of one's own consciousness.

If we do this, we must say that all the acts and manifestations which I notice in myself and do not know how to link up with the rest of my mental life must be judged as if they belonged to someone else and are to be explained by the mental life ascribed to that person. Further, experience shows that we understand very well how to interpret in others (i.e., how to fit into their mental context) those same acts which we refuse to acknowledge as mentally conditioned in ourselves . . .

Now this method of inference, applied to oneself in spite of inner opposition, does not lead to the discovery of an unconscious, but leads logically to the assumption of another consciousness which is united in myself in the consciousness I know [FREU3: 429-430].

In carrying out this analysis, he argued, I must logically either admit the existence of the

unconscious or else suppose two (or even more) separate consciousnesses at work in myself. Suppose, for example, that you and I are talking and, while so engaged, I “absent-mindedly” scratch my ear. Here are two seemingly disconnected events, both of which appear to require conscious action. How is this possible? Either, Freud might say, I must assume there is within me a second consciousness (the one who’s ear itched) or else there is a single underlying unconscious process at work that coordinates all my conscious activities. “Those who have contested the assumption of an unconscious,” Freud wryly observed, “will not be content to accept in its place an unconscious consciousness” [FREU3: 430]. The assumption of multiple consciousnesses raises so many objections that, in comparison, the idea of the unconscious almost seems to rise to the level of being a fact.

This justifies us in modifying our inference about ourselves and saying that what is proved is not a second consciousness in us, but the existence of certain mental operations lacking the quality of consciousness. We shall also, moreover, be right in rejecting the term *subconsciousness* as incorrect and misleading. The known cases of *double consciousness* (splitting of consciousness) prove nothing against our view. They may most accurately be described as cases of a splitting of the mental activities into two groups, whereby a single consciousness takes up its position alternately with either the one or the other of these groups [FREU3: 430].

This last remark deserves some commentary, particularly in light of our discussion earlier in this chapter on the subject of hysterical neuroses. Freud, who had much more experience dealing with cases of conversion hysteria and dissociated states than did James, utterly rejects Janet’s “split consciousness” interpretation of these phenomena on the basis of clinical results obtained by himself and by Dr. Josef Breuer, to whom Freud gives the credit for the creation of psychoanalysis in his work from 1880-1892. In *The Origin and Development of Psycho-Analysis*, a set of lectures he delivered at Clark University in 1909, Freud recounts a number of cases Breuer and, later, he himself had dealt with involving conversion hysteria or “double consciousness” (multiple personality disorder) and his own development of the theory of “repression.” If Freud’s accounts do not prove to his reader convincing beyond a doubt, they *do* succeed in raising a sufficient degree of doubt as to the validity of Janet’s theory (which Freud also briefly and not too unkindly describes).

We can now see the difference between our theory and that of Janet. We do not derive the psychic fission from a congenital lack of capacity on the part of the mental apparatus to synthesize its experiences, but we explain it dynamically by the conflict of opposing mental forces, we recognize in it the result of an active striving of each mental complex against the other [FREU4: 8].

So it was that by the beginning of the twentieth century there were no fewer than *three* competing theories: Janet’s (and James’) “split consciousness”; Breuer’s “hypnoidal states”; and Freud’s “repression.”

Freud does not intend for us to view the unconscious and the conscious as contradictory ideas. Rather, what he has in mind with this terminology is a systematic model of mental processes and their interrelation. The phrases “conscious mind” and “unconscious mind” must not be taken too literally, for what is implied is not a plurality of “minds” but, rather, a *single* “mind” in which some aspects of this *noumenon* have the “quality of consciousness” while others lack this “quality.”

Before going any further, let us note the important, though inconvenient, fact that unconsciousness is only one attribute of the mental and by no means suffices to describe its character. There are mental acts of very varying values which yet have in common the characteristic of being unconscious. The unconscious comprises, on the one hand, processes which are merely latent, temporarily unconscious, but which differ in no other respect from conscious ones and, on the other hand, processes such as those which have undergone repression, which if they came into consciousness must stand out in the crudest contrast to the rest of the conscious mind. It would put an end to all misunderstandings if, from now on, in describing the various kinds of mental acts we were to pay attention to whether they were conscious or unconscious, but, when classifying and correlating them, inquired only to which impulses and aims they were related, how they were composed and to which of the two systems in the mind that are superimposed one upon another they belong. This, however, is for various reasons impracticable, and it follows that we cannot escape the imputation of ambiguity in that we use the words *conscious* and *unconscious* sometimes in a descriptive and sometimes in a systematic sense, in which latter they signify inclusion in some particular system and possession of certain characteristics [FREU3: 430-431].

It is, among other things, the business of *this* treatise to see if and to what degree it really is “impracticable” to carry out the classifying, correlating, and so on of a theory of mental physics as represented in the Organized Being model. For now what is noteworthy is Freud’s thesis that “the mental” *can* be systematically described (to at least some degree) *and* that along with the experiential phenomena of “conscious thought” there must also exist a substratum or organizing structure, not itself “conscious” in some sense of the word, without which the “conscious” aspects of mind are inexplicable.

§ 4.3 Piaget and the “Grasp of Consciousness”

For the two views just discussed, the idea of consciousness involves other ideas such as awareness, attention, interest, and so on. For James consciousness is inseparably connected to the idea of a stream of thought (which, it is to be noted, includes “feelings” as well). We see this in the frequency with which terms such as “images” appear in James’ descriptions. Freud, likewise, seems to take it for granted that “thoughts” are a primitive ingredient of both the conscious and the unconscious mental processes.

Piaget holds a somewhat different view of consciousness. “Thoughts” and “images” in the sense that James and Freud use these terms are also involved in Piaget’s theory of consciousness, but the role they play is more that of an outcome, a “signpost” that “consciousness” is present.

Just as Freud views “the unconscious” as a system of processes, Piaget likewise views “consciousness” as such a system. The principal difference is that, unlike the unconscious, the conscious system is to be defined as a system of processes in which “conceptualization” is involved. For Piaget “consciousness” and “cognizance” are very nearly synonymous.

In *The Grasp of Consciousness* [PIAG25] Piaget describes this theory by contrasting it with the views of the philosopher Maine de Biran:

For the French philosopher, the subject slowly achieves a more or less complete introspection (with an ego consciousness, a feeling of effort as an applied force, and the like) of the causal mechanism of his own action. Subsequently, this is generalized to external objects through a sort of "induction" of what the subject has discovered in himself. We maintain, on the other hand, that the initial psychomorphism of the physical causality and subsequent attribution of operatory mechanisms to the objects themselves constitute basically unconscious inferential processes - processes which lack both this characteristic of immediate intuition postulated by the Biranian theory and, even more important, any relationship with an (initially non-existent) consciousness of the ego [PIAG25: vi].

In the first months of life infantile behavior appears to tell us that the infant does not distinguish between himself, as a Self, and the rest of his world. If ego-consciousness (that is, empirical consciousness of oneself as an object among objects) is taken as an essential element of consciousness, we would then be forced to conclude that the infant is not conscious – a clearly absurd proposition. It follows that “introspection” and the apprehension “in thought” of one’s own efforts can clearly not be essential elements of consciousness if the subject has no idea of himself as distinct from other things. What, then, is the “essence” of consciousness?

Piaget answers that we must view consciousness in terms of an active *system* which, of course, involves perceptions in various ways but which is *manifested* by the slow and steady evolution of the child’s mental schemes and structures and the extension of simple sensorimotor schemes *to* schemes of thinking. This, of course, makes any clear demarcation between the unconscious and the conscious that much more difficult to draw. Freud characterized the unconscious in terms of mental processes that “lack the quality of consciousness.” Piaget, in effect, asks, “What does that *mean*?”

In general, when a psychologist speaks of a subject being conscious of a situation, he means that the subject is fully aware of it. The fact that he has become aware of it neither modifies nor adds anything to the situation - all that has changed is that light has now been thrown on a hitherto, for him, obscure situation. Freud even compares consciousness to an "organ of the internal senses," it being understood that for him a sensation can only receive and not transform an external matter. However, no one has contributed more than Freud to make us consider the "unconscious" a continually active dynamic system. The findings in this book lead us to claim analogous powers for consciousness itself. In fact, and precisely insofar as it is desired to mark and conserve the differences between the unconscious and the conscious, the passage from one to the other must require reconstructions and cannot be reduced simply to a process of illumination. Each chapter has

shown that cognizance (or the act of becoming conscious) of an action scheme transforms it into a concept and therefore that cognizance consists basically in a conceptualization [PIAG25: 332].

Although he does not say so explicitly, it is possible to interpret Freud's theory as one in which a real division exists between unconscious mental processes and conscious ones. This attitude is reflected in the very terminology of clinical psychology with its "primary" personality and "secondary" personality or personalities (in the cases of hysterical neuroses). Piaget, in effect, erases this real-boundary line and replaces it with what in this treatise we call a logical division. For Freud the conscious and the unconscious "interact" with each other; for Piaget, they do not "interact" because they are one and the same – a complex dynamic mental process. It is merely "precisely and insofar as it is desired to mark and conserve the difference" between the idea of the unconscious and the idea of the conscious that we require some way to specify or characterize "the quality of consciousness."

Piaget sees *behavior* as the principal observable for delimiting and marking the *logical* distinction between "the unconscious" and "the conscious." What then, in behavior, can serve to mark this distinction? Piaget says it is *cognizance* that does so, and that cognizance shows itself only in behaviors that clearly demonstrate that the subject thinks about ("conceptualizes") his situation.

When is a subject fully conscious of a situation? How is this consciousness acquired? In other words, what constitutes the dawn of consciousness or, as it is also called in this book, "cognizance"? Now that it is agreed, contrary to the classical behaviorist view, that there is no dichotomy or basic opposition between behavior and consciousness - since cognizance itself constitutes a type of behavior that interacts with all other types - the problem of cognizance is of increasing interest to scientific psychology. For the philosophical psychologist, introspection is fundamental and even has a sort of unlimited power, coextensive with all mental life. The behavioral psychologist has noticed that a considerable portion of behaviors (or their mechanisms) remain unconscious and that cognizance consequently demands the intervention of special activities, depending on other behavior and, in turn, becoming capable of modifying them. It would even seem that cognizance involves more than the incorporation of a new bit of information into an already established field (with all its characteristics) of consciousness. There is a genuine construction, which consists in elaborating not "the" consciousness considered as a whole, but its different levels - that is, its more or less integrated systems. Conceived in such terms, the problem has even come within the scope of psychological research into alertness or "vigilance." Finally, as is well known, it is also encountered by the psychoanalyst in connection with "catharsis" [PIAG25: v].

From the psychological point of view, cognizance is not merely a sort of interior illumination, it constitutes a far more complex process involving conceptualization. It is these conceptualization processes that have to be analyzed. In other words, although psychologists have tried primarily to determine in which situation a child is cognizant, they have too often neglected the other complementary question of how this happens, a question that demands equal attention [PIAG25: vii].

It is obvious that a theory of consciousness that revolves around descriptions of behavior and even the rational interpretation of the observed evolution of cognizance is going to be a theory

that addresses what we are calling the phenomenon of *empirical* consciousness. However, since empirical consciousness is, to put it bluntly, an *outcome* that must have its ultimate explanation rooted in a transcendental ground (if it is to have *objective* validity), that which we learn “for a fact” about empirical consciousness is indispensable to achieving an understanding of what we here call *pure* consciousness. The theory of pure consciousness, as the faculty of consciousness, is objectively valid only insofar as the organization of this faculty gains its place in theory from being *necessary for the possibility* of these empirical facts.

The Grasp of Consciousness presents us with the detailed observations from fifteen different types of experiments carried out using subjects ranging in age from four to eleven years. These young subjects, therefore, are representative of three different developmental stages (in Piagetian terminology): 1) the stage of preoperational thought; 2) the stage of concrete operations; and 3) the stage of formal operations. The experiments themselves involve quite simple tasks (walking on all fours, hurling an object with a sling, etc.) which even the youngest of the subjects are able to perform without much difficulty. What is being examined in this study is how well, when, and to what degree of correctness are these subjects capable of *describing* their own actions? In other words, how cognizant of their own actions are these subjects?

The actual experiments were apparently carried out by Piaget’s younger collaborators. Their observations and the details of what happened in each experiment are quite interesting and often rather surprising. However, the individual conclusions drawn in each particular chapter tend to lack the unity, depth of insight, and careful consideration of possible alternative explanations so characteristic of the work of Piaget himself. It is not until the final “conclusions” chapter that we find the overall synthesis of the many individual facts and observations in a comprehensive and systematic form. Consequently our discussion here will be limited to these general conclusions (which Piaget himself formulated).

Piaget partitions these conclusions into five sections: 1) functional reasons for cognizance; 2) the mechanism of cognizance; 3) observable features and inferential coordinations; 4) the evolution of actions and the three levels of knowledge; and 5) processes of interiorization and externalization. This diversity in detail, each one of which is aimed at a particular and specific question, finds unity under one principal idea. This idea is that cognizance (the logically conscious in Piaget’s system) depends upon a “circular relationship” between the subject and the objects of which he becomes cognizant. Among these objects is the subject’s empirical “self.” This principle is the main finding of *The Grasp of Consciousness*, and we can do no better than Piaget himself in stating it:

To sum up, the study of cognizance has led us to place it in the general perspective of the circular relationship between subject and object. The subject only learns to know himself when acting on the object, and the latter can become known only as a result of progress of the actions carried out on it.

This explains the circle of the sciences, of which the solidarity that unites them is contrary to all linear hierarchy. Furthermore, and most importantly, this explains the harmony between thought and reality, since action springs from the laws of an organism that is simultaneously one physical object among many and the source of the acting, then thinking, subject [PIAG25: 353].

With this let us now examine the five particular factors that deal with the question of consciousness.

Functional Reasons for Cognizance

Cognizance of a particular situation is not something “given” to the Subject by some external agency; it is a state or condition the Subject makes for himself. Accepting this as a fact, one irresistible question is: *Why?* Is there some reason, specifically some *functional* reason, why the Subject “takes the trouble” to think about his or her situation? This is a question we shall later find goes much deeper than the context in which Piaget regards it. For now, however, let us look at this question behaviorally, i.e., what does the Subject appear to *do* and why does he appear (to the observer) to do it? In other words, what *practical* function does cognizance seem to serve and what are the conditions that seem to “trigger” his cognitive behaviors?

Piaget begins by noting two observable “peripheral features” of cognitive behavior: pursuit of a goal and results. These are termed “peripheral” factors “because they are linked to the triggering of the action and to the point of its application” [PIAG25: 334]. Starting from an objective goal (howsoever the subject may come to “have” this goal), Piaget theorizes that the Subject assimilates the goal-object into an existing scheme that “immediately triggers off the means of effecting” the goal [PIAG25: 334]. It is significantly noteworthy that the Subject need not be cognizant of why he employs the particular scheme as a means of effecting his goal; in a sense, so far as the observer can tell, it is the scheme “itself” that assigns the goal to the action for which it is the scheme. The action scheme may, indeed, not even be appropriate to effecting the goal and, if the goal is in fact achieved, the child may still have no conscious knowledge of *how* he achieved the goal.

For example, suppose my goal is to see what just made the loud noise outside my window. I get up and walk to the window (a scheme of action). I do not think about the details of getting up and walking and, indeed, I probably do not even think *about* getting up and walking. I certainly do not go through a reasoning process such as “if I want to see what made the noise, I must first get up from my chair and then I must walk to the window.” If you ask me how many steps it took to reach the window, or with which foot I took the first step, I will probably be unable to tell you because normally I “take no notice” of these details. I am not “unconscious” of the fact that I get up and walk to the window, but I am also not “cognizant” of how I do it.

In Piaget's experimental studies there are multiple situations where the child successfully achieves his goal without having any knowledge whatever of *how* he did so. The children are asked to describe, afterwards, what they did and, particularly for the younger children, these descriptions are quite frequently *entirely incorrect* even for such simple tasks as "walking on all fours" (crawling on the floor on one's hands and knees). The four-year-olds are usually unable to correctly describe what they are doing *even while they are doing it*. In an amusing footnote, Piaget's collaborator, Professor Androula Henriques-Christophides, tells us that she asked some participants at a conference, where she was about to present the results of the "walking on all fours" experiment, to walk on all fours and then, afterwards, tell her how they did it. Professor Henriques reports that the logicians and mathematicians typically *gave the wrong answer* while physicists and psychologists usually got it right [PIAG25: 5fn]. She leaves it to our imaginations to ponder the implications of this little factoid.

We might be tempted to attribute these results to "muscle memory" – or, in more scientific terminology, to "acquired programming" of complex movements in the brain's supplementary motor area¹ and the cerebellum² – except for the fact that in some of these experiments the young subjects had never before performed the actions they were asked to do. The fact that these actions were easily accomplished by the children could, of course, merely show that "programmed" motor learning can take place rapidly, but this explanation still does not seem (at least to me) to fully account either for the children's inability to explain what supposedly they had *just learned to do* or for what appeared to be spontaneous corrections and adaptations they exhibited in their actions in pursuit of the goal, of which actions they were likewise cognitively ignorant.

All this is not to say that the children did not learn (that is, "conceptualize") during these experiments. A part of the experimental procedure was aimed directly at seeing if the children *did* learn from their experiences and, if so, what they seemed to be able to bring to "cognizance" and how difficult this process appeared to be for them. (In this, of course, a great deal of difference was observed between children at different stages of development). "Cognizance" did in fact take place as each experiment went on. As Piaget summarized it,

Thus cognizance, starting from the periphery (goals and results) moves in the direction of the central regions of the action in order to reach its internal mechanism: recognition of the means employed, reasons for their selection or their modification en route, and the like.

. . . As we have said, cognizance begins with the pursuit of a goal leading to the conscious noting of success or failure. In case of failure, the reason must be sought and this leads to cognizance of more central regions of the action. Starting from his observation of the object (failure to achieve the goal), the subject thus tries to find out where there was a lack of accommodation of the scheme to the

¹ see Claude Ghez, "Voluntary Movement," in [KAND: 609-625].

² see Claude Ghez, "The Cerebellum," in [KAND: 626-646].

object. From his observation of the action (its finality or general direction) the subject turns his attention to the means used and to how he might correct or perhaps replace them. Thus through a two-way movement between object and action, cognizance draws nearer through stages to the action's internal mechanism and thus extends from the periphery . . . to the center [PIAG25: 334-335].

This phenomenon – failure leading to examination and cognizance – lends weight to an earlier analysis by Edouard Claparède that Piaget cites [PIAG25: 333]. Young children, Claparède found, are more aware of differences than of similarities between objects even at an age when these children are prone to make excessive generalizations. Cognizance, Piaget noted, “would thus appear a direct consequence of a failure to adapt and would be useless as soon as the functioning (here the generalizations based on similarities) adapts itself normally.” This, however, is not the complete story.

As has been shown in this book, cognizance is always triggered by the fact that automatic regulations . . . are no longer sufficient. New means must therefore be sought through a more active adjustment; this constitutes the source of thought-out choices, which presupposes consciousness. There is indeed the important factor of nonadaptation, but the actual (active or automatic) process of readaptation is of equal importance.

Moreover, the very fact that the regulations have this role shows that it would be quite wrong to think that cognizance resulted only from such lack of adaptation. Effective cognizance can occur very late as, for example, in walking on all fours or the use of a sling, without there being any lack of adaptation in these actions. Even more importantly, each time a subject wants to reach a new goal, he becomes conscious of it, regardless of whether success is immediate or achieved only after trial and error - but it is impossible to maintain that the choice (or even the acceptance, at the interviewer's suggestion) of a new goal is necessarily the sign of a lack of adaptation [PIAG25: 333-334].

Being frustrated in the achievement of one's goal is not the only trigger for cognizance. This, of course, is something our own common everyday experiences could have told each of us. But if “nonadaptation” of the means to the goal is not the only source of the progress of cognizance, from what else does this progress originate?

It is not difficult to anticipate what Piaget's answer will be. If lack of accommodation is not the source of cognizance in this second case, we are left only with assimilation. The reason given by Piaget for this case seems more a process of elimination than anything else and, as I am mildly critical of his explanation, we shall first allow Piaget to speak for himself in this. With the reminder that Piaget uses the words “concept” and “representation” to mean something different from the terminology of this treatise, here is his answer:

In this last case, if progress in cognizance no longer stems from the difficulties of the action, it can result only from the assimilating process itself. Assigning a goal for a specific object signifies the latter's assimilation to a practical scheme and, if the goal and the action's result are “cognizable,” while remaining generalizable in actions, the scheme becomes a concept and the assimilation becomes representative, that is, capable of an increasing number of evocations [PIAG25: 336].

Without knowing more precisely what Piaget means by “concept” it is difficult to grasp what this explanation is saying. What, for example, was the scheme before this transformation took place if it was not a concept? From Piaget’s earlier works, specifically [PIAG1], Piaget seems to have in mind something like the following. The scheme, as a mental structure, must have been constructed prior to this point (an obvious presupposition), but this does not mean the representation of the scheme is an objective representation. We will later see (Chapter 9) that the Organized Being is capable of entirely practical (non-objective) representations. Put another way, schemes constructed during the sensorimotor stage of development are structures in which there is no differentiation made between a thing to which it is applied and the means represented in the sensorimotor actions of the scheme. Other things can be assimilated into the scheme, as operational elements of the scheme, but this does not necessarily imply the Subject is yet capable of regarding the action of the scheme as something distinct from the growing inventory of things to which it applies. When Piaget says, “the scheme becomes a concept,” all that is meant by this is that the Subject re-cognizes the sensible appearance of the action of the scheme as an object separate and differentiable from the objects to which it has formerly been applied, i.e., *the action becomes an object in its own right*. Speaking figuratively, the target object becomes a variable, a “blank” into which the Subject can thereafter insert different objects of any suitable sort. The action of the scheme thereafter “maintains an identity” (so to speak) independently of the application. Seen in this way, the action-object is not a thing in a materially substantial sense, such as an apple or an elephant can be called “materially substantial”; Piaget calls the representation of this materially insubstantial thing a “concept.”

Piaget’s discussion of this idea seems to support the interpretation I have given it above:

From then on, as soon as one begins to compare different situations, problems inevitably arise. Why is it easier to use one object than another? Why is one way of using it more, or less, efficient than another? In these cases, the assimilatory process, promoted to the rank of an instrument of understanding, will simultaneously bear on objects and actions because of its continual two-way movement between observations of each. The mechanism of cognizance of the object must therefore extend into cognizance of the action, since each is equally dependent on the other. It is not that lack of adaptation (why is a certain method not successful?) no longer plays a role, but that this role is only momentary or local. The positive problems (the reason for the success) take on primary importance with the active adjustments during the subject’s attempts to find the solution [*ibid.*].

“Conceptualizing”, then, amounts to what we commonly call “abstract thinking” – the ability to regard “immaterial things” outside the context of what Piaget calls their “materially practical use.” For example, I can think *about* walking – describe it “visually” as (literally) a step-by-step process. But this abstract description of walking seems to have little to do with *actually* walking from the viewpoint that *when* I walk, I just walk. I could walk long before it entered my mind to look at what walking involves “theoretically.” Indeed, if I think about walking *while* I am

walking (as I do when, for instance, the sidewalk is icy), I do not walk *as naturally* as I do when I'm *not* thinking about walking.

This sums up Piaget's two "functional reasons" for cognizance. He called these reasons the "why" of cognizance, although it is clear from the above that this explanation is more of a "how" than a "why", e.g., how cognizance can be explained in terms of assimilation and accommodation. To view this in "why" form, we must state the question as, "Why does the *observer* regard the behavior of the subject as *conscious* behavior in these experiments?" It is because the observer can give a theoretical explanation in terms of the "functional reasons" of assimilation and accommodation. The Subject's behavior is conscious "because" his behavior can be explained operationally in terms of behaviors which show that he is able to distinguish between means and objects in pursuit of his goal.

The Mechanisms of Cognizance

"True" conceptualization, according to Piaget, is "a passage from practical assimilation (assimilation of the object into a scheme) to an assimilation through concepts" [PIAG25: 337]. We have still not given a very precise description of what Piaget means by a "concept" other than to tie it to schemes as "that which is signified by" the scheme. Rather than launch into a lengthy discussion of the details and fine points of Piaget's terminology¹, let us agree to regard, provisionally, this word "concept" in the same sense as it is used by Kant and in this treatise. In doing so, we will lose nothing vital from the discussion that follows.²

In describing "how" cognizance develops, Piaget summarizes ten general observations and findings that come out of the experimental work [PIAG25: 337-342]. These facts point to an overall conclusion that cognizance is a process by which concepts are elaborated and re-elaborated, gradually and by degrees, into increasingly more structured and detailed forms. There is, he says, "no intrinsic difference between cognizance of the action and awareness of what is happening outside the subject" [PIAG25: 342]. However, this does not mean conceptualization is either instantaneous or a particularly accurate representation of what the Subject is aware *of*. The child's description of what he did is often greatly at variance with what he actually did. In the set of experiments, the child is asked to think about what is going to happen before he actually performs the exercise. What the child *anticipates* is often quite different from what will subsequently take place, but the child often fails to perceive that there *was* a difference when he is later asked to describe what happened (even though his actions were successful and *not* in accord

¹ see J. Piaget and B. Inhelder, *Mental Imagery in the Child* [PIAG26: 380-383].

² Pragmatically, what a Kantian concept "does" and what a Piagetian conceptualized scheme "does" in the contexts of the two theories (Piaget's and Kant's), are not all that different in terms of observable behavior.

with his prior expectation of what would happen). As Piaget put it, the child appears to “see what he expected to see” rather than what actually took place.

Piaget notes that this can be viewed as “driving conflicts” between the child’s observations and their previous conceptualized scheme “back into the unconsciousness” (“putting it out of mind”). The child simply “distorts” his conceptualization of the observation to make it fit with his preconceived concept. (Piaget notes there is a parallel phenomenon that can take place in the “realm of affectivity” when an unconscious desire “comes into conflict with a conscious system”). To understand this we must bear in mind that the child’s conceptualization involves the construction of a concept and that this scheme-concept is, in a sense, “pinched off” from the “unconscious scheme” inasmuch as the unconscious practical scheme *includes the action* on the motor level (i.e., the child does not think *about* the action; he *acts*), whereas the concept is “freed up” from the actuality of performing the action.³ The perception of what he actually does is, obviously, incorporated into the practical scheme, but the conflicting factors in it are *not assimilated into the conceptualized scheme*.

Having said this, two things must at once be noted. First, this situation is obviously not permanent. With more practice, with more experience, and with the development of an overall more mature system of constructions (i.e., with the sort of global mental *development* that characterizes the child’s advance from stage to stage, e.g., preoperational thought to concrete operations), the concept can undergo multiple reconstructions until the initial “distortion” in the conceptualized scheme is corrected. Concepts, in other words, can be altered by accommodation through adaptation. Second, the characterization of the concept as “freed up” from the practical scheme *does not* mean there is no *connection* between the concept and the practical scheme. Although Piaget (like James) dislikes the Kantian terminology of a “manifold” and avoids phrasing things in these terms, his theory does in fact explicitly require and call for “reciprocal assimilation” between schemes [PIAG1: 230-236], and this reciprocal assimilation can hardly be viewed as anything other than as a *nexus* of a manifold of schemes.

The concept (or, more precisely in Piagetian terms, the “conceptualized scheme”) is thus a structure distinct from the practical scheme from which it originated but is nonetheless still connected to this practical scheme and can evoke the practical scheme in applying the “means” contained “in” the practical scheme to a wider variety of objects. It is in this sense that one could say that assimilating an object into a concept is a “goal-setting” process since the assimilation of an object in the concept *of an action* is more or less a kind of decision about *what to do* with regard to the object. The evocation of the practical scheme is, in effect, the actualization of the attempt to achieve the goal.

³ We will see later that concepts and motoregulatory schemes involve two different processes of judgment.

The “mechanism” of cognizance is, consequently, a process of construction and reconstruction of conceptualized schemes. The means of effecting this process is adaptation. In terms of conscious vs. unconscious structures, Piaget deems the practical scheme (the scheme that actualizes the action) as the “unconscious” structure, while the conceptualized scheme is the “conscious” structure. This distinction can be likened to the distinction between “the deed” and “the thought.” *Both* schemes are capable of being elaborated through experience, and it is not a requirement that the elaboration of one necessarily implies the elaboration of the other although, of course, over time one could expect this to occur. (As it states in the Arab proverb: repetition teaches even a donkey). Nor is it a requirement that the elaboration of the conceptualized scheme can only follow elaborations made to the practical scheme; the process, it seems, can run both ways save only that a conceptualized scheme must *first originate* from a practical scheme. If the elaboration of the conceptualized scheme precedes that of the practical scheme, this does not necessarily mean that both schemes will be elaborated *in precisely the same way*. The elaboration of the conceptualized scheme may be “wrong” while that of the “unconscious” practical scheme might “get it right” (i.e., achieve success).

One question raised by Piaget in this analysis is whether or not we should admit the idea of “degrees of consciousness.” He makes the hypothesis that we should do so. The question for us is: what does this idea mean? Given the discussion above, the explanation of this idea is straightforward. The concept (conceptualized scheme) is *not* a mere copy of the practical scheme (since it is prone to contain “distortions”) and, consequently, cannot be looked at as the “illumination” of the practical scheme. Details may be missing from the concept, and indeed the concept may contain details that are incorrect. (This does not prevent the practical scheme from being carried out). One can say that the “degree” of consciousness, in Piaget’s sense, is a measure of the how well the details of the practical scheme are accurately contained in the conceptualized scheme. To this I would like to add that “incorrect details” (mistakes) would also seem to “count” in any measure of the “degree of consciousness in” a concept; after all, the theory needs to explain our errors as well as our successes.

Observable Features and Inferential Coordinations

One of the facts most firmly established in Piaget’s study concerns what he calls the “direction” from which particular cognizance seems to “come” to the Subject. Putting it as simply as possible, the Subject’s cognizance of his *actions* appears to come as a result of his observation of the *object* and, reciprocally, his understanding of the object appears to originate from his analysis of his own means by which he attains his goal. Now it must be remembered that, initially, the

only knowledge of which the Subject is conscious is the goal pursued by the action and the result obtained. Furthermore, the means employed by the Subject remain, at first, unperceived, i.e. is “unconscious.” The children in Piaget’s study do not examine their means – become cognizant of their own actions – until led to examine these means by their observations of the object. However, once they begin to examine and become cognizant of their means, this becomes the basis for increased understanding of the object *through the inference of causal relationships between the means and the object*.

Because such a relationship cannot be *observed* by the Subject (a “causal relationship” is a supersensible idea), it must follow that these relationships are *inferred*. Put another way, the process giving rise to cognizance undeniably appears to *add something* not given through direct observation.

These findings bring to light two general processes. Firstly, there is a reciprocal but alternating action (with an interval of varying length between the two phases of the exchange) of the subjects' observations of the object on those of the action and vice versa. Then, with the establishment of a relationship between them, inferential coordinations follow. These both go beyond the scope of the observable features, allowing the subject to understand causally the observed effects, and simultaneously lead to a subsequent more subtle analysis of these features, thus maintaining and reviewing the preceding two-way movement. The speed of this dialectic of the observable features varies with the situation [PIAG25: 344].

What Piaget and his collaborators have succeeded in doing in this remarkable set of experiments is nothing less than to observe and record the behavior of their young subjects unambiguously caught in the act of *having ideas*.⁴ While the existence of ideas has, probably, been undoubted since the beginning of this treatise, and while the importance of this type of representation is so obvious as to not require further elaboration, the *demonstration* that behaviors which can be indicative of nothing else than the construction of ideas *are observable* is a remarkable scientific accomplishment of first-rate importance.⁵

In addition to the finding that there is a “direction” from which cognizance of actions and objects “come”, two other findings are noteworthy. The first is that the “inferential coordinations” (i.e., the ideas that relate the means and the object) “act only in the direction” from cognizance of the *action* to cognizance of the *object*. Piaget calls this an “asymmetry” since the sort of cognizance we have been talking about earlier is “two-way” in the sense that observation of the object leads to cognizance of the action *and* analysis of the action leads to greater cognizance of the features and characteristics of the object. But there is nothing in the object which can be observed that corresponds to the idea of a causal relationship between the conceptualized action

⁴ Recall that an idea is a concept of a supersensible object.

⁵ Although the *Dasein* of ideas is evident from introspection, the objective validity of the actual *Dasein* of ideas requires, according to the Critical theory, grounding in observable behavioral phenomena.

and the object. Rather, this “inferential coordination” (as Piaget calls it) must be *deduced* and this deduction extends the concept of the action beyond what is directly observable.

The second noteworthy finding is that, while it is clear that a process of *abstraction* is evidently involved in the process of cognizance, Piaget could distinguish two “types” of abstractions and finds another “asymmetry” relating to them. The first type of abstraction he calls “empirical abstraction.” Empirical abstraction is abstraction involving factual information or observable features. Any abstraction from objects is inherently “empirical” in this sense. On the other hand, abstraction from the coordination of actions is also possible, and here he finds a second “type” of abstraction which is not present in the case of target-objects. While abstraction can, of course, be made from observable features of actions (and this abstraction is empirical), he finds that the subjects can also make abstraction from the *inferences* they have drawn from the “ coordinations” discussed above. In the terminology of this treatise, this is abstraction from ideas. Piaget calls this second type of abstraction by the name *reflexive abstraction*.

Is there “really” a difference between “empirical” and “reflexive” abstraction? Piaget undoubtedly thinks there is. Are his proofs of this convincing? Certainly, insofar as the type of structure (sensible *vs.* supersensible object) is concerned. Does this, however, justify the distinction at more primitive levels of our theory? Piaget’s theory does not dive to these depths and so let us withhold judgment, merely keeping at hand the question of whether we must deal with one process of abstraction or with two.

Evolution of Actions and the Three Levels of Knowledge

It has likely become increasingly apparent in the discussion of Piaget’s findings given so far that *action* (that is, a practical scheme) in and of itself constitutes a kind of knowledge, even if this knowledge is “unconscious.” We could call this “practical know-how.” This is an idea we have used previously, in discussing what is meant by the term knowledge *a priori*, but Piaget’s study finds that practical schemes can and *must* likewise be regarded as “know-how” (although clearly not *a priori* know-how in every instance⁶).

Piaget’s findings show that the development of cognizance (conceptualized schemes) “on almost every point” [PIAG25: 346] lags behind the development of the practical schemes of action. Thus, “material action” (another phrase Piaget uses interchangeably with practical scheme) and “cognizance” constitute two distinct “levels of knowledge.” The former is knowledge on the “unconscious” plane, while the latter is knowledge that has “become

⁶ Innate sensorimotor *reflexes* are the exceptions to this. These reflexes *are* to be regarded as *a priori* since all of the schemes constructed during the sensorimotor development stage originate in them [PIAG1].

conscious.” (Recall that the division between the unconscious and the conscious is merely a logical division; Piaget’s purpose is to find a way to mark and preserve this merely logical distinction). In making this distinction we must also bear in mind that Piaget takes it for granted that the child’s “observations of the object” (that is, his observations of the *results* of the action) are also “conscious knowledge.” Piaget does not pursue *this* aspect of “cognizance” – perhaps feeling that nothing need be said of it – but we should realize there is an unstated implication here, namely that the conceptualized scheme seems to not be the *only* way in which cognizance can occur.

If we are to regard this division between practical and conceptualized schemes in terms of two levels (the lower and the higher, respectively), we must also take note of the two-way interaction that appears to take place between them. In other words, it is observed that the action (the practical scheme) is not a static structure and can itself “evolve.” We discussed earlier the on-going elaboration that is carried out on the conceptualized scheme. Similarly, it is hardly an earthshaking observation that the practical schemes can themselves be elaborated (witness a child learning to walk). The question is: does this elaboration take place entirely at the “unconscious” level or is there a kind of “feedback” (reciprocal assimilation) taking place between the unconscious practical level and the conscious level of cognizance?

Piaget argues that the results of these experiments provide an indication the latter is the actual case *in at least some circumstances*. He does not conclude this *for a fact* on the basis of these experiments, but the data does not rule out the possibility. The argument in favor runs thus. In the development of cognizance there is clear evidence of a *third* “level” – that of the inferential coordinations (or, as I have called them, the ideas). Piaget calls this the level of the *reflected abstraction*.⁷ The child comes to have cognizance not only of what his action scheme *is*, but also becomes cognizant of a relationship between his actions and their effects on the object. But, if this is the case, it is only going a small step farther to infer that by *changing* the action one can change the result. There might therefore be a “reverse” direction, from the level of “reflected abstraction” to conceptualized scheme to practical scheme, at work in the elaboration of the practical scheme. If this is indeed the case then the conceptualized scheme can undergo accommodation stemming from either the analysis of the means (i.e., “up” from the practical level) or from a synthesis originating from ideas (i.e., “down” from the reflected abstraction).⁸

There is little room to doubt Piaget thinks that this is indeed what actually takes place. However, he notes that this finding is *not* unambiguously established in *The Grasp of Consciousness* and points us toward another study which, he tells us, will treat this question. We

⁷ Piaget uses “reflected abstraction” to denote a “conscious” reflexive abstraction [PIAG25: 346].

⁸ In Kantian terminology accommodation of concepts of the first type is called a prosyllogism; accommodation of the second type is called an episyllogism.

shall, therefore, place this question in with the rest of our growing collection of empirical issues and postpone further discussion until later.

Piaget does make one other interesting comment with regard to the evolution of actions. This is on the connection that practical schemes (and their accommodation) share with their neurological substrate:

As for the level of the action, the coordinations that it constructs are hardly radically new, but they are derived through reflexive abstraction from earlier mechanisms, such as the processes involved in all regulation. Although the action itself cannot be called a true cognizance since it is not yet conscious, in relation to its neurological substrate it constitutes a progressive conquest, with reconstructions and enrichments, analogous to conceptualization in relation to action [PIAG25: 348].

It has long been known to neuroscience that the development of motor skills is accompanied by changes at the biological level.¹ Piaget's model provides us with a structural perspective on empirical Nature for addressing one of the most puzzling and long-standing issues dealing with the phenomenon of mind, namely the Nature of the so-called mind-body interaction.

When one regards the division between *nous* and *soma* as a real division, the problem of communication between "mind" and "body" defies solution. The problem of the *possibility* of "communication" between *nous* and *soma* vanishes in the Organized Being model since this division is merely logical (and viewing the division as "substantially real" is without objective validity). This still leaves us, however, with one very important issue. Viewing the Organized Being as a faculty, *where does the connection between nous and soma logically belong?*

Considered from a purely empirical perspective, the number of logically possible answers to this question is staggering. It is a simple matter of common experience that merely thinking about performing some physical act and actually performing this act are two entirely different things. Yet it proves to be impossible to detail, simply by introspection, what is different between, say, just planning to raise one's hand without doing so and actually raising the hand. We pass this off by calling it "will" (e.g., "when my hand actually raises, it is because I *will* that my hand be raised").

If we adopt Piaget's method of distinguishing between conscious and unconscious mental structures, the problem is immediately simplified. If we are not cognizant of "what it is" that makes the difference between actually raising a hand and planning to raise the hand, it logically follows at once that this "missing link" belongs to the unconscious part of the manifold of mental structures. Piaget's practical schemes are, of course, of precisely this nature.² Keeping in mind

¹ see Claude Ghez, "The Cerebellum," in [KAND], pp. 626-646.

² We are in no position at this point to assume they are the *only* such structures.

that Piaget's division between conscious and unconscious mental structures is strictly a *logical* division, and given that the very definition of a practical scheme is a scheme that actually encompasses the *performance* of an action, it follows that *the logical connection between nous and soma occurs at the point of application of the practical scheme*. This conclusion places the point of connection at the junction of a non-objective process of *nous* with *psyche*. What this junction point is we will see in Chapters 19 and 20.

Processes of Interiorization and Externalization

We have seen that the “grasp of consciousness” involves the construction (and re-construction) of mental structures (schemes) that are either directed at actions (practical sensorimotor schemes and conceptualized schemes of action) or target-objects (including “inferential coordinations” as “physical” explanations). Piaget refers to these mental activities as the processes of *interiorization* and *externalization*, respectively. In effect, these processes drive the development of what I prefer to call a manifold of schemes and are instrumental, through reciprocal assimilations, in producing the *nexus* in this manifold. The processes of interiorization and externalization do not go on independently of each other for, in Piaget's words, “any progress of one leads to progress of the other. However, after detailed study it becomes clear that it is more accurate to speak of a succession of reciprocities than of an exact symmetry” in these interactions [PIAG25: 350].

Piaget was able to see in these findings a close link to many of his earlier empirical findings concerning the sensorimotor development stage in infants and the gradual elaboration of childish logic and thinking in the later stages. Of the process of interiorization, he writes:

As has been seen at the level of the material action, the interiorization process leads from the boundaries between the subject and object to reciprocal assimilations of schemes and to increasingly central coordinations . . . These latter coordinations result in the construction of a sort of logic of schemes prior to language and thought. At the heart of these schemes are already found the main types of connections . . . in short, the main ingredients of future operatory structures.

At the conceptualization level, the interiorization movement is initially marked by a general growth of cognizance of the action, thus of the interiorization of the material actions into meaning-bearing representations (such as language and mental imagery). However, from the outset, and with progress of the action itself, this cognizance becomes polarized toward the two possible types of abstractions. The empirical abstraction then provides a conceptualization which, in a way, is descriptive of the observable features of the action's material characteristics. The reflexive abstraction derives sufficient data from the coordinations of the action to construct the inferential coordinations. At the concept level, the latter enable these observable features (which are, as seen above, constantly in interaction with those of the object) to be both linked and interpreted [PIAG25: 350-352].

As for the process of externalization,

Right from the sensorimotor levels, the externalization process is marked by increasingly advanced accommodations of assimilatory schemes to objects, followed finally by the construction of instrumental behaviors, of spatio-temporal physical structures . . . and of an objectified and spatialized causality [PIAG25: 351].

Piaget notes some features that these two processes share. First, the ability of the subject to make accommodations is not unlimited. The more a given scheme is linked to other schemes, the more flexible this scheme becomes in being applied to objects. On the other hand, the more accommodations that are required of it, “the more these variations favor reciprocal assimilations.” Figuratively speaking, if a scheme is in frequent need of modification (accommodation), it tends to become a kind of link among other schemes – calling on them for help, so to speak – since, as Piaget has noted elsewhere [PIAG19: 23], a scheme that proves incapable of becoming integrated as a kind of subsystem within the whole of the manifold of schemes is “carried off in a general dislocation comparable to the death of an organism” which cannot adapt itself to its environmental conditions. Put another way, the adaptation cycle will “rupture” if a scheme can neither accommodate nor form reciprocal links to other schemes when circumstances require [PIAG19: 33].

With this, let us conclude for now our discussion of Piaget’s formulation of the psychology of consciousness. The findings we have summarized here will prove to be of value in our deduction of the faculty of pure consciousness. However, it is also true there are “why?” questions we must ask for which an empirical model deduced from observable behaviors cannot supply all the answers.

§ 4.4 Kant’s Remarks on Consciousness

This section bears the title ‘remarks’ rather than ‘theory’ for a simple reason: while Kant often invoked the idea of consciousness in his theoretical discussions, he never did get around to providing a systematic formulation of the faculty of consciousness. Perhaps he felt the idea was so self-evident that it did not require elaboration; perhaps he felt that its elaboration would require too much preliminary discussion of empirical matters (he was, after all, occupied with rescuing metaphysics from Hume). Whatever the case may be, he left us only with scattered remarks and observations rather than a finished theory. Nonetheless, these remarks *do* provide some clues as to the role and Nature of consciousness as it is to be viewed under the Copernican hypothesis.

With the exception of his treatment of transcendental apperception in *Critique of Pure Reason*, most of Kant’s explanatory remarks were made in the course of his lectures on

metaphysics and logic and in his unfinished final work, the *Opus Postumum*. These remarks, for the most part, concern empirical rather than pure consciousness. Nonetheless, they are still useful for our purposes since the theory of pure consciousness can have validity only to the extent that it provides the transcendental ground for the phenomena of empirical consciousness. Put simply, we are not conscious of pure consciousness and the idea of pure consciousness is merely the metaphysical and transcendental idea of the structure of inner sense.

As we begin this discussion, I think it proper to say up front that Kant himself never called “pure consciousness” the representation of transcendental apperception. In point of fact, Kant made no reference whatsoever to anything called “pure consciousness” other than indirectly through the term transcendental apperception. Of course, Kant also did not try to present a clear and formal picture of the tangle of “faculties”, “powers”, and other elements he discussed in his three Critiques and other works. A *representation* of the idea of transcendental apperception is necessary only if one wishes to present a systematic picture of this. It is for this reason that this treatise distinguishes between transcendental apperception and its representation, which we call the faculty of pure consciousness.

Having said this, let us now see what Kant *did* say on the topic of consciousness. Given the more or less scattered manner in which Kant chose to make his various remarks, it seems best to organize our examination of them around the major themes and findings that emerge from the views of consciousness presented by James, Freud, and Piaget above. First, however, let us look at Kant’s remarks on the general nature of empirical consciousness.

Remarks on Consciousness in General

The earliest general statements we have come from notes taken in the mid-1770s of a lecture Kant gave on the topic of psychology.

The substratum which lies at the ground and which expresses the consciousness of inner sense is the *concept of I*, which is merely a concept of empirical psychology. . . I conclude the *Dasein* from the experience. [KANT19: 44 (28: 224)].

As intelligence, I am a being that thinks and wills. *But thinking and volition cannot be intuited*; thus I am no Object of outer intuition. . . I am conscious of two kinds of objects:

1. of my subject and my state;
2. of things outside me.

My representation is directed either to objects or to myself. In the first case I am conscious of other cognitions; in the second case of my subject. . . Consciousness is a knowledge of that which belongs to me. It is a representation of my representations, it is a self-perception, Perception [KANT19: 46 (28: 226-227)].

The characterization of consciousness as “knowledge of that which belongs to me” was echoed slightly more than one century later by William James. Note the entirely empirical nature of this description of consciousness. The phrase “I conclude the *Dasein* from the experience” is entirely consistent with Piaget’s observations on infantile behavior. The infant starts life with no idea of what to make of the barrage of sensations he feels; slowly, from this kaleidoscope of perception, he comes to evolve his world model in which he places himself as an object among objects.

Like James, Kant classified “consciousness” in terms of several different kinds of *context*, although Kant’s classification differs significantly from that of James’ division of consciousness into material, social, spiritual, and pure Ego elements. To Kant, consciousness could be divided into [KANT19: 46 (28: 227)]:

- 1) Logical consciousness (*conscientia logica*) - consciousness of abstract reasoning, e.g., consciousness of numbers or other “abstract” ideas;
- 2) Psychological consciousness (*conscientia psychologica*) - consciousness of one’s subjective Self;
- 3) Objective consciousness - the conscious knowledge of objects; and
- 4) Subjective consciousness - consciousness of one’s own state of perception.

Kant did not elaborate on these four contextual divisions of consciousness, nor does this division seem to have much obvious application other than as an illustration. We may, however, take note that these four contexts are arranged as Quantity, Quality, Relation, and Modality, respectively.

Many of the instances where Kant talks about what consciousness “is” occur in the context of when he is discussing the “soul.” We already have an idea, from the doctrine of Rational Psychology, of how we may *not* regard the idea of the soul. How, then, does Kant use this word in any positive context? Some insight into this question can be gained from a lecture remark made in 1783:

The word soul actually means the interior of a thing, e.g., with a feather or a cannon [KANT19: 246 (29: 876)].

To the native English-speaking reader, this seems an odd remark. However, as noted by Ameriks and Naragon, Germans use the word *Seele* (soul) to refer to such things as the cavity of a gun, the inner strand of a cable, the sound post of a stringed instrument, and so on [KANT19: 584, note 169]. This is really no more odd than when, in English, we say of someone, “he is the soul of discretion,” or some similar remark. Seen in this perspective, the word “soul” refers to the idea of one’s Self as logical Subject.

[What] the identity of its Self amounts to is difficult to know; everything is referred to this, everything can change, only consciousness and apperception, or the capacity for referring representations to one’s Self, remains [KANT19: 248 (29: 878)].

In this statement Kant expresses an idea very much similar to James' idea of consciousness in terms of its "continuity" in sensations and feelings. Consciousness of the Self is that which remains (or seems to remain) unchanged amidst the ever-changing whirl of appearances.

One kind of representation can accompany all our representations; this is the representation of our self. The representation of our self is called consciousness, *apperceptio* [KANT19: 344 (28: 584)].

Kant remains quite consistent in this view of empirical consciousness. Its role in theories is a fundamental one, namely that of the substrate or "condition" for the making of representations. In his lectures on logic we find the following remarks.

Consciousness accompanies each of our states; it is, as it were, the view of ourselves [KANT8a: 28 (24: 40)].

All our knowledge can be considered in two respects.

1. In respect to Object. This is representation.
2. In respect to Subject. This is the consciousness of the representation.

. . . Consciousness is the standard condition for all logical form in our cognitions [KANT8a: 265 (24: 805)].

All our knowledge has a *twofold* reference, *first* a reference to the *Object*, *second* a reference to the subject. In the former respect it refers to *representation*, in the latter to *consciousness*, the universal condition of all cognition in general. - (Consciousness is really a representation that another representation is in me) [KANT8a: 544 (9: 33)].

These remarks cover a span of years from the early 1770s to the mid-1790s.

Consciousness and "State of Mind"

Running throughout the theories of consciousness in its treatment by James, Freud, and Piaget is a more or less vaguely expressed supposition that consciousness in general is representative of a "state of mind." In James' theory this is most clearly exhibited in his discussion of attention. What we "attend to" is dependent upon our "interests" and the *way* in which we attend to things varies according to whether we are in anticipation of something occurring, whether our attention is "passive immediate sensorial attention" or some other variety, and so on. For Freud, this "state of mind" consists of two major divisions, the conscious and the unconscious. "Repressed memories" and so on – i.e., the state of the manifold of representations – have a direct bearing on the entire subsequent mental behavior. This appears again with Piaget, who expresses the state of mind not only in terms of practical and conceptualized schemes but also in terms of the structure

of these schemes themselves.

For Kant this idea of a “state of mind” takes the shape of the idea of one’s “inner sense”:

Inner sense is the consciousness of our representations themselves. (Apperception is the ground of inner sense) [KANT19: 250-251 (29: 882)].

Consciousness stands over the entire higher faculty of knowledge as the ground. Consciousness is distinguished from the senses [KANT19: 346 (28: 585)].

The consciousness of the unity of the manifold according to concepts is logical function [KANT19: 453 (29: 984)].

Perception of an object is a consciousness of the object through sensation [KANT19: 467 (29: 999)].

(It) is preferred in systems of psychology to toss in inner sense with the power of apperception (which we carefully distinguish) as if they were of the same sort.

That which determines inner sense is understanding and its original capacity of combining the manifold of intuition, i.e., of bringing it under an apperception (as that on which its very possibility rests). . . . (Thus) its synthesis, considered in itself alone, is nothing other than the unity of the act of which it is conscious as such even without sensibility, but through which it is capable of itself determining sensibility internally with regard to the manifold that may be given to it in accordance with the form of its intuition [KANT1a: 257 (B: 153)].

This idea of inner sense is the idea of a condition on all conscious representations – an idea which in more modern terminology is that of the structure of a mental *state* of the Subject. That the representative *function* of inner sense takes its “unity of consciousness” from the ground of the transcendental apperception is made clear in *Critique of Pure Reason*:

The general first principle of all three analogies³ is based on the necessary *unity* of apperception with regard to all possible empirical consciousness (of perception) *at every time* . . . For the original apperception refers to inner sense (the quintessence⁴ of all representations), and indeed *a priori* to its form, i.e. the relationship of the manifold of empirical consciousness in time. Now in the original apperception all of this manifold . . . is to be unified; for this means the *a priori* transcendental unity of the same, under which stands all that shall belong to my . . . knowledge, thus can be an object for me [KANT1a: 296-297 (B: 220)].

To have a theory we must be able to represent this “transcendental unity” or “oneness” which is asserted “*a priori*”; this is why we introduce the distinction between empirical consciousness and the *representation* of transcendental apperception (pure consciousness). This need is a simple requirement of system theory; before one can represent the state of any system, one must first represent the structure in which the state is presented.

³ Kant is referring here to the Analogies of Experience, which constitute one part of the metaphysics proper of Rational Physics. We will discuss the details of the Analogies of Experience in Chapter 6.

⁴ “Quintessence” in this context means that in which the “embodiment” or concrete expression of representations is possible.

Consciousness and “Feeling”

The idea that “feelings” of various kinds are among the factors that make up the mental state and are among the things of which we are conscious is another common theme among all the different views of consciousness we have explored. In his stream-of-thought model, James speaks of “feelings of tendency” and “interests”. He tells us, “this central part of the Self is felt.” Freud speaks of the “discord” one would feel if repressed memories were to become conscious. The idea of *feelings* obviously stands in some kind of relationship to the idea of *emotions*, but “emotion” is not exactly what the idea of “feeling” expresses. Indeed, psychology is not too sure what to make of the phenomenon of emotion and lacks even a generally accepted definition of what an emotion is [CARL: 4-7]. Piaget tends to avoid the term “emotion” altogether.

The role of “feelings” in Piaget’s theory does not come through clearly in *The Grasp of Consciousness*, although it seems clear enough that “feelings” are ‘in there somewhere’ in such ideas as ‘failure to adapt’ and cognizance of ‘success or failure’. (His subjects, after all, were young children). Two points are worthy of note in this regard. First, Piaget preferred the term *affectivity* to the term “feelings”. Feelings, in his view, are part of but do not make up the entirety of affectivity. Second, affectivity is seen to play a fundamental role in intelligence. His clearest expression of his views on this can be found in *Intelligence and Affectivity*, a book produced from a series of lectures Piaget gave on the subject at the Sorbonne, first published in 1954. Professor Philip A. Cowan gives a precise statement of the role Piaget saw for affectivity:

Piaget argues that affect is related to the *function* of intelligence - acting as an energizing force emerging from the disequilibrium between assimilation and accommodation. Cognition provides the *structure* for this energy. . . . Affect as “energetics” can combine with cognitive structural schemes to focus the individual’s interest on a specific thing or idea. Because it influences an individual’s choice of whether to exert intellectual effort, affect serves as a regulator of action. Because it influences the choice of specific goals, affect also plays a role in determining values (described here as internal interest projected outward so that things and people appear to have a certain worth). By regulating action and determining values, affect influences our tendency to approach or avoid situations; in turn, this influences the rate at which we develop knowledge, accelerating it in some areas, slowing it down or preventing it in others [PIAG16: xi].

This statement is, of course, Cowan’s interpretation of Piaget’s work; however, his view and my own interpretation of *Intelligence and Affectivity* are in complete agreement on this point and Cowan’s statement is, in my opinion, a true and accurate accounting of Piaget’s theory.

Kant, likewise, acknowledged the role of affectivity in inner sense.

I feel myself either as passive or as self-active. . . . Three things belong to my capacity:

1. representations;
2. appetites, and

3. *das Gefühl der Lust und Unlust* [KANT19: 47: (28: 228)].

My use of the German phrase in (3) requires an explanation. *Das Gefühl der* is “the feeling of.” The two words that follow, *Lust* and *Unlust*, do not travel over into English quite as well, although “lust” would probably serve for *Lust* were it not for the more or less unsavory connotation this word carries, particularly in its sexual connotation, in present-day English. When Kant’s work was first being translated into English the Victorian Era sensibilities of the time made it unthinkable to render *Lust* as “lust.” Consequently, *Lust und Unlust* were generally rendered as “pleasure and pain” or as “pleasure and displeasure,” and this tradition has continued to the present day.¹

However, I am as convinced as I can be this is a wholly erroneous and misleading translation of Kant’s idea of *das Gefühl der Lust und Unlust*. First, neither “pain” nor “displeasure” are correct in any way as a translation of *Unlust*. The connotations of *Unlust* include “listlessness” and “reluctance” – neither term related even remotely to either “pain” or “displeasure.” Since Kant obviously intended *Lust* and *Unlust* to be opposites of each other, it follows that “pleasure” cannot be an accurate translation for *Lust*. Furthermore, a great deal of Kant’s *Critique of Judgment* simply does not make good sense if *Lust* and *Unlust* are regarded as “pleasure and pain” or “pleasure and displeasure.”

Pleasure and displeasure are more or less ‘passive’ ideas. One *enjoys* pleasurable feelings and one *dislikes* feeling displeasure. In both cases these ideas convey a state of being which, by itself, denotes a sense of the *here and now* and a connotation of being satisfied or not being satisfied. But *Lust* and *Unlust* apply to *action oriented* feelings. *Lust* has the connotation of a kind of motivated *wanting*, of feeling “up” for something in the sense of the colloquialism “I’m up for doing that!”² These are the connotations of *Lust* that more properly coincide as the idea opposite to *Unlust*.³ Interest, inclination, feeling motivated towards – all of these are proper connotations or implications of the word *Lust*, and all of these fit better with *Unlust* (listlessness, reluctance, aversion).

“Lust,” on the other hand, denotes in English not merely an inclination toward but an *extreme* inclination towards something. Thus “lust” probably goes too far in the other direction as a term for translating *Lust*; there appears to be no single English word that properly translates the idea Kant is using. *Lust* carries the idea of an *energizing* feeling, motivating the individual to take action to realize something, just as *Unlust* denotes the opposite – a feeling of reluctance to take

¹ None too surprising, ‘pleasure’ and ‘pain’ carry ideas much more closely suited to Locke’s philosophy and the tradition of British empiricism that evolved from Locke’s work.

² This interpretation of *Lust* I owe to my friend and colleague, Professor Axel Krings.

³ “To take pleasure in” is *one* translation of the idea of *Lust*, out of many, but as I have noted this connotation does not at all fit in opposition with *Unlust*, and it is not general enough to convey the idea.

action or a spur to take action for the abolition of something. The idea of *Unlust* is also conveyed in the phrase, “I’m not in the mood.” Thus, *Lust* and *Unlust* are ideas that lie quite close to Piaget’s idea of feelings as “energetics” – a relationship we will discuss at length in Chapter 15. Rather than using words that poorly translate these ideas, in this treatise I will simply keep the German words as they are. Under this convention, (3) is “the feeling of *Lust* and *Unlust*.” I will maintain the capitalization and the italic font for these words so that we do not enter into any confusion between the words “*Lust*” and “lust.”⁴

In contrast, the word *appetite* in (2) has more of the connotation of “something wanted” upon which one might carry out an action.

The *appetitive power* is either a *higher* or a *lower* appetitive power. The *lower* appetitive power is a power to desire something so far as we are affected by objects. The *higher* appetitive power is a power to desire something from ourselves independently of objects [KANT19: 48 (28: 228)].

The principal difference between “appetite” and *Lust* is that the latter implicates a *wholly* subjective feeling which in itself has no objective content, while “appetite” implicates a feeling that has become connected as some practical representation of a purpose. The conscious presentations of these two through subjective “feelings” will be called *affective perceptions* in this treatise.

As we will see, affective perceptions play a fundamental role in consciousness and in the dynamics of cognition. In this, the ideas of Kant and Piaget are much alike. For those who have only read *Critique of Pure Reason*, this is an aspect of the Critical Philosophy easily overlooked altogether. Kant’s style of writing is sufficiently obscure and difficult that this point can be overlooked even in *Critique of Judgment*, which even today is thought by many to be nothing more than a theory of aesthetics in art. It is little wonder that in his *dilettantism*, Nietzsche – whose passions and whose disdain for logic fueled his neurotic egotism – would write⁵

Learning to *think*: in our schools one no longer has any idea of this. Even in the universities, even among the real scholars of philosophy, logic as a theory, as a practice, as a *craft*, is beginning to die out. One need only read German books: there is no longer the remotest recollection that thinking requires a technique, a teaching curriculum, a will to mastery - that thinking wants to be learned like dancing, *as* a kind of dancing . . .

That the Germans have been able to stand their philosophers at all, especially that most deformed concept-cripple of all time, the *great* Kant, provides not a bad notion of German grace. For one cannot subtract dancing in every form from a noble education - to be able to dance with one's feet, with concepts, with words: need I still add that one must be able to do it with the pen too - that one must learn to *write*?

⁴ For purposes of pronunciation, *Lust* is pronounced "loost" - rhyming with "roost."

⁵ Friedrich Nietzsche, *Twilight of the Idols, or, How One Philosophizes With a Hammer*.

Kant described the role the feeling of *Lust* and *Unlust* plays in the dynamics of cognizance in a lecture delivered in the early 1790s:

Feeling subsists in the relationship not to an Object but to the entire Subject. *Lust* and *Unlust* are not at all cognitions. The capacity of discrimination of representations in so far as they modify the Subject is the capacity of *Lust* and *Unlust*. . . The feeling of the promotion of life is *Lust*, and the feeling of the hindrance of life is *Unlust*. *Lust* is when a representation contains a ground to be determined to produce again the same representation or to continue it when it is there [KANT19: 346 (28: 586)].

(Rendering *Lust* in the traditional way, as “pleasure”, would certainly make Kant out to be an Epicurean in this remark).

While feelings of *Lust* and *Unlust* are not objective perceptions, they belong nonetheless to representation in general. Kant remarked upon this point in his lectures on logic in 1792:

To our cognition belongs two parts, *intuition* and *concept*. Representations can also be related to something other than cognition, namely, to the feeling of *Lust* and *Unlust* (the way in which we are affected by things) [KANT8a: 440 (24: 701)].

These remarks illustrate quite clearly that feeling belongs to inner sense and, hence, also to the organization (faculty) of consciousness.

Consciousness and Receptivity

The idea that mind apparently receives data from the senses is so self-evident as to be unremarkable (provided we do not concern ourselves with the “mind-body problem”). However, the studies cited by James and Freud illustrate that this seemingly simple power of mind has a great deal more to it than typical experience suggests. Nothing serves to better illustrate this than the anæsthesia symptoms of conversion hysteria. In the simple Lockean picture of “sense impression” the stimulation of the senses is presumed to have a kind of direct path to the mind such that sensorial stimuli “appear” at once in consciousness. This view is convincingly refuted by the phenomena of conversion hysteria, from which we can conclude that mind seems to have something to say about when and how sensorial stimuli will become perceived in consciousness.

Far from an “imprinting” or “impression” of sensorial stimuli on the mind, the empirical evidence illustrates that we must pay attention to the issue of how mind comes to be affected by corporeal sense. We call this the phenomenon of *receptivity*.

Everything that is sensible rests on receptivity . . . Receptivity - receptiveness - is the capability or possibility to be affected [KANT19: 344-345 (28:584)].

Receptivity, as Kant describes it, is merely the ability for mind to receive “sensible” data, i.e., for one’s inner state to be affected in such a way. Feelings (in the sense described above) as well as sensation (the data of the senses that go into the makeup of objective perceptions) make up this “sensuous data.” In this view, receptivity pertains merely to the possibility for mind *to be affected*. He calls the *manner* or *mode* in which we are affected (i.e., the characteristics of the representations that result) *sensibility* [KANT1: 48 (B: 33)]. In terms of the organization of this capacity of mind, receptivity can be called the general *faculty*, whereas sensibility refers to the matter and form of the sensible representations.

The possibility of an experience in general and cognition of its objects rest on three subjective sources of knowledge: *sense*, *imagination*, and *apperception*; each of these can be considered empirically, namely in application to given appearances, but they are also elements or foundations *a priori* that make this empirical use possible. *Sense* puts forth the appearances empirically in *perception*, the *power of imagination* in association (and reproduction), *apperception* in the *empirical consciousness* of the identity of these reproductive representations with the appearances, through which they were given, hence in *recognition* [KANT1a: 236 (A: 115)].

Some commentators have called Kant’s ‘sensibility’ a faculty. This is quite wrong. The *faculty* is receptivity. Sensibility, when regarded in context with an ability to make representations, is “passive” from the viewpoint that it must be “given” its determinable (i.e., its “input data”) and can not spontaneously “create” this data out of nothing. The representation made (the determined “output”) is therefore merely a kind of transformation performed on the given “data.” However, nothing in this implies that the transformations effected as sensibility are *fixed* and *unvarying*. We have every justification for regarding receptivity as an “active” faculty from the viewpoint of the possibility that the transformations effected in sensibility may well depend on the Subject’s state of mind or inner sense. It would be strange indeed if the power of adaptation did not extend to receptivity.

Kant did not treat this facet of receptivity in *Critique of Pure Reason* since this work dealt only with foundations – that is, did not go into “merely empirical” factors concerning cognition [KANT1a: 150 (B: 26-27)]. However, it is beyond reasonable doubt that he never intended for us to view sensibility as “fixed” in its function. Psychology could hardly be said to be in even its infancy in Kant’s day but, such as it was at the time, Kant had at least some familiarity with it:

The illness of hypochondria is such: that certain inner, bodily sensations do not only disclose an actually existent ailment in the body, but they can also serve to allow it because human nature . . . can strengthen or sustain a feeling by centering attention on certain local impressions; on the other hand, either intentional distractions, or abstraction caused by other distracting occupations, may weaken the symptoms and, if such abstraction becomes habitual, the illness may disappear altogether [AK7: 212].

I have remarked in another writing [*Von der Macht des Gemüths*] that averting attention from certain painful sensations, and exerting it on any other object voluntarily grasped in thought can

ward off the painful sensations so completely that they are unable to break out into an illness [AK7: 212fn].

By modern standards Kant knew little about empirical psychology, but that is not the point. The point is that receptivity must be a faculty capable of adaptation, particularly in that aspect of sensibility we join to empirical apperception, if empirical effects of mind on sensibility, such as that noted above, are to be possible. The adaptability of receptivity must, in other words, be viewed as the transcendental ground for these effects.

Consciousness and Spontaneity

Spontaneity, the ability of mind to produce representations not given through mere analytic representation of given data of the senses, is a power both James and Piaget agree is exhibited by mind. James sees the evidence for this in the phenomenon of attention; Piaget sees it in the ability of his subjects to make “inferential coordinations.” The idea of spontaneity is closely linked to the idea that mind is *active* – that it *does* something – and that what it does directly bears on how the Subject perceives his world. Strict empiricists, of course, also hold that the mind is “active” but, since Locke, have tended to view this activity as no more than “placing ideas side by side, comparing them, combining or associating them” and so on. In this activity, however, Locke and those who came after him denied that anything essentially *new* is produced in this process. Thus, it is spontaneity that draws a most clear distinction between the empirical and associationist views and those of James, Piaget, and Kant.

Our cognition springs from two fundamental sources in the mind, the first of which is the reception of representations (the receptivity of impressions), the second the ability for making out an object by means of these representations (spontaneity of concepts); through the first an object is *given* to us, through the second it is *thought* in relationship to that representation (as a mere determination of mind) . . .

We will call the *receptivity* of our mind to receive representations insofar as it is affected in some way *sensibility*: therefore by comparison the capacity for bringing forth representations itself, or the *spontaneity* of cognition, is *understanding*. It comes along with our nature that intuition can never be other than sensible, i.e., that it contains only the way in which we are affected by objects. The capacity for *thinking* of objects of sensible intuition, on the contrary, is understanding. Neither of these properties is to be preferred to the other [KANT1a: 193 (B: 74-75)].

We have seen how Piaget’s theory of cognizance involves spontaneous activities of construction and re-construction (conceptualized schemes), and that this conceptualizing process appears to work “from the periphery to the center” – i.e., from goal and result, to conceptualizing the practical scheme, to analysis of the conceptualized means, to conceptualizing the object, etc. There is a very interesting similarity between Piaget’s theory of this interaction between object and subject and a remark made by Kant in one of his lectures, given in the mid-1790s, on the act

of *nous* in re-presenting one of its representations:

This act of the mind can be described as something in me that refers to something else. Now this reference of this something other in me is representation taken subjectively. The representation is aimed in part *at the Object*, to which I am referring, in part *at that action of the mind* through which I compare something in me with the Object. . . This latter is called consciousness or the representation of myself insofar as I exhibit the representation of the representation to myself. One is nevertheless not always conscious of the representation, but can nevertheless become conscious of it at any time. Consciousness is also called apperception, which accompanies the represented Object [KANT19: 441 (29: 970)].

That mind appears to possess a power of spontaneity seems evident from the experimental research of Piaget and the empirical reflections on attention provided by James. This, of course, raises a deeper question – which we mentioned briefly earlier – namely, does spontaneity imply that mind must be regarded or described in some way as having the power to act as an “original force”? James put the question this way:

When, a few pages back, I symbolized the "ideational preparation" element in attention by a brain-cell played upon from within, I added "by other brain-cells or by some spiritual force," without deciding which. The question "which?" is one of those central psychologic mysteries which part the schools. When we reflect that the turnings of our attention form the nucleus of our inner self; when we see (as in the chapter on the Will we shall see) that volition is nothing but attention; when we believe that our autonomy in the midst of nature depends on our not being pure effect, but a cause . . . we must admit that the question whether attention involves such a principle of spiritual activity or not is metaphysical as well as psychological, and is well worthy of all the pains we can bestow on its solution. It is in fact the pivotal question of metaphysics, the very hinge on which our picture of the world shall swing from materialism, fatalism, monism, towards spiritualism, freedom, pluralism, - or else the other way [JAME2: 291].

As was mentioned earlier, James comes to no conclusion on this “central psychologic mystery”; he merely points out that materialism, empiricism, the automaton-theory, etc. have not settled the issue and that room remains for the possibility of “free will.”⁶

Piaget also comes to grips with the “problem of the will”; unlike James, he does not see the need for or the use of grappling with the “other brain-cells vs. spiritual force” question if one properly *defines* what one means by the term “will.” This is not entirely an unexpected position, given Piaget’s view that “mental life” is nothing other than an extension of “organic life” and that there is no real separation between the two. In *Intelligence and Affectivity* he tells us:

The affective analogue of intellectual operations is found in the act of will. The will is an instrument for conserving values and is one of the affective characteristics of the fifth stage.⁷ Some precautions of vocabulary are necessary, however, when discussing acts of will [PIAG16: 61].

⁶ We will see later that the question of ‘free will’ is less a question of what we must mean by ‘will’ than it is of what we must mean by the word ‘free’. There is a Critical answer to this, which we will render at the appropriate time. We will find the Critical idea of ‘free will’ to have *practical* objective validity.

⁷ The "fifth stage" referred to is Piaget's fifth stage of affective development, from age seven to eleven or twelve years.

Piaget then goes on to briefly describe some of the ways the word “will” is commonly employed. The problem with most of these everyday usages of “will” is there is no way to specify what they mean in terms of *observable* behavior. For Piaget no definition of “will” is of any use to the psychologist unless there is something in that definition which “makes a difference” that can show itself in observable behavior. In this instance Piaget acts more like a pragmatist than James did:

We, however, are interested only in behaviors that are characteristic of normative affects. Taking inspiration from William James, we define such behavior by two criteria. First, in order to speak of will, a conflict between two impulses or tendencies must be present. Second, the impulse that is initially weaker must become the stronger of the two in the course of an act of will. This means that all hypotheses concerning the will must account for this reversal [PIAG16: 61].

Let us note that Piaget carefully uses the term “will” and not the more highly charged term “free will.”

Piaget, in his usual thoughtful manner, then goes on to briefly discuss a number of models that have been proposed to explain the will. These models are drawn from philosophy, sociology, and psychology. One by one he exposes the weaknesses or objections found in these models and why they will not adequately serve psychology. He comes at last to his own model: will as a special behavioral *regulation*.

As Piaget defines it, a “regulation” is any kind of correction or reinforcement relationship. Suppose some action *A* produces a reaction *B*. If, during this process, *B* becomes modified in some fashion (so that next time *A* produces reaction *B'* instead of *B*), we can say that *A* “produced a correction to” (negative feedback) or “a reinforcement of” (positive feedback) *B*. Piaget calls this correction or reinforcement a “regulation” [PIAG19: 18, 195-196]. A regulation applied to a scheme can produce a change (an accommodation) in the scheme. Regulations may likewise be applied to regulations, in which case we have a “regulation of the second order” or a regulation of regulations. In Piaget’s hierarchy of regulations [PIAG19: 21] every regulation involves some kind of action (practical or cognitive), and the interaction between regulations and Piaget’s reflexive abstraction is one means of developing regulations of regulations [PIAG19: 36-37]. This systematic process is, of course, a complex one – the idea of which is central to Piaget’s theory of equilibration – and we must postpone our discussion of it until the appropriate time. For now it is sufficient for us to view this idea in terms of a system of connected and interacting schemes that can act upon each other (through assimilation and accommodation) to produce changes in schemes which, in turn, affect other schemes.

Piaget regards “will” as a manifestation of this idea of a regulation of regulations:

If acts of will are compared to intellectual operations, it is obvious that it is no longer necessary to make an additional force intervene. In problems of intelligence one encounters conflicts between perceptual experience and logical deduction. The subject must rise above the momentary perceptual configuration. He must free himself from it in order to bring out relationships that were not given in perception at the start. This involves decentration, which permits mastery of the present situation by connecting it with former situations and, if need be, by anticipating future ones. That is how an operation works.

Our thesis here is that it is exactly the same with acts of will. Affective conditions are given which correspond to the perceptual configuration of intellectual operations. It is not a question of rejecting this affective configuration but of going beyond it by "changing perspective" in such a way that relationships appear that were not given at the start. There is nothing any more mysterious about this than about intellectual decentration. *The will is simply the affective analogue of intellectual decentration.* The force of the impulses in conflict is in no way absolute; in every case it is relative to the configuration. The "change of perspective," by modifying the situation, modifies the distribution of constantly varying forces.

We end with this final formulation: the will is a regulation to the second power, a regulation of regulations, just as, from the cognitive point of view, the operation is an action on actions. The act of will corresponds, therefore, to the conservation of values; it consists of subordinating a given situation to a permanent scale of values [PIAG16: 63-65].

Perhaps "there is nothing mysterious" about all this; perhaps there is. Piaget's view of an "act of will" is presented in terms of a cause-and-effect chain of events in the construction and reconstruction of schemes. The "feedback" element in this makes this a recursive process, and such processes are notoriously difficult to describe and deal with without the employment of mathematics (a formalism Piaget did not undertake). In any event, depicting an act of will in terms of such a cause-and-effect chain begs one question: *what sets off this chain of events?* Piaget envisions a growing, developing structure of schemes, and there is nothing wrong with this, but his behavioral description of "will" also suffers from the difficulty that its operational definition can first be observed only at the normative (or fifth) stage of the child's affective development [PIAG16: 14]. Shall we say that prior to age seven years there is nothing observable in childish behavior that can be attributed to an "act of will"?

"It is obvious," Piaget assures us, "that it is no longer necessary to make an additional force intervene." Well, it is *not* obvious that this is so. Piaget's model draws inspiration (if not mathematics) from the science of system theory (the home of feedback theory), but let us not conveniently leave out the *unpleasant* things system theory has to say about this model. In the language of system theory, Piaget's model is a 'non-linear, time-varying, recursive system.' These are the most notoriously difficult of all systems to treat. What we do know, empirically, is how *most* such systems behave: they are unstable and tend to either tear themselves apart or settle down into repetitive 'limit cycle oscillations' (which, themselves, can respond in an unstable fashion to fresh inputs and either re-equilibrate in a new limit cycle or else tear the system apart). "Chaotic" behavior – that is, seemingly random and unpredictable behavior – is the norm rather than the exception for such systems.

There is currently no general theorem in (mathematical) existence, no general proof or solution, showing that such a model as Piaget proposes (where there is no invariant “central regulator” or “control mechanism”) is capable of producing the sort of somewhat regular, stable behavior that the phenomenon of mind exhibits in the vast majority of cases (i.e., in the case of the overwhelming majority of people). There is, likewise, no general theorem, proof, or solution that shows this is impossible. The question is simply beyond the present capability of system theory to answer. What we *do* know is this: in every *known* instance where regular and at least statistically predictable system behavior results, *that system has a regulatory mechanism of some sort which is not itself adaptable*. This mechanism goes by various names – for example, “adaptation algorithm” – but the point is that the regulation enforced by this mechanism *is absolute*.

Does this regulatory mechanism constitute an “additional force” at work? To answer that we must know what the idea of “force” means. In the most general and abstract use of this term, a “force” is “anything that makes something else happen.” From this point of view, a central regulator mechanism, which regulates the process of adaptation itself, *is* an “additional force.” Piaget’s model, with some modification, will prove useful to us, but it in no way settles the question which worried James nor is it completely adequate by itself to deal with the general problem of “will”.

The principal descriptive trait of an “act of will” as given by Piaget (with due credit to James) is this trait of the “weaker impulse” overcoming the “stronger impulse.” These impulses, in Piaget’s model, can be comprised of sensible stimuli or of “intellectual stimuli” (e.g., ‘logic’) or of affective stimuli (e.g., “values”). Leaving aside the ambiguity in the word “impulse” for now, let us look at what Kant thought about this.

The effort to become conscious of one's representations is either attentiveness (*attentio*) or disregard (*abstractio*) of a representation of which I myself am conscious. - The latter is not by mere neglect and dereliction of the former (since that would be distraction, *distractio*), but rather it is a genuine act of the faculty of knowledge to hinder a representation of which I myself am conscious from combination with others in one consciousness.- Therefore, one does not speak of abstracting (separating) something, but rather *from* something, i.e. abstracting a determination of the object of my representation, whereby this contains the universality of a concept, and is thus taken into understanding.

To know how to abstract from a representation, even when it forces itself on a man through sense, is a far greater capacity than that of attending, because it gives evidence of a freedom of the power of thinking and authority of the mind to have the state of one's representations under one's dominion (*animus sui compos*). - In this respect the power of abstraction is much more difficult, but also more important, than that of attention when it concerns representations of the senses [AK7: 131].

This “far greater capacity” of which Kant speaks is the power of *choice* (*Willkür*). Note that Kant does not say the ability to make an abstraction proves free will exists; he merely says it “gives

evidence of a freedom of the power of thinking and authority of the mind.” In other words, there is evidence in support of the possibility of the actual existence of something called “power of choice.”

To Kant, the *spontaneity* of mind “gives evidence” for the existence of “freedom” – i.e., of “free will.” But what does he mean by “free will”? It is obvious he does not mean “soul” or “spirit” because, as we have seen, Rational Psychology renders this supposition groundless (it has no objective validity). Indeed, Kant says in a number of places in his writings and lectures that no theoretical proof of the thing-like existence of free will itself, on objectively sufficient grounds, is possible. But, again, what does “free will” *mean*?

The first thing to ask is: *free from what*? Let us suppose for a moment there is some truth (perhaps even a great deal of truth) in Piaget’s model but that there is, in fact, some absolute regulatory “mechanism” that controls the process of adaptation. (In this context it does not matter whether we say this central regulator is the product of interacting brain-cells, a “free spirit” or whatever; all that matters is that its regulation of the process of adaptation is absolute – it controls the process of adaptation, but adaptation does not affect *it*). Such a regulator would then be entirely “free” of any *empirical* “outside influence.” (If the regulator is absolute, it is invariant; if it is invariant, nothing sensuous can affect it). Its *functioning* would be “a law unto itself.”

If, however, this is the case, then the regulations it imposes on the process of adaptation, being uninfluenced by empirical circumstances, could only be of a *formal* nature. Put another way, it would give *laws* for “governing” adaptation, but these laws could not depend on the empirical circumstances. To employ an analogy, “murder is murder, no matter who the murderer is.” Criminal law lays down the definition of what does and does not constitute “murder” and these laws are independent of whoever the people involved might be, wherever it might take place, whatever time of day it might take place, and so on.

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

Since the matter of the practical law . . . can never be given otherwise than empirically, whereas free will, as independent of empirical conditions (i.e. conditions belonging to the sensible world), must nonetheless be determinable, a free will must find a ground of determination in the law but independently of the *matter* of the law. But apart from the matter of the law, the aforesaid contains nothing more in it than the lawgiving form. Thus the lawgiving form . . . is uniquely that which can make up a ground of determination of the will [KANT4: 26 (5:28-29)].

There we have it. A free will is a will that is determined only by the form of the actions it allows to occur. Its determining ground is noetic, not “out in” the external world. It can choose to ignore or to attend to sensible stimuli; it can “will” a particular action if the anticipated result will be pleasurable, or it can “will” to *not* undertake that same action in those same circumstances; no material ground can be ascribed to what it “wills to do”; only the “lawgiving form” of the action chosen provides a ground for choosing. Free will is *pure practical determination of choice*.

Is this possible? Logically, yes. Is it “real”? Does it “actually” exist? That discussion is going to prove to be quite lengthy and now is not the time for it. Kant’s solution will be arrived at only after a closer examination than we have given so far of what is meant by “law” and only after we explore whether or not a “lawgiving form” is possible that can be both independent of empirical matter *and* suitable for being a determining ground for action.

In the meantime, it might help our thinking if we keep the regulator analogy for Piaget’s model in mind. It might also help if, for the present, we think of will as if it *might* be a fundamental law of the Nature of mind; thinking about it in this way allows us to approach the entire problem as we would any other process of scientific discovery and reduction. Our task then becomes one of discovering “what this law is” rather than speculating on the question “is will a spirit or a blind mechanism responding to the laws of physics?” We already know we will not find a “spirit”; that is forbidden by Rational Psychology. But if will *is grounded in a fundamental law of nous*, then the “blind mechanism” need not bother us.¹ If “will” is merely the effect of some more fundamental law of physics then it is *not* a “free” will (under Kant’s definition). To even begin to discuss the latter, we must do the former – that is, discover the law behind those phenomenal appearances upon which we base our ideas of “will.”

To sum this up: The spontaneity of mind is an empirical *fact*. Two tasks yet remain ahead of us with regard to spontaneity. First, we must find how to represent the power of spontaneity and its faculty. Second, the existence of spontaneity requires us to find the transcendental ground of its possibility and the laws which govern spontaneous behavior. The organization of the power of choice, and the system of laws which govern it (i.e., which regulate the faculty of spontaneity) we will call *the faculty of pure practical Reason*.

The Conscious, the Unconscious, and Degrees of Consciousness

Freud’s idea of “the unconscious” postdates James and Kant so neither speak directly to it. On the

¹ In science, a “fundamental law” (usually these days known as a “first principle”) is a “law” that cannot, *at present*, be explained in terms of other “laws” of nature. Science has a number of such laws (e.g., conservation of energy), which it regards as the “rules to go by” until and unless these rules fail to work. Then a new “law” is sought to take the place of the old “law.” Science never runs out of work.

other hand, both make what can be viewed as indirect remarks about it – or so their remarks could be viewed once Piaget had established the division between the conscious and the unconscious as merely a logical division.

We have already looked at James' discussion of selectivity and inattention, and we have examined Piaget's theory in detail. As for Kant, his view of the conscious vs. the unconscious is phrased in terms of "clear" and "obscure" representations. We have previously seen one such remark by Kant in §3.2. In a lecture given at about the time *Critique of Pure Reason* was being published, Kant made the following remark:

Our representations are either obscure or clear, etc. Obscure representations are those of which I am not immediately conscious, but nevertheless can become indirectly conscious through inferences.

On the other hand, Locke makes the objection: I am not conscious of obscure representations. Whence does one know then that I have obscure representations? Not to be conscious of something and yet to know it is *contradictio in adjecto* [a contradiction in terms] - but that is mere chicanery.

Obviously we do not know it immediately, but we do through inferences, e.g., when we observe it with the naked eye, we are not conscious to ourselves that the Milky Way consists of sheer small stars, but through a telescope we see that. Now we infer that since we have seen the entire Milky Way, we must also have seen all the individual stars. For were that not so, we would have seen nothing. But what we have seen we must also have represented to ourselves. Since we know nothing of these representations, they must have been obscure. Thus we have obscure representations, and these indeed in such magnitude that their number far exceeds that of our clear representations. It is as if our soul were a map on which just a few places were illuminated. Should all of our obscure representations become clear at once we would be stunned by the multitude. We would see ourselves as though transferred into another world. The obscure representations constitute the depth of the soul and their multitude is the field of the obscure representations [KANT19: 248-249 (29: 879-880)].

In the early 1790s, Kant made a similar, if much briefer, remark:

That representation of which we are conscious through apperception is clear. Clarity, obscurity, distinctness, and indistinctness are distinguished merely according to the connection of consciousness, and not according to their origin; this is a logical difference. All our representations have a twofold origin; they arise (1) from sensibility and (2) from understanding. The first is called the lower, and the other the higher faculty of knowledge. The first belongs to sensuality and the other to intellectuality. Everything that is sensible rests on receptivity; but what belongs to spontaneity belongs to the higher powers . . . Cognitions which are distinct or indistinct are not distinguished other than in the degree to which I am conscious of the representation [KANT19: 344-345 (28: 584)].

Kant also touched on what he meant by "indistinct" representation in his logic lectures. For example, we have

Indistinct representation is the consciousness of the representation as a whole, but without distinguishing the manifold that is contained in the whole [KANT8a: 265 (24: 805)].

This remark is very much in the flavor of Piaget's view of consciousness as cognizance.

Although these remarks by Kant are far from definitive, their congruence with Piaget's theory of cognizance is rather obvious. Piaget speaks of the successive building up of cognizance through a repetitive process of conceptualization. Kant's remarks, as well as the text of his "logic manual" [KANT8], are in much the same 'spirit' as this.

This brings us, finally, to the issue of whether or not we are conscious by degrees. Under Freud's system it is easy to adopt a "binary-valued" view: x is either conscious or unconscious. However, for both James and Piaget, the idea of degrees of consciousness is evident. For James this appears in both his distinction between substantive and transitive parts of the stream of thought, in the idea of interest as a condition of attention, and in the idea of attentive versus distracted states of mind. For Piaget the degree to which we are conscious of something depends on the degree of detail brought forth during the conceptualizing of a practical scheme.

From his remarks, it is also clear that Kant held consciousness to be a matter of degree. This is illustrated in the following remarks made in his lectures on metaphysics.

Consciousness is a quality of thinking and thus has a degree, for every quality always has a degree. My apperception, as we call our consciousness, thus has a quality of thinking [KANT19: 351 (28: 590)].

Knowledge, representations, yes even the consciousness of human beings have many degrees [KANT19: 468 (29: 1000)].

Let us close this section with a brief remark on the question of whether or not there is an upper limit to the ability to apprehend the data of the senses. When we looked at James' theory one of the experimental findings he discussed concerned the issue of "how much we can attend to." In this discussion we saw that the evidence had led James to theorize that such an upper limit exists, and that when the data exceeds this limit the Jamesian "Object" of thought "breaks apart." The stream of thought then, he said, must "oscillate" back and forth between the multiple things, first attending to the one, then the other.

While he was much less explicit on this matter, Piaget held a similar view. In the cycle of adaptation a scheme either accommodates or, if this is not possible, the cycle "ruptures." This character of adaptation was presented in *The Origins of Intelligence in Children* and we have referred to it previously.

Kant also holds that there is a limit to "what we can attend." In *Critique of Judgment* he writes:

To take up a quantum intuitively in imagination . . . involves two acts of this capacity: *apprehension* (*apprehensio*) and *concentration* (*comprehensio aesthetica*). Apprehension involves no problem, for it may progress to infinity. But concentration becomes more and more difficult the

farther apprehension advances, and it soon reaches its maximum, namely, the aesthetically largest basic measure for the evaluation of magnitude. For when apprehension has gone so far that the partial representations of sensible intuition that were first apprehended are already being extinguished in imagination as it advances to apprehension of further ones, then it loses as much on the one side as it gains on the other, and so there is a maximum in concentration that it cannot exceed [KANT5c: 135 (5: 251)].

To sum up §4.4: There is a remarkable degree of congruence between Kant's views on consciousness and its traits and those views coming out of empirical psychology. This congruence is all the more remarkable when one considers that Kant proceeded from arguments rooted in the Copernican hypothesis and its consequences, whereas James, Freud, and Piaget come at the issues from essentially empirical grounds. There are, of course, some great differences in how these men viewed the world, and there are certainly tremendous differences between the rational underpinnings of these facts postulated by James and Piaget compared to the philosophy of Kant. Nonetheless, the general overall congruence seen here can be taken as a very hopeful sign that our synthesis of these two approaches will bear good fruit.

§ 5. The Faculty of Pure Consciousness

We have finally arrived at the objective of this chapter: the representation of the faculty of pure consciousness. We have dealt with empirical consciousness for such a long time now that it is worth our while to pause for a moment and remind ourselves of what it is we seek.

By the phrase *faculty of pure consciousness* we mean the logical representation of transcendental apperception. Throughout the previous two sections our concentration has been fixed on the details of the phenomenon of empirical consciousness. The task to which we must now turn is the deduction of the formal structures and ideas in which we find the transcendental ground for planting these empirical findings. Now, the idea of transcendental apperception is the idea of a pure *noumenon*. There can, therefore, be only one criterion for us to follow if our theory is to have objective validity. That criterion is this: the ideas of the faculty of pure consciousness must be *necessary for the possibility* of empirical consciousness.

The role played by pure consciousness, from a logical perspective, has already been stated: Consciousness is the representation that a representation is in me. Thus, first of all, what we are after here is a *representation* of how this “representing that a representation is in me” can be possible. For this job, we will employ the general theory of representation we developed in Chapter 3. We are therefore concerned with the faculty of pure consciousness in terms of the four titles of representation: Quantity, Quality, Relation, and Modality.

The faculty of pure consciousness is a representation of great importance as a principle of organization. Now, the metaphysics proper of Rational Psychology tells us this representation can hold only logical significance in our theory. The faculty of pure consciousness does *not* provide us with a representation of the *I* of transcendental apperception because this *I* is a *noumenon*. The transcendental *I* does, however, occupy a special place among all other *noumena* because the *I* is the one *noumenon* for which one's knowledge of the *Dasein* is *certain*. It is in this *I* that the unity of the manifold of representations is rooted. Kant commented on this in a footnote in the first edition of *Critique of Pure Reason*:

One should attend well to this proposition, which is of great importance. All representations have a necessary reference to a *possible* empirical consciousness: for if they did not have this, and if it were entirely impossible to become conscious of them, that would be as much as to say that they did not exist at all. All empirical consciousness, however, has a necessary reference to a transcendental consciousness (preceding all particular experience), namely the consciousness of myself as original apperception. It is therefore absolutely necessary that in my knowledge all consciousness belong to one consciousness (of myself). Now here is a synthetic unity of the manifold (of consciousness) that is recognized *a priori*, and that yields the ground for synthetic *a priori* propositions concerning pure thinking . . . The synthetic proposition that every different *empirical consciousness* must be combined into a single self-consciousness is the absolutely first and synthetic fundamental principle of our thinking in general. But it should not go unnoticed that the mere representation *I* in reference to all others (the collective unity of which it makes possible) is the transcendental consciousness. Now it does not matter here whether this representation be clear (empirical consciousness) or obscure, even whether it be actual; but the possibility of the logical form of all cognition necessarily rests on the relationship to this apperception *as a capacity* [KANT1a: 237 (A: 117fn)].

Our representation of pure consciousness, as a fundamental organizing principle, provides us with the *logical* organization of the capacity to which Kant refers.

Let us now begin our deduction of the representation of the faculty of pure consciousness. From our earlier work in Chapter 3 we know that for the representation of a thing, at the second level of analytic representation, we must add to the general idea of representation some *specific idea* which distinguishes the particular thing we are representing from the representation of other possible things. For pure consciousness this idea is the idea of consciousness as *the representation that a representation is in me*. In this context, the phrase “the representation that” means *representing that* a representation is in me. We are, in other words, dealing with the 2LAR representation of an *act of nous*. Logically our task is one of finding what factors are necessary for the possibility of the representation of empirical consciousness as one's experience of empirical consciousness *appears to us*.

At the 2LAR level we have two “titles” of the matter of this act (Quality as the matter of the matter of representation, and Modality as the matter of the form of representation) and two “titles” of the form of this act (Quantity as the form of the matter of representation, and Relation as the form of the form of representation). We first examine what the idea of the “matter”

conveys when the thing we are representing is the *act* of consciousness.

An act is something that is carried out. This necessarily presupposes one has the ability or *power* to carry it out as an action. It follows that the representations of Quality and Modality concern fundamental powers of making representations. In the case of Quality, these powers are those which have to do with the making (presenting) of representations themselves. This means we are concerned here with the different kinds of representations (intuitions, concepts, affective perceptions) and the *powers needed to sensibly produce them* (**powers of sensibility**). These powers define the matter of the matter of pure consciousness.

In the case of Modality the powers with which we are concerned are those that are necessary for the existence of the *nexus* of the manifold of consciousness. Here we are not concerned with the kinds of representations but, rather, with the manner in which different representations stand in relationship to transcendental consciousness. We will call the functions of Modality by the name *powers of perception*.

The idea of the matter concerns the ‘what’ of the act. Next we consider form, the ‘how’ of the act. The practical character of an act, in terms of its form, derives from actions and action effects a *change*. Actions can be viewed as transformations of some sort, taking us from an initial condition or state to a new condition or state. The ‘how’ of an act is represented, then, by the *process* of the action. Quantity and Relation in the representation of pure consciousness are therefore the titles of the *processes of representing*. Quantity, as the form of the matter of pure consciousness, concerns the process of making the representations themselves. Relation, as the form of the form of pure consciousness, concerns the process of connection among representations in the manifold of consciousness. With these basic ideas of the faculty (i.e. organization) of pure consciousness, we can now examine in turn each of the four titles of representation.

§ 5.1 Quality in the Faculty of Pure Consciousness

In the general representation of a thing, illustrated in Figure 3.3.2, Quality is described in terms of three ideas: agreement, opposition, and subcontrarity. In the context of the faculty of pure consciousness we must ask ourselves: agreement, opposition, or subcontrarity with respect to *what*? What does, say, the idea of agreement mean in the *context* of a faculty of pure consciousness?

First of all, as the matter of the matter of pure consciousness, these ideas must be ideas of a power (ability to do something). Second, this power must be a power for representing that a representation is in me. Third, we must bear in mind that in the composition of empirical consciousness our awareness is not the awareness that we have a representation but, rather, is the

awareness of an appearance. The ideas of Quality must therefore be ideas pertaining to the possibility of presenting to oneself the representation of an appearance.

Now, representation *with consciousness* we call **perception** [KANT1a: 398 (B: 376)]. A perception, in turn, may be either an objective perception (cognition) or a merely subjective perception of inner sense (affective perception). Cognition, as we have seen, always involves both intuitions and concepts. Of these two, it is the intuition that stands in *immediate* relationship to the object as an appearance. It follows from this that the idea of agreement, in the context of the faculty of pure consciousness, is an idea of the agreement of representation *with appearance* and, consequently, is an idea of a kind of “harmony” of representation in intuition. The power to construct intuitions is nothing else than the ability or possibility of being affected (the conscious Subject as patient rather than as agent), and the faculty for this is receptivity. The idea which corresponds to agreement, in the context of the Quality of pure consciousness, is therefore the idea of the **faculty of receptivity**.

The idea which corresponds to opposition follows immediately from this as that which is contrary to the power of being affected in conscious representation. Since receptivity pertains to the Subject acting as patient (receiving sense data), the idea contrary to receptivity is **spontaneity** – the power to act as an *agent* for originating a conscious representation. In receptivity perceptions are seen as being *given*; receptivity contains the idea of the relationship between Subject and appearance wherein the object is viewed as the ground for the perception. Spontaneity, on the other hand, places the ground for the origination of the perception in the Subject.

One’s consciousness, however, is not limited to objects of appearance but also includes consciousness of the completely subjective internal state (i.e., affective perception). Here we have the idea of the Subject as being affected but, unlike the representations of receptivity, the *effect* is not viewed as part of an appearance but merely as a representation of a subjective inner sense. Kant described this by saying, “the feeling of *Lust* or *Unlust* is part spontaneity, part receptivity” [KANT19: 250 (29: 881)]. Note the similarity of this phrase to our earlier discussion of subcontrarity in Chapter 3. Although feeling is non-cognitive (that is, not vested in an object of appearance), our *descriptions* of feeling are often couched in terms of an object we associate with it, even though we all know that “feelings” are *one’s own* feelings and are not “given” to us by the object, as, e.g., when Burns writes¹

Then Anna comes in, the pride o' her kin,
The boast of our bachelors a', man :
Sae sonsy and sweet, sae fully complete,
She steals our affections awa, man.

¹ Robert Burns, *The Tarbolton Lassies*.

It is clear to all of us that Anna does not actually reach inside us and take something called “affections” *from* us. Yet the feeling referenced in this poetry is bound up in some way *with* Anna or, better put, with the experience in which Anna is objectively a part. The feeling of *Lust* or *Unlust* is spontaneity *viewed as* receptivity; it is, in this sense, the synthesis of the other two ideas of Quality, taking something of the character of each but belonging to neither. Palmquist uses an interesting metaphor to describe affective perceptions (although he does not actually use the term “affective perception” in [PALM1]). He calls them *non-cognitive cognitions*, a metaphor that views affective perception precisely in terms of the synthesis of spontaneity and receptivity.

This gives us our three ideas of Quality in the context of the faculty of pure consciousness. Summarizing this, we have the following table.

Quality
as the powers of sensibility

Receptivity
Spontaneity
Feeling of <i>Lust</i> or <i>Unlust</i>

This representation is complete at the second level of analytic representation. We will, of course, require further elaboration of each of these ideas since all we have done at this point is to deduce these powers of Quality as powers necessary for the possibility of empirical consciousness insofar as the matter of the matter of empirical consciousness is concerned. We will still require for our theory the relationships of these powers with the rest of the abilities of the Organized Being.

§ 5.2 Modality in the Faculty of Pure Consciousness

Modality in the general representation of a thing is expressed by the ideas of the determinable, the determination, and the determining factor. For the faculty of pure consciousness these ideas must express the power of pure consciousness in regard to the matter of the *nexus* of the manifold of empirical consciousness. Here the ideas of Modality refer to *coherence* in presenting representations in the faculty of consciousness rather than to the matter of ‘what’ is being presented (since Modality is the matter of the *form* of representation).

The Determinable: In an act of representing the determinable is that which may go into a determined representation but which, prior to this act, has no context. We can say that the determinable is that which provides the *potential* for making a determination. The similarity of this idea to Aristotle’s “matter” is striking. Less remotely, though, we can compare the idea of the determinable with Kant’s idea of the *obscure representation*. In a lecture on metaphysics given in the mid-1770s, Kant made the following remark:

(The) mind arrives at clear from obscure representations not immediately, but rather through all the intermediate representations which are clearer than the first ones [KANT19: 25 (28:202)].

From this brief remark the connection of the idea of the obscure representation with the idea of the determinable is readily apparent. The obscure representation is one that is not determined in empirical consciousness but may become so – i.e., obscure representations *are* determinables.

This view of the obscure representation also has a striking similarity to Piaget's theory of cognizance. For Piaget the practical scheme – that is, the unconceptualized scheme of action – does not belong to that logical division called the conscious but, rather, to the division of the unconscious. In like fashion Kant calls the obscure representation a representation “of which we are not conscious.” From all this it is evident that the determinable idea of Modality is to be sought in the *faculty of the unconscious* – the “system” Freud held to underlie all conscious thought.

It may perhaps seem strange and even contradictory that one of the ideas of the faculty of pure consciousness belongs to the logical division of the unconscious. On the other hand, the idea of the unconscious can, and should, be viewed as an idea that pertains to the *possibility* of the conscious. Empirical support for this view is found in Piaget's work on cognizance discussed earlier. We have likewise seen Freud's dialectic argument for the unconscious. Logically, the phenomenon of selectivity, which James discussed at some length, is absurd unless we suppose that it is possible for mind to ignore – that is, not consciously attend to – some stimuli in favor of others. Indeed, if we look more closely at James' description of selectivity we could well ask if it is not a logical contradiction to call something a stimulus if the mind can refuse to be stimulated *by* it; James' argument only holds together if we make a logical division of the general idea of a stimulus into two sub-classes: *possible* stimuli (which remain unconscious) and *actual* stimuli (which we attend to).

The idea of an unconscious substratum is also presupposed in arguments for the theoretical undecidability of “free will.” As Kant remarked, “One may prove or also refute freedom in the theoretical sense as one wants” [KANT19: 265 (29: 898)]. His argument ran like so:

From what do we know that the will is free? - Freedom is not a property that we learn from experience; for we cannot experience anything negative². Indeed we do many acts by which we appear to act contrary to all stimuli, but we can not yet conclude it [freedom] from that . . . We ourselves are also not immediately conscious of freedom. We are conscious only of the mainsprings or stimuli which are clear representations. But we can also have obscure representations and stimuli for something of which we are thus not conscious [KANT19: 264 (29: 896-897)].

² Kant uses the word “negative” in this context to mean “something that gives no stimulation”; he is referring to the idea of freedom as the power to choose independently of sensible stimuli and he is going to point out that being unconscious of a stimulus does not prove there is no stimulus.

A scientific materialist scoffs at this entire line of discussion. “There is no mystery here,” he might say. “The brain is a physical system, obeying the laws of physics, and merely reacting – albeit in an enormously complicated way – to physical stimuli. If you want to call this blind mechanism ‘the unconscious,’ go ahead. Just realize what you’re really talking about.” Such an authoritative-sounding statement, of course, would have us regard the phenomenon of mind as an emergent property of a complex chain of physical cause-and-effect relations. It is also, however, a line of thought in which “reality” is seen as stamping its impression on neural activity – which is another manifestation of the copy of reality hypothesis once more re-asserted in yet another even more subtle form. In light of all we have seen previously, and in the absence of scientific data *supporting* the materialist *hypothesis*, we should see this *saltus* for what it is. As a scientific hypothesis the materialist argument is acceptable *as a premise for research investigation*, even if there is a deplorable tendency to state this *metaphysical hypothesis* as if it were a *fact*, e.g.:

Voluntary movement is controlled by complex neural circuits in the brain interconnecting the sensory and motor systems. Although all voluntary movement is controlled directly by the motor system, the decision to initiate a voluntary movement is regulated by the motivational system. . . . The motivational system influences voluntary movement by acting on the somatic motor system of the brain. In addition, it influences behavior through its action on the autonomic nervous system, which innervates the exocrine glands, the viscera, and smooth muscles in all organs of the body. . . . The sympathetic and parasympathetic divisions, which regulate the body's basic physiology, also mediate motivational and emotional states.³

This all sounds very authoritative. Fortunately, even if he sometimes speaks as if hypothesis were already established as a fact, the scientist usually is quite aware of what is and is not “known for a clearly established fact,” e.g.:

Drives or motivational states are inferred mechanisms postulated to explain the intensity and direction of a variety of complex behaviors, such as temperature regulation, feeding, thirst, and sex. Behavioral scientists posit these internal states because observable stimuli in the external environment are not sufficient to predict all aspects of these behaviors. In simple reflexes - for example, the pupillary response - the properties of stimulus appear to account in large part for the properties of the behavior. On the other hand, more complex activities are not consistently correlated with external stimulus conditions. For example, at certain times food might stimulate vigorous feeding. At other times it produces no response or even rejection . . .

Neurobiologists are now beginning to define the actual physiological states that correspond to the motivational states inferred by psychologists. In some instances it has been possible to approach motivational states as examples of interaction between external and internal stimuli. The problem of motivation thus can be reduced to that of a complex reflex under the excitatory and inhibitory control of multiple stimuli, some of them internal. This approach has worked particularly well with temperature regulation. In contrast, the relevant internal stimuli for hunger, thirst, and sexual behavior have been exceedingly difficult to identify or manipulate . . . As more is learned about the actual physiology of hypothetical drive states, the need for invoking these states to explain behavior may ultimately disappear, to be replaced by more precise concepts derived from physiology and

³ J.P. Kelly and J. Dodd, "Anatomical Organization of the Nervous System," in [KAND: 279].

systems theory.⁴

A clearer statement of the state of scientific knowledge (insofar as “motivational states” is concerned), and a more honest expression of the “article of faith” every physical scientist must hold if he is to pursue his science, can hardly be given.

Nor does it seem very likely that the physical scientist is entirely wrong in his premise. Our division of consciousness in general into the conscious and the unconscious is merely a logical division, as is the division of Organized Being in terms of *nous*, *soma*, and *psyche*. It is quite proper *and even necessary* that we regard the idea of the unconscious as an idea which contains *at least in part* some aspects of the *soma*; to deny this would be to make a *real* assertion about the division of *nous* and *soma* – an assertion forbidden by Rational Psychology. But, at the same time, it would be going too far if we were to presume that the unconscious is to be reduced *entirely* to the *soma* because this makes a real mind-body division rather than a logical one.

Where does all this leave us with regard to the idea of the determinable in Modality? We have linked the idea of the determinable to the idea of the unconscious through Kant’s ‘obscure representations’ as well as through Piaget’s theory of cognizance. The logical place of the unconscious with regard to representation is given by a simple classification of representation-in-general in terms of representation with consciousness (perception)⁵ and its contrary, representation without consciousness. The unconscious (obscure) representation can be viewed simply as the representation of a *possible* perception and this idea is made necessary by the rejection of the copy of reality hypothesis.

But the determinable must also be viewed in the context of the faculty of pure consciousness as a power grounding the possibility of the *nexus* in the manifold of empirical representations. Thus the determinable in the faculty of pure consciousness is not the idea of the obscure representation as a representation but, rather, the idea of the power to make a particular representation the matter for a possible, but not an actual, perception. We will call this power the ***potential for perception***.⁶ The potential for perception is the power of making a connection in the manifold of representations, but only insofar as made representations are merely connected in the manifold of sensibility and are not yet connected in an appearance or a feeling. It is the power for structuring what Freud called the system of the unconscious.

The Determination: The second idea of Modality in the general representation of a thing is the idea of the determination. From Chapter 3, the determination is the idea of the determined form in

⁴ I. Kupfermann, "Hypothalamus and Limbic System: Motivation," in [KAND: 750-751].

⁵ see [KANT1: 248 (B: 376)].

⁶ I borrow this term, with appropriate modification under the Copernican hypothesis, from Aristotle [ARIS7: 1609 (1019^a15)], which, incidentally, is where physics got its idea of "potential energy."

a representation. In Chapter 3 we illustrated this idea using the form of a simple predication,

_____ is _____ ,

as an example of the *structure* that must be present in the connection of representations with each other. In this example the structure amounts to the designation of one term as the subject phrase and the other as the predicate phrase – a determination not contained in the two representations themselves but which must be imposed upon their connection. This example of *assignment* in a predication is merely one specific instance of the more general idea of determination as an idea of the matter of the *structure* of connection.

We must now look at this general idea in the context of the representation of the faculty of pure consciousness. The determinable elements (the things that, so to speak, “fill in the blanks”) are representations. The idea of the determination is in this context the idea of a connection of these determinables in a larger structure, and it is this structure that is provided in the determination. Thus, the determination is the idea of bringing to the determinables a particular organization of their relationship.

Here, however, we encounter a subtle but nonetheless important issue. It can be argued that the idea of an organizing structure is not restricted to what is represented through the determination. After all, must we not acknowledge that the determinables themselves possess a structure or organization of their own, i.e., an *internal* structure of some sort composed in the Quantity and Quality of each individual representation contained in the connection? Is this not implied in the very idea of Quantity as the form of the matter of a representation? This point is one which I think we must concede. It follows, then, that we must be clear on what other feature or character the idea of the determination must contain that distinguishes it from the idea of the internal organization of a representation.

This, however, is not a difficult feature to identify. Modality pertains to the matter of the form of connection (*nexus*) in the manifold of representations. There thus enters into this idea a certain *perspective* concerning what we view as “a” representation and what we view as the formulation of a manifold of individual representations insofar as these individuals are represented as *connected in a unity of consciousness*. This requires two conditions. First, the individual representations themselves must exist (in the sense of *Dasein* or “being present”) within the Organized Being. All that is required for this is merely the idea that representations constitute a particular “state” of the Organized Being insofar as this state is regarded as the “state of mind” of the Organized Being. Individual representations can then be viewed as constituting the “state variables” of this mental state. The possibility of this first condition is provided by the idea of the potential for perception as the idea of the determinable in the consciousness of the

Organized Being.

The mere connection of representations in the Organized Being is, however, not sufficient by itself because the unity provided in this connection is merely the unity of the Organized Being itself, i.e. it is a unity *of* representation (all representations are ‘my’ representations). We must have unity *in* representations and not merely the subjective unity *of* representation. Put another way, in addition to the *Dasein* of representational elements we must have *Existenz* for representation as a whole. Existence in the *Dasein* sense is merely connection in the Subject; existence in the *Existenz* sense pertains to the *made structure* of interconnection *among* individual representations *as representations* and not merely as variables in a mental state.

Now, that which connects a manifold of representations in a unity *as a representation* is the Object. Representations, after all, represent *something*.¹ But what is the ground for the possibility of an Object? An Object is that in which representation is united with some object. We cannot say that an Object “presents itself” because this would be tantamount to accepting a form of the copy of reality hypothesis. Neither can this idea be grounded in the potential for perception because the idea of the connection of representations in the faculties of the Subject contains no reference to an object *of* the representation.

Representations that stand in connection with an object (immediately as the intuition of an appearance and mediately as a concept) are cognitions. However, before a representation can be a cognition, it must first be a *conscious* representation, that is, a *perception*.² The ground for the idea of an Object consequently must be sought in the *conscious* ‘division’ of the faculty of pure consciousness. Furthermore, the ground of the idea of an Object is a transcendental ground (i.e., it is necessary for the possibility of knowing an object and thus is a ground for the phenomenon of cognition). Thus the condition distinguishing determination from composition in the context of the faculty of pure consciousness is the connection of the *apprehension* of an Object with the *apperception* of the logical Subject. (The latter is called ‘logical consciousness’ [AK7: 142]).

The idea of the determination in the context of the faculty of pure consciousness therefore pertains to *making representations conscious*. This is the idea of a power, namely the *power of conscious representation*. Just as we borrowed from Aristotle the term potential (*dynamis*) for perception, so now we may term this power the **actualizing** (*enérgeia*) **of perception**.³ The actualizing of perception is the power of making a representation conscious. In more Kantian terms, it is the power *to present a clear* representation by referencing the form of the connection of representation in an Object to the logical apperception of the perceiving Subject.

¹ An obscure representation can be said to *potentially* represent an Object but lacks the connections required for cognition of that Object. A clear representation is one that has this connection.

² The act of perception is the apprehension of the representation of sensation [AK7: 128].

³ cf. [ARIS7: 1658 (1050^a5-23)].

The Determining Factor: Our third idea of Modality in the 2LAR of the representation of a thing is the idea of the determining factor. We recall from Chapter 3 that the determining factor is the factor in the Modality of representation that determines which connecting form the determinables are to ‘go into’ and what their arrangement within that form is to be.

In the context of the faculty of pure consciousness, the determining factor is the pure and *a priori* power to govern and regulate the form of the *nexus* in the manifold of all representations and to *regulate the selection* of the place occupied by each determinable within this manifold. In performing this regulation and selection, this power can contain nothing that is empirical because in this power lies the ground for the possibility of the *Existenz* of the *nexus* and, therefore, of experience itself. Just as the potential for perception pertains to possible perceptions and the actualizing of perception pertains to the actuality of perception, the power of the determining factor pertains to the *necessity* of unity in a manifold of representations.

The manifold exists and takes on whatever form it assumes *because* of this determining power. For this reason we say that this power is the supreme executive mental power to which all other powers of *nous* are subordinate. We can therefore do no better than to give this power the title of *the power of pure Reason*.

Our catalog of the ideas of Modality in the faculty of pure consciousness is now complete. In these three powers we have an arrangement altogether in keeping with giving a Critical turn to the classical ideas of modality put forth by Aristotle long ago, namely: *possibility*, *actuality*, and *necessity*. The three powers of Modality in pure consciousness – the potential for perception, the actualizing of perception, and the power of pure Reason – are the fundamental powers of *nous* that constitute the matter of the form of pure consciousness.

§ 5.3 Quantity in the Faculty of Pure Consciousness

Turning now from the powers of the faculty of pure consciousness, we consider the *processes* at work in this faculty. We begin with the form of the matter of pure consciousness, i.e., the ideas of Quantity. As before, we start with the general ideas in the 2LAR of representation of a thing and then specialize these ideas in the context of pure consciousness.

Identification: The idea of identification in the 2LAR of representation of a thing is the idea of the “oneness” or identity of the thing. It is the form of representation in which the thing is represented as a “unit.” In the context of the faculty of pure consciousness, the process that corresponds to this idea is therefore a process that produces this form of the matter of representation.

The idea of such a process is evident in the theories of both James and Piaget. *Assimilation* is indeed nothing other than the idea of a process of adaptation in which given “aliments” are

incorporated into a single framework or structure. Piaget calls assimilation an “implicative function” [PIAG1: 9] and regards it as one of the elementary functions that gives rise to intelligence.

Intelligence is *assimilation* to the extent that it incorporates all the given data of experience within its framework. Whether it is a question of thought which, due to judgment, brings the new into the known and thus reduces the universe to its own terms or whether it is a question of sensorimotor intelligence which also structures things perceived by bringing them into its schemes, in every case intellectual adaptation involves an element of assimilation of external reality into forms due to the subject's activity. Whatever the differences in nature may be which separate organic life (which materially elaborates forms and assimilates to them the substances and energies of the environment) from practical or sensorimotor intelligence (which organizes acts and assimilates to the schemes of motor behavior the various situations offered by the environment) and separate them also from reflective or gnostic intelligence (which is satisfied with thinking of forms or constructing them internally in order to assimilate to them the contents of experience) - all of these adapt by assimilating objects to the subject [PIAG1: 6].

Such a process can be inferred as being responsible for the phenomenon of syncretistic thought and for the observable behavior of the young subjects in Piaget's experiments in cognizance, in which it was observed that the subject tended to perceive what he *expected* to see rather than what he *actually* did (for example in the experiment with the sling [PIAG25: 12-45]). It is also obvious that James' stream of thought model with its pack-of-cards-is-on-the-table constructs can be seen as being the outcome of a process of assimilation.

Kant does not explicitly discuss processes as such, but the idea of assimilation is evident in the Kantian idea of the synthesis of representations. As one of Kant's students of metaphysics wrote in his lecture notes in the mid-1790s,

The consciousness of the unity of the manifold according to concepts is logical function.⁴

All objects (they may occur in appearance or through concepts) can certainly be perceived, but never their composition. This understanding must add to the representation, and it is thus entirely an act of understanding, namely composition, to represent the composite in such a way that it becomes *one*. - Mr. Kant calls this synthesis, e.g., parts that together constitute a room [KANT19: 453 (29: 984)].

We have already discussed at length, in Chapter 3, the role of synthesis in the making of representations. Synthesis is an act, but we may call the idea of a process through which this act takes place the idea of identification in the faculty of pure consciousness and give to this idea the name *process of assimilation*.

While the term “assimilation” is not to be found in Kant's works, he *does* speak of a transcendental principle for which assimilation, as a *process*, can be seen as the means for its realization. This is the transcendental principle of *genera*.

⁴ A Kantian function is the unity of the act of ordering different representations under a common one.

If among the appearances offering themselves to us there were such a great variety - I will not say of form (for they might be similar to one another in that) but of essence, i.e. regarding the manifoldness of existing beings - that even the most acute human understanding, through comparison of one with another, could not detect the least similarity (a case which can at least be thought), then the logical law of genera would not at all take place; and no concept of a genus, nor any other universal concept, indeed no understanding at all would take place, as it exclusively has to do with such as these. The logical principle of genera therefore presupposes a transcendental one if it is to be applied to nature (by which I here understand only objects that are given to us). According to that principle, sameness of kind is necessarily presupposed in the manifold of a possible experience (even though we cannot determine its degree *a priori*), because without it no empirical concepts and hence no experience would be possible [KANT1a: 596 (B: 681-682)].

So it is that the process of assimilation has not only a basis in empirical fact, but more importantly it has a transcendental basis as well. So it is that the process of assimilation has both an empirical and a proper rational place in our theory.

Differentiation: The idea of differentiation is the contrary of the idea of identification in the 2LAR of representation of a thing. In the making of representations, the contrary of synthesis is analysis, i.e., the analytic re-presentation. In the Piagetian theory, assimilation also has its contrary and this is none other than the *process of accommodation*. Piaget called accommodation the “explicative function” and its role in adaptation is, like assimilation, a central one.

There can be no doubt either, that mental life is also *accommodation* to the environment. Assimilation can never be pure because by incorporating new elements into its earlier schemes the intelligence constantly modifies the latter in order to adjust them to new elements. Conversely, things are never known by themselves, since this work of accommodation is only possible as a function of the inverse process of assimilation. We shall thus see how the very concept of an object is far from being innate and necessitates a construction which is simultaneously assimilatory and accommodating [PIAG1: 6-7].

Kant expressed a view of representation which is very much in the same spirit as this.

Unity can be thought formally as well as materially.

Formal unity is based upon the combination of the manifold under a principle. Material unity is oneness of the Object itself. Thus formally only *one unity of a thing* is possible (*in singulari*), for each thing has only one concept under which the manifold is brought through understanding. But materially there are unities of one and the same Object, i.e. as many as can be called *one* in each thing. *Therefore plurality in the Object* is at all times material. The manifold in the representation of the Object is, however, in itself formal plurality [KANT19: 458 (29: 989)].

The idea of differentiation is inherent in the very idea of a process of accommodation and the idea of accommodation must presuppose this “formal plurality in the (representation of the) Object.” If it were otherwise it would not be a question of adapting an old scheme in response to new factors;

it would be a question of *shattering* the old scheme altogether – an act in which the original scheme must lose its identity.

But in addition to this empirically-derived observation, we also can find a transcendental principle in support of the idea of the process of accommodation. This principle arises as the ground of the logical principle of *species*. Kant calls this transcendental principle the *principle of specification*.

To the logical principle of genera which postulates identity there stands opposed another, namely that of *species*, which needs manifoldness and variety in things despite their agreement under the same genus, and prescribes to understanding that it be no less attentive to it than to the former. This principle (of acumen, or of the power of discrimination⁵) severely limits the rashness of the first (of wit) and here reason shows two-fold, self-conflicting interests: on the one side, an interest in the scope (universality) in regard to genera, on the other an interest in content (determinacy) in respect to the manifoldness of species; for in the first case understanding indeed thinks much *under* its concepts, while in the second it thinks all the more *in them*. . .

This latter way of thinking is also obviously grounded on a logical principle that has as its aim the systematic completeness of all cognitions, if, starting from the genus, I descend to whatever manifold may be contained under it, and thus in this way seek to secure extension for the system, just as in the first case I seek to secure simplicity by ascending to the genus. . . This law of specification could be expressed thus: *entium varietates non temere esse minuendas*.⁶

But it is easy to see that even this logical law would be without meaning or application if it were not grounded on a transcendental *law of specification*, which plainly does not demand an actual *infinity* in regard to the variety of things that can become our objects - for the logical principle asserting the indeterminacy of the logical sphere in regard to possible division would give no occasion for that; but it does impose on understanding the demand to seek under every species that comes before us for subspecies, and for every variety smaller varieties. For if there were no lower concepts, then there would also be no higher ones. . .

Also this law of specification cannot be borrowed from experience; for experience can give no such extensive disclosures. Empirical specification soon stops in distinguishing the manifold, unless through the already preceding transcendental law of specification as a principle of reason it is led to seek such disclosures and keep on assuming them even when they do not immediately reveal themselves to the senses [KANT1a: 596-598 (B: 682-685)].

Thus, the *process* of accommodation has just title to a place in the Quantity of the faculty of pure consciousness and constitutes its second idea.

Integration: Identification and differentiation are contrary ideas. Integration, in the 2LAR of representation of a thing, can be thought as differentiation *viewed as* identification – that is, as the idea of the synthesis of differentiation and identification. In the context of the faculty of pure

⁵ *Unterscheidungsvermögens*. English translations of Kant usually render *Vermögen* (ability, capacity, power) as "faculty" to distinguish it from *Kraft* (strength, power, force), which is usually rendered as "power." Kant tells us, "*Vermögen* and *Kraft* are different. By *Vermögen* we provide only the possibility of *Kraft*. Between *Vermögen* and *Kraft* lies the concept of effort" [KANT19: 329 (28: 565)].

⁶ "The varieties of entities are not to be diminished rashly."

consciousness, the idea of integration can likewise be seen as the synthetic product of viewing the process of accommodation as a process of assimilation. Piaget's term for such an idea is the idea of the *process of equilibration*.

For us to understand what Piaget is getting at with the idea of equilibration, we must first appreciate what he means by a cognitive *equilibrium*.

With the exception of the balances achieved in actual work, the cognitive equilibriums are quite different from mechanical equilibriums which conserve themselves without modification or, in the case of "displacement," give rise merely to "moderations" of the disturbance and not to whole compensations. They differ even more from thermodynamic equilibrium . . . which is a state of rest after destruction. On the other hand, cognitive equilibriums are closer to those stationary but dynamic states, mentioned by Prigogine, with exchanges capable of "building and maintaining a functional and structural order in an open system," and they resemble above all the static, biological equilibriums ("homeorhesis") [PIAG19: 4].

To put it a bit less in the abstract, a scheme or system of interconnected schemes is in "equilibrium" when it is stable and undergoes no new innovations. For example, once a person learns how to walk, the scheme of walking remains the same and undergoes no further significant development unless injury or illness occur. The "walking scheme" is in this sense *in equilibrium*. The idea of equilibrium does not denote some one unique type or state of equilibrium; Piaget illustrates that there are many ways or forms in which schemes can come to be in equilibrium. However, in all cases, "the equilibrium is due among other things to a reinforcement of the differentiation and integration" [PIAG19: 4] effected by accommodation and assimilation, respectively.

Equilibration, on the other hand, is a *process* having for its outcome the attainment of equilibrium. Piaget describes the general idea at the beginning of *The Development of Thought* in the following fashion:

This is an attempt to explain the development, perhaps even the formation of knowledge by considering a central process of equilibration. By this we do not mean we can identify a single general structure of equilibrium which can be stated once and for all, and applied to every situation and to every level as Gestalt theorists . . . use their hypothesis for the psychology of form, but rather that we can observe a process (hence the term "equilibration") leading from certain states of equilibrium to others, qualitatively different, and passing through multiple "nonbalances" and reequilibrations. Thus the problems to be solved involve various forms of equilibrium, the reason for nonbalance, and above all the causal mechanisms, or methods, of equilibrations and reequilibrations. It is especially important to stress from the very beginning the fact that, in certain cases, the reequilibrations merely form returns to previous equilibriums; however, those that are fundamental for development consist, on the contrary, in the formations not only of new equilibriums but also in general of better equilibriums. We can, therefore, speak of "increasing equilibrations," and raise the question of self-organization [PIAG19: 3-4].

Equilibration is therefore a process for keeping assimilation and accommodation "in balance"

with each other, a process that is inherently integrative.

Kant also speaks of this need to balance “genera” and “species” in representation. The transcendental law that legislates for this balance is the principle of *affinity* of concepts.

Reason thus prepares its field for understanding: 1) through a principle of *homogeneity* of the manifold under higher genera, 2) through a first principle of the *variety* of the homogeneous under inferior species; and in order to complete the systematic unity it decrees 3) yet in addition a law of the *affinity* of all concepts, which requires a continuous transition from every species to every other through a step-wise growth of varieties. We can call these the principles of the *homogeneity*, *specification*, and *continuity* of forms. The last arises by joining the first two, according as one has completed the systematic context in the idea by ascending to a higher genera, as well as descending to lower species; for then all manifolds are allied to one another, because they are all collectively descended through every degree of extended determination, from a single highest genus . . .

The first law, therefore, wards off excess in the manifold variety of original genera, and recommends homogeneity; the second, on the contrary, limits in turn this inclination to unanimity, and demands distinction of subspecies before one turns to the individuals with one's universal concepts. The third law joins the first two, prescribing even in the case of the highest manifoldness a homogeneity through the step-wise transition from one species to others, which shows a kind of affinity of various branches, insofar as they have all sprouted from one stem.

This logical law of the *continui specierum (formarum logicarum)*⁷ presupposes, however, a transcendental law (*lex continui in natura*)⁸ without which the use of understanding through the former law would only mislead, since the prescription would perhaps take a path directly opposed to nature. This law must therefore rest on pure transcendental and not empirical grounds. For in the latter case it would come later than the systems; but it really first produced what is systematic in the cognition of nature. Behind these laws there is also nothing like a hidden intention to initiate probes, as mere experiments . . . rather, one can see clearly that the laws judge the parsimony of fundamental causes, the manifoldness of effects, and the consequent affinity of the members of nature in themselves reasonably and in conformity with nature, and these principles therefore carry their recommendations directly in themselves, and not merely as methodological devices [KANT1a: 598-600 (B: 685-689)].

Thus, once again, we have from Kant transcendental principles that support and give a proper rational substratum to Piaget's empirical principles.

In summary, then, our three ideas of Quantity in the faculty of pure consciousness consist of the processes of assimilation, accommodation, and equilibration. These ideas are given rational support by the transcendental principles of genera, specification, and affinity.

§ 5.4 Relation in the Faculty of Pure Consciousness

We now come to our final title in the 2LAR representation of the faculty of pure consciousness. The general ideas of Relation in the 2LAR representation of a thing are: the internal, the external, and the transitive. Our task now is to examine these ideas in the context of pure consciousness.

⁷ continuum of species (of logical forms).

⁸ law of the continuum in nature.

Relation in general is the form of the form of representation. In the context of the faculty of pure consciousness we must view Relation in terms of the idea of a process, namely the process of the construction of the form of the manifold of empirical consciousness. If we compare our general ideas (the internal, external, and transitive) with our earlier discussion of Piaget's theory of cognizance, we might find ourselves making the natural connection between these general ideas and Piaget's processes of interiorization and externalization. However, if we do so we at once encounter the obvious difficulty that the *complete* description of Relation requires *three* ideas of processes and Piaget provides only *two*. Perhaps Piaget's "inferential coordination" might serve the required third idea, but since he describes the idea of this phenomenon as being contained, so to speak, within the idea of the process of interiorization, the question merits a Critical examination.

We begin this examination by reminding ourselves of the nature of the phenomena that Piaget describes with his ideas of interiorization and externalization. In the first place, we note that these ideas are ideas of an *act* that Piaget calls "conceptualization." Conceptualization in the context of Piaget's theory involves the separation of the mere cognition of an activity from the practical sensorimotor *execution* of that activity. This distinction is the essence of Piaget's logical division between schemes that are conscious and schemes that are unconscious.

In the second place, we must take a look at what sort of objects these activities of conceptualization are directed toward. The object of interiorization is the "conceptualized scheme" and the coordination of these schemes. On the "material" level, this results in "a sort of logic of schemes prior to language and thought¹." On the "conceptualization" level interiorization leads to the construction of "meaning-bearing representations² (such as language and mental imagery)." The schemes constructed in the process of interiorization are structures by which we know what to make of our experiences.

Externalization, on the other hand, is a process having for its object the construction of "reality" in the sense of the Subject's knowledge of the "natural, external world." The outcomes of the process of externalization are "instrumental behaviors, spatio-temporal structures, and an objectified and spatialized causality" (e.g., objective space, objective time, cause-and-effect relations, operations, and so on). At the risk of over-simplification, we might regard interiorization as the construction of schemes in terms of "mental life" and externalization as the construction of schemes that bring "knowledge of the real world" and which pertain to "material life."

¹ It is important for us to remember that Piaget does not use the word "thought" in the same way that we do in this treatise, namely, in the context of "thinking" as "cognition through concepts."

² Again, Piaget does not use "representation" to mean the same thing as our use of this term in this treatise. For Piaget a "representation" is a specialized and rather high-level form of schema, e.g. a word, such as "dog," that represents a thing.

The element of realism presupposed in this way of dividing up the theory of the processes of cognizance is only too obvious. In view of the number of times we have already encountered the persistent tendency of the copy of reality hypothesis to enter our theoretical considerations, we are well-advised to view Piaget's division of processes of conceptualization in terms of interiorization and externalization with caution. It seems well established that something like that which he describes is taking place, but interiorization and externalization, as ideas, seem not to get at the real essence of what is taking place. The ideas of interiorization and externalization have *empirical* support from behavioral evidence, but this is not enough if we can find no transcendental ground for these ideas.

The principal difficulty with seeing interiorization and externalization as the ideas of Relation in the faculty of pure consciousness arises from the fact that we must view Relation in terms of processes which must have for their object *the form of the manifold of consciousness* rather than the things represented within this manifold. Interiorization and externalization, as described by Piaget, necessarily must be cast in terms of observable behavior since it is the observation of behaviors from which these ideas are drawn. In the language of system theory, interiorization and externalization are "input-output" descriptions; the idea of a manifold of empirical consciousness, on the other hand, is more like the idea of a "state-space" description. Putting this another way, the idea of a process of Relation must be an idea of a *formal* process rather than an idea couched in terms of the compositional matter that goes into this form.

If we remove from the descriptions of interiorization and externalization all the objective content of these ideas (i.e., we abstract from each of these ideas the matter of the idea), all that remains are ideas of *connection*, i.e., rules governing the manner in which the Piagetian schemes are modified and coordinated. These rules differ from the ideas of Quantity in an important and fundamental way. Whereas assimilation, accommodation, and equilibration pertain to the form of the matter of empirical consciousness, the rules of connection of which we speak here are rules that legislate the formal properties of the manifold itself. Put another way, the processes of Relation pertain to rules by which particular representations (e.g., Piaget's schemes) are subsumed under the schematization of a *general structure*. We have a word for the application of rules of this sort that govern mental structures. The word is *judgment*.

Power of judgment in general is the capacity³ to think the particular as contained under the general⁴. If the general (the rule, the principle, the law) be given, the power of judgment which

³ *das Vermögen* - the ability, capacity, or power.

⁴ *Allgemeine*. In translating Kant's work, this word is usually rendered as "universal." However, in the context in which Kant is using it in this passage from *Critique of Judgment*, it seems more correct to render it as "general" in order to avoid the specialized connotation that "universal" carries in formal logic.

subsumes the particular under it . . . is *determining*⁵. But if only the particular be given for which the general has to be found, the power of judgment is merely *reflective* [KANT5: 15 (5: 179)].

Kant viewed the idea of judgment in a manner that was radically different from the definition given this term by his contemporaries (and, for that matter, by most logicians throughout the history of logic⁶). For Aristotle, to judge was “to affirm a predicate of a subject” and something like this view was prevalent among logicians prior to the logical positivism of symbolic logic. For Hegel,

The *Judgment* is the notion in its particularity, as a connection which is also distinguishing of its functions, which are put as independent and yet as identical with themselves, not with one another.

One's first impression about the Judgment is the independence of the two extremes, the subject and the predicate. The former we take to be a thing or term *per se*, and the predicate a general term outside the said subject and somewhere in our heads. The next point is for us to bring the latter into combination with the former, and in this way frame a Judgment. . . the Judgment [is] taken as a determination of the object itself. The etymological meaning of the Judgment (*Urtheil*) in German goes deeper, as it were declaring the unity of the notion to be primary, and its distinction to be the original partition. And that is what Judgment really is [HEGE1, § 166].

This is “Judgment” as a thing (a “notion” in Hegel’s terminology), a “particular” distinguished within Hegel’s idea of the “Absolute” and not merely an act. For Husserl’s “phenomenological” theory, on the other hand, judgment is a *confirmation*.

If one disregards all these superstructures of the world of our experience, above all, of the experience which to each is his own, then it appears that the act of judgment, even on this lowest level . . . has structures which coincide with those of judgment under the idea of definitive validity. It appears not only that the domain of the logical also extends to where scientific interest does not yet exist but also that, with the expression "judgment," a *general essence is denoted which, in its basic structure, is the same at all levels of logical activity in which it occurs*. . .

If, beforehand, we wish already to make precise *this most general concept of the judgment and the concept of the object* which belongs to it as the concept of the substrate of the judgment, then we must go back to the relation between the act of judgment and life-experience in the wholly concrete sense. All experience in this concrete sense rests at bottom on the simple pregiving *protodoxa* of ultimate, simply apprehensible substrates. . . But this domain of *protodoxa* . . . is merely passive pregiving consciousness of objects as substrates. . .

The term "judgment" taken in this sense is then the name for *the totality of objectifying ego-acts* [HUSS2, § 13].

With Husserl’s idea of the “pregiving *protodoxa*” (an idea that stems from Husserl’s theory of the “self-evidence” of objects), we can see the copy of reality hypothesis firmly stamped on Husserlian “judgment.”

⁵ *bestimmend*. In different translations, we find this rendered either as "determinant" or "determinative."

⁶ Hegel and Husserl likewise each hold their own radically different view of the idea of judgment. The Whitehead-Russell tradition of symbolic logic ruthlessly expunges the idea of "judgment" from holding any place in logic at all.

In between Aristotle's quite simple idea of judgment and the impressively obscure ideas of Hegel and Husserl, we find Kant's explanation of judgment.

I have never been able to satisfy myself with the explanation that the logicians give of a judgment in general: it is, they say, the representation of a relationship⁷ between two concepts. Without quarreling here with this faulty explanation, that in any case it fits only *categorical* and not hypothetical or disjunctive judgments (which latter two do not contain a relationship of concepts but of judgments themselves) . . . I remark only that it is not here determined wherein this relationship subsists.

But if I investigate more closely the reference of given knowledge in every judgment . . . I find that a judgment is nothing but the manner of bringing given knowledge to the *objective* unity of apperception. This is plain from our use of the copula *is* in the aforesaid, in order to distinguish the objective unity of given representations from the subjective. For this indicates the reference of these representations to original apperception and their *necessary unity*, even if the judgment is empirical, therefore contingent . . . I do not say by this that these representations *necessarily* belong to each other in the empirical intuition, but rather they belong to one another by virtue of the *necessary unity* of apperception in the synthesis of intuitions, i.e. according to principles of the objective determination of all our representations, so far as knowledge can arise from them, these principles being all derived from the first principle of the transcendental unity of apperception. In this way alone can there arise from this relationship a *judgment*, that is, a relationship that is *objectively valid*, and is perfectly distinct from the relationship of the same representation which has only subjective validity according to the laws of association [KANT1a: 251-252 (B: 140-142)].

A judgment is, for Kant, that act which brings representations into the necessary unity of transcendental apperception. (The representation of precisely what is meant by this unity is, of course, our purpose in developing our representative theory of the faculty of pure consciousness). Thus, it follows at once that the ideas of the processes of Relation in the faculty of pure consciousness are none other than ideas of the processes of judgment.

The Internal: A connection of Relation, in the general 2LAR of representation of a thing, is internal if the representations so connected are viewed as contained "in" the representation of the thing. For example, consider the predication "John is happy." The state of "being happy" is represented as something "contained in" the representation of John. In contrast, "John and Paul are friends" predicates an external relation (that of "being friends") between two objects (John and Paul). A representation that is regarded in Relation as internal to another representation can be called a *characteristic* of that second representation.

This idea of a characteristic is itself many-faceted. For example, a characteristic might be a representation that is inherent or "essential" to the representation of the object for which it is a characteristic. Kant called such a characteristic a *mark* of the object; in this case, the mark is a ground for the recognition of the object. Contrariwise, the characteristic may be contingent; John is happy right now, but next week he might not be. We will have quite a lot to say about this and

⁷ *Verhältnisse*.

other elements of the logic of concepts later on in this treatise.

In the context of the faculty of pure consciousness, the object being represented is empirical consciousness of the manifold of representations. In this context all representations are “contained in” this empirical consciousness (either as clear – i.e., “conscious” – representations or as obscure – i.e., “unconscious” – representations). Seen in this context, the internal pertains to the process of judging the connection of representations insofar as these connections are viewed as *necessary* connections. This process of judgment is *determining*; the judgment *makes the determination* of the *form* given to these connections and declares this form of connection to be *necessarily* the form. This form establishes the *nexus* of relations among the various representations and establishes the *formal Existenz* of the manifold of concepts.

This process of *determining judgment* constitutes what we can call a *logic of structures*. Now, in this logic of structures representations are placed in relation with one another (all in the manifold of representations) and it is convenient to picture these relations in a hierarchical fashion, with some representations “standing under” other representations (e.g., “higher” and “lower” concepts). For this reason, we may also call the process of determining judgment a *logic of understanding* since it governs the logical form of the *nexus* of representations both in terms of the form of the representations themselves *and the matter of these representations*. Therefore, this logic of understanding goes beyond being merely classical formal logic but includes as well that logic of objects which Kant called *transcendental logic*. The former is *analytic* in its nature; the latter is *synthetic* since it is responsible for establishing the *material validity of the premises* that “go into” the merely formal structure provided in the former.

From the side of understanding, human cognition is *discursive*, i.e., it takes place through representations which take as the ground of cognition that which is common to many things, hence through *marks* as such. Thus we know things *through marks* and that is just called *recognition*, which comes from “*being aware of*” [KANT8a: 564 (9: 58)].

The process of determining judgment is the process at work in that which we call *thinking* insofar as we regard thinking in objective terms. From the distinction made above between the formal and the transcendental aspects of determining judgment, we see that we can subdivide the idea of determining judgment into two parts: 1) mathematical and 2) dynamical. Their combination is called *conjunctio*. Determining judgment, however, is a *process* and so we must take care to distinguish between these two aspects of determining judgment, on the one hand, and the ideas of analytic, synthetic, and anasynthetic *representations* on the other.

Now, this idea of the process of determining judgment requires a transcendental principle as the ground for its objective validity. (Otherwise its *Dasein* remains merely a rational hypothesis). The full exposition of this transcendental principle involves a thorough discussion of Kant’s transcendental ontology and it is not yet time to undertake that discussion. However, we can still

name this principle and provide a brief description of it in preview of the detailed discussion that will come later. The transcendental principle upon which the idea of the process of determining judgment is grounded is: *The Principle of Conformity to Law* [KANT5: 34 (5: 198)]. The law referred to in this principle consists of the primitive notions of understanding (that is, the rules governing the making of concepts). These notions are the primitive and pure *a priori* rules (or, if one prefers, functions) that are *necessary for the possibility of objective* experience, and they constitute the objective core of transcendental ontology. As we have said many times already, the phenomenon of mind *makes* a “world model” (which we call Nature); the notions of understanding are the rules of this construction and the ‘mortar’ of human understanding.

The “bricks”, of course, originate in and are made from the data of the senses. What mind will make of this data, insofar as objective knowledge is concerned, depends on many factors but, when viewed structurally, the notions of understanding can be regarded as providing the general laws of the structure (i.e., the rules) under which the ‘particulars’ of the data arising from the senses are subsumed. It is from this perspective that the internal in the faculty of consciousness is called a process of *determining* judgment, in keeping with Kant’s discrimination of different types of judgment.

It is this process of determining judgment which provides the ground for that peculiar ability of mind that we call the *power (Vermögen) of understanding*. This power of understanding (or simply “understanding” for short) is exhibited in that phenomenon of mind we call *thinking* (cognition through concepts). Thinking is a process and it is interesting to note that while Kant often used the word “thinking” as a technical term, the word “thought” (as a noun) does not appear in his writings *in a technical context*. In the Kantian theory the only thing that might adequately serve to answer the question “what is a thought?” would have to be the intuition coming out of the interaction between the synthesis of apprehension and the synthesis of imagination we discussed in Chapter 3; this we could call an *intuition of comprehension*. As we examine the details of this process in more depth, we will come to see that there is indeed no conflict or contradiction between this idea and William James’ descriptions concerning the character of thought in his stream-of-thought model of the phenomenon of mind, and we will indeed be able to better describe James’ ideas of “transitive” and “substantive” thought with far more distinctness than James was able to achieve.

The External: In the general 2LAR of representation of things, the external is the connection between two representations for which the objects of these representations are regarded as distinct from each other. We must now examine this idea in the context of the faculty of pure consciousness. As our starting point, we may note that the idea of the external is the contrary opposite of the idea of the internal and examine the implications of this for pure consciousness.

The idea of Relation in the process of determining judgment is representation of *nexus* in a manifold of objects. Now, consciousness is the representation that a representation is in me. This means that the idea of empirical consciousness contains the ideas of two general Objects, namely the manifold of representations and the representing Subject. We can make no inquiry as to real internal connections in the representing Subject since the *I* of transcendental apperception, as an Object, is a *noumenon*. Internal representations, such as "I am a soul," can have no objective validity when applied to the *I* of apperception. We can, however, examine connections of Relation between the manifold of representation and the *consciousness* of the Subject inasmuch as *these* are regarded as distinct from each other as objects, and our representation of the faculty of pure consciousness speaks merely to how we must view the organization of the unity of the manifold of consciousness. As we noted at the beginning of this section, all empirical consciousness has a necessary reference to a transcendental consciousness (preceding all particular experience), namely the consciousness of oneself as original apperception.

The representation of such a reference is clearly of the sort which falls under the idea of the external in the form of the form of pure consciousness. Our task, then, is to deduce how such a Relation is viewed in terms of a process of judgment. To do so, we first note that judging is an act of the judging Subject and that the ability to perform this act is a peculiar characteristic of the phenomenon of mind. Is the capacity for understanding, which is grounded in determining judgment, a sufficient ground for the possibility of this act and for the cognition that results from it? Kant points out that it is *not*.

The determining power of judgment under general transcendental laws, that understanding gives, is merely subsuming⁸; the law is presubscribed for it *a priori*, and hence it does not need to think of a law for itself so that it can subsume the particular in nature under the general. But the forms of nature are so manifold, so many modifications, as it were, of general transcendental natural concepts are left undetermined by those laws which pure understanding gives *a priori*, - since these only go to the possibility of nature in general (as an object of the senses) - that there must be laws for these also which, as empirical, may seem contingent from the point of view of *our* understanding and yet, if they are to be called laws (as the idea of nature requires), they must be regarded as necessary in virtue of a principle of the unity of the manifold, though it be unknown to us.- The reflective power of judgment, which is obliged to ascend from the particular in nature to the general, requires on that account a principle that it cannot borrow from experience, because it is supposed to ground the unity of all empirical principles under higher ones, and hence to ground the possibility of their systematic subordination under one another. Such a transcendental principle, then, the reflective power of judgment can only give as a law from and to itself, not derive it from outside (because then it would be determining judgment), nor can it prescribe it to nature: for reflexion upon the laws of nature is directed by nature, and not nature by the conditions according to which we attempt to arrive at a concept of it which is quite contingent in respect to nature [KANT5c: 67 (5: 179-180)].

⁸ *Die bestimmende Urtheilskraft unter allgemeinen transzendentalen Gesetzen, die der Verstand giebt, ist nur subsumierend.* The power of understanding is the ability to *make* general rules (concepts) that *determine* Nature (one's world model). However, we must keep in mind that understanding is grounded in determining judgment and not the other way around. We can only view understanding as an ability, not as some sort of "mental machinery" which churns out Lockean-style knowledge-nuggets.

There is quite a lot contained in this quote, and it is well worthwhile to analyze these contents. The first point is this: while determining judgment works under the principle of conformity to a law marked out for it by means of the notions of understanding (the rules governing rules), the notions of understanding are nothing more than the pure *a priori* forms in which the data of the senses is dressed and given form for the *possibility* of experience. These notions, precisely because they *are* so general, only mark out what forms of experience can “legally” be applied. They *do not* carry within themselves any instruction manual which, so to speak, dictates “*this* form must be applied to *that* data.” (If they did, Nature would be predetermined by the mind and purely rational – a outright victory for the rationalist school of mind and for Hegel’s system).

Consequently, while the notions of understanding do provide the “generals” under which the data of the senses is to be subsumed, *which* general laws are to be applied is a judgment for which we are “given the particular” and left to “find the general” under which the empirical ‘particular’ is to be subsumed. Such a judgment is called a *reflective* judgment. A ***process of reflective judgment*** is therefore *necessary* as the ground for the ability of the judging Subject to *make* this determination. However, this also necessarily presupposes that the law (principle) which governs this process of reflective judgment must be sought in the judging Subject because the property of *necessity* inherent in the idea of such a principle cannot possibly come from the contingent data of the senses. It is from this perspective that the connection made by reflective judgment is seen as a necessary connection between the manifold of representations and the consciousness of the Subject (and is therefore an External idea of Relation).

Let us be as clear on this point as possible. *Nature* is the singular Idea having for its Object the *noumenon* we call “the world” or “the universe” or “everything”. Nature is represented in terms of the appearances under this *noumenon*. The representation of Nature is given only by the totality of the manifold of *objective* representations. The on-going exposition of its details is the business of the process of determining judgment, and the process of reflective judgment stands only in a *mediate* relationship to this exposition. But reflective judgment stands in *immediate* relationship between the consciousness of the Subject and the form of the manifold of representations. The objective representations produced in determining judgment dictate no immediate connection to the empirical consciousness of the Subject; this connection is made possible only through reflective judgment.

Now, our idea of the Subject is represented in our theory by the Organized Being model. If, then, we wish to analyze “the nature of reflective judgment” this analysis must proceed from the perspective of how the Organized Being “connects” with the “world of appearances” (an idea that includes in it our representations of the *soma*). What sort of connections are these?

Viewed as an Organized Being, the Subject must be regarded as one particular object among other objects in Nature. Our representation of the Subject must therefore be a representation that stands “within” Nature and not “outside” it. The relationship between the Organized Being and the environment must consequently be one of complete reciprocity – the environment can affect the Organized Being and the Organized Being can, reciprocally, affect the environment. Reflective judgment must correspondingly be viewed from two aspects. First, we have the aspect where the connection is one in which the environment affects the Organized Being; this is the Subject as *patient*. We will call reflective judgment under this relationship *aesthetical reflective judgment*. Second, we have the aspect where the connection is one in which the Organized Being affects the environment; this is the Subject as *agent*. We will call reflective judgment for this type of relationship *teleological reflective judgment*.

Now, the idea of Nature is unitary; we think *one* Nature when we speak of “everything.” While determining judgment sees to the *details* of the representation of Nature, it is the business of reflective judgment to see to it that the *structure* of these representations forms a systematic whole – the unity of Nature – and, most especially, *that the whole of Nature is subjectively as well as objectively a unity*. The transcendental principle which provides the ground of reflective judgment in general must therefore be a principle under which this unity of representation *in consciousness* becomes possible. Let us examine what is required for this possibility.

In the first place, we can have no object in Nature where we have no cognition of the appearance of this object. The possibility of an object is therefore grounded in the possibility of the objective representation of the appearance of this possible object. The mere data of the senses, however, is *not an objective* representation; indeed, the data of the senses is not necessarily even a *conscious* representation. Since in all cases it is the Subject who *makes* its own objective representations, the possibility of making an objective representation presupposes that the Subject “has a reason” for making such a representation and for making it in whatever form this representation is given. The most primitive form of an objective representation is an intuition, which is merely the representation *of an appearance*, the object of which is yet undetermined. The cognition of an object of appearance requires more than this; it requires, in addition, that the intuition be combined with a concept that gives a determination of the object. But the formulation of any concept must have a determining *ground* (a ‘reason’) why it is *this* concept and not some other that is formulated. This ground is necessarily part of the total structuring of the concept and we can hardly do better than to call it the *purpose* of the concept. We do not say that the idea of a purpose is something contained in the data of the senses (again, that would place the purpose in the object as a thing-in-itself - i.e., the copy of reality hypothesis). But if the object cannot be regarded as supplying the purpose (because to so regard it has no objective validity; a “purpose” is supersensible), this purpose can come only from the Subject who *represents*.

The making of concepts belongs to determining judgment. But, as we have seen, determining judgment by itself does not have the ability to perform this act except that reflective judgment provide it with a rule for ascending from the particular to the general in the notions that are to be applied. Now, the idea of this rule and the idea of the purpose of the representation are two entirely different ideas. Yet it is clear that if the rule legislated by reflective judgment had nothing whatever to do with the purpose, there could be no ground for supposing that the representation resulting from the process of determining judgment will be in agreement with any purpose in making the representation or, indeed, could have any connection whatever with that purpose. Objective representation in this case would be divorced from the thinking Subject, *no representation of actual objects* (that is, objects of sensible appearance) *would be possible*, and Nature could have no systematic connection. All that representation could do would be to create a psychotic world lacking any sense of meaning.

We can now see the transcendental principle at work in reflective judgment. Kant called the agreement of an Object with that characteristic of things which is possible only through purposes (bearing in mind that characteristics are concepts) the *Zweckmäßigkeit* (expedience) of the *form* of representation of the Object's appearance. The transcendental principle upon which the process of reflective judgment is grounded is the principle that the *purpose* of a representation must be represented in the *form* of the cognition of the appearance of the Object. He called this the *principle of the formal expedience (Zweckmäßigkeit) of Nature* [KANT5a: 18-26 (5: 179-186)].

Apology: A word of explanation is required here for those readers who are familiar with English versions of Kant's *Critique of Judgment*, in which *Zweckmäßigkeit* is rendered using the word "purposiveness." This rendering is now traditional and can be laid at the feet of J.H. Bernard's 1892 translation. In his translator's introduction Bernard wrote, "*Purposive* is an ugly word, but it has come into use lately; and its employment enables us to preserve the connection between *Zweck* [end, purpose] and *zweckmäßig* [appropriate, expedient]." I object to this decision for two reasons. The first reason is that "purposive" and "expedient" have similar but still quite different meanings. Purposive means "serving some purpose" or "having a purpose." Expedience, on the other hand, is defined as "fitness or suitability to effect some desired end or the purpose intended; appropriateness to the particular end or circumstance." If "purposive" meant *only* "serving some purpose" then I would have no great objection to the term because its meaning would be clear and distinct, and "purposiveness" would be more nearly synonymous with "expedience." In fact, though, "purposiveness" is not only an ugly word but also an uncommon word and its appearance in *Critique of Judgment* has the effect, in my opinion, of making Kant's already difficult-to-follow explanation of this principle even more difficult to follow. "Expedience," on the other hand, delivers the point Kant is making quite vividly – the

representing form must be suitable and fit for connecting the cognition with the subjective purpose. The power of judgment is, as Kant says, the “middle term between understanding and reason.” Reflective judgment has no hand in establishing a purpose; it merely sees to it that the purpose is not mislaid in the process of objective representation. Expedience expresses this principle clearly enough and purposiveness does not.

My second objection is a linguistic one. *Zweckmäßigkeit* simply does not mean “purposiveness” in German. That would be *Zweckbetontkeit* or *Zweckbestimmtheit*, words whose adjective roots already include the connotation of “purposive.” □

Acting under the principle of the formal expedience of Nature, reflective judgment provides those determinations required for the *practical employment* of the capacity for understanding, which we can likewise regard as the capacity for making *objective* representations. But if all objective representations of concepts fall under the domain of determining judgment, what is left for the representations of reflective judgment? In other words, what mark or representation is left for reflective judgment to make that can bring to consciousness the knowledge that what understanding has produced is in accord with the principle of the formal expedience of Nature?

This question has an easy answer. All representation with consciousness is perception. In turn, a perception is either an objective perception (in which case, the making of it falls under the process of determining judgment) or it is a non-objective, i.e. *affective*, perception. The *form* given to Nature is the exclusive responsibility of the process of determining judgment, but the evaluation of the *expedience* of this form (its agreement or “harmony” with subjective purpose) is not itself a judgment *of* Nature and thus is entirely non-objective. The representations arising from reflective judgment are consequently none other than affective judgments.

We have a great many words for describing affective perceptions. These include such words as *emotion, feelings, interests, desires, values, motivations*, and so on. We use these words to try to communicate with each other some indication of “what’s going on inside us” and, of course, we succeed in doing so only to the extent that and only because of the fact that all of us “experience” affective perceptions that we seem to share more or less in common as human beings¹. In science, with the obvious exception of psychology, affective perceptions are often held in disrepute; the popular image of science is that of a coldly rational and objective human undertaking where “emotions” and “desires” and “appetites” get in the way and consequently are to be driven out as having no place in science.

¹ When we make these attempts at description, and when psychologists and neuroscientists undertake to study them, what we are doing is trying to make objective representations of these non-objective perceptions. Inasmuch as we can be conscious of our affective perceptions, they are phenomena *in* Nature although they are not representations *of* Nature.

There is, of course, much to be said in favor of this attitude. No one would accept a theorem in mathematics on the grounds that “it just *feels* right.” In physics, in mathematics, and in engineering, affective perceptions lie outside the topic of the science; they are “unscientific” in these fields. However, when our science has for its topic the phenomenon of mind, the affective perceptions clearly have a place and this place is one of great importance. The process of determining judgment (from which comes understanding and all our objective knowledge) requires reflective judgment to provide it with, so to speak, its “rules of engagement.” Without the affective perceptions this is not possible. The “purely logical being” of science fiction is just that – a fictitious entity. *There can be no human-like intelligence without affective perception.*

The recognition of this has come to physical scientists working in the field known as “cognitive science” (cognitive neuroscience, artificial intelligence and so on) only fairly recently. Rosalind Picard, in her 1997 book², writes:

I ran into a fundamental and relatively unknown role of emotions while investigating what scientists assume to be the *rational* mechanisms of perception and decision-making. I was trying to understand how people perceive what is in a picture - how they decide what the contents of an image are. My colleagues and I have been trying for decades to make computers “see” - to help catalog and search the contents of images and video, to help physicians find abnormalities in medical imagery, to help robots navigate or computers inspect industrial parts, and to help achieve many other goals. Most of my research has focused on the problem of modeling mechanisms of vision and learning, and has had nothing to do with emotions.

But what I ran into, in trying to understand how our brains accomplish vision, was emotion. Not as a corollary, tacked on to how humans see, but as a direct component, an integral part of perception. The story of how emotion influences perception . . . will be saved for later in this book, but suffice it to say that this marked a turning point in my thinking. . .

The latest scientific findings indicate that *emotions play an essential role in rational decision making, perception, learning, and a variety of other cognitive functions.* . . We all know from experience that too much emotion can impair decision making, but the new scientific evidence is that *too little emotion can impair decision making.* . .

I have come to the conclusion that if we want computers to be genuinely intelligent, to adapt to us, and to interact naturally with us, then they will need the ability to recognize and express emotions, to have emotions, and to have what has come to be known as “emotional intelligence.”

Now, the term “affective perception” is not synonymous with the word “emotion.” Indeed, present day psychology is far from being in agreement even on the question, “What is emotion?” In this treatise emotions are regarded as phenomena which, while clearly belonging to the general phenomenon of mind, stand in the place of Aristotle’s “what is clearer to us” rather than “what is clearer by nature.” Affective perceptions and the process of reflective judgment to which they “belong” make up our present topic (or, more accurately, sub-topic within the larger topic), and our concern will be with what we might playfully if none-too-accurately call the ontology of emotional intelligence.³

² R.W. Picard, *Affective Computing*, Cambridge, MA: The MIT Press, 1997, pp. ix-x.

³ Most of the inaccuracy in this phrase lies with the word ‘ontology’ rather than ‘emotional intelligence.’

Finally, in bringing this sub-section to a close, let us briefly return to my earlier statement of the logical division of the process of reflective judgment into two parts – aesthetical reflective judgment and teleological reflective judgment. We make this division in recognition of the *commercium*, or reciprocity, between the “mental world” and the “external” or “physical” world. Let us remind ourselves that in the faculty of pure consciousness reflective judgment occupies the role of a sort of “bridge” between the objective representation of Nature and the subjective idea of purposes. Insofar as the Organized Being is regarded as *patient* (i.e., as affected by the external world), reflective judgment must judge the expedience of the effects produced *in* the Subject (as patient) with regard to subjective purposes. This sort of judgment is what we mean by the term *aesthetical* reflective judgment.

However, insofar as the Organized Being is regarded as *agent*, reflective judgment is called upon to judge the expedience of actions and outcomes (which are experiential) with regard to the purpose or purposes which we say provide the ground for the Subject to *act* as an agent. Every voluntary action undertaken by the Subject, as agent, can be called a “willful” or “purposive” action. For any such action we must presuppose some end, goal, or objective that the action is intended to attain. Now, the Object of the idea of a ‘purpose’ is supersensible; we do not say that “Nature provides us with a purpose” but, rather, that “we *have* a purpose” in our deeds (whether these deeds be intellectual – understanding – or physical). A purpose is, however, the idea of “something” that is entirely subjective. The *particular* action undertaken is a *concrete instantiation* that we say “reflects” one’s purpose, but our cognition *in concreto* is a *consequence* of purpose and not “the” purpose itself.

We are only justified in making a connection between actions and purposes if we regard the actions as somehow *expedient for the purpose intended*. The student studies his books and notes on Wednesday “because he has a test on Friday” that he “wants to be ready for” so that he will “get a good grade.” In this example we see what we might call a *purposive chain*⁴ of actions all “leading to” a “desired goal.” Throughout this chain, the actions and objects are represented cognitively, i.e. it falls to determining judgment and the consequent capacity of understanding *to represent* what will be done. But it is the process of reflective judgment that evaluates the expedience of this objective representation. Here we encounter the old Aristotelian idea of a “final cause” referred back to the Subject (as required by the Copernican hypothesis), and it is for this reason that reflective judgment in regard to the Subject as agent is called *teleological* judgment.

⁴ In regard to reflective judgment insofar as the Subject acts as an agent, it is appropriate to use the word “purposive” in describing the “nature” of the judgments of expedience. The problem with the traditional use of “purposive” in translating Kant is that the appropriateness of the word “purposive” in the case of *aesthetical* reflective judgment is not without valid criticism. This is why I prefer to call the transcendental principle of reflective judgment the principle of the formal *expedience* of Nature.

The Transitive: We come at last to the transitive Relation, which in some ways is the most difficult of the ideas of the faculty of pure consciousness. In the 2LAR of representation of a thing, the transitive is an idea that must be viewed simultaneously as both an idea of an internal Relation of a thing and an external Relation among different things. The idea of “inertial mass” in physics is an example of something that is represented in this fashion since it is seen as a property of every “ponderable body” (as a property of a “particle” it is an idea that stands in internal Relation to the body; as a property of *every* particle⁵ it stands in external Relation as an idea by which diverse “bodies” can be connected, as, e.g., in Newton’s law of gravity). In Chapter 3 we saw that the idea of the transitive Relation can be viewed as the combination (in a synthesis) of internal and external Relations.

Now in order to see how the ideas of external Relation (reflective judgment) and internal Relation (determining judgment) can be so combined in the context of the faculty of pure consciousness, we need to identify the synthetic idea serving as the basis for such a combination. This, however, we have already accomplished; it is the idea of that which we call “purpose.” As we noted above, the conscious representations in the manifold of representations are *made* by the Subject rather than *given to* the Subject. If we deny the former and assert the latter we are making the copy of reality hypothesis. But the making of a representation necessarily presupposes a ground, a *reason*, for making this representation and we call that reason the “purpose.”

It is a task⁶ of the process of reflective judgment to see to it that objective representation is “fit” or “suitable” to serve this purpose, and it is in this sense that we can say the purpose is “contained in” the objective representation. However, we regard neither the objective representation nor the object it represents as the *source* of this purpose. (These merely “reflect” the purpose). Rather, the source of any purpose whatsoever can only be found in the representing Subject (as Organized Being) and, therefore, the idea of purpose is common to both the objective representations and the consciousness of the Subject.

At the same time, Relation in the faculty of pure consciousness is the idea of a *process*, namely a process of *judgment*. Therefore the mere idea of a purpose is not the idea of the transitive Relation in the faculty of pure consciousness. Rather, it is the idea of a *judgment* of purpose which must fill this role. The act of making such a judgment is what brings into being the transitive connection between representation and the consciousness of the Subject. So it is that we must examine this process of judgment to understand its nature.

⁵ For the sake of simplicity in this example, we do not consider the distinction modern physics makes between “rest mass” and “mass” nor other various specifications of “mass properties” such as the idea of the “effective mass” of an electron in a solid.

⁶ (but not the only task)

It is at this point where we find ourselves face to face with a peculiar difficulty. Arising as it does from the Subject, the judgment of a purpose must be a judgment that can take *nothing whatsoever* from concrete experience because the establishment, through judgment, of purpose is itself *necessary for the possibility* of experience. Without this judgment we find no ground for the making of objective representations; all such representations must be made in accord with the principle of formal expedience of Nature, which must presuppose a subjective purpose. It follows that the judgment of purpose must be both a *pure* judgment (taking nothing from the empirical) and an *a priori* judgment (necessary for and thus prior to experience).

In addition, the judgment of purpose is a judgment out of which *actions* follow, whether these actions be merely intellectual (the making of representations) or physical (the Subject as agent affecting the non-mental world). The judgment of a purpose is not concerned at all with the particular objective representations, which merely reflect purpose in a concrete instantiation. Indeed, all such representations *serve* their purpose and this is something quite different from the judging *of* a purpose. The judgment of a purpose stands in *immediate* relationship only to the action that follows; its standing with respect to the representations is only a *mediate* relationship and, from this point of view, the judgment of purpose is not a *theoretical* judgment⁷; it is a *practical* judgment in the ancient sense of the word “practical”, e.g.,

What affirmation and negation are in thinking, pursuit and avoidance are in appetency; so that since moral excellence is a state concerned with choice, and choice is deliberate appetite, therefore both the reasoning must be true and the appetite right if the choice is to be good, and the latter must pursue just what the former asserts. Now this kind of intellect and truth is practical; of the intellect which is contemplative, not practical nor productive, the good and the bad states are truth and falsity (for this is the function of everything intellectual); while of the part which is practical and intellectual the good state is truth in agreement with right appetency.

The origin of action - its efficient, not its final cause - is choice, and that of choice is appetite and reasoning with a view to an end. This is why choice cannot exist either without thought and intellect or without a moral state; for good action and its opposite cannot exist without a combination of intellect and character. Intellect itself, however, moves nothing, but only the intellect which aims at an end and is practical; for this rules the productive intellect as well, since every one who *makes* makes for an end, and that which is made is not an end in the unqualified sense (but only relative to something, i.e. *of* something) - only that which is *done* is that; for good action is an end and appetite aims at this [ARIS10: 1798-1799 (1139^a32-1139^b5)].

Because the judgment in the transitive Relation must be pure and stands in immediate relationship to a following action that serves a subjective purpose, we may call the transitive Relation in the faculty of pure consciousness the ***process of practical judgment***. It is obvious that such a process of judgment serves the power of pure Reason. This leaves us with another question: *can pure Reason be practical?*

⁷ The determination of a theoretical judgment belongs to the process of the determining judgment. We could well call such determinations judgments of understanding.

This question is not a trivial one for it presupposes the idea of a purpose that is both pure and *a priori* as well as capable of being reflected in empirical consciousness by one's empirical representations. The very word "purpose" is almost synonymous with the idea of an "end" or "goal" yet the pure purpose of which we speak can take nothing empirical as its foundation. It must be, in other words, *an end in itself*. Can we make out anything that has such abstract properties?

Let us approach this question, following Aristotle's *dictum* of starting with "that which is clearer to us," with an examination of our actions and activities. Our aim in this is to see if we can find any common theme or thread that binds these actions in a common connection despite their manifold diversity. If we can make abstraction from these concrete examples and find something they all appear to have in common, yet which is itself the idea of a *supersensible* object that "serves as its own end," then we will have found evidence that this transcendental Idea of a purpose can have *objective* and not merely subjective validity. We must, in effect, ask of ourselves "Why do I do what I do?" and then ask this question again of the answer until no further abstraction is possible.

Fortunately, we are not the first to question ourselves in this manner; the question is as old as philosophy itself. If we make abstraction of all of our actions and inquire as to "the reason" for them, we eventually come to at least one idea that closes on itself. This idea is: *happiness*. To be happy appears to be an end we pursue for no other reason than itself. Viewed *empirically*, the question "what is happiness in general?" openly defies us to name any empirical *thing* – money, love, comfort, and so on – of which we can say *this is happiness*. Yet, at the same time, we *know* when we "feel happy" and when we do not, and we can perceive this feeling in degrees. Happiness, therefore, seems to be an idea of a 'something' that appears to possess this pure quality, which serves no *other* objective purpose, and which we appear to pursue spontaneously *for its own sake*. The "nature" of the idea of happiness does indeed possess the *subjective* character we require in order that we may call the judgment of it *pure*, and it does appear to underlie most (we cannot yet justify saying "all") our *actions* and therefore lies in contact with the *practical* side of human nature.

Yet, for all this, the idea of "happiness" still leaves us with a number of difficult problems. If "happiness" defies us to pin it down to specific objects (objects of happiness) how can we *judge* whether a particular subjective state is agreeable with the idea of happiness or contrary to it? Is happiness not an "emotion" or, at least, a "state of being"? Finally, and most importantly, do we have an *objectively valid* ground for proclaiming "happiness" to be a purpose of Reason? These and other difficult issues concerning "happiness" must be dealt with before the treatise concludes, and we will find that this discussion is not brief.

On the other hand, examination of the nature of the very questions we have just asked points us toward another and more fundamental fact. The very nature of these questions presupposes the *possibility* of an answer and *this* presupposition is a transcendental *principle*. Our *process of Reason* drives us to *attempt* an answer, and it is the activity inherent in *making* such an attempt in which we see the necessity for a transcendental principle under which alone the idea that we *do* make such an attempt is an *objectively valid idea*. At the bare minimum, *Reason must presuppose at least the possibility of answering the question* of whether “purpose” is the idea of something that has *objective reality*. Kant called this principle *the principle of final purpose*. It is the transcendental principle upon which the process of pure practical judgment is grounded.

Let us be clear on this point. What we are able to observe, what we know as a fact, are the *activities* we undertake (whether they are physical or intellectual) which appear to us as actions taken for a purpose. Each such action has an objective it attempts to attain; beyond this objective, we find another, the object for-the-sake-of-which the first objective is sought; beyond that, we find another, and so on. But at the end of this purposive chain, if indeed we find that it has an end, is some feeling of “happiness” or “state of contentment” or “sense of self-respect” or other such non-objective condition that marks what Aristotle called “that which is sought for the sake of itself.” The connection of this cascade of objectives is, however, without any rational basis if we do not presuppose some *transcendental* principle under which alone this observable chain of purposive actions is objectively possible and which provides the ground *in Reason* for this chain. It is not necessary that this supposed final purpose have some *empirical* representation; all that is necessary is that the Subject *practically suppose* this purpose is discoverable and attainable.

How, though, are we to represent such a pure purpose or, if not the final purpose itself, *its effects*? The key point in answering this question is simply that *pure practical judgment manifests itself in actions*, and actions are observable since they tie themselves necessarily to objects in consciousness. Looked at in this way, we have only two Objects of pure Reason. We call the Idea of an object that is necessarily desired in the judgment of every reasonable being the Idea of *good*. Contrariwise, the Idea of an object that is necessarily an object of aversion in the judgment of every reasonable being we call the Idea of *evil*.

To be an object of practical knowledge . . . signifies . . . only the reference of the will to the act by which it or its opposite would be actualized¹, and to pass judgment on whether or not something is an object of *pure* practical reason is only the discrimination of the possibility or impossibility of *willing* the act by which . . . a certain Object would be made actual. . .

The only Objects of a practical reason are therefore those of *good* and *evil*. For by the first one understands a necessary object of the appetitive power, by the second, of the power of detestation, both, however, in accordance with a principle of reason [KANT4: 50 (5: 57-58)].

¹*wirklich gemacht* - made real, realized, actualized, or made actual; the phrase means "to bring something into actual being through one's own action."

Whatever action we take we take because we judge that taking that action is *good* in some way – bringing us pleasure, avoiding pain, helping us to attain some other goal, or whatever.

Whatever the action may be, and whatever may be the immediate reason or purpose for the taking of that action, what *all* actions have in common is this Idea that what we are doing is good to do. If, therefore, we wish to put a name on the “final purpose” to which the principle of final purpose refers, we could call the Object of this Idea *the highest good*. We will have to devote considerable time, later in this treatise, to filling in the details of this Idea – casting it, as it were, in *practical form*. For now, however, it is enough for us to understand the principle of final purpose in this context, because it is from this context that we may appreciate the process of pure practical judgment. Practical judgment is the process by which the Subject determines for itself the grounds for judging something as “good” or as “evil” in a *thoroughly practical* sense.

So it is that we have our three processes of Relation for the faculty of pure consciousness: determining judgment, reflective judgment, and practical judgment. There is an interesting observation we may make at this point. The process of determining judgment, by which is established the form of the manifold of concepts and from which arises objective understanding, can rightly be viewed as the ground for a *logic of truth*. The reflective judgment, which joins objective representation to subjective purpose through the expedience of the form of representation, provides the foundation for a *logic of meanings*. Finally, the process of practical judgment, with its reference to the Ideas of good and evil, gives us the foundation of what Piaget once called a *logic of morality*.

§ 6. The 2LAR of Pure Consciousness

We have now achieved the primary objective of this chapter, namely the deduction of the basic formal organization of pure consciousness. Figure 5.6.1 summarizes the twelve ideas of this faculty.

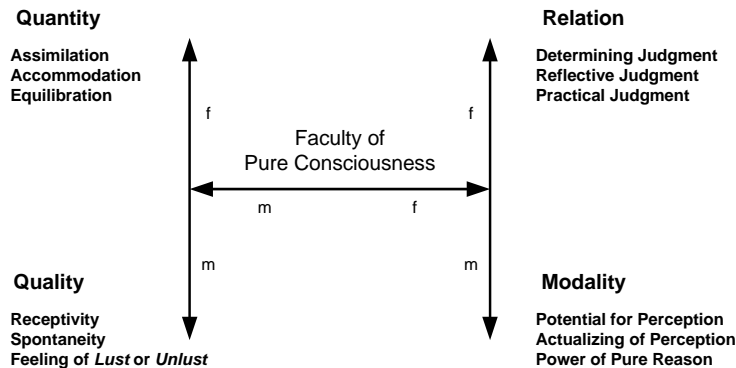


Figure 5.6.1 2LAR Structure of the Faculty of Pure Consciousness

In coming to our deduction of the formal organization of pure consciousness, we have reviewed some noted empirically-based views and findings on the phenomenon of consciousness and from these findings we have sought the proper representation of consciousness with regard to the transcendental *I* of apperception. Our guiding principle in this has been the unity of apperception in one consciousness – a fundamental rational principle of Kant’s Critical epistemology. The result has been, figuratively speaking, a logical *Cannae* by which we hope to have trapped the phenomenon of mind inside a circle constructed on the one side from empirically observed facts and, on the other side, from transcendental principles of pure Reason.

If, however, the reader has emerged from Section 5 with a certain feeling of unease, a suspicion that we might not after all have accomplished what I claim we have, and with a judgment that the deduction of our 2LAR structure lacks convincing proof, I applaud the sound *scientific* attitude that this manifests. It is far too early to celebrate victory for at best we have only surrounded the phenomenon of mind; we have not yet captured it. If we lift our eyes from the field of this our logical engagement, do we see clouds and hear the faint rumble of distant thunder? Or do we perceive the ghost of Bacon frowning down at us and muttering, “too much from too little, too much from too little”?

We have been careful in our exposition of the ideas in Figure 5.6.1, and the deductions made have at least the appearance of a sound footing in fundamental principles. But the distance between observable empirical *fact* and pure *a priori* transcendental principles is not to be underestimated. We may not discount the possibility that our reasoning contains a *saltus*; indeed we *must* suspect that it does, that we have leaped a gap between the phenomenally observable and pure rational principles. This gap must be closed. We must draw the circle inward, tightening its boundaries around our quarry. We hope that when we have done so the phenomenon of mind will be in the grasp of our theory. But perhaps it will not be so. Perhaps there is a weakness somewhere in the perimeter of our reasoning and the quarry will break through and elude us at this point. Perhaps we have erred fundamentally at some point and, when we advance inward to the center, we shall find nothing awaiting us.

In short, we must now commence the task of filling in the details and bridging the gaps. It is one thing to say, “There must be a process of practical judgment”; it is another to elucidate its form, uncover its matter, and evaluate its consequences. So also it is with the other ideas of the faculty of pure consciousness. It is often said that the process of scientific discovery is like peeling an onion; it progresses layer by layer until it reaches the core matter of its topic. We are merely at the first layer.

Still, what we have done so far is at least a beginning rich with the hope of success. Let us consider, for example, what the idea of the process of practical judgment – which is perhaps the idea most far removed from observable phenomena – holds out to us. Kant described it well:

Pure reason is indeed occupied with nothing other than itself, and can have no other business because it is not given objects for unity of the concepts of experience but rather notions of understanding for unity of ideas of reason, i.e. of the context in one principle. The unity of reason is the unity of system, and this systematic unity serves reason not objectively as a fundamental principle extending it over objects, but rather as a subjective maxim, to spread it over all possible empirical knowledge of objects. Nevertheless the systematic context, which reason gives to the empirical employment of understanding, not only promotes the propagation of that employment, but ensures its correctness, and thus the principle of such a systematic unity is also objective, although only in an undetermined manner (*principium vagum*), not as a constitutive principle to determine something having regard directly to an object, but rather as merely a regulative fundamental principle and maxim to promote and to strengthen the empirical employment of reason through opening up of new paths into the infinite (undetermined) that understanding knows not, yet without ever being the least bit contrary to the laws of its empirical employment [KANT1a: 610-611 (B: 708)].

With all this in mind, let us move on to the business of drawing in our circle of exposition. Our first next steps will take us temporarily away from the investigation of *nous* on a reconnaissance mission to the logical division of *psyche*.