

Why People Think

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I. Introduction

This paper is a Critical examination of the fundamental role thinking plays in human life. The theory presented here is derived from my previously published Critical theory of the phenomenon of mind¹. An understanding of that theory is propaedeutic for the arguments and deductions presented in the present treatise. A glossary of technical terminology used here is available.² By analogy with the definition of "physics," I call the study of laws that explain this and other mental phenomena the "mental physics" of the phenomenon of mind. Let us begin by defining some key fundamental terminology.

The central thesis of this paper is that the primitive function of human thinking is practical and serves the process of practical Reason in effecting a state of equilibrium by means of ratio-expression. The process of thinking (cognition through concepts) produces sensible objective perceptions, called intuitions, and all intuitions are combined with expressible motoregulatory actions by means of a process of teleological reflective judgment. This combining of intuitions with action expression is the basis of voluntary motions. In this way, and this way alone, intuitions and concepts acquire their root meanings.

A concept is a rule for the reproduction of an intuition. Intuition as a mental *act* is the immediate reference of the power of representation to a singular Object. An intuition as a *depiction* (*parástase*) is a direct, singular, and sensible objective perception of an appearance. Understanding is the capacity for making a cognizant structure of rules ("rules of understanding") by means of representations. This structure of rules overall makes up the state of a human being's empirical and theoretical knowledge. Thinking is the process by means of which this cognizant structure is constructed by a human being.

Although there are historical disagreements among scholars of science and philosophy going back at least twenty-five centuries over how to understand "thinking" and its characteristics, it is generally accepted that people do think. Indeed, thinking is so fundamental to the phenomenon of being a human being that it is regarded by scholars as one of the most fundamental symptoms of "having a mind." Adler *et al.* wrote,

If there were no evidence of thought in the world, mind would have little or no meaning. The recognition of this fact throughout the tradition accounts for the development of diverse theories of mind. None of the great writers denies the phenomenon of thought, however differently each may describe or explain it.³

These theories are diverse indeed. *Circa* 335-322 BC Aristotle wrote,

Now there are two special characteristics which distinguish *psyche*, viz., (1) movement in space, and (2) thinking, judging, and perceiving. Thinking, both speculative and practical, is regarded as a form of perceiving; for in both cases *psyche* judges and has cognizance of something which is. Indeed the older philosophers assert that thinking and perceiving are identical. . . . For all these authors suppose the process of thinking to be a bodily function like perceiving, and that men both perceive and recognize like by like . . . And yet they ought to have made some mention of error at the same time; for error seems to be more natural to living creatures, and *psyche* spends more time in it. . . . Now it is quite clear that perceiving and practical thinking are not the same; for all creatures have a share in the former, but only a few in the latter. Nor again is speculative thinking, which involves being right or wrong . . . the same thing as perceiving[.] . . .

¹ Richard B. Wells (2016), *The Phenomenon of Mind*, www.mrc.uidaho.edu/~rwells/techdocs/

² *Wells' Unabridged Glossary of the Critical Philosophy and Mental Physics*, Richard B. Wells, 5th edition, 2016, www.mrc.uidaho.edu/~rwells/techdocs/.

³ Mortimer J. Adler *et al.*, *A Syntopicon of Great Books of the Western World*, vol. II, chap. 58, pg. 171, Chicago: Encyclopædia Britannica, Inc., 1952.

As for thought, since it is distinct from perception and is held to comprise imagination and judgment, it will be best to discuss it after having completed our analysis of imagination.⁴

Near the end of the 19th century, during the era of positivism, psychologist William James wrote,

Most books start with sensations, as the simplest mental facts, and proceed synthetically, constructing each higher stage from those below it. But this is abandoning the empirical method of investigation. No one ever had a simple sensation by itself. Consciousness, from our natal day, is of a teeming multiplicity of objects and relations, and what we call simple sensations are results of discriminative attention, often pushed to a very high degree. It is astonishing what havoc is wrought in psychology by admitting at the onset apparently innocent suppositions that nevertheless contain a flaw. . . . The only thing psychology has a right to postulate at the outset is the fact of thinking itself, and that must first be taken up and analyzed. . . . *The first fact for us, as psychologists, is that thinking of some sort goes on.* I use the word thinking . . . for every form of consciousness indiscriminately.⁵

During the early 20th century heyday of behaviorism in American psychology, psychologists tried to ban such troublesome ideas as 'mind' and 'thinking' from psychology's discourse. The "cognitive revolution" in American psychology from 1960 to the late 1970s brought concepts of mental Objects back into respectability and made these ideas publishable again in scientific journals. In the present day, Reber's *Dictionary of Psychology* says of "thinking":

As G.C. Oden put it, 'Thinking, broadly defined, is nearly all of psychology; narrowly defined, it seems to be none of it.' Given the subtle truth of this quip, we might be able to find a middle ground if we treat the term as denoting, most generally, any covert cognitive or mental manipulation of ideas, images, symbols, words, propositions, memories, concepts, percepts, beliefs, or intentions; in short, as encompassing all of the mental activities associated with concept-formation, problem-solving, intellectual functioning, creativity, complex learning, memory, symbolic processing, imagery, etc. Few terms in psychology cast such a broad net and few encompass such a rich array of connotations and entailments.⁶

Likewise, few terms in present day psychology are defined in ways more scientifically meaningless and less scientifically useful in application.

The Critical Philosophy teaches that all real meanings are, at their very roots, *practical*.⁷ Near the end of his long and distinguished research career the eminent psychologist Jean Piaget reached this same conclusion⁸. Recognizing this fundamental characteristic of meanings, this treatise approaches the scientific question of why people think from a basis in the practical, *i.e.*, by examining thinking in terms of what it accomplishes for the thinking person.

II. Representation and the Organized Being Model

In the Critical theory of the phenomenon of mind *representation* is a primitive term. The idea of representation is such an important one that it deserves a short discussion here. Kant said of this idea⁹,

Representation is mental (internal) determination where a thing is being referred to as if it were separate from myself.

A bit less formally he said "a" representation is "something in me that refers to something else." There are two contexts for the English word "representation" in these two descriptions. The first is the context of

⁴ Aristotle, *On the Soul*, Bk. III, III. Aristotle's actual word, *psyche*, is traditionally translated into English as 'soul'.

⁵ William James (1890), *The Principles of Psychology*, vol. I, chap. IX, pp. 224-225, New York: Dover Publications, 1950.

⁶ Arthur S. Reber & Emily S. Reber, *Dictionary of Psychology*, 3rd ed., London: Penguin Books, 2001.

⁷ Richard B. Wells (2016), *The Phenomenon of Mind*, www.mrc.uidaho.edu/~rwells/techdocs/, Chap. 7.

⁸ Jean Piaget & Rolando Garcia, *Toward a Logic of Meanings*, Hillsdale, NJ: Lawrence Erlbaum Associates, 1991.

⁹ Immanuel Kant (c. 1753-59), "Die Vernunftlehre," in *Kant's gesammelte Schriften*, Band XVI, pg. 76.

representation as a process (act of making a representation). The second is the context of that which is the outcome of that process ("a" representation). In order to avoid confusion between these two contexts, the theory of the phenomenon of mind refers to the latter as a *parástase* ("depiction").

Representation is a primitive term because the only way to explain representation is by making a representation (a *parástase*)¹⁰. The Critical theory can be regarded as a theory of human mental representation. It is a mathematical theory because all of its Objects, like all Objects of mathematics generally, are supersensible Objects (Objects that cannot be directly experienced through the senses)¹¹. A human being can be conscious of some of these; these Objects are called perceptions (representation with consciousness). There are two types of perceptions. *Objective perceptions* are called cognitions and knowledge of the corresponding Object represented is called an "appearance." *Affective perceptions* are conscious representations for which there is no corresponding appearance. Consciousness is itself "a representation that *another* representation is in me"¹² which must be attended to. Other mental Objects remain unconscious, *i.e.*, they go unperceived. "Consciousness" itself belongs to this class of unconscious Objects. Kant called representations of this type "obscure" representations. He called representations of the first type "clear" representations¹³. It is interesting to note that Kant's Critical theory predated Sigmund Freud's theory of the conscious and the unconscious by more than a century.

From a scientific perspective the Critical theory can be regarded as a mathematical theory of how human beings make and transform mental representations. An act of representing by a human being can be regarded as an act of forming within himself: (*a*) the manner of his behavior in relationships between himself and his environment; or (*b*) the nature of internal relationships involving his own capacities for self organization. Viewed in this context, a process of making a representation can be called a process of *informatio* ("in-forming"). A *parástase* resulting from such a process is said to contain information. If the *parástase* is represented with consciousness then that *parástase* is called a *datum* ("given"). If the *parástase* is not a conscious representation then that *parástase* is called a *dabile* ("givable") because of a potential for the *parástase* either to be made conscious or to be used in producing an action. This terminology is consistent with the terminology used in the science of information theory¹⁴.

The Critical theory begins by recognizing that all experience with living human beings is always an experiencing of a human being as an undivided *whole* in appearance. In all such experiences we can and do make distinctions between phenomena of a human being regarded as a corporeal object ("body") and manifestations of human behaviors that we attribute to mental phenomena ("mind"). But we never have any real experience in which we encounter a living human being without mental capacity, nor do we ever have any real experience in which we encounter a disembodied mind. Therefore all divisions we might choose to make between "mind" and "body" are never anything else than a logical (*i.e.* mathematical) division. This means no mind-body concept is a concept of *real* experience but, rather, is a merely logical product of reasoning which goes beyond the horizon of possible experience. The famous mind-body division is a mathematical, not an empirical, division and has only a practical objective validity.

We can, of course, study and theorize about phenomena of body without making "mind" a part of such a study or theory. The science of biology does precisely this. Likewise, we can study and theorize about phenomena of mind without making "body" a part of such a study. This is what the science of psychology undertakes to do. However, in both cases the application of the science to actual human beings is without objective validity unless the theory follows a strict principle of a thorough-going reciprocity between

¹⁰ Immanuel Kant (1800), *Logik*, in *Kant's gesammelte Schriften*, Band IX, pg. 34.

¹¹ Richard B. Wells (October 24, 2014), *The Institution of Public Education*, vol. III of *The Idea of Public Education*, Chap. 14, "The Mathematics Framework," www.mrc.uidaho.edu/~rwells/techdocs/.

¹² Immanuel Kant (1800), *Logik*, in *Kant's gesammelte Schriften*, Band IX, pg. 33.

¹³ Immanuel Kant (1800), *Logik*, in *Kant's gesammelte Schriften*, Band IX, pg. 34.

¹⁴ Richard B. Wells (1999), *Applied Coding and Information Theory for Engineers*, Upper Saddle River, NJ: Prentice-Hall, pg. 4.

objects of "body" and objects of "mind." This means an objectively valid theory must embrace *as a basic axiom* complete Relations of community between physical objects of body and mental objects of mind. As objects, "mind" and "body" are *co-determining objects*, each simultaneously a *cause* of the other as well as an *effect* of the other. For example, it is not objectively valid to posit that "brain causes mind" any more than it is to posit "mind causes brain." To say X causes Y is to say "first X happens *and then* Y happens." But mind objects and body objects always *coexist* simultaneously in every appearance of every living human being and for this reason all laws of *actual* mind-body relationships must be understood in no other terms than in terms of relationships of community ("X partially determined Y *and* Y partially determined X"). In the Critical theory this axiomatic principle is called the Organized Being model of a human being and it is an epistemological necessity for any objectively valid theory of human beings.

For example, science has established beyond reasonable doubt that in the aftermath of traumatic brain injuries the injured person exhibits changes in behavior broadly characterized as psychological changes. It is objectively valid to say the physical trauma was the *determining factor* in the accompanying mental trauma. But this is not the same thing as saying the physical trauma *caused* the mental trauma. There is a subtle difference between the two statements but this difference is the difference between an objectively valid scientific *finding* (the former) and a *speculation* lacking scientific objective validity (the latter).

Reciprocally, it is now well established that in the aftermath of psychological trauma the victim exhibits physical symptoms, *e.g.* uncontrollable trembling, pallor, galvanic skin reactions, change in brain chemistry (such as is found in cases of post traumatic stress disorder), *et al.* It is objectively valid to say the psychological trauma was the determining factor in the accompanying physical trauma. It lacks objective validity to say the psychological trauma caused the physical trauma.

This principle of organized being applies in every theory in which the theory posits relationships between corporeal phenomena and psychological phenomena. Not all corporeal phenomena imply co-relationships with accompanying psychological phenomena. For example, you can trim your fingernails or have your hair cut and emerge from these events as "the same person" you were before losing pieces of your fingernails or strands of your hair. So far as science knows at present, reciprocal relationships between physical and mental phenomena are found only where the physical dimension involves the nervous system, the endocrine system, or the chemical milieu within which cells operate and function. A living human being is not simply an isolated body object or an isolated mentality; he or she is a holistic Object with simultaneous characteristics in both dimensions.

Nonetheless, there is an inestimable scientific value in the practice of *mathematically* distinguishing between corporeal and psychological phenomena. Imagine what a state biology would be in if every biologist had to also be a master of psychology. Scientific division of labor is pragmatically beneficial and no serious person advocates the abolition of this practical division of labor. However, in order to avoid fallacious speculations it is vital for the scientist to always understand these divisions as products of a mathematical process of labor classifications, and to not mistake the convenience of making these logical divisions for implications of ontologically real divisions. The Critical theory institutes holism in its theory of being-a-human-being by means of a threefold logical division called the Organized Being model.

The Organized Being model is a classification of human phenomena in terms of: (a) a dimension of physical phenomena (the logical division of *soma*); (b) a dimension of mental phenomena (the logical division of *nous*); and (c) a dimension of (mathematical) animating principles necessary to ensure that the theory's somatic objects and its mental objects coexist in relationships of thorough-going reciprocity. The name given to this third dimension is the logical division of *psyche*. The topic of this paper is primarily concerned with processes falling within the logical division of *nous* but is also necessarily concerned with aspects of the logical division of *psyche*. Figure 1 illustrates the overall organization and structure of *nous* and its interactions with the logical divisions of *psyche* and *soma*.

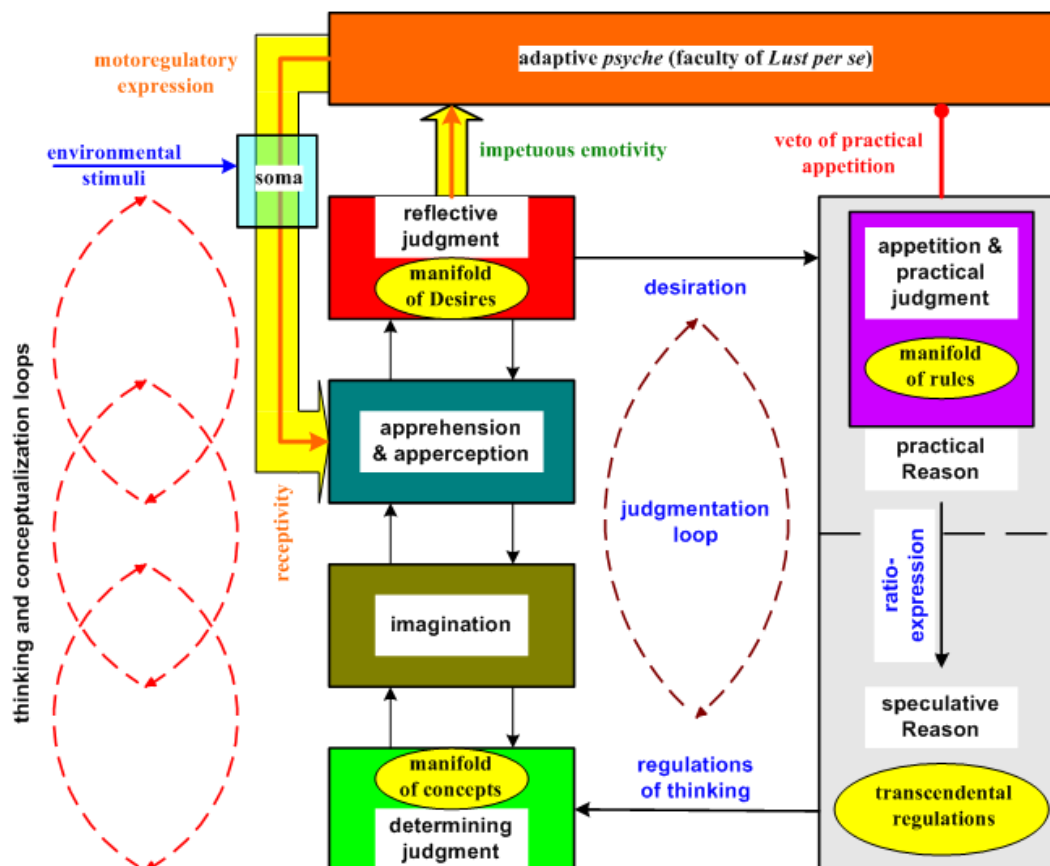


Figure 1: The logical organization and structure of the processes of *nous*.

In figure 1 the blocks denoted *adaptive psyche* and *soma* as well as the pathways denoted as *motoregulatory expression* and *receptivity* (both parts of *psyche*) lie outside the division of *nous*. *Soma* is, of course, the Object studied by biology, physiology, and their supporting disciplines of biophysics and biochemistry. *Psyche* is the logical division dedicated to the organized structure of animating principles of *nous-soma* reciprocity¹⁵. The remaining blocks in figure 1 depict various special processes of synthesis by which representations are produced, combined, transformed, and acquire meanings through acts within the logical division of *nous*. Also depicted in the figure are three representational manifolds of central importance in this paper: (a) the manifold of rules in practical Reason; (b) the manifold of concepts in determining judgment; and (c) the manifold of Desires in reflective judgment. The first two are structures constructed through experience. The third is not constituted as a structure. Detailed explanations for all of these are provided in *The Phenomenon of Mind*¹. In order to limit this treatise to a reasonable length, its treatment of figure 1 is confined to highlighting those characteristics and properties of figure 1 which are immediately pertinent to the topic at hand, *i.e.*, to explaining *why* people think.

In the Critical theory all acts of representation are carried out by means of judgments. In general a judgment is an act by which particular representations are subsumed under more general ones in such a way that a unity of consciousness is achieved¹⁶. A *parástase* resulting from an act of judgment can be: a singular representation (as in the case of an intuition) in which that which is contained in it is not given distinct representation; or – more usually – it is a combination of other distinct representations.

¹⁵ Richard B. Wells (2016), *The Phenomenon of Mind*, www.mrc.uidaho.edu/~rwells/techdocs/, Chap. 4.

¹⁶ Immanuel Kant (c. Oct. 1789), "Erste Einleitung in die Kritik der Urteilskraft," in *Kant's gesammelte Schriften*, Band XX, pp. 201-202.

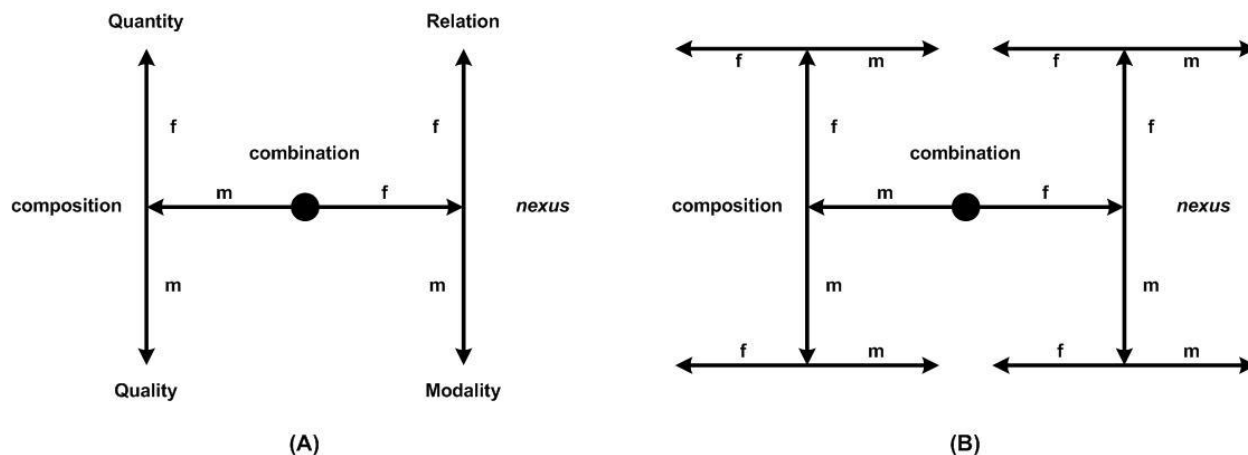


Figure 2: Higher level analytic representations. (A) 2LAR; (B) 3LAR. m denotes matter; f denotes form.

The mathematics of Critical representation theory analytically describes outcomes of acts of judgment by means of what are called n-level analytic representations (n-LARs). An n-LAR is constructed by a series of analytic divisions into matters of composition (*compositio*) and forms of connection (*nexus*). A single division produces a 1-LAR; two produce a 2LAR; three produce a 3LAR; etc. Figure 2 illustrates the two most frequent levels of analytic representation found in the mathematics of the Critical theory. The 2ⁿ endpoints of the division process are called "headings." Under each heading there are three synthesizing functions for recombining the n-LAR to recover an overall representation of the Object represented. Any number of analytic divisions may be used for mathematically describing an Object. Any specific understanding of the Object *in a context* is specified by a particular subset of the $3 \cdot 2^n$ synthetic functions ("*momenta*") of the n-LAR (one from each heading). This schematic for the mathematics of Critical representation theory was named "transcendental Logic" by Kant¹⁷. It sets out formally the methodology that must be used to establish real relationships between the mathematics of the theory and the Objects the theory explains, *i.e.*, it is the science by which ideas of mathematics (which are products of human thinking and reasoning) are given real relationships with empirical objects of nature. Kant called transcendental Logic the science of pure understanding and of pure knowledge of reason ^{*ibid.*}.

The Critical theory teaches that all ideas, concepts, and notions in any science must be understood in a *context* which delimits the scope of their applications to nature, and that without such a delimited scope the objective validity of a science's theories is merely speculation lacking sufficient grounding in real experience. This paper is concerned with inquiry into why people think, and so the first order of business at hand is to establish and explain the proper context of our topic.

To ask why people think in some ways echoes Aristotle's inquiry, "What is the function of man?"¹⁸ He was inquiring into the reason or reasons someone or something is regarded as being or being productive of some good, benefit, or blessing. The Greeks called this attribution the *αγαθον* of the object. Aristotle took a practical-functional viewpoint of *αγαθον* based on what was done by or could be done with the object. When he applied his viewpoint to humankind generally his deductions led him into the sorts of considerations we today might say were inquiries into "the meaning of (human) life." He wrote,

Are we then to suppose that, while the carpenter and the shoemaker have definite functions or businesses belonging to them, man as such has none and is not designed by nature to fulfil any function? Must we not rather assume that, just as the eye, the hand, the foot and each of the various

¹⁷ Immanuel Kant (1787), *Kritik der reinen Vernunft*, 2nd ed., in *Kant's gesammelte Schriften*, Band III, pp. B79-B81.

¹⁸ Aristotle (c. 340 BC), *Nicomachean Ethics*, Bk. I, 7.

members of the body manifestly has a certain function of its own, so a human being also has a certain function over and above all the functions of his particular members?¹⁸

Aristotle concluded that what was special about all human beings, setting us apart from other living things, was the capacity of a human being for being a *rational* being, and that to be rational beings was the function of humankind in general. He concluded that,

it follows that the *αγαθόν* of man is the active exercise of his *psyche's* faculty in conformity with excellence or virtue, or if there be several human excellences or virtues, in conformity with the best and most perfect among them. ^{*ibid.*}

This is the launching point for Aristotle's philosophy of ethics and morals, and at this point this paper parts company with Aristotle. Nonetheless, the question of what good (if any) or what benefit (if any) a human being realizes *because* he thinks echoes to some degree Aristotle's concern with *αγαθόν*. Modern science cannot and does not follow Aristotle in his theological presupposition that man is *designed* 'by nature' to fulfil some purpose not of the individual's own design. Science can, however, inquire into why people think from a point of view akin to Aristotle's insofar as the *αγαθόν* of an eye, a hand, a foot, or the capacity to think and to be rational is pertinent to understanding our species.

To inquire into a "how" in science is to seek explanation in terms of relationships of cause and effect. For physical scientists this is the only type of question that can scientifically be posed because the context and objects of a science, *e.g.* physics, are already posed by the topic of that science. For all physical-natural sciences – physics, chemistry, biology, etc. – there was once a time when someone asked "Why?" rather than "How?" and this began the inquiries that eventually gave birth to the science. Before one asks how something happened, one must first want to know why it happened. We see precisely this course of intellectual development in small children.¹⁹ Science historian Thomas Kuhn wrote,

Effective research scarcely begins before a scientific community thinks it has acquired firm answers to questions like the following: What are the fundamental entities of which the universe is composed? How do these interact with each other and with the senses? What questions can be legitimately asked about such entities and what techniques employed in seeking solutions? At least in the mature sciences, answers (or full substitutes for answers) to questions like these are firmly embedded in the educational initiation that prepares and licenses the student for professional practice. Because that education is both rigorous and rigid, these answers come to exert a deep hold on the scientific mind.²⁰

To bring a mature science to this point someone somewhere somewhen asked a "why?" question, but the science practices that emerge from that remote inquiry thereafter are confined to "how?" questions.

To inquire "why?" is to seek explanation in terms of a "because," *i.e.*, in terms of *logical* relationships of reason to consequent. To ask "how?" is to seek a connection between two observed facts. To ask "why?" is to seek an encompassing *context* within which a synthesis of otherwise heterogeneous ideas or judgments can be made by which they are connected *necessarily* in relationships. The great difference between a human being and inanimate objects is that a human being is capable of spontaneity, *i.e.*, he is the agent of his own actions. His agency is the consequence of interactions and relationships inter-connecting his three processes of judgment depicted in figure 1: (a) practical judgment; (b) determining judgment; and (c) reflective judgment. His capacity for spontaneity is effected by means of his production of representations; and the question which lies before us can equivalently be put as: What role does thinking play in human spontaneity? To understand this we must begin with the overarching ideas of

¹⁹ Jean Piaget (1930), *The Child's Conception of Physical Causality*, Paterson, NJ: Littlefield, Adams & Co.

²⁰ Thomas S. Kuhn (1970), *The Structure of Scientific Revolutions*, 2nd ed., enlarged, Chicago, IL: The University of Chicago Press, pp. 4-5.

equilibrium and equilibration.

III. Equilibrium and Equilibration

Equilibrium is a fundamental concept in both biology and psychology. Terms often used as synonyms for it include balance and stability²¹. Biologists use the term 'physiological homeostasis' to refer to various biological processes which help regulate and maintain constancy of the internal environment of a cell or organism at appropriate levels²². Physiological homeostasis is one particular instance of a wider set of processes generically called 'processes of *equilibration*.' Noted neurologist Antonio Damasio of the University of Iowa stressed the importance of equilibrium and equilibration for the biological roots of the phenomenon of mind²³. Piaget likewise stressed its importance for mind-body reciprocity. He wrote,

Life is a continuous creation of increasingly complex forms and a progressive balancing of these forms with the environment. To say that intelligence is a particular instance of biological adaptation is thus to suppose that it is essentially an organization and that its function is to structure the universe just as the organism structures its immediate environment. . . . What we must translate into terms of adaptation are not the particular goals pursued by practical intelligence . . . but it is the fundamental relationship peculiar to consciousness itself: the relationship of thought to things. The organism adapts itself by materially constructing new forms to fit them into those of the universe, whereas intelligence extends this creation by constructing mentally structures which can be applied to those of the environment. In one sense and at the beginning of mental evolution, intellectual adaptation is thus more restricted than biological adaptation, but in extending the latter, the former goes infinitely beyond it²⁴.

Likewise, the ideas of equilibrium and equilibration are fundamental in the Critical theory.

Equilibrium is a closed cycle of physical and/or mental activity in which there are no innovations (*i.e.*, no incongruence is perceived to exist between the person's factual state of *Existenz*²⁵ and his anticipation of this state). In equilibrium a person assimilates his environment without having to make any physical or mental accommodations to it. Piaget mathematically describes assimilation and accommodation in the following way:

The organism is a cycle of physiochemical and kinetic processes which, in constant relation to the environment, are engendered by each other. Let α , β , γ , etc. be the elements of this organized totality and x , y , z , etc. the corresponding elements of the surrounding environment. The scheme of organization is therefore the following:

- (1) $\alpha + x \rightarrow \beta$;
- (2) $\beta + y \rightarrow \gamma$;
- (3) $\gamma + z \rightarrow \alpha$, etc.

The processes (1), (2), etc. may consist either of chemical reactions (when the organism ingests substances x which it will transform into substance β comprising part of its structure), or of any physical transformations whatsoever, or finally, in particular, of sensorimotor behavior (when a cycle of bodily movements α combined with external movements x result in β which itself enters the cycle of organization). The relationship which unites the organized elements α , β , γ , etc. with the environmental elements x , y , z , etc. is therefore a relationship of *assimilation*, that is to say, that the

²¹ Arthur S. Reber & Emily S. Reber, *Dictionary of Psychology*, 3rd ed., London: Penguin Books, 2001.

²² Michael Thain & Michael Hickman (2004), *The Penguin Dictionary of Biology*, 11th ed., London: Penguin Books Ltd.

²³ Antonio Damasio (1999), *The Feeling of What Happens*, NY: Harcourt Brace & Co., pp. 133-167.

²⁴ Jean Piaget (1952), *The Origin of Intelligence in Children*, Madison, CN: International Universities Press, Inc., pp. 3-4.

²⁵ *Existenz* is existence in the context of the manner-in-which-something-exists.

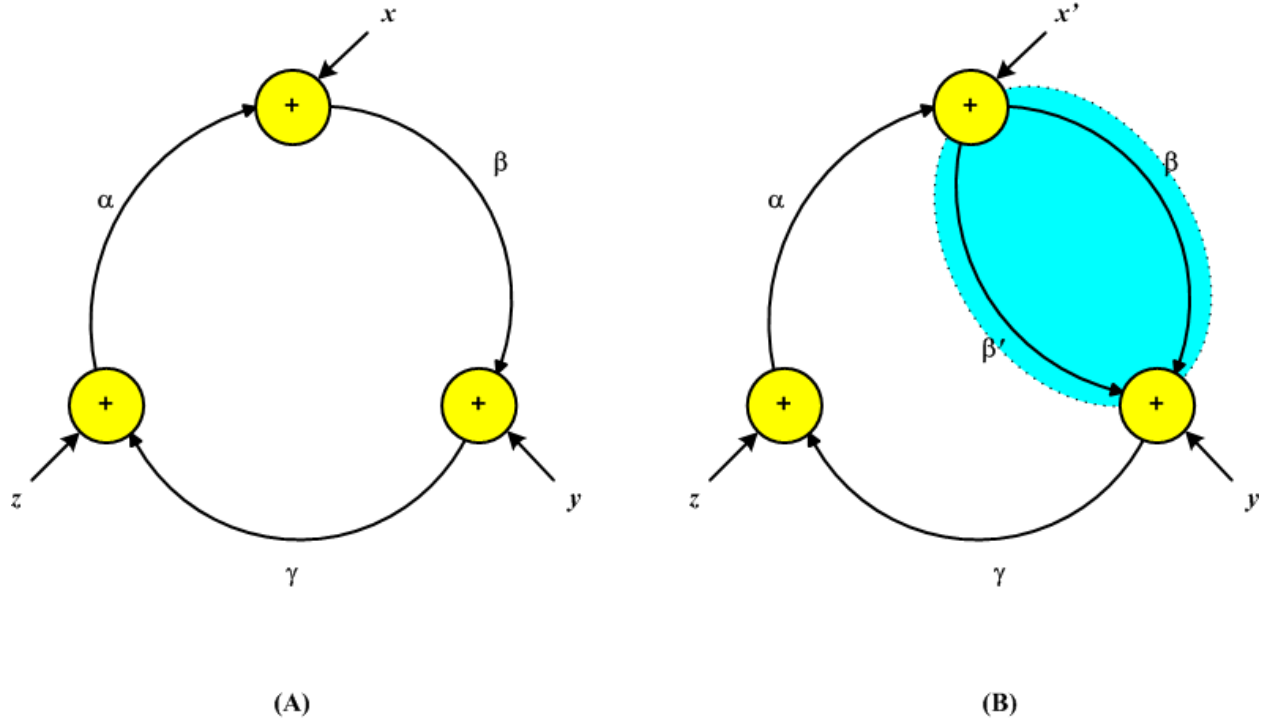


Figure 3: Illustration of an assimilation cycle (A) and an accommodation cycle with adaptation β' (B). The assimilation cycle (A) is in equilibrium. The accommodation cycle comes to equilibrium after adaptation β' .

functioning of the organism does not destroy it but conserves the cycle of organization and coordinates the given data of the environment in such a way as to incorporate them in that cycle. Let us therefore suppose that, in the environment, a variation is produced which transforms x into x' . Either the organism does not adapt and the cycle ruptures, or else adaptation takes place, which means that the organized cycle has been modified by closing up on itself:

- (1) $\alpha + x' \rightarrow \beta'$;
- (2) $\beta' + y \rightarrow \gamma$;
- (3) $\gamma + z \rightarrow \alpha$.

If we call this result of the pressures exerted by the environment *accommodation* (transformation of β into β'), we can accordingly say that *adaptation is an equilibrium between assimilation and accommodation*.

This definition applies to intelligence as well. 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 . . . There can also be no doubt either that mental life is also *accommodation* to the environment.²⁶

Figure 3 provides a rudimentary illustration of these processes. In figure 3 (A), the assimilation cycle, the organism (person) exists in a state of equilibrium; mathematicians refer to this kind of behavior as a *limit cycle*. In figure 3 (B) equilibrium is possible only after the accommodation β' is made, after which the cycle becomes closed. Note that the adaptation thereafter permits assimilation of both x and x' . This is

²⁶ Jean Piaget (1952), *The Origin of Intelligence in Children*, Madison, CN: International Universities Press, Inc., pp. 5-6.

a fundamental feature of real adaptation: the person loses *none* of his previous ability to assimilate while retaining his ability to accommodate new variations. Equilibration is the central and fundamental process of synthesizing this balance between assimilation and accommodation²⁷.

It has long been known to neural network theorists that these two features of adaptation – stability of past assimilations and plasticity in making new accommodations – can be contrary to one another unless the system possesses a number of special properties for resolving this stability vs. plasticity dilemma. The pioneering mathematical work on solving this problem was published by Grossberg in 1976²⁸. Solving it places a number of requirements on the structure of the system which, as it turns out, are satisfied in the structure and organization discovered by Kant and developed in the Critical theory depicted in figure 1.

Any alteration producing variation in an equilibrium cycle is called a *disturbance*. Anything that causes such an alteration often is also called a 'disturbance' but is more properly called a *disturber*. The variation x' in figure 3 is a disturber until it is assimilated into the equilibrium cycle by accommodation β' . Mental disturbances in a human being arise in sensibility²⁹ during the process of apprehension (figure 1) but in order *to be made* a disturbance this *parástase* must be *judged* to be one by an act of the process of reflective judgment.

The process of reflective judgment judges a person's affective condition, *i.e.*, it judges representations of sensibility insofar as sensibility pertains to matters of desire: satisfactions; non-objective feelings; interests; and interrelationship between the faculty of pure consciousness³⁰ in *nous* and the animating principles of *psyche*. The last of these four is called *Lust* connection, and understanding this connection is fundamental to understanding the dynamics of equilibrium and equilibration.

The German word *Lust* (pronounced "loost") has no English equivalent. It most emphatically does *not* mean the same thing as the English word "lust." Translators have a long tradition of translating *Lust* as "pleasure" (and its opposite, *Unlust*, as "pain") but this translation is wholly erroneous. Its mistranslation has introduced a number of important misconceptions into English translations of the works of German-speaking authors, and nowhere is this more so than in English translations of Kant and Freud. Indeed, this mistranslation is partially responsible for many Americans regarding Freud as either "the dirty old man of psychology" or as some kind of hedonistic Epicurean.

One way to understand the "flavor" of what the word *Lust* means is captured in the American slang phrase, "I'm up for that!" It carries a positive connotation of a person being motivated to express some action or actualize some state of being. Its opposite, *Unlust* (pronounced "un-loost"), carries a negative connotation, *i.e.*, it implies being motivated to prevent or abolish the actuality of something. *Lust* is the positive, *Unlust* the negative, connotation of adaptive *psyche's* fundamental property for its role in determining adaptation to a state of equilibrium. This fundamental property is called *Lust per se*. An affective perception of *Lust per se* in sensibility is called a *feeling of Lust* or *Unlust*, and such perceptions are adjudicated by the process of reflective judgment. A person's actions are always oriented toward the negation of the intensive magnitude of feelings of *Lust per se*. This orientation for acting in the particular is a fundamental acroam and is called the *Lust* principle³¹.

²⁷ Jean Piaget (1975), *The Equilibration of Cognitive Structures*, Terrance Brown & Kishore Julian Thampy (tr.), Chicago: The University of Chicago Press, 1985).

²⁸ Stephen Grossberg (1976), "Adaptive pattern classification and universal coding: II. Feedback, expectation, olfaction, and illusions," *Biological Cybernetics* 23, 187-202 (1976).

²⁹ Sensibility is the sensuous representation of an effect, the cause of which is attributed to the capacity for receptivity in *psyche* and/or the synthesis of re-production in imagination.

³⁰ A faculty is the form of an ability insofar as that ability is represented in an idea of organization. Faculty represents how that ability is manifested in experience. The faculty of pure consciousness is the logical *parástase* of the organizing and organization of perceptions.

³¹ Richard B. Wells (2016), *The Phenomenon of Mind*, www.mrc.uidaho.edu/~rwells/techdocs/, Chap. 4.

Freud, building on an earlier hypothesis presented by Fechner, introduced a principle into his theory of psychoanalysis very similar to the Critical acroam, and he gave it the name *Lustprinzip* ("*Lust* principle"). Freud's theory is not the Critical theory, which holds certain of his findings and conclusions to be incorrect, but what he and Fechner had to say about the *Lustprinzip* is pertinent to this paper:

In psychoanalytical theory we take it for granted that the psychological course of events is automatically regulated by the *Lustprinzip*; that is to say, we believe that any given process originates in an *unlust*-ful [*unlustvolle*] animated tension and thereafter drives itself in such a direction that its final result coincides with a reduction of this tension, i.e., with an avoidance of *Unlust* or production of *Lust*.³²

Freud's text can be interpreted as saying that a person is animated into action by *Unlust* and this animation is reduced or removed by *Lust*. Critical theory says this interpretation is not correct because the character of both *Lust* and *Unlust* more or less correspond to what Pierre Janet called "activations." For Freud and Fechner *Unlust* likewise so corresponds but in their view *Lust* has a character corresponding to what Janet called "terminations."³³ In the Critical theory the characteristic corresponding to Janet's "terminations" is a balance between feelings of *Lust* and *Unlust* that results in real *negation* of the intensive magnitude of feelings of *Lust per se*. Such a negation is the defining condition of equilibrium. To properly understand this we must examine how the interplay of sensibility, reflective judgment, practical appetite, and adaptive *psyche* is adjudicated and regulated.

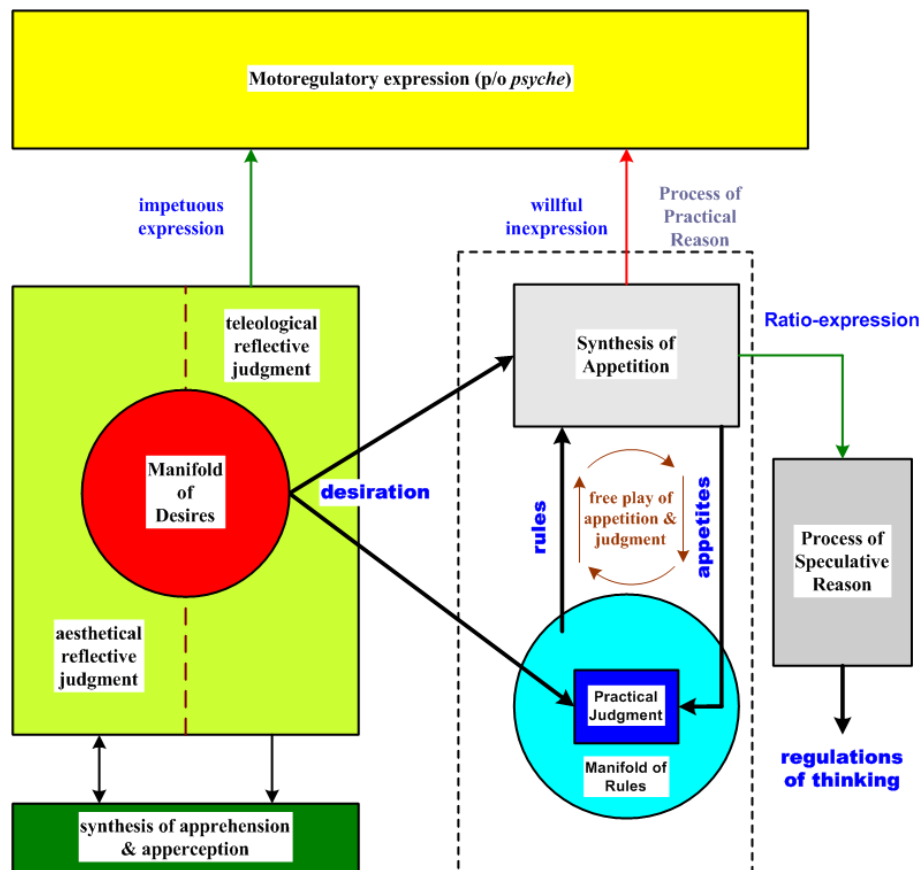


Figure 4: Interplay of affective and practical processes involved in assimilation and accommodation.

³² Sigmund Freud (1921), *Jenseits des Lustprinzips*, Zurich: Internationaler Psychoanalytischer Verlag, G.M.B.H.

³³ Jean Piaget (1981), *Intelligence and Affectivity*, Palo Alto, CA: Annual Reviews Inc., pp. 26-30.

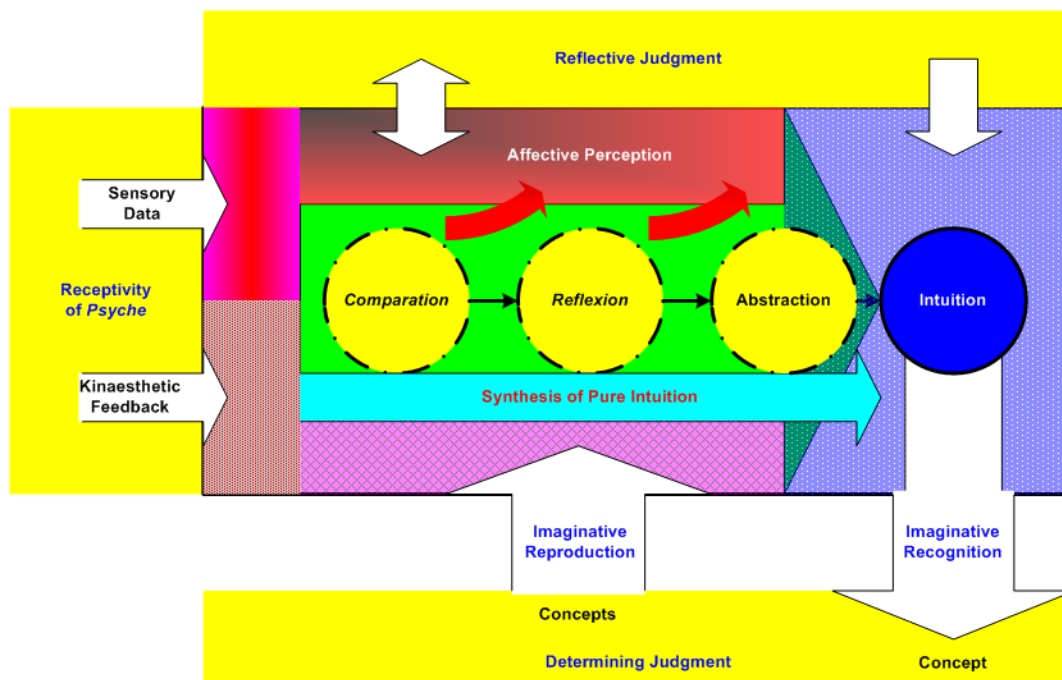


Figure 5: Synthesis in sensibility by apprehension and apperception.³⁵

IV. The Adjudication of Assimilation and Accommodation

Figure 4 illustrates affective and practical processes involved in acts of assimilation and the triggering of accommodation. It depicts in slightly more detail part of the structure illustrated in figure 1. The blocks in figure 1 not shown in figure 4 – determining judgment and imagination – are also involved in the overall processes of assimilation and accommodation but for the moment I postpone explaining their roles. As you will see later, the processes of determining judgment and imagination *augment* the regulation of assimilation and accommodation by introducing *concepts* into the overall process of equilibration. This augmentation and what it provides to the process of equilibration *is* why people think in the context of what the *αγαθον* of thinking is in terms of what we might call the *survival value* of those human capabilities which are made possible *only* by a human being's ability to think³⁴.

Referring to figure 4, the synthesis of apprehension is the process of synthesizing data of the senses to produce representations of sensibility (intuitions and affective perceptions). Information flows into this process from two sources: (1) somatic *dabilia* ("giveables") by means of receptivity in *psyche*; and (2) noetic *dabilia* from the manifold of concepts by means of the synthesis of reproductive imagination (see figure 1). A schematic illustration of the synthesis of sensible data is given by figure 5. Information matter is given form either as possible affective perceptions or possible intuitions in the synthesis of apprehension. *Perception* of these *dabilia* occurs when they are transformed into *data*, either as affective perceptions or perceptions of intuition. This happens when *dabilia* undergoing synthesis are given the mark of consciousness.³⁵ Consciousness, again, is "representation that another representation is in me and must be attended to."

A specific *parástase* undergoing the synthesis in sensibility *receives* this mark from that synthesis but the synthesis of apprehension and apperception does not choose or select a *parástase* to receive this marking. That choice is adjudicated by the process of reflective judgment (figure 4).

³⁴ *c.f.* "survival value" in Arthur S. Reber & Emily S. Reber, *Dictionary of Psychology*, 3rd ed., London: Penguin Books, 2001.

³⁵ Richard B. Wells (2016), *The Phenomenon of Mind*, www.mrc.uidaho.edu/~rwells/techdocs/, Chap. 3.

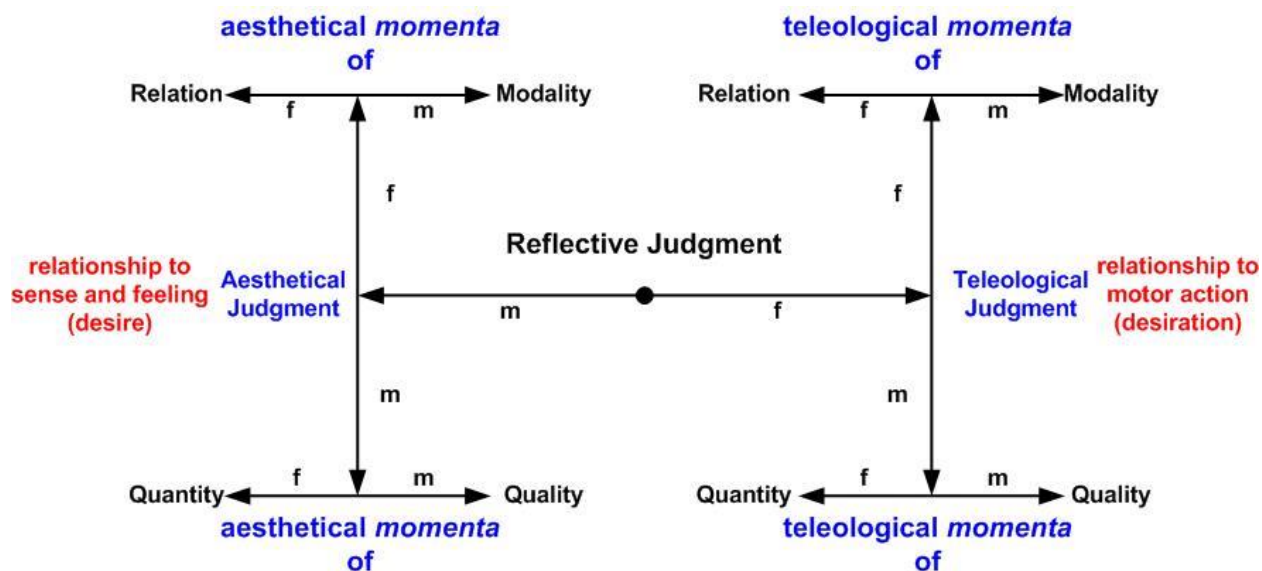


Figure 6: 3LAR structure of the process of reflective judgment.

The representations of reflective judgment are entirely subjective, *i.e.*, they are non-objective and have to do only with relationships between perception and the state of the perceiving Subject himself. Because these representations are non-objective, representations of reflective judgment are *autistic*, by which I mean a person cannot put them into words or otherwise communicate them to another person³⁶. For example, we can only communicate our "emotions" to others by resorting to simile or metaphor (*e.g.*, "clammy fear" or "white-hot anger" or "tender love"). The degree to which we are able to tell others "how we feel" depends entirely on the fact that other people have experienced affective perceptions similar to our own. Other people match up our descriptions and "body language" expressions with their own and are thereby able to apprehend "how we feel" to some degree. A person who has a high degree of such apprehension is said to "feel empathy" for the other person.

The process of reflective judgment has a Janus-like organization. On the one side, acts of reflective judgment *affect* the synthesis in sensibility. On the other, these acts *effect* the expression of motor-regulatory actions (emotivity) and *affect* determination of practical appetition in practical Reason (figure 4). This Janus-like logical organization is described by a 3LAR structure of reflective judgment depicted in figure 6. There are eight headings in this 3LAR, each of which has three synthetic *momenta* standing under it. The logical organization is subdivided into a process of aesthetical reflective judgment and a process of teleological reflective judgment. The first pertains to representation of matters of desire, the second to representation of practical forms of Desire ("desiration"). The unity of desire and desiration is called a Desire³⁷. The multiplicity of Desires represented by the process of reflective judgment is called the manifold of Desires (figures 1 and 4). Unlike the manifold of concepts in determining judgment and the manifold of practical rules in practical Reason, the manifold of Desires is not a structure because these representations *are not conserved*. We do not *remember* Desires; we *regenerate* them.

Of the three logical divisions of judgment in *nous* (reflective, determining, and practical), the process of reflective judgment is mathematically the most complex with the most immediate effects on human

³⁶ I use "autistic" in the old connotation of the term in psychology. Today's primary usages tend to be bound up with contexts of psychiatric conditions called 'autism.' Originally, however, it meant "orientation to the self" and this is the connotation I intend for this term. The roots of the word are *aut-* = self and *-ism* = orientation or state. Psychiatric autism is properly called "autistic disorder" and refers to the presence of markedly abnormal or impaired development in social interaction and communication and a markedly restricted repertoire of activity and interests.

³⁷ Richard B. Wells (2016), *The Phenomenon of Mind*, www.mrc.uidaho.edu/~rwells/techdocs/, Chap. 8.

behavior. For this reason it is worthwhile to take a minute to place it in perspective with an older theory that time and usage have made more widely familiar than is the case with the Critical theory. This theory is Freud's "structural" model of the ego, the id, and the superego. I am not trying to imply an equivalence between the Critical theory and Freud's theory; the theories are not the same and the Critical theory holds Freud's theory to be incorrect. This, however, does not mean Freud's insights should be entirely dismissed nor does it mean Freud's theory is entirely without merit. As Kant said,

Every error into which human understanding can fall is however only *partial*, and in every erroneous judgment there must always be something true. For a *total* error would be a complete *opposition* to the laws of understanding and reason.³⁸

Freud was attempting to achieve a unified mathematical explanation for a wide range of behavioral phenomena he and others had observed in psychiatric patients. His tripartite model of ego, id, and super-ego was intended to clear up what he called unavoidable ambiguities in his earlier "topological" model of the conscious system, the unconscious system, the perception-consciousness system, and the preconscious system³⁹. To each of the three logical divisions in his structural model he assigned particular descriptive attributes.

The Freudian ego "starts out from the [perception system] and begins by being [preconscious]." The role assigned to it is that of "bringing the influence of the external world to bear on the id and its tendencies and [it] attempts to substitute the reality-principle for the *Lust*-principle which reigns supreme in the id." *ibid.* This is a description that can also be applied more or less to the role of the process of determining judgment in the Critical theory (with certain amendments to Freud's idea of "substituting" a "reality-principle" for a *Lust* principle). In Freud's model the perception-consciousness system has a role analogous to representation in sensibility and the processes of apprehension and apperception.

To the Freudian superego is attributed the formation of behavioral rules and a striving for perfection. Freud wrote,

The superego is . . . not merely a deposit left by the earliest object-choices of the id; it also represents an energetic reaction formation against those choices. Its relation to the ego is not exhausted by the precept: "You *ought to be* such and such . . .; it also comprises the prohibition: "You *must not be* such and such"[.]³⁹

This attribution can, again more or less, be applied by analogy to the role of practical judgment. The most prominent feature of Freud's superego division is *prohibition*, and this is the feature that brings about descriptions of it as a repository of an individual's values, his moral attitudes, and his conscience. As Santayana remarked,

The relation between aesthetic and moral judgments . . . is close, but the distinction between them is important. One factor of this distinction is that while aesthetic judgments are mainly positive, that is, perceptions of good, moral judgments are mainly and fundamentally negative, or perceptions of evil. . . . The truth is that morality is not mainly concerned with the attainment of pleasure; it is rather concerned, in all its deeper and more authoritative maxims, with the prevention of suffering. . . . The sad business of life is . . . to escape certain dreadful evils to which our nature exposes us By the awful authority of these things, which stand like specters behind every moral injunction, conscience in reality speaks[.]⁴⁰

Finally, the Freudian id is described as the disorganized, animal-like part of a person's personality, and

³⁸ Immanuel Kant (1800), *Logik*, in *Kant's gesammelte Schriften*, Band IX, pg. 54.

³⁹ Sigmund Freud (1923), "The Ego and the Id."

⁴⁰ George Santayana (1896), *The Sense of Beauty*, NY: Dover Publications, 1955, pp. 16-17.

as the source of needs, desires, and impulses. According to Freud it is

the obscure, inaccessible part of our personality; . . . We suppose that it is somewhere in direct contact with somatic processes, and takes over from them instinctual needs and gives them mental expression . . . These instincts fill it with energy, but it has no organization and no unified will, only an impulsion to obtain satisfaction for the instinctual needs in accordance with the *Lust*-principle. . . Naturally, the id knows no values, no good and no evil, no morality.⁴¹

Much of this description, with certain modifications and caveats, can also be applied to the process of reflective judgment. The most important of these modifications is that reflective judgment is not governed by the *Lust* principle but is instead governed by a Critical acroam named the Principle of Formal Expedience of Nature⁴². The Critical *Lust* principle – *i.e.*, that orientation in acting is the determination of an action judged expedient for the negation of the intensive magnitude of *Lust per se* – touches upon a part of the process of reflective judgment, but the *Lust* principle casts a wider net covering practical judgment and adaptive *psyche* as well⁴³.

Part of Freud's description that does apply to reflective judgment is that, like Freud's id, representation in reflective judgment "has no organization" in the strict sense that the manifold of Desires does not constitute a structure and its representation is not conserved. Another nearly-true attribution is that "it is in direct contact with somatic processes" from the strict sense that reflective judgment is the adjudicating process for sensibility. The third applicable attribution – and this one is very important – is that acts of reflective judgment "gives mental expression" in terms of combining representation in sensibility with schemes of motoregulatory expression in *psyche*. Note in figure 4 that reflective judgments are *impetuous* acts, and this impetuosity brings to manifestations of its acts a behavioral character that might be called "chaotic" in a non-pejorative connotation. An infant, for example, has very few constructs (compared to an adult) in either the manifold of concepts or the manifold of rules. Infantile behavior is by and large the outcome of acts of reflective judgment in its first days of life and for some months afterward. Think about the wild, limb-flapping "chaotic" way an infant expresses joy. He is, to use Freud's phrase, "a cauldron of seething excitement"⁴¹. The process of reflective judgment judges satisfactions and dissatisfactions and adjudicates the combining of these representations with action expression in *psyche*.

The 2LAR of the faculty of adaptive *psyche* has four headings: somatic *Kraft*; noetic *Kraft*; somatic organization; and noetic organization⁴³. Somatic *Kraft* is the power of *soma* to produce or suffer effects. Noetic *Kraft* is the power of *nous* to produce or suffer effects. Somatic organization is the somatic structure of adaptation in *nous-soma* reciprocity. Noetic organization is the noetic structure of adaptation in *nous-soma* reciprocity. *Psyche* and *nous* are different *logical* divisions in the Organized Being model and the necessity for a human being to be a *real unity* requires a synthesis, combining the mathematical description of acts of reflective judgment with those of adaptive *psyche*, in order to obtain objective validity for the Critical theory. Without this synthesis, *psyche* and *nous* are nothing more than disjoint mathematical models. This necessary synthesis is called *the synthesis in continuity* and is mathematically described by synthetic relations for combining the 3LAR of reflective judgment with the 2LAR of the faculty of adaptive *psyche*. Figure 7 illustrates the mathematical structure of the synthesis in continuity⁴⁴.

The overall synthesis in continuity contains four synthetic functions shown in figure 7: (a) the synthesis of objectivity; (b) the synthesis of the aesthetic Idea; (c) the synthesis of the judicial Idea; and (d) the synthesis of Meaning. The explanations for each of these functions are somewhat lengthy and are provided in chapter 7 of *The Phenomenon of Mind*. Briefly, the objectivity function expresses Nature as the persistent in all appearances (continuity in Nature). The aesthetic Idea is the catalyst for stimulation of

⁴¹ Sigmund Freud (1932), "New Introductory Lectures on Psycho-Analysis," Lecture 31.

⁴² Richard B. Wells (2016), *The Phenomenon of Mind*, www.mrc.uidaho.edu/~rwwells/techdocs/, Chap. 8.

⁴³ Richard B. Wells (2016), *The Phenomenon of Mind*, www.mrc.uidaho.edu/~rwwells/techdocs/, Chap. 4.

⁴⁴ Richard B. Wells (2016), *The Phenomenon of Mind*, www.mrc.uidaho.edu/~rwwells/techdocs/, Chap. 7.

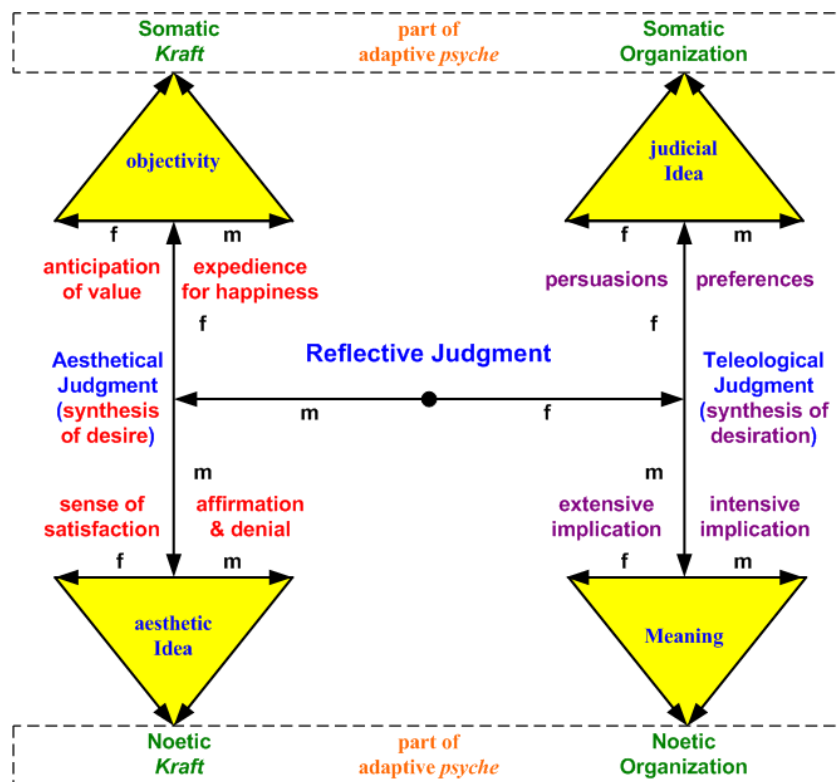


Figure 7: The synthesis in continuity. m denotes matter, f denotes form.

thinking (continuity in perception). The judicial Idea is the function of continuity in *Self-Existenz*, i.e., the capacity to gauge the formal expedience of sensuous conditions for determining particular appetites by which the accidents of a person's *Self-Existenz* are actualized (i.e., connecting appearances of "me" at one moment in time with appearances of *the same* "me" at the next moment in time; it is the function that underlies the ability of a human being to distinguish himself as a *persistent* Object from other objects judged to comprise what is "not-me" in Nature). The synthesis of Meaning is the continuity function by which the person is able to achieve on-going mental coherence in the overall context of his life.

The synthesis in continuity synthesizes an organic unity of reflective judgment and adaptive *psyche* by which acts of reflective judgment find physical expression as motor actions in *soma* and physical somato-sensory signaling in *soma* finds mental representation in *nous*. The capability of mental representation to bring the body into motion is what Kant called the *facultatem locomotivam* (power of locomotion).⁴⁵ This is, literally, "the power to impart movement." In the Critical theory it is the power of an Organized Being to be animate through reciprocal determinations of *nous* and *soma* under animating principles of *psyche*. It is through these animating principles that thinking's primitive role is uncovered.

V. *Lust per se*, the Animating Principles, and Action Expression

Psyche is the organized structure of animating principles of *nous-soma* reciprocity. But what is the significance of the adjective "adaptive" in the term "adaptive *psyche*"? The explanation of this is simple enough although the deduction of this explanation is not⁴⁶. The adaptive *psyche* is the 2LAR description of how adaptation is organized in accordance with animating principles of *nous-soma* reciprocity. An appreciation of this requires a fuller understanding of the idea of *Lust per se*. Kant wrote,

⁴⁵ Immanuel Kant (1794-95), *Metaphysik Arnoldt*, in *Kant's gesammelte Schriften*, Band XXIX, pp. 1079-1032.

⁴⁶ Richard B. Wells (2006), *The Critical Philosophy and the Phenomenon of Mind*, chapter 15, "Third Epilegomenon: *Lust* and *Unlust*," www.mrc.uidaho.edu/~rwells/techdocs/.

Now one calls the capability to have *Lust* or *Unlust* during a representation *feeling* for this reason: because both contain the *merely subjective* in the relationship of our representation and contain absolutely no reference to an Object for the possible cognition of the same (not even the cognition of our state) . . . Indeed, because of this very reason *Lust* and *Unlust* will not be able to be clearly explained for themselves and rather one can, if need be, only cite what consequences they have in certain relationships to make them recognizable in practice.⁴⁷

What Kant is telling us here is that the only kind of objectively valid explanation of *Lust per se* is one which is practical and grounded in observable action phenomena. As a practical Object, *Lust per se* is a *noumenon* and we understand it as an Object only in terms of effects we logically ascribe to this Object. To put this another way, *Lust per se* is a mathematical Object having *epistemological* significance but no *ontological* significance.

What is this epistemological significance? Kant tells us,

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*. All the same, it is entirely peculiar that we also have an intellectual *Lust* and *Unlust* but we have no other word for it. The discrimination of good and evil belongs to intellectual *Lust* or *Unlust*. We must view that feeling by intellectual *Lust* or *Unlust* not as the ground but rather as the effect of satisfaction. 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.⁴⁸

Similarly, one feels *Unlust* when a representation contains a ground to be determined to abolish or prevent the actuality of the Object of a representation. These are practical explanations: when I do 'this' I "feel *Lust*"; when I do 'that' I "feel *Unlust*." As you can see, *Lust* and *Unlust* are logico-mathematical Objects under which stand action phenomena classified by attractive or aversive characteristics.

The word "perfection" regarded substantively means entire completeness of or in something. The same word regarded as a verbal noun means acting to perfect something, *i.e.*, acting to make it more complete. Now, equilibrium is a perfection in the first connotation of that word; equilibration is a perfection in the second connotation (perfecting). An equilibrium cycle is closed; it is "complete unto itself." A process of equilibration is a process attempting to achieve a closed cycle of this kind. Therefore one can rightly suspect that *Lust per se* has something to do with trying to achieve perfection and, furthermore, is a logically essential part of the organization of adaptation. Kant tells us we are correct in this suspicion:

Lust is matter of perfection – fundamental property (fundamental mental power when it is sensuous, fundamental capacity when it is intellectual) – that does not allow itself to be reduced, not even to the faculty of knowledge. Our representations can themselves be efficient causes (and to that extent are not cognitions). The causality of representations is:

1st subjective – they are causes for producing themselves, to contain themselves.

2nd objective – since they become cause for the production of Objects. The *consensus* with subjective causality is called the feeling of *Lust* – the congruence with the objective causality is called appetitive power. Thus a representation which brings forth effort to preserve its state of representation is called *Lust*, one which becomes the cause for the production of an Object is called appetite.⁴⁹

When we regard *Lust per se* in the context of it being a fundamental property of a human being pertaining to the power to perform adaptation it is called *Lust-Kraft*. Kant's remark quoted above also tells us something else about *Lust per se*. Specifically, he tells us this *noumenon* also stands in combination

⁴⁷ Immanuel Kant (1797), *Die Metaphysik der Sitten* in *Kant's gesammelte Schriften*, Band VI, pp. 211-212.

⁴⁸ Immanuel Kant (c. mid-1770s), *Metaphysik L₂* in *Kant's gesammelte Schriften*, Band XXVIII, pg. 586.

⁴⁹ Immanuel Kant (1793), *Metaphysik Dohna* in *Kant's gesammelte Schriften*, Band XXVIII, pp. 674-675.

with the practical synthesis of appetite in figure 4. This too is part of the adjudication of assimilation and accommodation. Appetite has to do with the *regulation* of equilibration and involves the process of practical judgment. The next section discusses this.

Lust-Kraft describes composition of *Lust per se* but does not provide its complete description. There is an additional dimension to consider. Adaptation is not merely a balancing of assimilation and accommodation. It is an *organized* balancing. The term *adaptive* psyche is used to emphasize that the animating principles of *psyche* express *nous-soma* reciprocity in terms of a *power* to undertake adaptation. *Lust-Kraft* is the name of this "adaptation dimension" of *Lust per se*.

But with this adaptation dimension there must also be an "organization dimension" which stands as form (*nexus*) to the matter (composition) of *Lust per se*. *Lust-organization* is the organized *structure* of the process of adaptation. The four functional headings for this structure are deduced by synthetically combining the headings of *Lust-Kraft* with the functions of the data of the senses. The latter synthesize representations in sensibility which stand in immediate co-relationship with *soma*⁵⁰. The combination of *Lust-Kraft* and *Lust-organization* produces a 3LAR for *Lust per se*. Figure 8 depicts this 3LAR.

The adaptation dimension and the organization dimension are, in a manner of speaking, two sides of the same coin and the process of equilibration cannot be fully understood without both. Piaget expressed this same idea when he wrote,

From the biological point of view, organization is inseparable from adaptation. They are two complementary processes of a single mechanism, the first being the internal aspect of the cycle of which adaptation constitutes the external aspects. With regard to intelligence, in its reflective as well as in its practical form, this dual phenomenon of functional totality and interdependence between organization and adaptation is again found. . . . The relationships between this organization and adaptation are consequently the same as on the organic level.⁵¹

The synthesis in continuity, which functionally crosses the logical boundary line between *nous* and *psyche*, synthesizes a necessary continuity between acts of reflective judgment and the animating principles of *psyche*. The synthesis of objectivity ties reflective judgment to the animating principle of somatic *Kraft*. That of the aesthetic Idea ties reflective judgment to the animating principle of noetic *Kraft*. The judicial Idea ties reflective judgment to the animating principle of somatic organization. Finally, the synthesis of Meaning ties reflective judgment to the animating principle of noetic organization. These animating principles are⁵²:

1. the animating principle of somatic *Kraft* – the principle states that reciprocity through somatic *Kraft* is determination of a condition, called an *elater animi*, through which the structuring of somatic actions expresses acts of aesthetical reflective judgment in the form of a system of values, desires, and interests;
2. the animating principle of noetic *Kraft* – the principle states that the co-determination of somatic representations and the affective perceptions of Quality in reflective judgment are energetics for understanding and reasoning in the structuring of a value system and for the orienting of activity;
3. the animating principle of somatic organization – the principle states that motivation is accommodation to perception and motoregulatory expression is its assimilation;
4. the animating principle of noetic organization – the principle states that equilibration is the activity leading to closure of the cycle of affective interaction in a state of equilibrium.

⁵⁰ Richard B. Wells (2006), *The Critical Philosophy and the Phenomenon of Mind*, chapter 15, pp. 1398-1404, www.mrc.uidaho.edu/~rwwells/techdocs/.

⁵¹ Jean Piaget (1952), *The Origin of Intelligence in Children*, Madison, CN: International Universities Press, Inc., pg. 7.

⁵² Richard B. Wells (2016), *The Phenomenon of Mind*, www.mrc.uidaho.edu/~rwwells/techdocs/, Chap. 4.

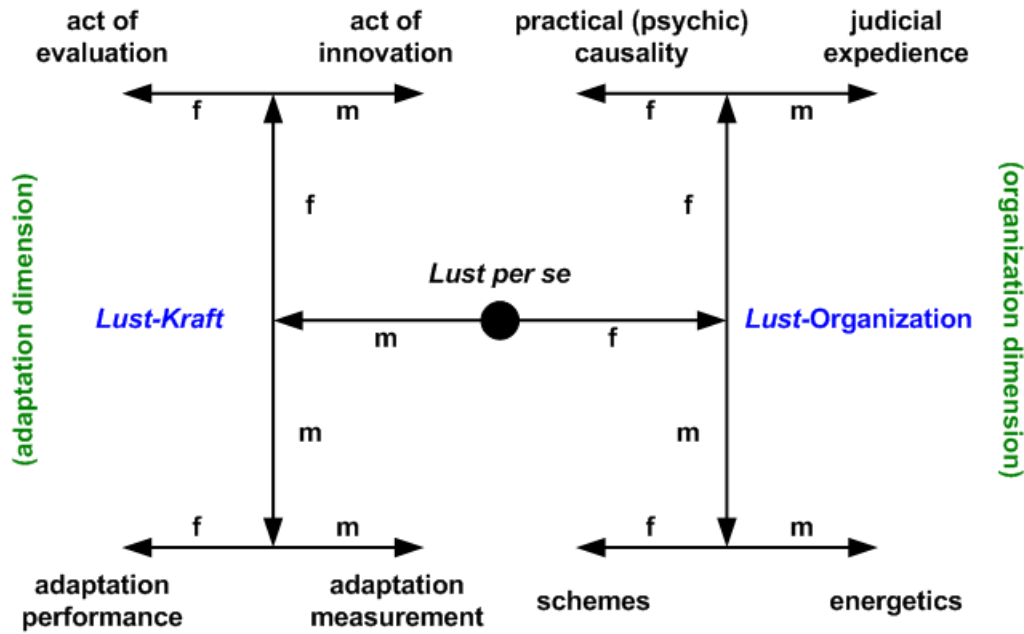


Figure 8: The 3LAR structure of *Lust per se* and its eight headings.

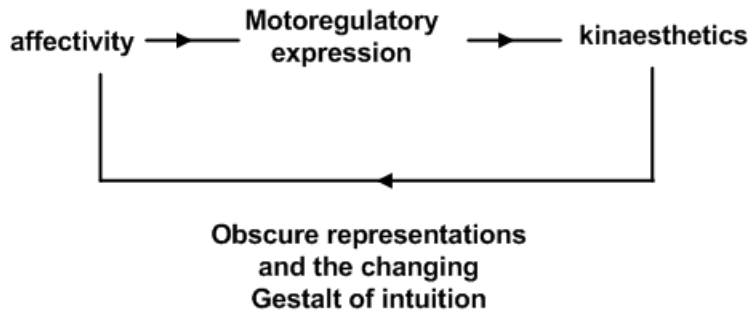


Figure 9: the cycle of affective interaction. The cycle is a sensorimotor feedback system for *nous-soma* regulation.

The cycle of affective interactions, depicted in figure 9, is the cycle of subjective factors in play as the process of equilibration works its way through a disturbance to a new state of equilibrium. Presentations of affectivity lead to new motoregulatory expressions of somatic actions. The effects of these actions feed back through internal body sensations (kinaesthetics) to produce changes in sensibility (both the autistic *dabilia* of affective perception and the objective *parástase* of intuition). These changes in sensibility lead to new reflective judgments altering the state of affectivity, thereby closing the affective interaction cycle. Equilibrium is achieved when no new innovations occur and feelings of *Lust* and *Unlust* cancel each other out sensorially (real negation of the feeling of *Lust* and *Unlust*).

A scheme is that which can be repeated and generalized in an act or an action. A human being is born already in possession of a base set of hereditary innate reflex schemes that are empirically displayed in what are often called instinctive reflexes. One example is an infant's sucking reflex, a complex series of motor expressions which make it possible for a newborn to take in nourishment.⁵³ Although the history of psychology is full of disagreements over the idea of instincts, it does agree that we all have them.⁵⁴

⁵³ Jean Piaget (1952), *The Origin of Intelligence in Children*, Madison, CN: International Universities Press, Inc., pp. 25-46.

⁵⁴ Jean Piaget (1981), *Intelligence and Affectivity*, Palo Alto, CA: Annual Reviews Inc., pp. 16-20.

These hereditary motoregulatory instincts, however, are not permanently fixed. Rather, they undergo modifications by adaptation empirically demonstrated by what Piaget called primary circular reactions⁵⁵. Functionally disjoint at birth, in the hours, days, weeks, and months that follow the base set of instinctive motoregulatory expressions are organized and coordinated as the infant gains experience by interacting with its environment by means of circular reactions. (Indeed, it is well known that depriving an infant of these interactions has a devastating effect on its mental and physical development). But to speak of experience is to speak of the two developed *structures* in figure 1, namely, the manifold of concepts and the manifold of rules. William James wrote,

Man has a far greater variety of *impulses* than any lower animal; and any one of these impulses, taken in itself, is as 'blind' as the lowest instinct can be; but, owing to man's memory, power of reflection, and power of inference, they come each one to be felt by him, after he has once yielded to them and experienced their results, in connection with a *foresight* of those results. In this condition an impulse acted out may be said to be acted out, in part at least, *for the sake* of its results. It is obvious that *every instinctive act, in an animal with memory, must cease to be 'blind' after being once repeated*, and must be accompanied with foresight of its 'end' just so far as that end may have fallen under the animal's cognizance. . . . It is plain, then, that, *no matter how well endowed an animal may originally be in the way of instincts, his resultant actions will be much modified if the instincts combine with experience* if in addition to impulses he have memories, associations, inferences, and expectations on any considerable scale.⁵⁶

What James calls "foresight" the Critical theory calls *anticipation*. An innovation is a disagreement between actual perception and anticipation, and innovations are disturbers of equilibrium. James' theory quoted above was speculative in his day, but later studies by Piaget *et al.* provided strong support for much of what James wrote if we substitute "anticipation" for "foresight". Piaget found that

cognizance begins with the pursuit of a goal leading to the conscious noting of success or failure. In the 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 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[.]⁵⁷

When Piaget speaks here of the "goal" of an action, he does not mean the subject is overtly cognizance of any goal-object before the fact. Rather, what he means – and stated explicitly – is that the action scheme "assigns" a *de facto* "goal" to the action without the person necessarily having any predetermined concept of what this "goal" might be (*ibid.*, pg. 334). In the Critical theory, "success or failure" amounts to a feeling of satisfaction or dissatisfaction after the fact of the action expression – feelings which implicate the feeling of *Lust* or *Unlust* in affectivity. This amounts to, as James put it above, "an impulse acted out for the sake of its result." In other words, "goals" are initially subjective and autistic and become objective and communicable only after repetitive experience establishes an adequate structure of concepts in the manifold of concepts. This is the more proper Critical description than is James' "memories, associations, and inferences." It is an error to suppose *objective* cognizance of "goals" is achieved rapidly. It is not, as the long road of acquiring experience a child must journey in its first few years attests.

⁵⁵ Jean Piaget (1952), *The Origin of Intelligence in Children*, Madison, CN: International Universities Press, Inc., pp. 47-143.

⁵⁶ William James (1890), *The Principles of Psychology*, authorized ed., vol. 2, pg. 390, NY: Dover Publications, 1950.

⁵⁷ Jean Piaget (1976), *The Grasp of Consciousness: Action and Concept in the Young Child*, Cambridge, MA: Harvard University Press, pg. 335.

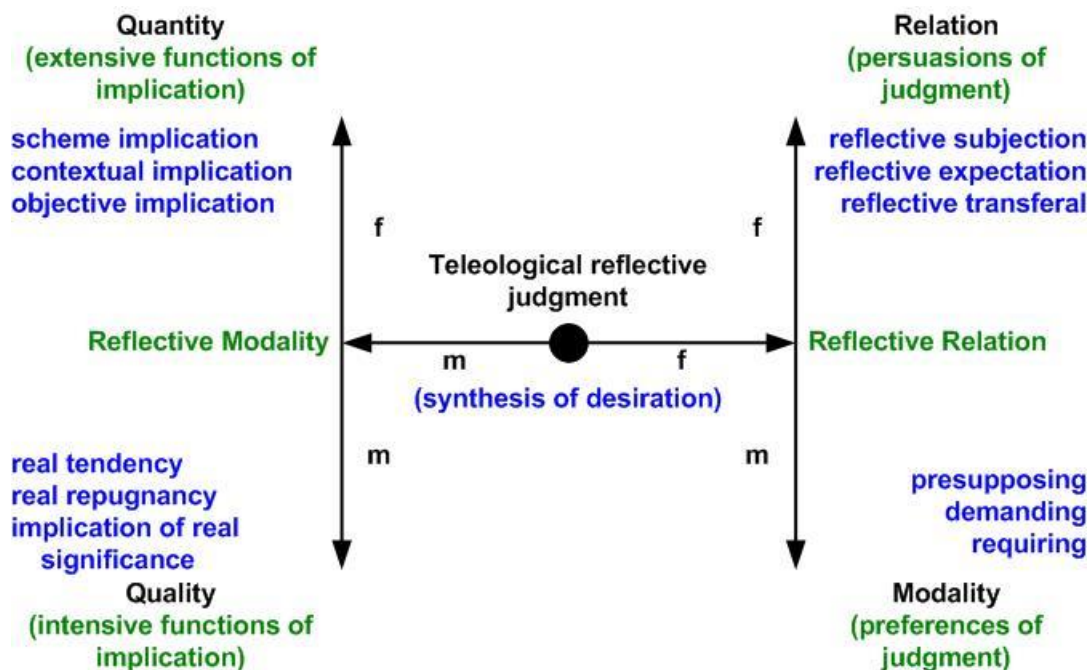


Figure 10: 2LAR of the process of teleological reflective judgment and its primitive functional *momenta*.

All concepts originate as intuitions and are properly understood as rules for the reproduction of these intuitions. The same act of reflective judgment that triggers the representation of a concept (through the process of re-cognition in imagination) also combines that intuition with a motoregulatory expression – initially a primitive instinct⁵⁸ and later as a more complex action scheme involving combined action rules constructed in the manifold of rules in practical Reason. Indeed, this combining constitutes the core of the synthesis in continuity of Meaning. The combination of intuition and motoregulatory action is adjudicated specifically by the process of teleological reflective judgment. Figure 10 depicts the 2LAR structure of teleological reflective judgment and its primitive synthetic functions⁵⁹. A combining of an intuition with a motoregulatory action expression is called a synthesis of desiration. The functions of Quantity and Quality in figure 10 are functions which assign real and practical root meanings to perceptions. Critical meaning is the coherence of perceptions and activities. Those of Relation in figure 10 are functions determining attention, orientation, and expectation in the judgment of sensibility. Those of Modality pertain to the interaction of reflective judgment with apprehension, imagination, and reasoning⁵⁹.

Thinking is cognition through concepts. The manifold of concepts is somewhat like Freud's idea of the "preconscious system" inasmuch as a human being is not conscious of his concepts until these are brought back into the synthesis in sensibility by means of the process of reproductive imagination. Furthermore, any *combination* of concepts in the manifold of concepts *is itself* a concept – we might call it an extended concept – and its reintroduction into the synthesis of sensibility *introduces* more extensive action expressions because concept combination in determining judgment preserves meaning implications by making the intuition of the concept *symbolic* of a real meaning⁶⁰ – and all real meanings are at their roots practical, i.e., are invested in action expressions. It is this – the ability to reproduce action expressions and extend them into action schemes by means of concepts – where the primitive root *αγαθον* of why people think is found.

⁵⁸ A primitive instinct is the *a priori* capacity to express a specific motor action under the condition of a specific perceptive state.

⁵⁹ Richard B. Wells (2016), *The Phenomenon of Mind*, www.mrc.uidaho.edu/~rwells/techdocs/, Chap. 8.

⁶⁰ Richard B. Wells (2016), *The Phenomenon of Mind*, www.mrc.uidaho.edu/~rwells/techdocs/, Chap. 5.

At this point let us recall Freud's remark that the primitive role of the ego is to "bring the influence of the external world to bear on the id." The process of determining judgment, and its construction of the manifold of concepts, is the Critical counterpart to Freud's ego idea; the process of reflective judgment is the Critical counterpart to Freud's id. However, we must now deal with another complication that was not adequately dealt with in Freud's theory. It is this: *determining judgment does not determine its own employment*. We might metaphorically say determining judgment is a workman who knows how to build a house or repair a furnace but who does not decide what house to build or furnace to repair. That task falls to his employer and determining judgment is not its own employer. That role falls to the process of Reason.

VI. The Process of Reason, Reasoning, and the Categorical Imperative

The process of Reason (figure 1) is logically divided into a process of practical Reason and a process of speculative Reason. The process of practical Reason is the master regulator of all non-autonomic activities. The process of speculative Reason is the noetic homologue to motoregulatory expression in *psyche*. Motoregulatory expression pertains to the expression of somatic actions. Speculative Reason pertains to the control of noetic (mental) acts in response to practical Reason's determination of appetites. Specifically, it is the process which exercises control of the *employment* of the process of determining judgment and, therefore, thinking. This control is invoked by the *ratio-expression* of appetite.

By controlling and regulating employment of determining judgment, the process of Reason exercises indirect control of the synthesis in sensibility because concepts reintroduced into the synthesis of apprehension modify perception. Motivation is the accommodation of perception (animating principle of somatic organization), and Reason's ability to employ determining judgment exercises control over this accommodation. In doing so, acts of Reason are utterly indifferent to whatever objects of appearance are depicted by concepts and intuitions; the process of Reason can be said to be an objectively dark process. The process of Reason is likewise utterly indifferent to whatever specific affective perceptions are synthesized in sensibility. It leaves these to the process of reflective judgment, and so it can be said that the process of Reason is affectively cold. Reason exercises a check on the impetuosity of reflective judgment by means of the power to veto its expressions. It *effects* human spontaneity by means of its power to direct the employment of determining judgment through ratio-expression.

The overall systematic function performed by the process of Reason is called a "control system" by modern systems theorists. In general a control system is anything that manages, commands, directs, or regulates the behavior of something else. All control systems have several common features. They all have some mechanism for monitoring the behavior of the thing controlled. They all have some mechanism for altering this behavior. They all have some means of evaluating the performance of the thing controlled, and they all have some fundamental control law specifying how the control system itself responds to this evaluation. The first human-built control system of which there is an historical record appeared over 2200 years ago in Alexandria, Egypt. The development of a formal mathematical theory of control systems began in the 1950s and gave birth to the science of modern systems theory. The development of systems theory relied heavily on developments in mathematics that were made starting in the late 18th century and continuing into the 20th century. Kant's theory of Reason, which he developed in the late 18th century, was handicapped by lack of knowledge these later developments in mathematics made available. He was also handicapped by the lack of a *scientific* psychology in the 18th century⁶¹. It is therefore not surprising that Kant's original theory suffers from some serious shortcomings that remained unsolved until 2006⁶².

⁶¹ The birth of psychology as a science is generally dated to 1879 when Wilhelm Wundt founded the first experimental laboratory for the study of psychology. The first pioneering work in scientific psychology dates back to the 1830s and the work of Gustav Fechner.

⁶² Richard B. Wells (2016), *The Phenomenon of Mind*, www.mrc.uidaho.edu/~rwells/techdocs/, Chap. 9.

Nonetheless, Kant did correctly conclude that some phenomena of human behavior – particularly the phenomenon of moral judgment – made a control law for practical Reason logically essential to human Nature. Naturally, Kant did not call it by this name – that terminology did not come into use until nearly two centuries later. He called it *the fundamental law of pure practical Reason*⁶³. The name he gave this law was *the categorical imperative* of pure practical Reason. Kant was even able to deduce that this law could only be a logico-mathematical law, *i.e.*, that it was a law of pure form. He wrote,

But if I think of my categorical imperative I know immediately what it contains. For here the imperative contains, besides the law, only the necessity of the maxim to be in conformity with this law; but the law contains no condition to which it would be limited, so that nothing remains with which the maxim of the act is to conform but the remaining universality of the law in general, and that conformity alone the imperative represents as necessary.⁶⁴

Kant was unsuccessful in taking the idea of the categorical imperative much further than this. He speculated that something he called "the moral law" sufficed for the role it plays. Given that he had no sound psychology research to draw from, this was not an unreasonable speculation. But it led directly to numerous problems philosophers have analyzed and criticized ever since⁶², and it led to some conclusions about human Nature that modern psychology has refuted. Prime examples are provided by the phenomena of sociopaths and antisocial personality disorder. If Kant's moral law speculation was correct there could be no such thing as a sociopath and no such thing as antisocial personality disorder; but there are. The most serious shortcoming in trying to equate the categorical imperative to "the moral law" is that in order *to be* a fundamental *natural* law this law must be one that a human being *must* obey necessarily in every act of pure Reason. It cannot express a problematic "ought to" in behavior – as Kant assumed – but, rather, it must be *necessarily determining* for human Nature. A person cannot choose to disobey a fundamental law of human mental Nature any more than he can choose to disobey the law of gravity.

Two-plus centuries of scientific discovery and mathematics development have provided the knowledge required to correctly understand Kant's categorical imperative. Its correct statement is: *A human being acts unconditionally to attempt to achieve and maintain overall equilibrium in his state of Existenz.* Failure to robustly re-equilibrate after a disturbance is psychologically traumatic and has devastating consequences. These include various kinds of psychoneuroses as well as debilitating psychoses.⁶⁵ The categorical imperative is a formula *defining* control law conditions for equilibration of disturbances. It is effected by means of determination of appetitive power (synthesis of appetite) and experience-driven construction of a manifold of rules by practical judgment (figure 4)⁶⁶.

Figure 11 depicts the 2LAR structure of the appetitive power in practical Reason. Appetitive power is the capacity of a human being to be, through its representations, the cause of the actuality of the objects of those representations. A determination of appetitive power is called an appetite. Appetition regarded in the practical Standpoint is the representation of a practical purpose.

⁶³ Immanuel Kant (1788), *Kritik der praktischen Vernunft* in *Kant's gesammelte Schriften*, Band V, pg. 30.

⁶⁴ Immanuel Kant (1785), *Grundlegung zur Metaphysik der Sitten* in *Kant's gesammelte Schriften*, Band IV, pp. 420-421.

⁶⁵ Richard B. Wells (2014), "The Challenge of Mini-Community", www.mrc.uidaho.edu/~rwells/techdocs/.

⁶⁶ Kant was not entirely incorrect when he attempted to equate the categorical imperative with something he called "the moral law." The phenomenon of human moral behaviors and judgments is a byproduct of the construction of the manifold of rules in practical Reason. However, because this manifold is constructed by equilibrating responses to a person's own unique experiences, each person constructs for himself a structure of practical rules in his manifold of rules that *has the effect* of constituting a uniquely personal "moral code" by which he judges good vs. evil, right vs. wrong. There is no one universal moral code applying to every person. I have mine; you have yours. They are congruent in many circumstances but also disagree in other circumstances. A *Society's* mores and folkways is the product of its members individually *accommodating themselves* to the other people in that Society. This is why a Society's children must be *taught* the moral customs and behaviors they will be expected to follow.

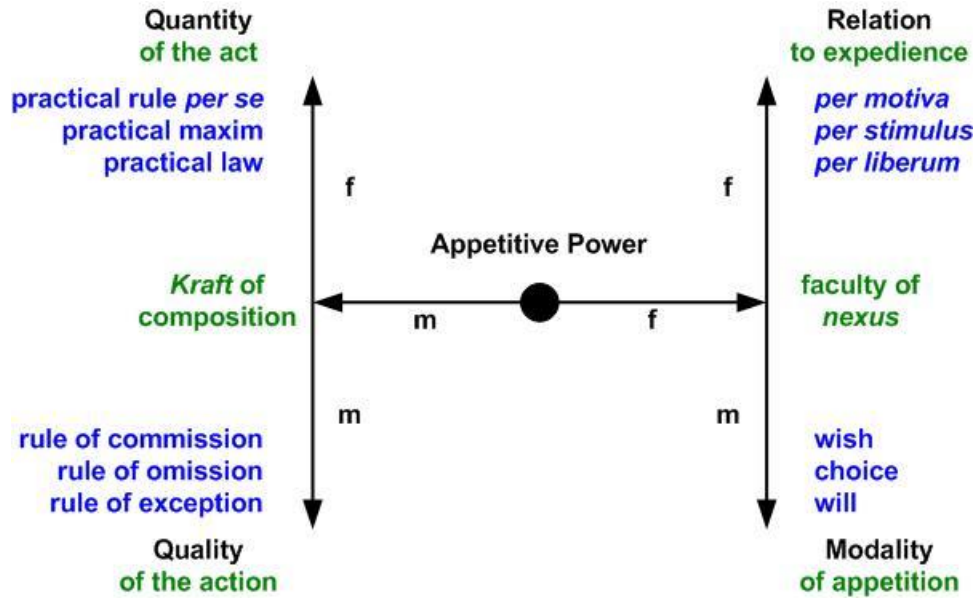


Figure 11: 2LAR structure of appetitive power in practical Reason.

Details and technical explanation of appetite and the functional *momenta* of appetitive power in figure 11 are provided in *The Phenomenon of Mind*⁶⁷. Appetitive power is the homologue, in practical Reason, of the power of imagination in the synthesis of sensibility (specifically, the synthesis of apprehension). The synthesis of appetite is *reasoning insofar as it pertains to the regulation of actions*. Reflective judgment synthesizes impetuous expressions of emotivity – that is, it presents to moto-regulatory expression possible actions it judges to be expedient based on affective perceptions and intuitions – and its representations are called Desires. The composition (matter) of Desire is called desire (*Begehren*) and is judged by aesthetical reflective judgment. The *nexus* (form) of Desire is called desiration (*Begehrung*). Kant drew an important if subtle distinction between desire (*Begehren*) and appetite (*Begierde*) which is often blurred in the English language. A desire is a *partial* condition for a expression of action, the form of which is a desiration, but it is not a sufficient condition. Practical Reason exercises a *veto power* over the impetuous acts of reflective judgment. Kant tells us,

That which is the cause of appetite is *causa impulsiva*⁶⁸ or *elater animi*⁶⁹. Now if they arose from sensibility then they are called *stimuli* and their effect [is called] *appetitio per stimulus*⁷⁰ or sensuous appetite. Otherwise they spring from understanding; consequently they are called *motiva*⁷¹, their action *appetitio per motiva*⁷² or intellectual appetite.⁷³

In figure 11 the *momentum* of Relation corresponding to *appetitio per stimulus* is called expedience *per stimulus* and that corresponding to *appetitio per motiva* is called expedience *per motiva*. These two are the result of making an analytic division distinguishing acting on the basis of receptivity vs. acting on the basis of thinking. However, there is a third basis for action which is a synthesis of these, i.e., acting on the basis of a sensuous expedience that is at the same time also an intellectual expedience. This is called

⁶⁷ Richard B. Wells (2016), *The Phenomenon of Mind*, www.mrc.uidaho.edu/~rwells/techdocs/, Chap. 9.

⁶⁸ "impulsive cause"

⁶⁹ "driver of the mind"

⁷⁰ "stimulated appetite"

⁷¹ "motives"

⁷² "appetition by motives"

⁷³ Immanuel Kant (1783), *Metaphysik Mrongovius*, in *Kant's gesammelte Schriften*, Band XXIX, pg. 895.

expedience *per liberum* in figure 11. It denotes the human capacity to elevate mere sensuous expedience to the status of a maxim for acting on reasoned judgment of an idea *as a principle* of objective happiness. In all three cases representation of an appetite is an effect of reflective judgment *but reflective judgment is only a partial and not a total cause of this effect*. To its contribution must be added the contribution of practical and experience-driven accommodations made in the past and codified in the manifold of practical rules. In figure 4 this contribution is represented by the free play of appetite and judgment.

A rule is an assertion made under a general condition. While acts of teleological reflective judgment make assertions of expedience, these assertions must be validated under a general condition the executive power of practical Reason alone contains. **Practical validation** is a determination of appetitive power permitting motoregulatory expression of all or parts of the manifold of Desires, and so we may regard an appetite as *the expression of a rule*.

Appetition has however the following peculiarity. The rules represented in the manifold of rules are all unconscious representations and what they represent are practical judgments of outcomes of past actions *insofar as these outcomes were successful or not-successful in cohering with the formula of the categorical imperative of pure practical Reason*. An action sequence that did not result in equilibration of a disturbance – as judged by the feeling of *Lust* and *Unlust* – stands in contradiction with the categorical imperative and thereafter is *forbidden* and its expression via *psyche* is disallowed. Practical Reason – that objectively dark and affectively cold process – has no knowledge *a priori* of what actions will or will not cohere with Reason's mandate for equilibrium. This can only be learned through actual experience – that is, by doing things – and the lessons learned thereby are recorded in the manifold of rules. Looked at in this light, human willpower is not properly described as "free will"; rather, it must be regarded as "free won't" because practical judgment can only judge the relationships between outcomes and the formula of the categorical imperative. If a presentation of reflective judgment is not gainsaid by the manifold of rules "there is no reason" for its action to be prohibited. If it does contradict the practical manifold of rules, all or part of the action it expresses is vetoed in appetite. The manifold of rules is quite properly regarded as an individual's *value structure* insofar as this structure is viewed in relationship to the presentations of reflective judgment.

But even this is not enough. Appetition can veto motoregulatory expression but a mere veto does not suffice to equilibrate a disturbance condition. Something more is necessary and this something more is what ratio-expression provides. The three processes of judgment – reflective, practical, and determining – are co-determining processes, and this is where the regulation of non-autonomic actions comes into play. Coherence between the value structure encoded in the manifold of rules and the presentations of reflective judgment is the practical condition for *choice*. That which is presented in reflective judgment and coheres with the manifold of rules is *valued*. That which does not cohere or cannot be immediately assimilated into this structure – and which therefore requires an accommodation – is *disvalued*. From the practical Standpoint, perception is an *evaluation* and the determination of appetitive power is *valuation*. **Valuation is the practical validation of actions as being in formal compliance with the condition of the categorical imperative**. Every act of choice is an act of validation when the immediate consequence of the act is permission of the action implicated in reflective judgment. Every act of choice in which the action is vetoed provokes an act of *reevaluation*. As Piaget put it, reevaluation is the act of changing the perspective of perception. **The expression of reevaluation is an act of speculative Reason** and the act it expresses is called ratio-expression.

VII. Judgmentation and the Motivational Dynamic

Regulation of non-autonomic activities by the process of Reason is effected by means of *judgmentation*. Judgmentation is the overall process of exercising reasoning, determining judgment, reflective judgment, the synthesis of sensibility, and determination of motoregulatory expression such that equilibration is achieved. In figure 1 this is denoted by the *judgmentation loop*. Acts and actions undertaken in judgmentation make up what is called the *motivational dynamic*, which is illustrated in figure 12.

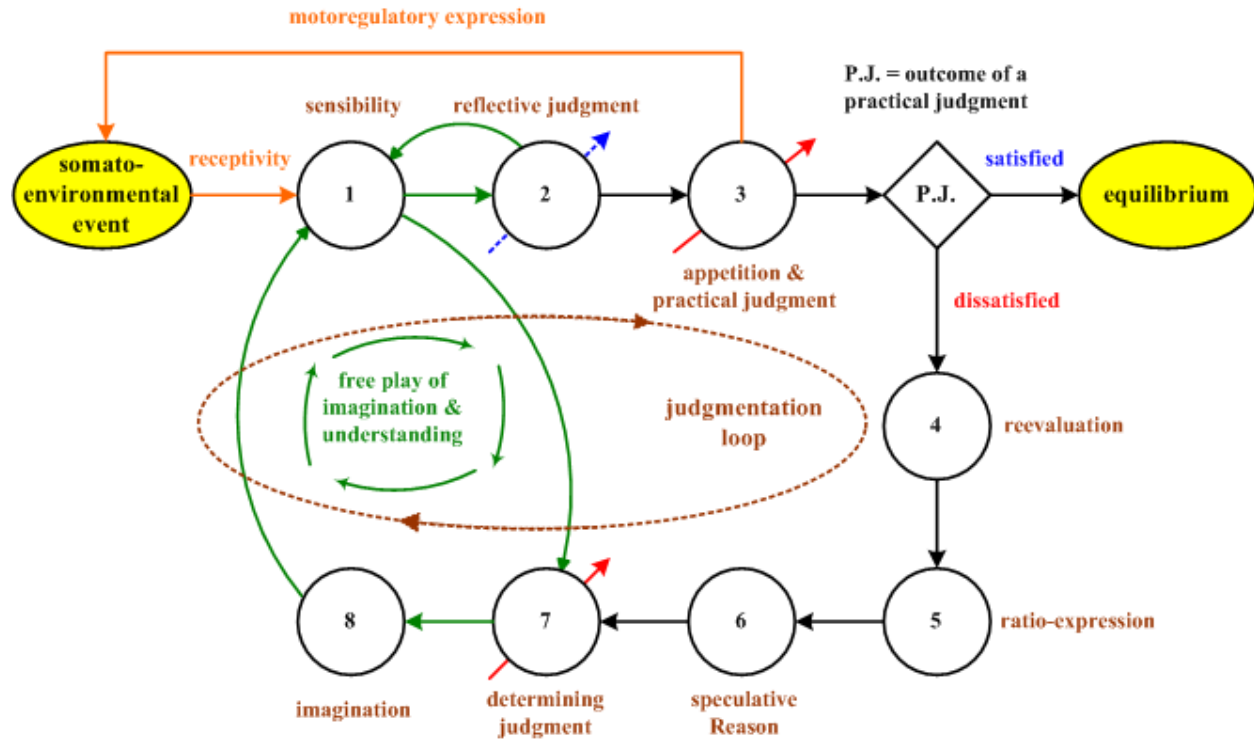


Figure 12: Synthesis of judgmentation in the motivational dynamic.^{74,75}

Motivation is the accommodation of perception and motoregulatory expression is its assimilation. The only way in which the process of practical Reason can accomplish equilibration is by means of bringing into play the employment of determining judgment. It does this through regulation of that process by speculative Reason in response to ratio-expression. The reintroduction into sensibility of concepts, structured into the manifold of concepts, alters sensibility and, therefore, the presentations of reflective judgment. *Thinking* is cognition through concepts, and *it is in the motivational dynamic where we find the primitive basis for why people think*. From the practical Standpoint, thinking is a tool of the process of Reason for realizing (making real) a state of equilibrium.

During judgmentation (figure 12):

1. perception of some somato-environmental event or possible circumstance occurs in sensibility;
2. during the synthesis of this perception a manifold of Desires is assembled by impetuous reflective judgment;
3. during the synthesis of appetition, some desiration presented by reflective judgment is evaluated during the synthesis of appetition and, because of this desiration, practical judgment encounters a conflict within the manifold of rules; the conflicting desiration is vetoed by practical Reason;
4. the resulting disturbance to equilibrium is accompanied by a practical judgment of reevaluation, which
5. triggers ratio-expression aimed at carrying out an adaptation for resolving the conflict in the manifold of rules and restoring equilibrium;
6. speculative Reason is evoked by ratio-expression into re-directing and regulating the stimulation

⁷⁴ Richard B. Wells (2016), *The Phenomenon of Mind*, www.mrc.uidaho.edu/~rwells/techdocs/, chap. 10.

⁷⁵ Richard B. Wells (2012), *The Idea of the Social Contract*, chap. 7, www.mrc.uidaho.edu/~rwells/techdocs/.

of thinking as a means of accommodating the manifold in perception;

7. determining judgment, brought into play by speculative Reason and conditioned by regulative principles of pure Reason, initiates cyclic activity in the free play of imagination and understanding by reintroducing concepts into the synthesis of reproductive imagination;
8. imagination alters sensibility (1 in figure 12), which in turn initiates a new round of synthesis in affective perception (2 in figure 12) and objective perception (7 and 8 in figure 12); the resulting accommodations in the manifold of Desires brings on a new outer loop of judgmentation; this process continues cyclically, producing accommodations in the manifold of rules, continuation of ratio-expression, and accommodations in the manifold of concepts until eventually either
 - (a) an accommodation of perception, a manifold of Desires and a manifold of rules are produced that satisfies the formula of the categorical imperative and equilibrium is restored, or
 - (b) the cycle goes into rupture (via compensating acts of ignorance) and some new focus for attention and judgmentation is found in a different cycle.

Step 8 (b) resembles in some ways the Freudian idea of repression. The person has failed to find a suitable adaptation for dealing with the disturbance that launched the reevaluation cycle and has instead dealt with the violation of the formula of the categorical imperative by synthesizing a reactive maxim or imperative in the manifold of rules. The accommodated rule structure amounts to denying the triggering situation and could be called a kind of "flight response" in ratiocination. As in Freudian theory, this rule construct is unconscious (the manifold of rules is never perceived). Contrary, however, to Freud's theory, it is not correct to ascribe it to an "ego function" (speculative Reason and the free play of determining judgment, imagination, and the synthesis of apprehension) because appetite and practical judgment are more akin to the Freudian notion of the superego. If the repressing maxim is placed high enough in the manifold of rules it can produce a number of psychological neuroses with various severities. Ignorance (pronounced ig-NOR'-ance) is one of three basic compensating behaviors, called a type- α compensation by Piaget⁷⁶. It is compensation by ignoring (cancelling out) part of sensible representation. The psychological idea of "denial" finds its root explanation in compensation by ignorance. It is not uncommon to encounter people whose ability to deny facts or situations is staggering; and to some usually lesser degree, all of us do so from time to time. This behavior is a manifestation of compensation by an act of ignorance during re-equilibrating judgmentation.

The 2LAR form of the motivational dynamic is presented in figure 13.⁷⁷ The dynamic and its twelve functional *momenta* in figure 13 are described in detail in the reference cited. Each motivational act in the dynamic is structured as a 4-tuple consisting of one functional *momentum* from each of the four headings, e.g.,

{expression of interest, affirmation of reevaluation, enforcement of law, groping for equilibration}.

The definitions of its four headings (want, drive, drive state, type-of-motive) provide the Critical real explanation for the corresponding terms in psychology.⁷⁷

Initiation of the cycle of judgmentation and the motivational dynamic is initiated by the determination of Quality in appetitive power (figure 11). In a great many instances practical Reason permits expression of impetuous acts of reflective judgment. This permission occurs when the Quality determination of appetitive power in figure 11 is the rule of commission. This determination is made when there is no rule in the manifold of rules that constrains the expression. Figure 14 illustrates what happens in this case.

⁷⁶ Jean Piaget (1975), *The Equilibration of Cognitive Structures*, Terrance Brown & Kishore Julian Thampy (tr.), Chicago: The University of Chicago Press, 1985).

⁷⁷ Richard B. Wells (2016), *The Phenomenon of Mind*, www.mrc.uidaho.edu/~rwells/techdocs/, chap. 10.

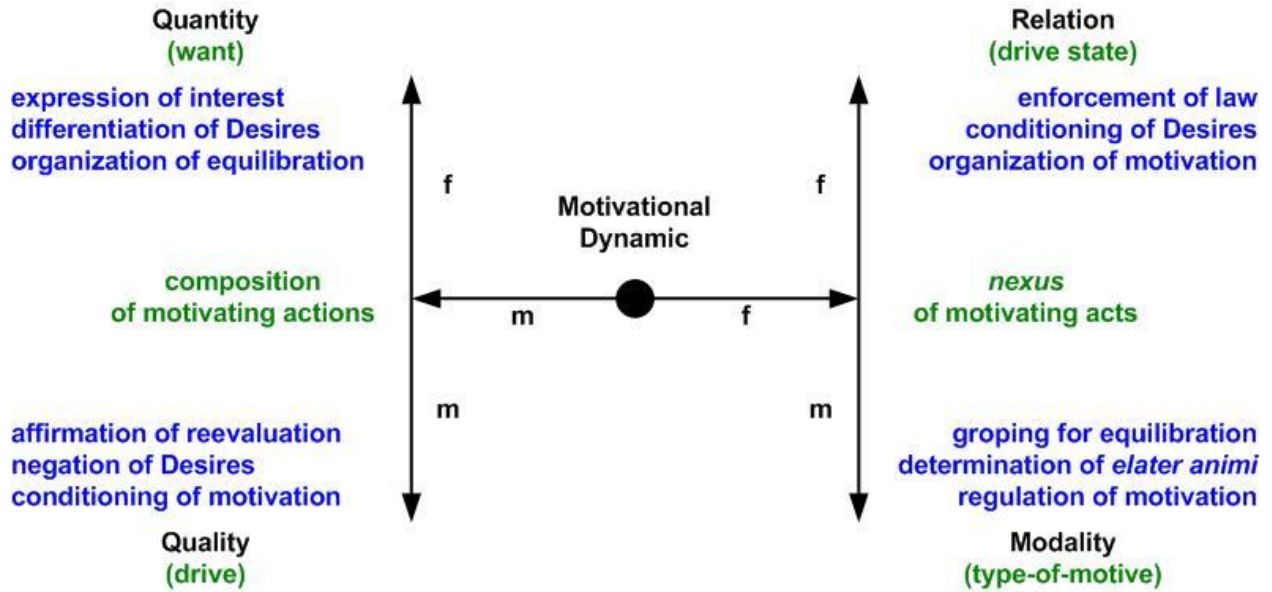


Figure 13: 2LAR structure of the motivational dynamic.

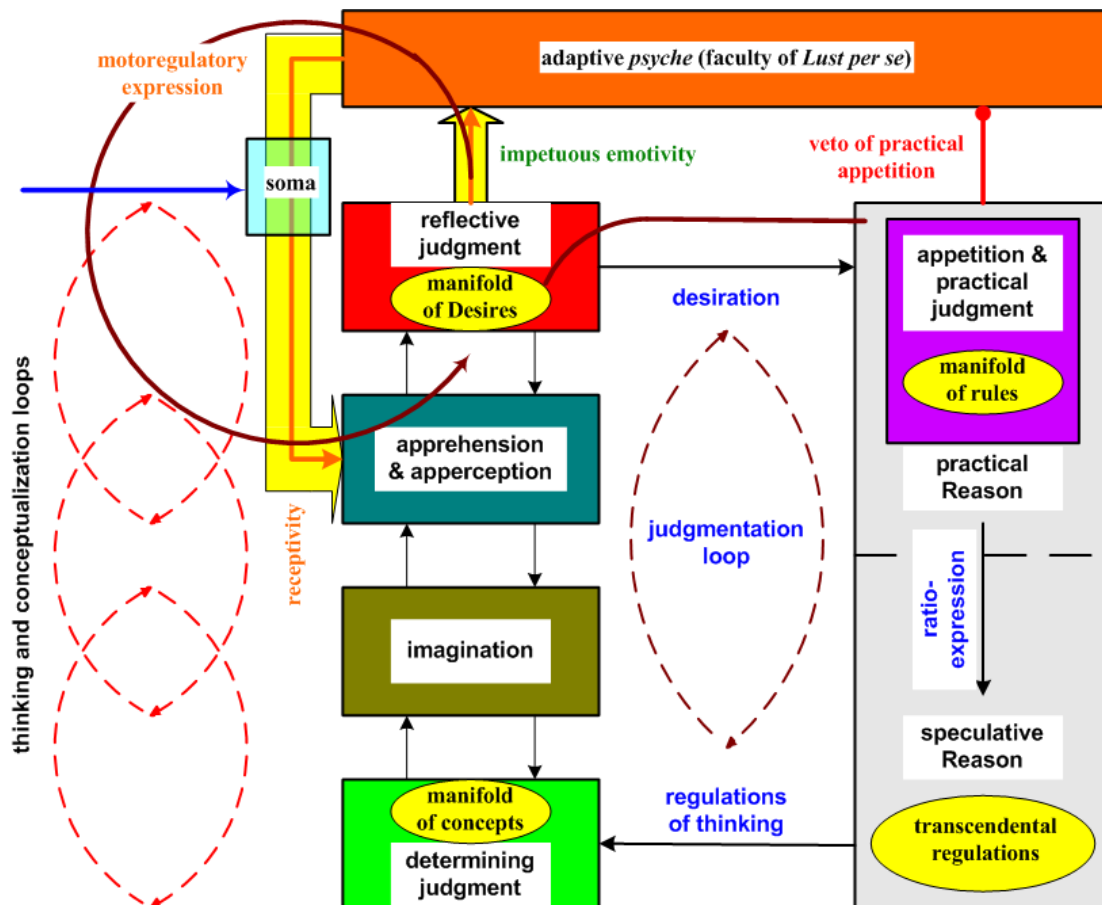


Figure 14: Information flow pathways under a Quality determination of rule of commission in appetitive power.

Information flows along the solid brown pathways indicated in the figure. The dashed brown line for the judgmentation loop denotes that the motivational dynamic is not initiated. The impetuous emotivity of reflective judgment is not impeded and the somatic actions it stipulates are expressed by motoregulatory expression.

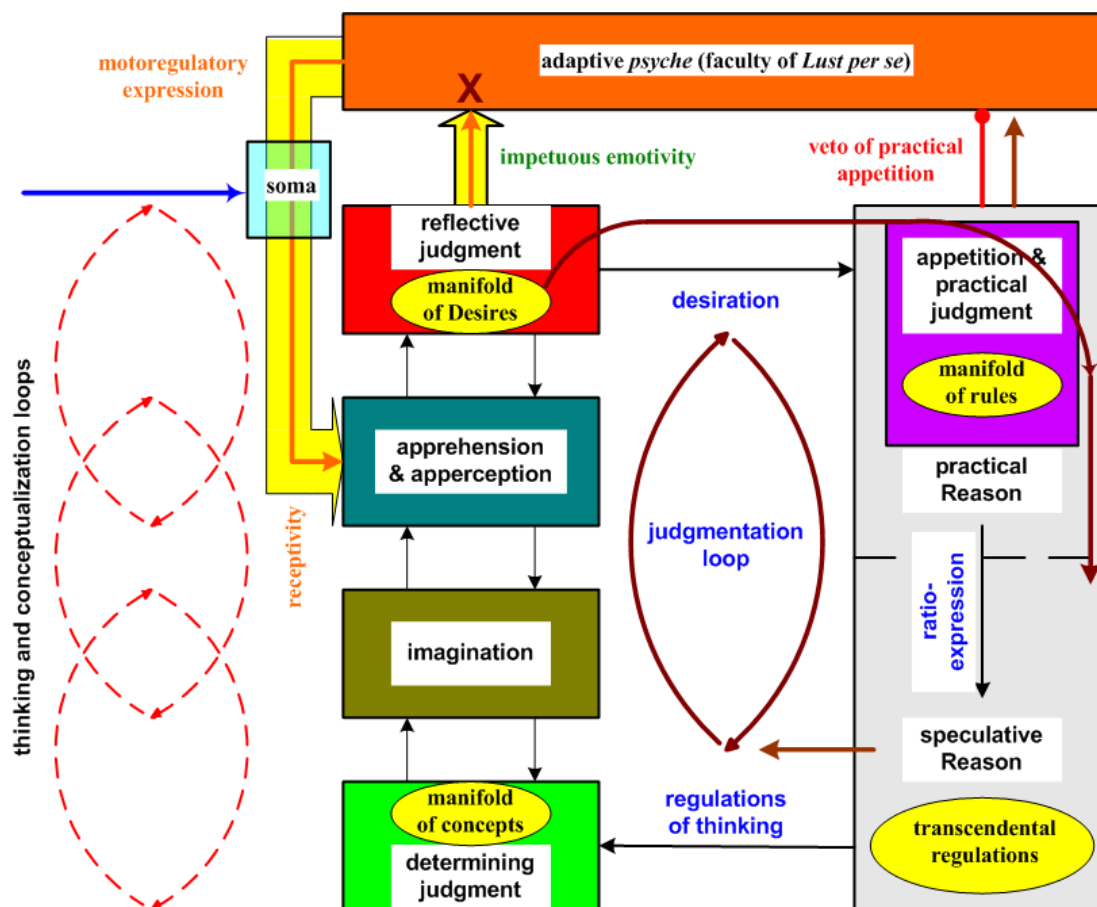


Figure 15: Information flow pathways under a Quality determination of rule of omission in appetitive power.

Information flows along the solid brown pathways indicated in the figure. The solid brown line for the judgmentation loop denotes that the motivational dynamic is initiated. The impetuous emotivity of reflective judgment is vetoed and the somatic actions it stipulates for motoregulatory expression is blocked. The process of determining judgment is brought into employment by speculative Reason. Concepts it introduces into the processes of apprehension and apperception produce accommodations in perception and thereby alter reflective judgment.

The text under figure 14 briefly describes the flow of information and expression under the function of a rule of commission. The person's perception is immediately assimilated into an action scheme, requiring no thought or accommodation on the part of the person in response to his circumstances.

The situation is otherwise in cases where Quality in the determination of appetitive power is a rule of omission. In this case, the impetuous act of reflective judgment gainsays the practical rule structure in the manifold of rules – which violates the categorical imperative of pure practical Reason. The impetuous expression of reflective judgment is vetoed and appetitive power invokes ratio-expression to deal with the violation. Thinking is provoked by bringing the process of determining judgment into play, and the re-introduction of concepts into the synthesis of apprehension alters the person's perceptions – which in turn alters the manifold of Desires and the impetuous reflective judgment. One possible outcome of the ensuing motivational dynamic is that concepts reintroduced into sensibility can negate some part of the impetuous expression that was contrary to the manifold of rules. This is type- α compensation (ignorance) by which a modified perception can be immediately assimilated into motoregulatory expression.

Another possible outcome is that the reintroduced concepts alter perception so that in perception the disturbing factors are accommodated by being transformed into mere variations for which the manifold of rules structure already contains permissible constructs. This is assimilation by type- β compensation.

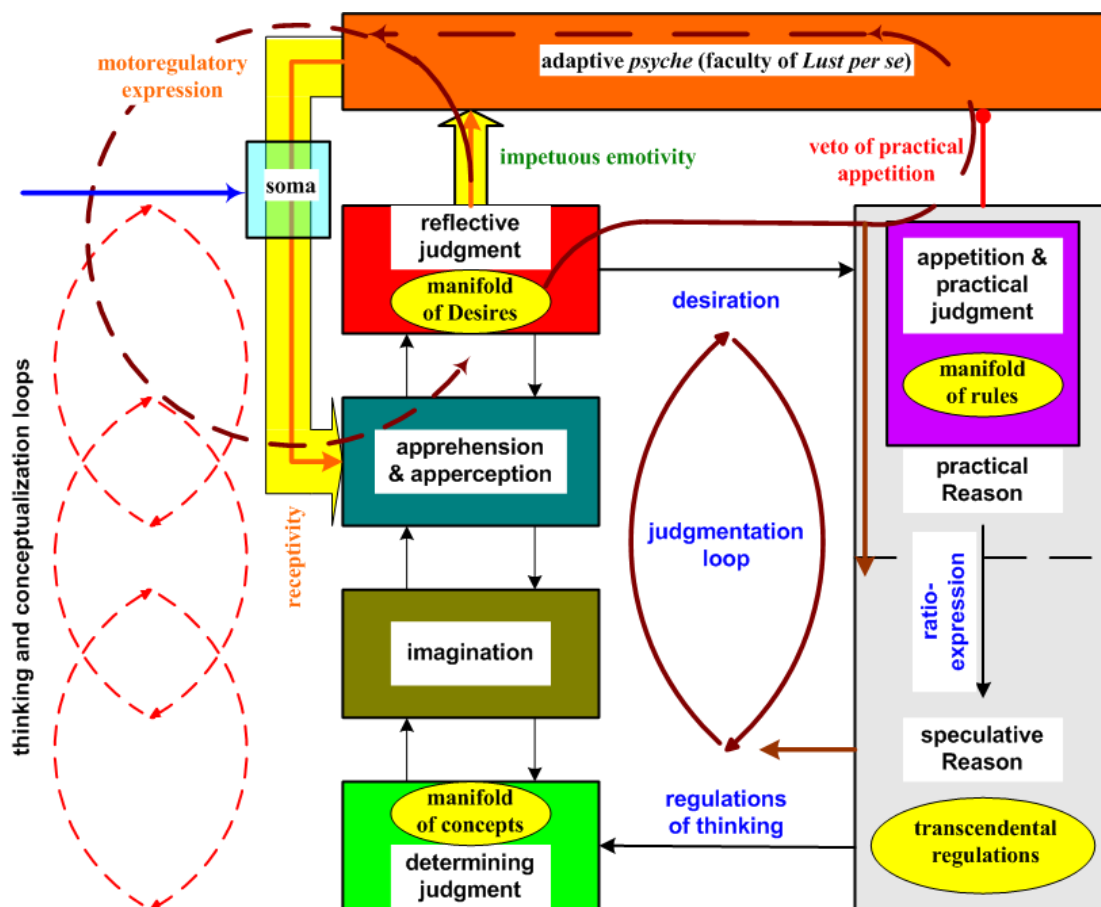


Figure 16: Information flow pathways under a Quality determination of rule of exception in appetitive power.

Information flows along the solid brown pathways indicated in the figure. The solid brown line for the judgmentation loop denotes that the motivational dynamic is initiated. The impetuous emotivity of reflective judgment is at least partially vetoed and vetoed somatic actions it stipulates for motoregulatory expression are blocked. The process of determining judgment is brought into employment by speculative Reason. Concepts it introduces into the processes of apprehension and apperception produce accommodations in perception and thereby alter reflective judgment. But, in addition, an accommodation may be made to the manifold of rules as well.

However, it might be the case where all *known* variations in the manifold of rules still contradict the categorical imperative. In this case, Quality in appetitive power is determined as the rule of exception. Figure 16 illustrates the information flow pathways in this case. Judgmentation and the motivational dynamic are again invoked, and perception is again accommodated by thinking. But, in addition, no permitted type- β compensation might exist in the manifold of rules and an accommodation of this manifold is then *also* required to satisfy the criterion of the categorical imperative. This is compensation behavior type- γ . Whenever an accommodation of the manifold of rules is necessitated in order to achieve equilibrium, the disturbance being dealt with is at least a mildly traumatic incident from the point of view that the person's fundamental value structure undergoes changes as a consequence.

As figure 4 indicated, the determination of appetitive power and the process of practical judgment interact. Figure 17 illustrates the 2LAR structure of the process of practical judgment⁷⁸. Its twelve functional *momenta* are the functions by which the manifold of rules is constructed and simple practical rules are combined to form more complex rule structures (maxims and tenets).

⁷⁸ Richard B. Wells (2016), *The Phenomenon of Mind*, www.mrc.uidaho.edu/~rwells/techdocs/, chap. 11.

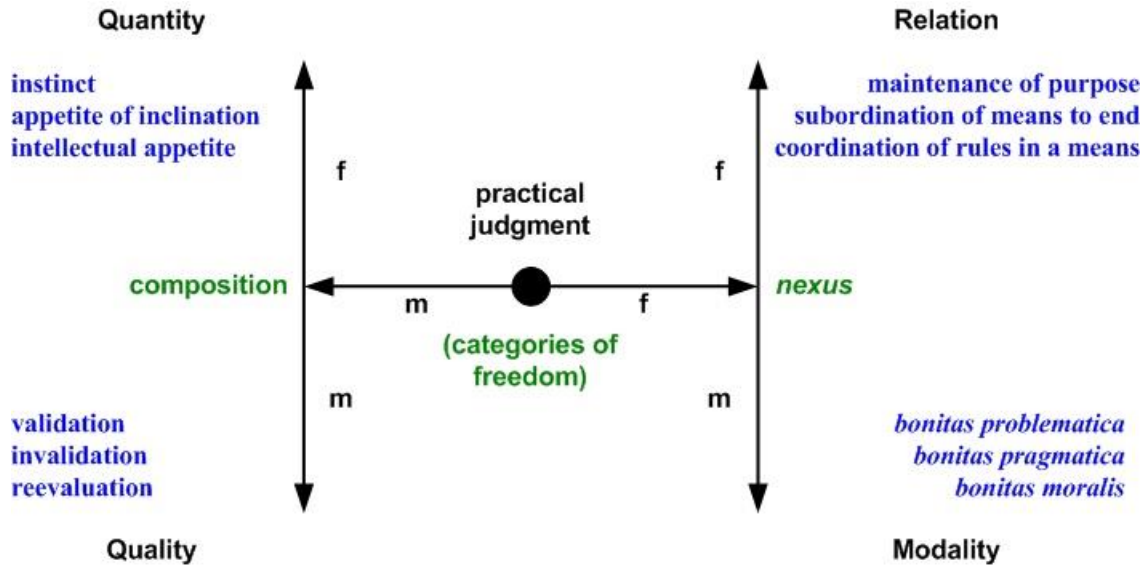


Figure 17: 2LAR structure of the process of practical judgment.⁷⁸

Validation and invalidation of the impetuous expressions of reflective judgment are functions of Quality in practical judgment. So too is the function governing reevaluation, which is the function that underlies ratio-expression by appetitive power. There is a free play between appetitive power and practical judgment – a cycle within a cycle – by which both processes are brought into harmony with each other – i.e. by which the two processes co-determine each other.

VIII. Summary

In this paper I have sketched out – admittedly in broad strokes – the primitive role of thinking in human mental Nature. At the root level thinking is a capability supporting equilibration in response to disturbances. It has a direct effect on human emotivity and without it human behavior would be merely an automaton's response to stimulations by the environment (such as that exhibited by an amoeba). Thinking is intimately tied to somatic actions and for this reason our understanding of the meanings of even complex ideas is tied *at the root* to action expression. This is why the Critical theory finds that *all* real meanings are at root *practical* even for the most abstract human ideas.

Ptolemy wrote in the second century AD⁷⁹,

For even if it happens the practical turns out to be theoretical prior to its being practical, nevertheless a great difference would be found in them . . . because in practical matters the greatest advantage is to be had from a continued and repeated operation upon the things themselves, while in theoretical knowledge it is to be had by a progress onward.

Much of science and philosophy from their ancient beginnings to the present day have operated on a more or less tacit presupposition that "the theoretical" has a sort of primacy of place over "the practical." Only engineering and the skilled crafts have been regarded as primarily practical and secondarily theoretical, and in engineering there has been a shifting of this viewpoint from the latter half of the 20th century until today. But the Critical theory of the phenomenon of mind teaches that "the theoretical turns out to be practical prior to its being theoretical." People think because thinking serves the most fundamental and vital of all practical purposes – the primitive survival requirement of equilibration.

⁷⁹ Claudius Ptolemy (2nd century A.D.), *The Almagest*, Book 1.