

Chapter 10 Human Factors of Behavior

§ 1. Basic Processes in the Synthesis of Behavior

The behavioral dynamics that play out within any mini-Society are expressions of what can be called the "social chemistry" at work among its "social atoms" (including field effects members bring into an association from what transpires elsewhere in their personal societies). All gross expressions of group behaviors are consequences of this social chemistry regardless of whether those behaviors pertain to social, occupational, economic, leadership, or political dynamics. There is an old saying among politicians: "All politics is local." The same can be said of economics, sociology, leadership, and every other behavioral circumstance involving multiple people. All group behaviors begin with individual human beings expressing their self-determined actions. These actions spread into co-determined actions of ever-widening groups of people through direct person-to-person interactions modulated by field effect dynamics (the indirect effects of personal behaviors and direct interactions). At the core of all this are individual human beings – the social atoms of all mini-Societies and their associational conglomerations.

This has always been the core complexity issue facing every social science and it is what makes every social science a more difficult undertaking than the relatively simple science of physics. Physics is the most mathematically advanced natural science *only* because its topic is the most simple to treat. Mathematics is a *language* for making very precise statements from which consequences can be deduced. The more complicated a phenomenon is, the more difficult it is to make *precise* statements about it. Physics is expressed in the most highly developed mathematical terms of any natural science because its *topics* are, relative to other topical phenomena, the least complicated. The practice of the science of chemistry is more difficult than physics, and less well mathematically developed, because phenomena of interest to chemists are more complicated than the phenomena of interest to physicists¹. The practice of the science of biology is more difficult than the practice of chemistry, and less well mathematically developed than chemistry, because *its* topical phenomena are more complicated than those of interest to chemists. And the behavioral phenomena at work between a mother and her three-year-old during such a mundane circumstance as going to a grocery store are more complicated than any of these. Phenomena of interest to social-natural science are largely undeveloped mathematically today.

If pressed, I suspect some social scientists might admit to knowing that they must take on the task of figuring out how to *base* their theories on the social atoms in order to get at root causative explanations and be able to make accurate predictions. Prior to the discovery of the science of the phenomenon of mind (mental physics), the task was more than just daunting; it was impossible. Psychology, for example, is presently a confederation of empirical social-natural mini-theories, some reasonably well developed and others less so [Hunt (1993), pp. 640-645]. It is not a fault imputable to social scientists that in the not-quite-two centuries most social sciences have existed, social scientists have stopped short of trying to take on the problems encountered in studying the phenomenon of mind. Their present stage of development is much closer to Aristotelian physics than it is to modern biology. It is a situation that prompted Bloom to write,

¹ The physicist community has a habit of calling physics "the queen of the sciences" and claiming that "in principle" physics contains the explanations of all natural phenomena. If that were true, then physics would be the most difficult, and least successful, of all natural sciences. In point of fact, this is childish boasting. Physicist and Nobel Laureate Richard Feynman said, "Physicists always have a habit of taking the simplest example of any phenomenon and calling it 'physics,' leaving the more complicated examples to become the concern of other fields" [Feynman *et al.* (1964), vol. II, chap. 31, pg. 1]. Physics is the most successful science to date because it is the most discerning about what is and is not a "topic of physics." It is not, never has been, and never will be "the queen of the sciences."

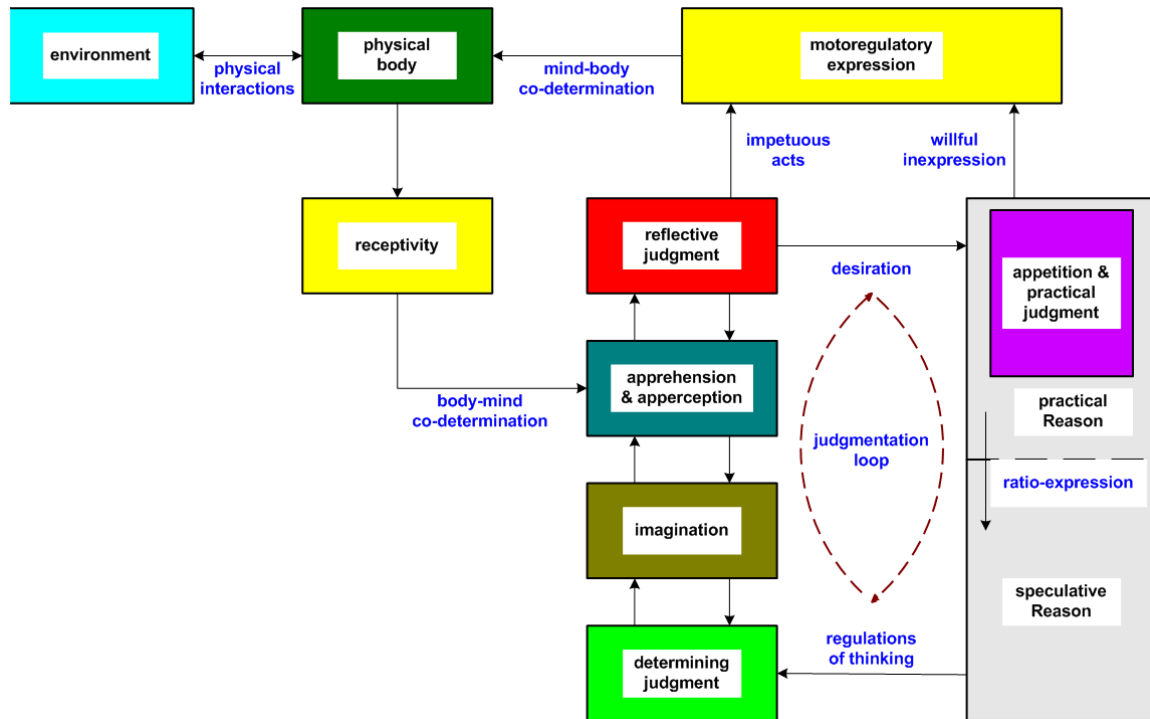


Figure 1: Mathematical structure of a human being as an organized being and depicting the mathematical organization of the phenomenon of mind in terms of processes of representation. [Wells (2009), chap. 1]

But where [physical-natural] science ends, trouble begins. It ends at man, the one being outside of its purview, or to be exact, it ends at that part or aspect of man that is not body, whatever that may be. . . . It is certainly a problem for us that we do not know what this thing is, that we cannot even agree on a name for this irreducible bit of man that is not body. Somehow this fugitive thing or aspect is the cause of science and society and culture and politics and economics and poetry and music. We know what these latter are. But can we really, if we do not know their cause, know what its status is, whether it even exists? [Bloom (1987), pp. 356-357]

Bloom's "fugitive thing or aspect" is the phenomenon of mind. Figure 1 lays out the structure of the phenomenon of mind deduced from Kant's theory [Kant (1781; 1787; 1788; 1790; 1798; 1800)] and given mathematical form [Wells (2006; 2009)]. The divisions into the processes depicted in figure 1 are to be understood as merely logical (i.e., mathematical) divisions, not as real (ontological) divisions. Everything depicted in figure 1 has objectively valid *epistemological* significance, and nothing in the figure has objectively valid *ontological* significance except those sensible aspects of physical-natural phenomena of body that are studied by physics, chemistry, and biology and, of course, physical-natural aspects of the natural environment.

This is the basic model from which specific aspects are presented in derivative models I use below to discuss more specific things with more specific foci. The primary purpose of this chapter is to provide explanations of some key behavioral factors, at fecund levels of specificity, that affect institutions of commercial Enterprise. At the level of the social atoms, these factors pertain to such things as meanings, appetite, motivation, and how human beings come to reach their objective understandings of phenomena of social-nature.

The capacity to make and perceive representations and to act on the basis of them are the most primitive features of the phenomenon of mind. The processes depicted by the blocks in the two columns in the lower right of figure 1 synthesize and process mental representations. Kant wrote,

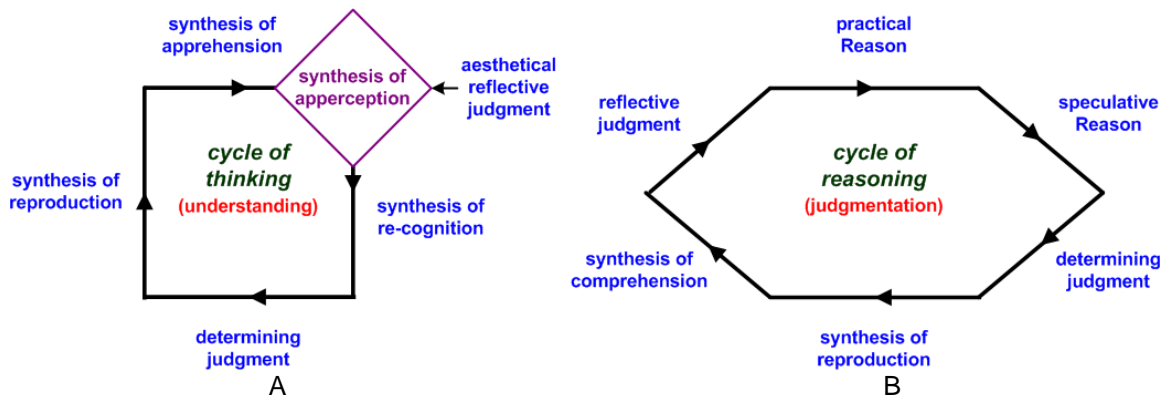


Figure 2: Two important processing cycles in the phenomenon of mind. A: the cycle of thinking, which pertains to human understanding. B: the cycle of reasoning, which is the processing cycle of judgmentation.

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

The blocks depict processes for the synthesis of representations; the arrows interconnecting the blocks depict process interactions whereby syntheses of representations of different kinds are made to be mutually co-determining. More detailed descriptions of these blocks are provided in Wells (2009), chapter 1. More technical detail on representation in general and the representing syntheses enacted by the judgment blocks in figure 1 is provided in chapter 2 of Wells (2009).

The co-determining nature of mental representations is key to how human beings understand things, synthesize their experiences, and determine themselves to express actions. Contrary to what Aristotle and Locke speculated, "mind" is not a "blank tablet" upon which experience is stamped as an "impression" [Aristotle (c. 335-332 BC); Locke (1690)]. Neither does it contain innate latent concepts of objects, as Plato and Leibniz speculated [Plato (c. 387 BC); Leibniz (1704)]. Both modern neuroscience and Piaget's developmental psychology research refute these early theories of mind quite conclusively. All expressed human behaviors and all human objective knowledge, beliefs, and opinions are products of these co-determining processes of synthesis. So too are all expressions of human affectivity (popularly called 'emotions', 'moods', and 'attitudes').

One of the most pronounced characteristics of the nature of human behavior is its appearances of cyclic behaviors. This character of human behavior and learning is easily observable in very young children from birth to the age of two years [Piaget (1952; 1954)]. Underlying this are two basic cyclic interactions in figure 1 and depicted more explicitly in figure 2: the cycle of thinking and the cycle of reasoning. The former pertains immediately to human understanding, the latter to overall human judgmentation. Although it is inappropriate for purposes of this treatise to delve into the deeper details of these processes (a treatment more appropriate to psychology), a higher level descriptive treatment of these cycles is important for one who designs the institution of, or is a manager within, an Enterprise. In making my decision to treat the topic in this manner I am merely following Aristotle's time-tested pedagogical dictum that it is better to begin with more gross behaviors and appearances and proceed from there to understanding more basic but harder to discern causative mechanisms underlying these grosser behaviors and appearances.

I begin with the cycle of thinking (figure 2A). This cycle is centered upon the synthesis of apprehension and apperception (figure 1) and involves two interaction loops. The first loop is the loop from apprehension-apperception through determining judgment and back via the synthesis of imagination. The second is the loop between apprehension-apperception and reflective judgment. (Figure 2A omits this second loop but it is shown in figure 1). Judgment is the act of subsuming particular representations under general ones [Kant (1790) 5: 179]. If the particulars to

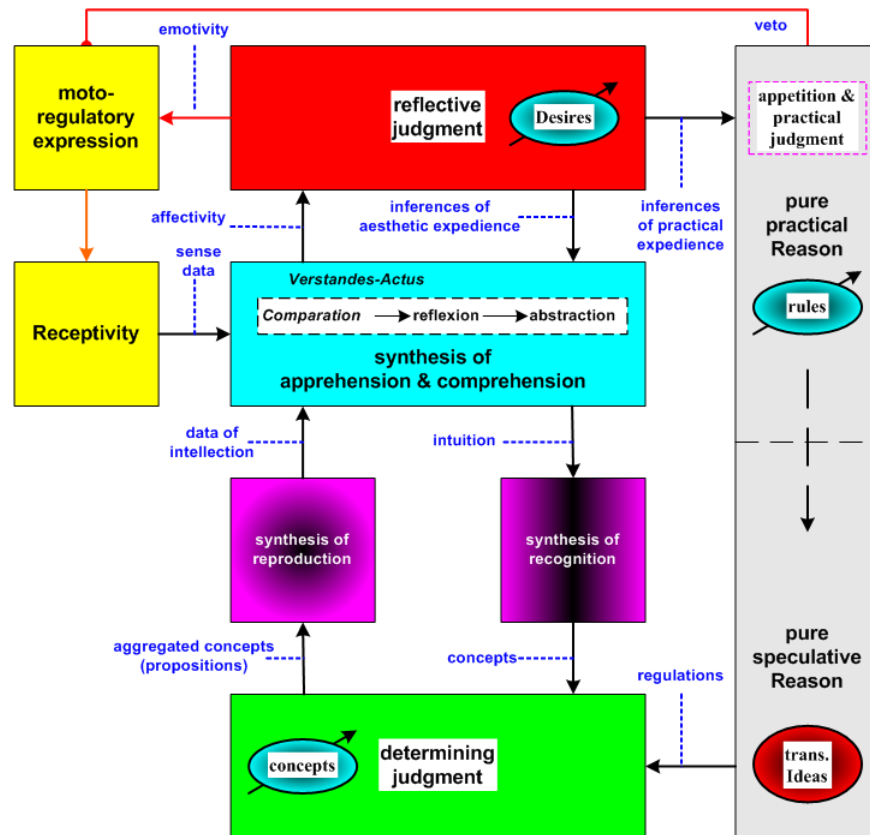


Figure 3: Processes involved in the motivational dynamic.

be subsumed are already represented as concepts and a general representation is to be found for them, it is an act of reflective judgment; if the general concept is already made and particular concepts to be placed under it are to be determined, it is an act of determining judgment. Figure 3, a modified depiction of figure 1, depicts in slightly more detail how the interactions of reflective judgment + apprehension and those of determining judgment + apprehension combine in apprehension to produce both cognitions (objective perceptions) and affective perceptions. The latter loop (determining judgment + apprehension) is what figure 2A depicts as a cycle.

The process of reflective judgment makes only *subjective* judgments and operates *only* upon affective representations. Indeed, these representations *cannot be made part of the representation of an object*. This is profoundly important because *all general concepts are made concepts by the acts of reflective judgment acting upon the synthesis of apperception*. Knowledge of objects is not the result of an object somehow "impressing itself" on human understanding. Everything anyone understands objectively is *made an object of understanding* by the *subjective* process of reflective judgment. Acts of reflective judgment do not immediately serve understanding; rather, they immediately serve the process of pure practical Reason by making representations that are aesthetically and formally expedient for the most fundamental law of human spontaneity, namely the categorical imperative of pure practical Reason. This is an acroam of Critical metaphysics, namely, the **Principle of Formal Expedience**: *All acts of reflective judgment legislate for formal unity in Nature according to the expedience of representations for the categorical imperative of pure practical Reason*. Objectivity is a *byproduct* of the acts of reflective judgment.

Many people are uncomfortable about this basic principle. Not unreasonably, they ask, "If this is true, then how is it that human beings come to agree with each other in their understanding of objects? How can cognition be driven by affectivity and still produce knowledge about the world

on which we all agree?" The answer to this question involves a couple of key points. First, the law of reflective judgment is the principle of formal expedience and *any experience that gainsays cognitive anticipations is not expedient for the categorical imperative*. The occurrence of any such disagreement between one's perception of actual Nature and one's understanding of Nature constitutes a disturbance to equilibrium and provokes initiation of the second cycle in figure 2, the cycle of reasoning. This can be called a "negative principle" of human understanding because it is through disturbances to equilibrium (violations of the condition required by the categorical imperative) that a human being is provoked into acts of thinking and reasoning that lead to the *construction* of object concepts [Wells (2016)].

In point of fact, people do *not* all understand objects in the same way *in all particulars*. But, through actual experiences, they *do* come to agreement with each other on many similar concepts of the objects – enough commonality of understanding, in fact, for adults to *think* we all understand the same things in the same ways. Piaget called this presumption that we all understand the same thing in the same way the phenomenon of "egocentrism."

Egocentrism is much more readily observable in young children than in adults. Adults are older and have accumulated more experience than children have. Yet adult egocentrism persists to some degree throughout a person's life. This is a fact well known to psychologists who study personality and have found that what one person self-reports about his own personality is often very different from what others who interact with him frequently think it is. Egocentrism lies at the root of many disagreements and conflicts among people – not because people have too inflated an opinion of their own importance and wisdom but because people presume other people understand objects and events in the same way they do. Egocentrism is the engine of stereotyping because when a person models *another* person in his understanding, he uses *himself* to fill in what he does not know about the other person. He might think the other person "is just like me" or he might think the other person "is completely opposite to me," but in any case he uses himself as a reference model, and this *is* the phenomenon of egocentrism.

Second, human beings are born *with no knowledge of objects whatsoever*. It takes months for a baby to make that all-important conceptual division between 'me' and 'not-me'. Prior to this step it is not so much that a baby "thinks he is king of the universe" as it is that he presumes he *is* the universe in the first days and weeks after his birth. But if human beings are born not knowing any objects and objects do not "impress themselves" on us, how do we come to know objects in the first instance? To "know an object" *fundamentally* means assigning meanings to perceptions and *all objective meanings are at root practical meanings* [Piaget (1974); Piaget & García (1987)]. The representations of reflective judgment do not pertain to objects at all *but they do pertain to practical action expressions* (via inferences of practical expedience in figure 3) by which a person comes to *construct* the practical meanings that determining judgment coalesces into cognitions of objects. This can be called a "positive principle" of human understanding. The interplay and co-determinations of the cycle of thinking and the cycle of reasoning can be called a "construction principle" of human knowledge.

One can correctly call the cycle of thinking a "localized" and non-systematic process because its acts are focused on particular objects but not on making Nature systematic. In contrast, the cycle of reasoning (judgmentation) leads to the construction of a person's objective 'world model' into which every particular thing he knows is fitted into unifying contexts of reality and in which he regards himself as an object-among-objects in a rational universe. While the cycle of thinking is confined to perceptions, the cycle of reasoning subsumes perceptions into behaviors and rules of practical actions. It controls the motivational dynamic by which motives are made and actions are determined. Constructions of cognitions, affectivity, and practical action are fused into an overall unity of representation by the cycle of reasoning. What this means to a person designing a commercial Institute or managing one is: *everything depends on understanding the social atoms*.

§ 2. Appetition

The root of natural human freedom is the capacity for appetition in practical Reason (figure 3). It is this process which is mathematically responsible for the human capacity to make rational choices and for human beings to exhibit what Kant called the capacity for *arbitrium liberum* (literally, "free choice"). Kant did not achieve a theory capable of explaining how "free choice" is epistemologically possible but this was due primarily to what Palmquist has correctly called "Kant's theocentric orientation" in philosophy [Palmquist (2000), pp. 7-13]. This was a mis-orientation fatal to Kant's ability to develop an objectively valid theory of deontological morals. The shortcomings in Kant's moral theory and idea of free choice were resolved in Wells (2006).

To understand the nature of human appetition one must correctly understand the different roles played in it by the process of reflective judgment and the process of practical Reason. A subtle error, also due to Kant's theocentric orientation, must likewise be corrected. I attend to this first.

Expressions of the process of reflective judgment (emotivity) set the particular ways in which human beings express motor actions. These acts of reflective judgment are impetuous and sensuously determined. Kant speculated about something he called the capacity of human beings for acting according to *arbitrium brutum* (literally, "brutish choice"), and by this he meant the expression of actions *grounded* in sensuous representations. Superficially *some* human actions seem to be of this sort. Empirically it is obvious that you might choose to eat an ice cream cone *because* you like the taste of ice cream. William James remarked,

Why do men always lie down, when they can, on soft beds rather than on hard floors? . . . Why do they prefer saddle of mutton and champagne to hard-tack and ditch water? Why does the maiden interest the youth so that everything about her seems more important and significant than anything else in the world? Nothing more can be said than that these are human ways, and that every creature *likes* its own ways, and takes to following them as a matter of course. . . . Not one man in a billion, when taking his dinner, ever thinks of utility. He eats because the food tastes good and makes him want more. If you ask him *why* he should want to eat more of what tastes like that, instead of revering you for a philosopher he will probably laugh at you for a fool. [James (1890), vol. II, pg. 386]

There is an important distinction between an action *grounded* in sensuous affectivity and one merely affected by and partially determined from sensuous affectivity. The former, if a choice could be said to be involved at all, would be *arbitrium brutum*, a choice made necessary (necessitated) by sensibility. The latter would be what Kant called *arbitrium sensitivum*, which means choice according to an adaptation by which an equilibrium is established in which the determination of the action is affected by but *not necessitated by* sensibility.

The innate reflex actions exhibited by an infant (*e.g.*, the sucking reflex, the looking reflex, *etc.*) are actions expressed out of the emotivity of reflective judgment. But actions like these are not indicative of making a *choice*. **Choice** is the practical capacity to make a representation the object of one's appetite. An **appetite** is a representation of a practical purpose and is regarded: (1) from the practical Standpoint as the self-determination of the power of an agent to take action through the representation of something in the future as an effect of this self-determination; (2) from the judicial Standpoint as a practical depiction having Desire for its matter and a structure within the manifold of rules as its form; (3) from the theoretical Standpoint as an assimilation of perceptions. Appetition therefore requires a human being to acquire certain abilities. An hours-old infant has had time to develop *none* of these abilities (although he does *begin* to develop them in the first few days of life) and so cannot be said to make a 'choice' at all. A baby doesn't *choose* to suckle, to dirty his diapers, to turn his head toward a sound, or to cry. His innate reflex actions are those of a sort of biological automaton and cannot even be properly called *arbitrium brutum*.

As he develops *habits* and forms his earliest rude concepts in the first days and weeks of life, a capacity for *arbitrium sensitivum* can be observed to emerge in his behaviors. This is because he has made the early beginnings of constructing a manifold of rules in practical Reason and a manifold of concepts in determining judgment. But it will be about a year before either of these is developed to the extent that he begins to recognizably exhibit *intentions* [Piaget (1952), pp. 147-152]. It is only at this point that a capacity for *arbitrium liberum* can validly be said to be exhibited in his behaviors. As he ages and continues to develop experience, his behaviors become more expressed in the character of *arbitrium liberum* and the *arbitrium sensitivum* character of his actions can be observed to play a decreasing role. He never completely abandons *arbitrium sensitivum* choices, but intellection clearly takes on a more dominating role. One sees this, for example, in the choices of a dieter, in a person who holds his temper in check during arguments, and a person who skips lunch in order to meet a work deadline.

Acts of reflective judgment are formally *expedient* for the *pure* purpose of practical Reason (the dictate of the categorical imperative) but they do *not* represent purposes and can be said to be 'purposive' only in the context that formal affective representations of Desires in the manifold of Desires are *aliments* for the construction of the manifold of rules, as I explain below. In a number of ways, the process of reflective judgment and Freud's idea of the id share similar characterizations, although Freud's id is not at all the same thing as reflective judgment. Reflective judgment is non-objective but its role is vital for objectivity; it is irrational but its role is essential to reasoning; its acts are impetuous but their expressions are regulated by practical Reason; and its acts are modified by reintroduction of concepts into the synthesis of apprehension (figure 3).

What, then, of appetites and appetition (the act of representing an appetite by the process of human appetitive power)? Human beings are not automatons, and once an infant begins to exhibit accommodations of habits (which occurs during the first few days of life) his actions can no longer be said to be *grounded* in sensuous representation. At first his actions only exhibit *arbitrium sensitivum*, but his ability to exhibit *arbitrium liberum* follows soon enough afterwards. Critically, 'free choice' implies nothing except freedom from actions *necessarily* being sensuously determined. The human ability to self-determine actions through intellection and to not be bound to sensuous necessitation is often called a capacity for "free will," although this term is not quite correct. It is more accurate and correct to call it "free won't," as I will now explain².

Figure 4 illustrates the interaction relationships between the synthesis of appetition, reflective judgment, motoregulatory expression, speculative Reason, practical judgment and the manifold of rules in the making of practical determinations of purposes. The process of practical Reason is the master regulator of all non-autonomic human actions. ***The categorical imperative*** is its first law: *All human actions unconditionally act to achieve and maintain a state of equilibrium in his overall Existenz*. Pure Reason knows no objects and feels no feelings. It can be described as an objectively dark and affectively cold process. As such, it has a number of characteristics not unlike Freud's idea of the superego, although Freud's idea is not the same as practical Reason.

So long as a human being is in a state of equilibrium – a condition marked by total negation of feelings of *Lust* or *Unlust* judged by aesthetical reflective judgment – the process of practical Reason undertakes no acts and allows the impetuous expressions of reflective judgment to be physically expressed through motoregulatory expression (figure 4). If, however, those actions lead to a disturbance to equilibrium (which is signified by feelings of *Lust* or *Unlust*) or fail to negate a disturbance, then regulation by practical Reason is effected. There are two means of this.

² In an interesting coincidence, in 2004 as I was writing the corresponding chapter of Wells (2006), Obhi and Haggard published an article in *American Scientist* that provided empirical evidence of the theory you are about to read [Obhi & Haggard (2004)]. It was probably the most thrilling moment I've ever had while reading *American Scientist*.

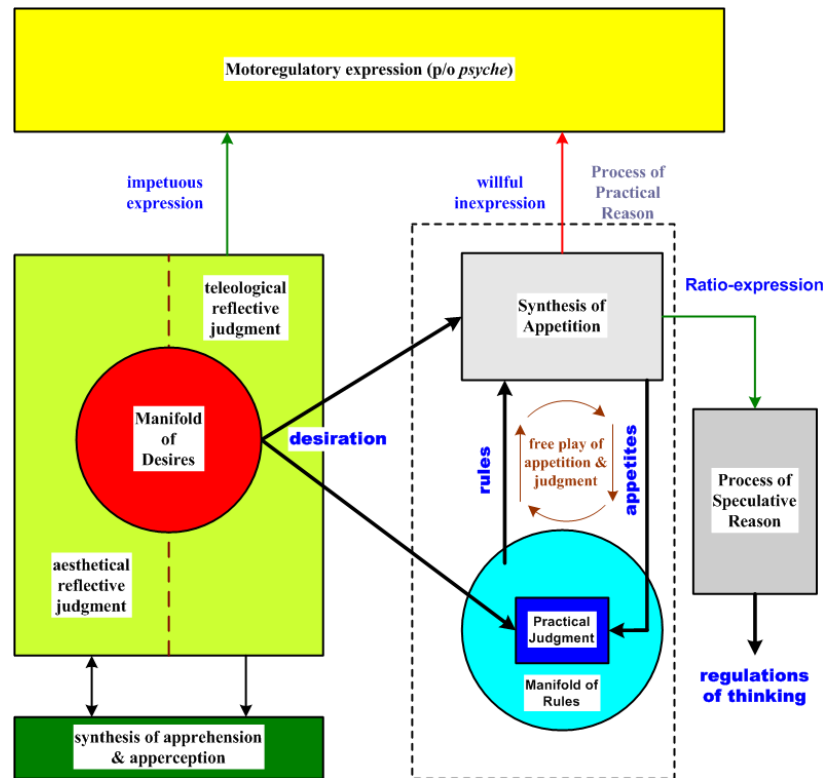


Figure 4: Interaction relationships in the making of practical determinations of purposes.

The first is through *veto* of some or all of the impetuous expressions of reflective judgment. The synthesis of appetite rejects (disallows) repetitions of motoregulatory expression of any motor expression that was previously followed by any disturbance to equilibrium or increased the intensive magnitude of this disturbance (as measured by feelings of *Lust* or *Unlust* judged in reflective judgment). This is an essentially negative act of practical Reason and gives it the character I described above as "free won't." Figuratively speaking, practical Reason does not know what to do; it knows what *not* to do, which is learned from practical experience.

The representations of reflective judgment comprise what is called a manifold of Desires. A Desire is a representation containing for its matter a desire (*Begehren*) and for its form a desiration (*Begehrung*). A desire is a combination of affective perceptions associated with each other by aesthetical reflective judgment. The matter of a desire is called a feeling of *Lust*³ or *Unlust*; the form of a desire is called a value. A desiration is a representation of a possible appetite as a rule judged, by an act of reflective judgment, to be satisfactory for formal expedience. Unlike the manifold of concepts and the manifold of rules, the manifold of Desires is not a structure, *i.e.*, it is not conserved. Desires are not 'remembered'; they are *regenerated* in reflective judgment each time they reoccur. Therefore, in order to learn practical actions it is necessary for expressions that previously produced unsatisfactory outcomes to be retained in some other constructed structure of practical rules, and this is what is done by construction of the manifold of rules via the process of practical judgment. However, these rules have the peculiarity that they are only *formal* rules, *i.e.*, the matter of desire is not retained in the structure and only the form of desiration is made a practical rule (practical Reason "feels no feelings"; its only pure purpose is achievement and maintenance of a state of equilibrium).

³ *Lust* (pronounced "loost") is a German word with no English equivalent. It does not mean the same thing as the English word "lust." See the glossary for more details. *Unlust* is the opposite of *Lust*.

William James came tantalizingly close to but fell short of correctly understanding this aspect of human behavior in his speculations about impulses and instincts:

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 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. [James (1890), vol. II, pg. 390]

James went astray with his speculations about "impulses" and "instincts" because his "way of looking at the world" (his metaphysic) was ontology-centered and he did not correctly understand Kant's Critical metaphysics and its implications. In fairness to James, we should remember that his work preceded Freud's important contribution that "the unconscious" (*i.e.*, the non-cognitive) had a legitimate place and role in psychology. Hence James was more or less bound to speculations in terms of objective cognizance, which, as I have just explained, is not at all the correct "place" within the phenomenon of mind for the learning of actions.

Still, what James meant by "impulses" was not too far off in character from impetuous acts of teleological reflective judgment (figure 4), and what he meant by "foresight of its ends" is consistent with "remembering" a state of dissatisfaction with an action outcome by means of rule constructs in the manifold of rules. Practical judgment compares these rules with desirability in order to validate or invalidate a repetition of an expression of reflective judgment. This latter (Critical) understanding is consistent with experimental results obtained by Piaget's study of the nature of human cognizance [Piaget (1974)]. So, while James' theory was flawed, his reasoning quoted above was not too terribly far off.

The negative character of practical Reason's vetoing of specific impetuous 'impulses' of acts of reflective judgment (its "free won't" character) helps one to a certain degree better appreciate a characteristic of "morals" that has long been noted. Santayana described this characteristic in the following words:

The relation between aesthetic and moral judgments, between the spheres of the beautiful and the good, 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. Another factor of that distinction is that whereas, in the perception of beauty, our judgment is necessarily intrinsic and based on the character of the immediate experience, and never consciously on the idea of an eventual utility in the object, judgments about moral worth, on the contrary, are always based, when they are positive, upon the consciousness of benefits probably involved. . . . 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 – death, hunger, disease, weariness, isolation, and contempt. By the awful authority of these things, which stand like specters behind every moral injunction, conscience in reality speaks [Santayana (1896), pp. 16-17].

Within the broad context that moral judgments are judgments about "right vs. wrong" and "good vs. bad," the "free won't" character of practical Reason has the following significance. In the practical manifold of rules, there are always some rules that presently are standing under no higher rules and are said to be "practically unconditioned" rules. Expressions of actions falling

under such rules are said to be "theoretically categorical." Consider, for example, the rules known as the Ten Commandments in Judaism and Christianity: you shall not kill; you shall not steal; you shall not bear false witness; *etc.* These rules are categorical and admit no "ifs ands or buts." They are not, of course, rules constructed in the manifold of rules (because they contain objects of cognition and, therefore, are ideas of moral Duty constructed in the manifold of concepts). But the possibility of cognizing rules like these necessarily requires non-cognitive practical structures within a person's manifold of rules. Actions you find so personally abhorrent that you would never intentionally commit them *are* abhorrent, to you, because commission of them requires expressing rules you represent in your manifold of rules as unconditionally *vetoed* actions.

It is in this context that some structures within the manifold of rules constitute on a practical level what can be correctly called a *personal moral code*. Every person constructs one, and no two people construct exactly the same one because the constructions are outcomes of experience and no two people ever have exactly the same experience. Every culture and every Society tries to normalize its peoples' moral codes to some degree. It is what is meant by phrases like "a moral upbringing" and "socializing the young." Every Society that achieves a significant degree of longevity succeeds in normalizing its social mores to a degree that is quite remarkable. The private moral codes of individuals are powerful forces to be reckoned with in a human Institute. If you are a manager and you attempt to persuade or coerce an employee to do anything that contradicts his private moral code, you can not only expect your leader's action to fail; you run the risk of provoking a reaction, possibly violent, that to you might very likely seem out of all proportion to the situation. A phrase sometimes heard used in the business world is, "He just went nonlinear about it." When someone "goes nonlinear," it means something has provoked a maxim in that person's private moral code. Furthermore, all the constructs in the manifold of rules are non-cognitive constructs; a person is not going to be able to verbalize them; at best he might be able to vaguely describe them metaphorically or by simile through action examples.

Yet all of this is only part of the story. In addition to learned behaviors of omission ("I won't"), people also learn accommodations of rules, i.e., they learn to make exceptions to rules they once held to be categorical. Piaget's research documents how radical such modifications of moral judgment can be [Piaget (1932)]. They also learn and construct positive rules of commission, e.g., "I must put my socks on before I put my shoes on." How does this kind of practical learning happen? To understand this, we turn to ratio-expression (figure 4) and the motivational dynamic.

§ 3. Appetition, Ratio-expression, and the Motivational Dynamic

The manifold of rules can be regarded as a manifold of learned appetites, and because appetite is the representation of an empirical purpose, the manifold of rules can likewise be regarded as a manifold of purposes. These purposes are not *a priori* nor are they innate. A baby is not born with an instinct to suck its thumb nor is thumb sucking an innate purpose. It is a *learned habit* [Piaget (1952)]. A manifold of rules constructed entirely of forbidden acts can not explain acquired habits because these require it to contain *allowed* acts. Because learned habits cannot be constructed by the veto power of practical Reason alone, Reason must therefore also have a *legislative* capacity. *Learning* begins with this capacity prior to *cognizance* of what is learned [Piaget (1974)].

When an impetuous expression of reflective judgment produces an unsatisfactory outcome, a rule for its non-commission is constructed in the manifold of rules. A re-presentation of this desiration thereafter is vetoed and provokes interaction between appetite and the process of practical judgment called the *free play of appetite and judgment* (figure 4). Part of this interaction loop between the process of appetite, practical judgment, and the manifold of rules is what results in veto of some or all of the impetuous desiration. If merely suppressing a part of this expression "works" (prevents the production of a disturbance following action expression) no

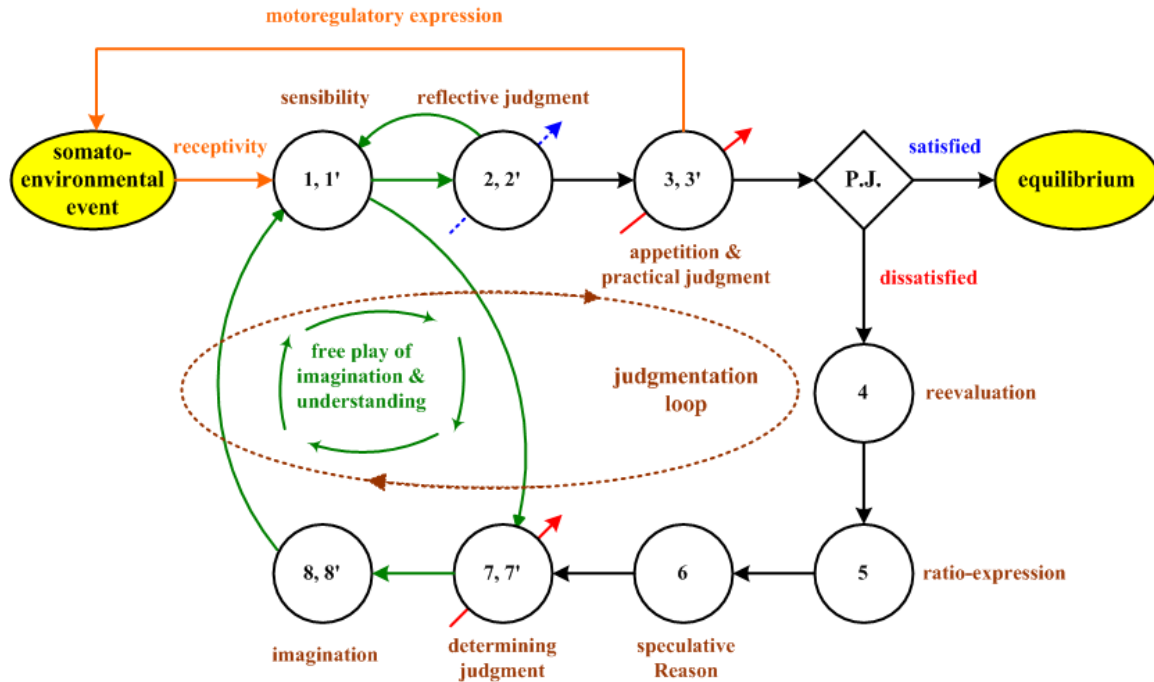


Figure 5: Schema of information flow and interactions in the synthesis of the motivational dynamic. P.J. denotes the outcome of a practical judgment. The three manifolds of representations (concepts, Desires, and practical rules) are implicit within the processes of determining, reflective, and practical judgment, respectively. Reevaluation denotes an act of appetite by which ratio-expression is evoked.

additional act of practical Reason is necessary for compliance with the dictate of the categorical imperative; practical Reason is said to have enacted regulation of expression by an act of *ignorance* (the act of deliberately ignoring something). Piaget used the term 'type- α compensation behavior' to describe exhibition of acts of ignorance [Piaget (1975), pp. 55-56].

However, if practical veto is insufficient for preventing or removing equilibrium disturbance then something in the represented desiration must be altered. Now, desirations are represented on the basis of representations of sensibility in the synthesis of apprehension (figures 3, 4). Further, the manifold of Desires is not conserved (it is not a structure) and, therefore, changes made to these representations in sensibility also indirectly effect changes in representations of desiration. The process of practical Reason can regulate non-autonomic human behavior only if there is a means by which appetite in practical Reason can cause such changes to occur in sensibility.

This is what ratio-expression does (figures 3, 4). Ratio-expression calls into play the process of speculative Reason and its capacity to regulate and orient thinking via regulation of the process of determining judgment. Determining judgment is the process that structures the manifold of concepts and produces objective human understanding and experience. Determining judgment cannot determine its own employment. It answers to speculative Reason for orientation of its acts, and one of these is the reintroduction (by the synthesis of reproductive imagination) of concepts back into the synthesis of apprehension (figure 5). A concept is a rule for the reproduction of an intuition in sensibility. However, part of this re-presentation in intuition involves connection to specific motoregulatory expressions, i.e., concepts are *made meaningful* (at the time they are created) by being given what is called a *meaning implication* that signifies *association* of an intuition with a motor action. The construction and connection of concepts in the manifold of concepts is carried out under primitive *a priori* rules of determinant judgments known as *the categories of understanding*. Meaning implications are structured by connections of Modality in

determinant judgments [Wells (2009), chap. 5; Wells (2006), chap. 8, §6.5, pp. 736-743]. *All meanings are, at root, practical*, i.e., correspond to specific possible action expressions. This principle is necessitated by the utter absence of *a priori* concepts of objects in newborn infants. To a baby, a rattle is something to shake, something to suck on, something to throw, etc. Knowledge of what he can *do* with it precedes any understanding of it in terms of objective properties of the rattle as an object distinct from himself.

A large body of experimental evidence supports this theorem [Piaget (1974); Piaget & Garcia (1987)]. Through a long tradition of intellectual habits dating back to the ancient Greeks, we have become accustomed to thinking about understanding and judgment in terms of knowledge of objects-as-ontological-things. But the Critical theory of the phenomenon of mind tells us this knowledge is the *byproduct* of a less grandiose use humans have for the power of judgment, namely, *the use of concepts to alter perception expediently for determination of physical actions*. ***Human beings are essentially doers***; our capacity to think extends and enriches our power as doers – so much so that the human capacity to do things far exceeds that of any animal.

In Critical terminology, the accommodation of perception is called ***motivation***. The process of making these accommodations is called ***the motivational dynamic***. Figure 5 illustrates the logical schema of the motivational dynamic in terms of the mathematical functions of figures 1 and 3 and the representations effected by these processes. Note the presence of what engineers call *feedback loops* within the major judgmentation loop. There is a loop between sensibility and reflective judgment and another between sensibility, determining judgment, and imagination ("the free play of imagination and understanding" loop). There is, furthermore, a loopback from appetition and motoregulatory expression to physical somato-environmental events. Nodes labeled with double numbers (*n* and *n'*) designate processes involved in these feedback loops.

The schema depicts flows of information within the system and co-determining transformative processing of these flows by the functions of the system. The logical schema is a dynamical system (capable of being represented using differential equations) that remains active from the first initiation of reevaluation until a condition of equilibrium is reached. Mathematically, this condition corresponds to the establishment of what is called a steady-state response in each of the different feedback loops⁴. Kant called this condition 'harmonization' (*Zusammenstimmung*). You can think of this as denoting that "all parts of the system are playing in harmony with each other."

Part of this overall general process includes possible accommodations to the manifold of concepts and/or the manifold of rules. This makes the schema of figure 5 what system theorists call a "nonlinear and time-varying system" and what neural network theorists call an "adaptive system." You probably won't be surprised to hear me say that systems of this class are the theoretically-most-formidable of all the divers types of systems that system theorists study and work with. Some would argue that people are the most theoretically formidable systems within this class of most-formidable systems. When you consider that we have been trying to "figure each other out" for thousands of years and haven't fully accomplished it yet, it seems hard to argue against that particular proposition.

Figure 5 depicts the information and processing flows within the motivational dynamic, but to grasp what this processing is about one must inspect the functions of the motivational dynamic briefly touched upon in chapter 3. Figure 6 repeats the motivational dynamic 2LAR presented earlier. The motivational dynamic performs a synthesis of interests and Desires to produce those changes in perception needed to bring the motivated person back to his equilibrium condition.

⁴ The term 'steady state response' is borrowed from the terminology of applied differential equations and is commonly used in, e.g., damped forced vibration problems [Boyce & DiPrima (1965), pg. 137]. It means that if no new factors of change are introduced, no qualitative or quantitative change in the behavior of the system occurs after the system "reaches steady-state." A persistent oscillation is a steady-state behavior.

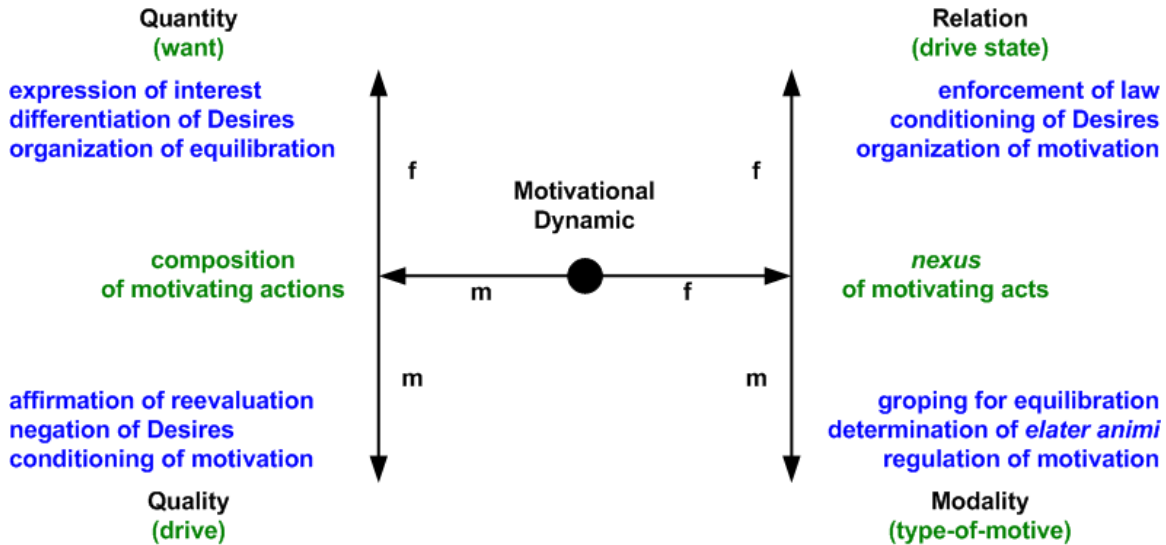


Figure 6: 2LAR structure of the motivational dynamic and its functions. Each act carried out in the overall motivational dynamic is a synthesis involving synthetic combination of one functional *momentum* from each of the four headings {want, drive, drive state, type-of-motive} [Wells (2009), chap. 10]. There are 81 such combinations possible, i.e., 81 basic acts of synthesis in processing accommodations in perception.

Leaders and managers (and psychologists) have long been accustomed to using vague ideas of "motivation" without knowing what "motivation" is, how to produce it, or how to beneficially guide it in order to achieve some useful purpose. The Critical theory supplies the real-explanation of what motivation is. Producing it could not be simpler: just perturb an individual's equilibrium. He will react and his actions will follow the consequences of the motivational dynamic. The tricky part is learning how to perturb him in such a way that his consequential actions go in a desirable and beneficial direction rather than in the direction of, say, punching you in the mouth.

Leaders' actions are aimed at modifying behaviors, not manifolds. No person can reach inside another person and directly effect any changes to any of the manifolds. All a leader can try to do is set up conditions where a follower's self-effected changes to these bring about behaviors that are congruent with the leader's intent in provoking him to do so. With adults accommodation of the manifold of concepts is easier to produce (and more likely to be produced) than is the case for the manifold of rules. A person spends his lifetime constructing a manifold of rules congruent with the dictates of the categorical imperative so far as he has learned from experience with the contingencies of nature. It's not a trivial thing to do in a way that legislates actions that adhere to the demands of this imperative reliably and consistently. What I am saying here is that an adult is *very* conservative about accommodating his manifold of rules – far more so than he is about accommodating his manifold of concepts. It is why we say of the elderly that they are "set in their ways." Bernard Widrow, one of the pioneers of neural network theory, made this conservatism a design *téchné* he called "the minimum disturbance principle." This characteristic of motivation immediately suggests that *education* is woefully overlooked as a tool for improving leadership in industrial mini-Communities because *instructional education enriches the manifold of concepts*.

Children, whose manifold of rules construction is *much* less far along than adults, are in one way easier to lead than adults. The challenge in leading children primarily is due to their less developed manifolds of concepts, a situation that hinders their abilities to conceive possibilities (anticipation of which enhances motivation) and promotes acting upon what Piaget called pseudo-necessities [Piaget (1983)]. For example, if you want to get a child to ride his tricycle on the sidewalk and stay off the street, it is more effective to tell him, "You may ride on the sidewalk" and *avoid* telling him "Do not ride in the street." With the first, you promote a conceptual pseudo-

necessity ("stay on the sidewalk"); with the second *you* are presenting him with the possibility of riding his tricycle in the street, and cognition of that possibility easily leads to him *acting* on it. Such tiny differences as in this example can and often do make major differences in behavior. You simply cannot effectively instruct or argue with young children as if they were short adults.

The topic of this treatise, civic free enterprise, makes the issues of adult leadership a topic of pertinence. This pertinence leads us on to the subject of interpersonal relationships and what takes place during interpersonal interactions and interpersonal communication transactions.

§ 4. Weaver's Model and Interpersonal Communication Transactions

As noted in the caption for figure 6, there are 81 different basic functions possible in every co-determination of the processes depicted in figure 5. The number of co-determinations required in order to reach harmonization in the motivational dynamic is open-ended since each synthetic act only moves the person *toward* equilibrium. Sometimes re-equilibration is accomplished rapidly, sometimes only gradually, depending on the specific situation and circumstances. This is enough to warn us that we are dealing with a very complicated mental process. In order to be of practical use by leaders in real world circumstances, some higher level of perspective is needed in order for a leader to be able to gauge appearances and actions as these are being expressed during real situations. Such a higher level of perspective might be called a perspective for practicing an industrial-managerial psychology – which is something leaders and managers are called upon to do every working day and which constitutes the core skill required by the expectation of authority that is always an implicit (although not always made an explicit) requirement of their jobs⁵.

It is often said that "motivating people" is what a manager is supposed to do. Technically, this is not correct. The only person who can motivate a person is that person himself. All a manager can do is *provoke* that person's motivational dynamic. A manager is a stimulating agent; he is not a provider of motivation. Stimulation of motivation involves interpersonal communication transactions, which in turn depend on interpersonal relationships. Stimulation of *desirable* motivation crucially depends on how people who are interacting *interpret* each other's *meanings*. *Semantics* is the study of meaning in any and all its manifestations. *Critical semantics* is the transcendental Logic of combining cognitions and affective perceptions with expression to produce real meanings. The latter pertains to how a human being comes to make meaning implications. The former has for its topic of study the art of communicating messages from one person to another while minimizing likelihood that the message will be misinterpreted by the person receiving it.

I think it's safe to say every adult has at least a vague dictionary-definition-level understanding of what a 'message' is. A message is "what is communicated" either to the person who receives it or by the person who expresses ("sends" or "transmits") it. This means a 'message' is an object of some kind. Put in stricter technical terms, its real-explanation is that a message is *the persistent object of a succession of appearances for which the objective nexus depends upon the comprehension of these appearances all in the same intuition*. A successful communication is said to have been transacted when the message received by the person communicated to has a meaning congruent with that of the sender. The problem is that this is not always what happens, *i.e.*, the meaning implications for the sender and the receiver are incongruently not-the-same.

⁵ Most books and college courses in management overemphasize the trivialities of management: planning, organization, staffing, training, finance, budgeting, control, etc. These activities are necessary of course, but they constitute only that tip of the iceberg made up of what a manager can do *by himself*. These are merely *administrative* functions and they are insufficient for success of the Enterprise. In the context that management is the achieving of results *through the efforts of others*, the invisible part of the iceberg subsists in the skillful guidance, promotion, and cooperative coordination of his group's leadership dynamic – in other words, the *psychological* part of the job; every manager is called upon to practice a layman's psychology.

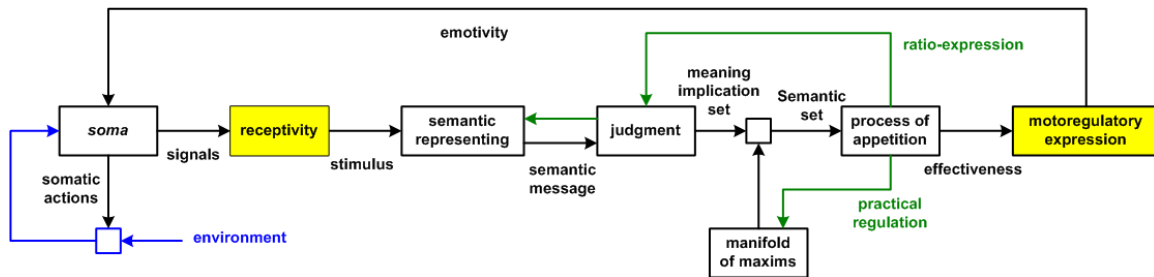


Figure 7: Weaver's model of the processes of Critical semantics in the making of meaning implications.

Indeed, it is almost always the case that a sender's message (the 'evoking message') and a receiver's message (the 'impact message') are *not* the same in all particulars. If a successful communication is to be transacted, what matters is that the evoking message sent and the impact message received are *congruent* with each other⁶ in enough of the particulars that any differences between the evoking and impact messages are inconsequential.

It is not always true that a message sender actually expresses the message he wishes to send. I think it likely we have all had experience with people who "say one thing but mean another." The most extreme case of this is probably that of a liar who intentionally tries to mislead others. Let us set this case aside as not pertinent to the present discussion. Because it is true that "if you never say what you mean then you never mean what you say," let us presume the sender actually transmits the message he intends to transmit and focus for now on the receiver's impact message.

In the early days of the science of information theory, the matter of semantics was recognized to be important in communications but the theory produced by Claude Shannon did not address this matter (because Shannon was addressing his theory to aspects of communication theory that were of interest to engineers working in radio, telegraph, etc.). It was recognized at the time that this was an important omission and there seems to have been good intentions of returning to it at a later time to "fill in the gap." Warren Weaver, one of the early information theorists, wrote that

semantic problems are concerned with the identity, or satisfactorily close approximation, in the interpretation of meaning by the receiver, as compared with the intended meaning of the sender. This is a very deep and involved situation, even when one deals only with the relatively simpler problems of communicating through speech. [Shannon & Weaver (1949), pg. 4]

Weaver outlined some of the aspects of this "very deep and involved situation" in non-technical terms, but the semantics problem lay dormant until it was picked up again in Wells (2011).

Figure 7 depicts a model of Critical semantics in the making of meaning implications. It is named after Weaver to acknowledge his definitional contribution. Figure 7 is a different way of depicting figure 1 by re-grouping the blocks in that figure to more clearly illustrate the aspect of the making of meaning implications. Figure 7 is what a mathematician might call a 'homomorphic image' of figure 1. Less grandiloquently, figure 7 "says the same thing as figure 1 but puts it in different words." The difference is one of context, not substance. The re-depiction is made in order to better draw out the connection between Critical semantics and the motivational dynamic.

The 'judgment' block in figure 7 represents all three fundamental processes of judgment. These are grouped into one representation to emphasize that their representations are co-determined in the motivational dynamic. This block also contains the process of speculative Reason. The 'semantic representing' block denotes imagination and the synthesis of apprehension and apper-

⁶ Congruence is general and global agreement and suitability without contradiction or real opposition.

ception in sensibility. The manifold of maxims represents practical rule structures in the manifold of rules. The process of appetition represents appetitive power in practical Reason plus the impetuous expressions of reflective judgment. 'Effectiveness' denotes those non-vetoed representations that are given motoregulatory expression. The '*soma*' block denotes the physical phenomenon of the human body.

A *semantic message* is the depiction of a message that can be associated with emotivity and ratio-expression in a meaning implication. *Semantic representing* is the synthesis of an intuition that presents a semantic message. A meaning implication set is the set of impetuous expressions of reflective judgment that constitute root meaning implications symbolized by intuitions. Some of these meaning implications are vetoed by practical Reason. A *Semantic set* is a subset of a meanings implication set regulated and delimited by a specific practical maxim in the manifold of rules.

Figure 7 is a general representation of semantic (meaning) processing in the phenomenon of mind. Root meanings are assimilated into physical action expressions, a result of the theory which finds support from experiments [Piaget (1974); Piaget & Garcia (1987)]. Piaget & Garcia found:

The data gathered in this project delineate the elementary ontogenetic forms leading to the construction of operations, and to structures that result from their necessary compositions. Each chapter has shown these developmental roots to be meanings and implications among meanings, starting with action implications that are initially implicit before being consciously grasped and finally being formulated verbally.

As a conclusion, we shall classify the various forms of meanings and meaning implications. To begin with, the simplest are the meanings of predicates. They may be defined as the similarities and differences between one property observed in an object and other predicates that are simultaneously recorded or already known. . . . Predicates are connected through conjunction-like preoperations . . . It follows that an object is a set of conjoined predicates and its meaning amounts to "what can be done" with it, and is thus an assimilation to an action scheme (whether the action is overt or mental). As for actions themselves, their meaning is defined by "what they lead to" according to the transformation they produce in the object or situation to which they are applied. Whether we are dealing with predicates, objects, or actions, their meanings always implicate the subject's activities, which interact either with an external physical reality or with elements that were previously generated by the subject, such as logico-mathematical entities. [Piaget & Garcia (1987), pp. 119-120]

The mental journey a human being takes in developing his understanding of meanings is a long one. It begins with the relatively simple 'action implications' an infant discovers during the stage of sensorimotor intelligence in the first two years of life. It comes into full flower by enrichment of his manifold of concepts with ideas of mathematical objects and 'virtual operations' he learns to perform on these objects⁷ – a developmental stage he does not complete until around age fourteen to fifteen years [Piaget (1953); Piaget & Inhelder (1964)]. It is matured by on-going experience.

⁷ The term 'action expression' refers to observable (or potentially observable) changes in *soma*. The most obvious of these are exemplified by such things as a baby grasping an external object such as a rattle. But it is important for you to bear in mind that such things as electrical and chemical brain activities are also physically observable action expressions. Indeed, mathematical objects have no other form of expression insofar as a person is concerned. A person's re-presenting of them via drawings and symbols is a secondary and approximate re-depiction of them and, indeed, sensorimotor expressions of drawings and written symbols is one of the ways in which a human being develops his concepts and meaning implications for these otherwise supersensible objects. Mathematicians are doing this when they study and use "limit" operations and arguments in mathematics. The idea of a "point" in geometry involves such a limit, i.e., "a point is a little ball made smaller and smaller until if it got any smaller there would be nothing left of it."

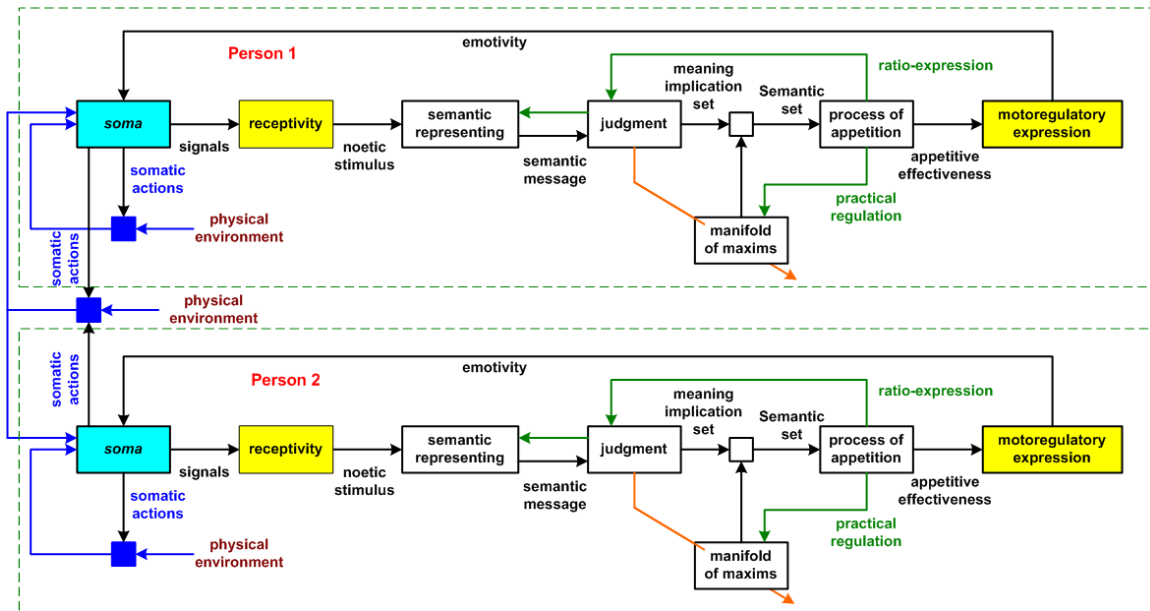


Figure 8: Weaver's model of two-person interaction and communication transaction.

Communication of meaningful concepts from one person to another constitutes a special part of the doctrine of meanings. This part is especially important for the institution of industrial conglomerates and Enterprises. It seems to me likely that business people know and feel this is so; it is less obvious to me that teaching Institutes, outside of speech and English composition courses (where teachers are more or less constantly presented with actual examples of vague meanings), appreciate it as deeply. What makes this such a special case is that interpersonal communication transactions always involve a minimum of two people, each of whom must engage in semantic representing over the course of multiple distinct message exchanges. Figure 8 depicts a Weaver's model for two-person interpersonal interaction and communication transaction.

One of the things you should note about this model is that the two people do not receive the same data of the senses from the environment and *soma* even if they are physically in the same location. One of them might have consumed too much coffee, the other might be feeling sluggish or sleepy; one of them might not be listening as closely as the other; one of them might be sitting closer to a noisy fan than the other. Right from the start, the two people are receiving different physical stimuli. Another thing you should note is that the two people have different manifolds of concepts and of rules (because these are constructed by experience and no two people have had the same experiences). These differences make a difference in the outcomes of their process of semantic representing. The likelihood, therefore, that both people give the *same* meanings to the effects of their interaction is extremely remote. As a practical matter, successful communication between them does not subsist in their reaching the same Semantic sets. Rather, it subsists in each of them producing a Semantic set sufficiently congruent with that of the other so that the different aims and interests of each are compatible (i.e., not-in-contradiction). How each person behaves, not merely in the words he uses but in his gestures and cues – e.g., 'body language' – as well, has major effects on the outcomes of their interaction and on the motivational dynamic each of them individually undergoes.

This is something the psychology of personality and social style takes a keen interest in understanding. Although it is impractical to undertake anything close to a sufficient coverage of these *empirical* science doctrines in this treatise, it is appropriate to outline the Critical framework within which psychological practices must properly be viewed. The overall model framework is shown in figure 9, the D-PIPOS model of personality style and interpersonal interactions.

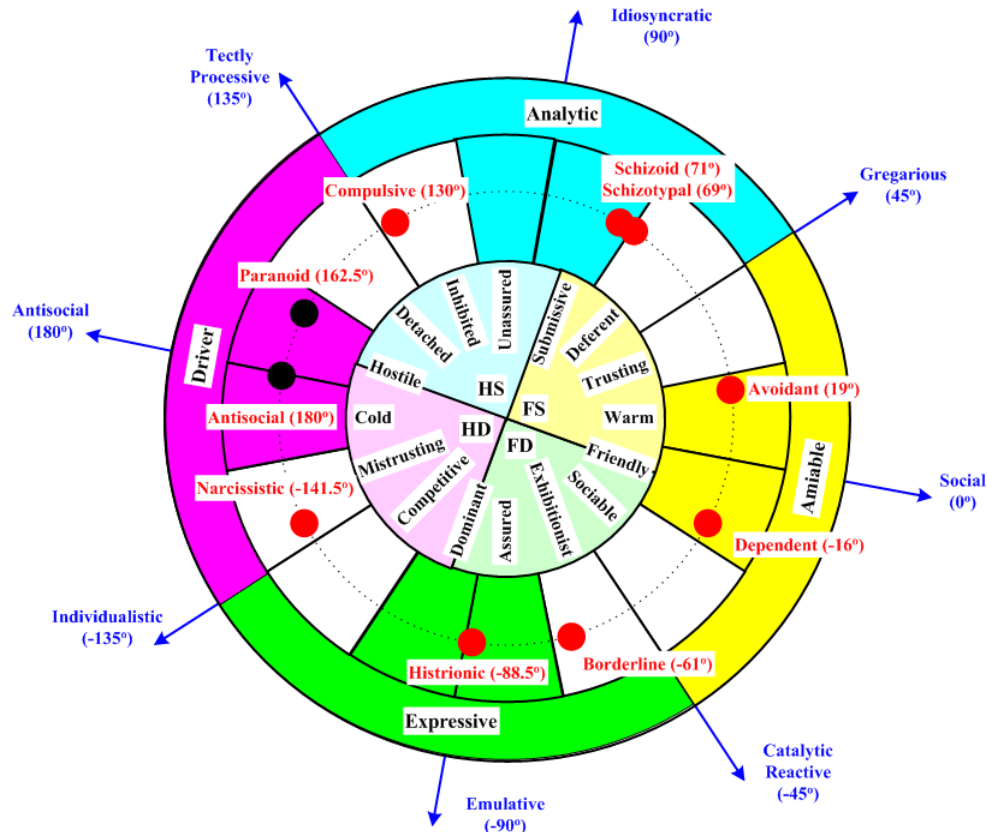


Figure 9: The D-PIPOS circumplex model of personality style, interpersonal interactions, and interpersonal communication transaction operationalizations [Wells (2012), chapter 8].

This model was deduced in Wells (2012), chapter 8, to which I refer you for understanding its many details. A circumplex model is a two-dimensional model of behaviors found to be adequate for describing enduring regular behavioral expressions regarded as indicative of an individual's personality and his habitual ways of conducting interpersonal interactions. It attempts to provide an understanding of the structure of these behaviors. The angular dimension of the circumplex characterizes particular expressive mannerisms of how the person behaves. The radial dimension characterizes the intensity with which he expresses them. It groups similar behavioral expressions, i.e., the smaller the angular difference the more similar the characteristics are and the greater the angular difference the more different the behaviors are. The model is a mathematical description of these characteristics defined by empirically developed rules for characterizing behaviors. Circumplex models first appeared in the 1950s. The first detailed methodological rules for defining and using them were published by Leary and his colleagues in 1957 [Leary (1957)].

"What is personality?" is a question that has long bedeviled psychologists. Reber & Reber tell us it is

a term so resistant to definition and so broad in usage that no coherent simple statement about it can be made [Reber & Reber (2001)].

This is so when a psychologist's "way of looking at the world" is ontology-centered. The situation is otherwise when his metaphysic is epistemology-centered. From the theoretical Standpoint, the Critical real-explanation of the term **personality** is *the entirety of the nexus of practical rules in the manifold of rules regulating a person's habits expressed by his physical and mental activities*. Because this manifold is itself not observable, the D-PIPOS model describes *personality styles*.

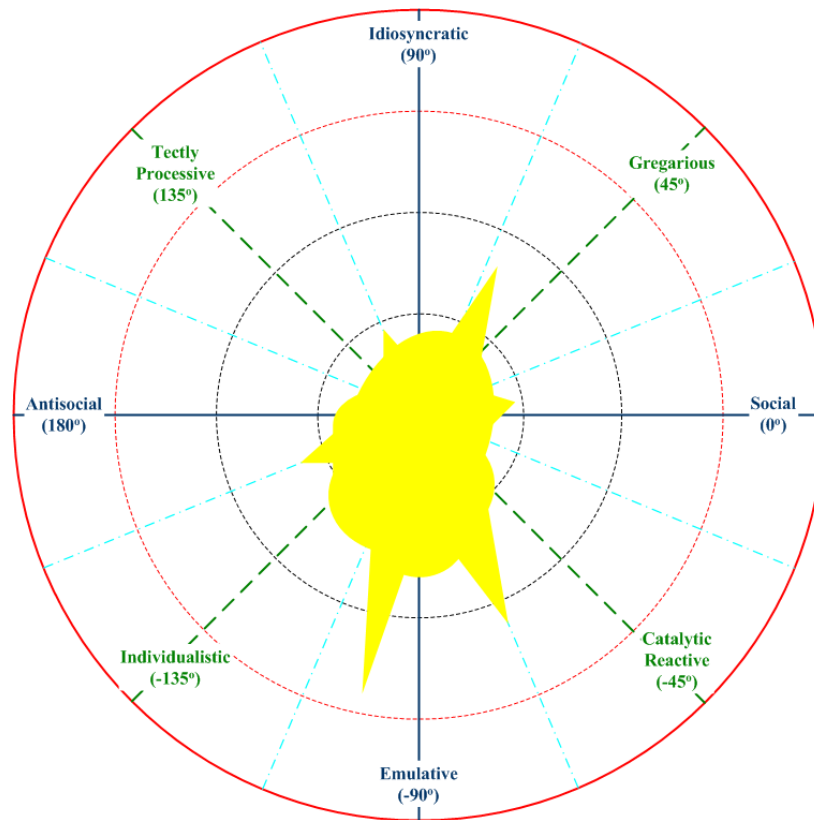


Figure 10: Example of a possible projection of the manifold of rules onto the D-PIPOS circumplex. Areas shaded in yellow denote actually observed behavioral expressions for a subject individual.

All externalized expressions of behavior are, at root, the product of the impetuous desiderations of reflective judgment and the regulations governing their expressions by the legislation of the manifold of rules. The regular and habitual conduct of an individual is therefore a sort of map or projection of the manifold of rules onto the behavioral circumplex. In psychological practice, the mapping out of an individual's expressed behaviors on a circumplex model is for all practical purposes an approximate empirical mapping of his manifold of rules. Rules for determining a circumplex model, such as those recommended by Leary [Leary (1957)] or by Wilson [Wilson Learning Corporation (2011)], are at the same time rules for empirical characterization of the manifold in terms of actual expressed behavior. Figure 10 illustrates such a possible projection.

It is important to understand that the terms personality, personality style, and personality disorder refer to three different things. A *personality style* subsists in phenomenal appearances of personality expression. The term *personality disorder* denotes maladjusted patterns manifested in conduct and behavior, relating to one's social environment, that are sufficiently severe that people who exhibit them have great difficulty functioning in their societies and cooperating with other people. The difference between style and disorder is one of degree. On a circumplex, the greater the radial dimension is and the narrower the angular mapping is as radius increases, the more the behavior trends toward being a disorder. Every person exhibits personality styles. If yours happens to fall on the antisocial axis in figure 9 this does not mean you have an antisocial personality disorder. It means you exhibit behaviors others tend to regard as interpersonally cold and a bit hostile and uncaring in regard to other people's feelings and needs. It does not make you a 'bad person' but it does tend to make others assume you might be. There are a number of positive traits associated with an antisocial personality style as well, some of which are actually quite attractive: exhibiting a strong value code; high-spiritedness; boldness and toughness; not given to excessive

worrying; a tendency to stand up to those who try to take advantage of you; a strong personal focus on results rather than appearances [Sperry (2003), pp. 38-39, especially table 2.1].

An antisocial personality *disorder*, on the other hand, denotes that the behaviors are carried out with such extreme of rigidity that the person cannot adapt himself to his Society, tends to fail at most things he attempts to achieve, and, sometimes, even commits actions that are criminal. Disorders fall within the professional scope of psychiatrists, styles within that of leaders.

This treatise is not concerned with psychiatry but it is concerned with human factors of interpersonal and personality styles affecting success or failure of industrial conglomerates in general and Enterprises in particular. One thing I want to particularly emphasize – so that it does not get lost in the details of figures 9 and 10 – is that, barring actual disease or neuropathology, external behavior manifestations such as figure 9 describes are rooted in the person's manifold of rules, that *this manifold is modified by experience*, and therefore people are not "frozen into" whatever interpersonal styles they might happen to habitually exhibit. The mappings (figure 10) *can be changed by means of appropriate training and practice*. People have a capacity for what Wilson called *versatility* and this capacity can be developed and improved by training and practice.

The concepts of Critical 'personality' and empirical 'personality style' have important implications for the organization of employer business Institutes. At the top of the list, and related to the idea illustrated in figure 10, is the strong *nexus* between behavior and obligations. Every person's manifold of rules contains a vast multitude of mundane rules of action and most of these have little or no special bearing on obligation in the workplace. Some, however, have major implications. These especially are ones that are either practically unconditioned by higher rules or which stand just under such practically unconditioned rules. Practically unconditioned rules stand as imperatives of action, and ones only slightly lower than these constitute tenets of behavior. The imperatives and the structured maxims they condition contain rules of obligation a person simply cannot contradict by his actions. Provoke them and the person will respond and will respond according to the tenets of these obligations. His reactions might or might not be beneficial to his business mini-Society; they might or might not be harmful to it.

Practical obligations stand in three kinds of Relations:

1. obligations to Self with regard to personality;
2. obligations to Self with regard to the situation of others;
3. reciprocal obligations to and with others (social contract *mutual* obligations).

Reciprocal obligations are always conditioned tenets and stand under imperatives and tenets to Self. This is the nature of human associations and reflects the fact that human beings have no innate social 'instincts'. No person on earth is more "selfish" than a newborn infant. An infant does not understand for many months that he is not the entire universe. When he does come to make that crucial real-division in his concepts of 'me' and 'not-me', his early understandings of the latter are conceptualized by analogy to his concepts regarding himself. Nothing demonstrates the latter more clearly than the child's early concepts of causality [Piaget (1930)]. Even after making this real-division, childish egocentrism is the dominant factor in what Piaget termed the moral realism of children up to around age 7 years. One of his observations, a conversation with a 5½ year old boy named Pha, illustrates what I mean by this:

"Did your daddy play at marbles before you were born? – *No, never, because I wasn't there yet!* – But he was a child like you before you were born. – *I was there already when he was like me. He was bigger!* – When did people begin to play marbles? – *When the others began, I began too.*" It would be impossible to outdo Pha in placing oneself at the center of the universe, in time as well as in space! And yet Pha feels very strongly that rules stand above him; they cannot be changed. [Piaget (1932), pp. 58-59]

Reciprocal obligations – upon which the success of any Institute depends insofar as success is dependent upon the cooperations of its members – serve the Self-interests of the individual. They are, to use the language of Critical Logic, practically hypothetical obligations conditioned by higher obligations to Self and can ground the person's actions only if the action does not gainsay those higher obligations. If you *coerce* an employee into taking some specific action, he does so from grounds of prudence; in other words, the conditioning obligation is not an obligation to the association or the manager but is instead an obligation-to-Self. Many proprietors and managers count on "company loyalty" for the effectiveness of their leader's actions to succeed. Lack of "company loyalty" is among the most bemoaned lacks one hears when business peers privately ruminate with each other over "management issues." There often seems to be a sort of mysticism attached to the ideal of "company loyalty" if my own observations are typical – a mysticism that seems to expect there should be some magical 'social instinct' of "company loyalty." When I hear people discussing this topic I often suspect they have never heard an old limerick that was popular with my parents' generation:

Here's to me and here's to you and here's to love and laughter.
I'll be true as long as you, and not one moment after. – [Irish drinking toast]

All actions taken in service to obligations reflect *interests* of the acting person. Cooperation is possible in any group of people only so long as the special interests of these people are congruent. Two people have congruent special interests if and only if satisfaction of interest by either person does not necessarily prevent satisfaction of interest by the other person. It is a minimal necessary condition for limited cooperations, but it is not sufficient to bind an association more than temporarily. Long term continuation of cooperations requires that individuals share one or more *common* interests and that these individuals *understand* that they share common interests.

The strong connection between interests and obligations is underappreciated. What I mean by this is that all *interests* are grounded in practical tenets that are ultimately conditioned by practical rules people have constructed that function as deontological *moral* rules. They are not rules that are based in any ontology-centered system of either consequentialist or virtue ethics even when the servicing of interest bears an exterior semblance to consequentialism or virtue-ism. Both co-operation and conflictive competition have their foundations in people's private moral codes.

Furthermore, *personality* is likewise ultimately so grounded. It is a popular myth that a person is born with an innate personality. But because personality is the entirety of the *nexus* of practical rules in the manifold of rules regulating a person's habits expressed by his physical and mental activities, every person's personality is *constructed* as he constructs his own manifold of rules. Because an individual's manifold of rules is also subject to accommodation via the motivational dynamic, this also means that *a person is capable of changing his personality*. The phenomenon of versatility depends upon this ability. It is part of the intellectual *Personfähigkeit* of a person. Indeed, versatility training (such as that provided by the Wilson Learning Corporation) is at the same time personality modification training.

Furthermore, the record of history contains examples of personality training carried out on a Society-wide scale. Perhaps the most conspicuous example of this is provided by the Society of ancient Sparta. Everything about the Spartan system of education was aimed at producing specific qualities of personality common to every Spartan. Regarding this, Plutarch tells us an anecdote about Lycurgus, the legendary lawgiver of Sparta:

Lycurgus, the lawgiver, wishing to recall the citizens from the mode of living then existent, and to lead them to a more sober and temperate order of life, and to render them good and honorable men (for they were living a soft life), reared two puppies of the same litter; and one he accustomed to dainty food and allowed it to stay in his house; the other he

took afield and trained in hunting. Later he brought them into the public assembly and put down some bones and dainty food and let loose a hare. Each of the dogs made for that to which it was accustomed, and, when one of them overpowered the hare, he said, "You see, fellow citizens, that these dogs belong to the same stock, but by virtue of the discipline to which they have been subjected they have turned out utterly different from each other, and you also see that training is more effective than nature for good."

But some say that he did not bring in dogs which were of the same stock, but that one was of a breed of house dogs and the other of hunting dogs; then he trained the one of inferior stock for hunting, and the one of better stock he accustomed to dainty food. And afterwards, as each made for that to which it had become accustomed, he made it clear how much instruction contributes for better or worse, saying: "So also in our case, fellow citizens, noble birth, so admired of the multitude, and our being descended from Heracles does not bestow any advantage unless we do the sorts of things for which he was manifestly the most glorious and most noble of all mankind, and unless we practice and learn what is good our whole life long." [Plutarch (date unknown), pp. 352-355]

Regardless of whether this anecdote is true or not, the maxim it contains is known to have been at the core of the Spartan *agoge*. It produced not only the most formidable soldiers of ancient Helena but also a people who were acknowledged by all the other Greek city-states to be the most morally upright people in all of ancient Greece. The Athenians lavished their highest praise on Spartan morality even as they thanked their gods that they themselves were not Spartans.

Cognizance of interests and objective conceptualization of them turns on meanings by which a person interprets situations and interactions, i.e., on his process of semantic representing (figures 7-8). Broadly speaking, there are two logical levels at which he carries out this representing. One is on the personal level in the semantic representing he makes out of direct person-to-person interactions (figure 8). Empirically this is the most basic level. The other arises not from actual interaction with others but, rather, from speculative abstract concepts of *stereotyping* – that is, out of an abstract-person model he constructs in his manifold of concepts. Concepts, as was explained earlier, are the principal tools he uses for accommodation of perception, i.e., to determine motivations. If a union member rails against "management" or a CEO holds up a duty "to the shareholders," there is no real actual person who is the object of his thoughts. In both cases, and many others, actions are predicated on stereotypes rather than on real people. But such stereotypes are themselves *noumenal* ideas formed out of actual experience. It is therefore of key importance that we look at some of the basics of interpersonal interactions.

§ 5. The D-PIPOS Circumplex Model

There are three empirical aspects in the D-PIPOS circumplex. The first is the aspect of social style (Driver, Analytic, Amiable, and Expressive). The second aspect is personality style. The third consists of externalized operationalizations by which a person attempts to communicate in direct person-to-person interactions. Empirically, these aspects are not separable and that is why all three appear in the D-PIPOS circumplex [Wells (2012), chap. 8].

It is important to emphatically understand that all three aspects are *empirical* and without any theoretical first principles underlying their developments. They are products of observations by professional observers that have been systematized, not derived. Furthermore, these observers belong to three distinct communities of researchers who typically do not talk to each other very much, do not read the same journals, and do not publish in the same venues. Wells' contribution, if one wishes to call it that, to the scientific discussion was the recognition that the three distinct systemizations are closely interrelated, complementary, and can be combined in one system (the D-PIPOS circumplex model). This analysis and deduction is presented in detail in chapter 8 of Wells (2012). Although the D-PIPOS circumplex systematizes the three aspects, it remains an

empirical model and, as such, it can be anticipated that future research is likely to lead to at least some modifications being made to the model. In the context of the present treatise, the purpose in discussing the D-PIPOS circumplex is to *apply* its main ideas to the institution of civic free enterprise and to provide some cautions against its misapplication.

The social styles aspect comes primarily from work by social psychologists and industry based or affiliated psychologists. Reportedly it had its earliest roots in transactional analysis and there are a few quite similar systems that have been developed using different labeling terms. The one presented in D-PIPOS is taken from the social styles model presently taught by consultants at the Wilson Learning Corporation. It also takes into account a similar but informal classification system that was used by social psychologist and psychoanalyst Michael Maccoby [Maccoby (1976)]. Maccoby's model is shown in Wells (2012) to overlay the Wilson system's circumplex (with the result that these two systemizations constitute different labelings for the same system).

The personality style aspect has its roots in psychiatry and the study of personality disorders. The idea of personality styles was derived from the study of personality disorders and is based on the observation that observable behaviors falling within the normal range exhibited in a Society can be regarded as less extreme examples of those classified by psychiatrists as disorders [Sperry (2003)]. The labels used in D-PIPOS are taken from DSM-IV-TR [American Psychiatric Association (2000)].⁸ Not surprisingly, the principal focus of psychiatric research is centered on disorders with rather scant attention being given to personality styles. For that reason, Sperry (2003) is the more authoritative source for understanding personality style labels. It is worthwhile to note that the American labeling and classification system is not the only one existent. Other empirical systems of categorization are presented by the World Health Organization as well as by noted professor of psychiatry Theodore Millon [Millon & Davis (2000)] and by psychologists Plutchik and Hope (1994). In the present day state of psychology and psychiatry research, there is no *a priori* reason to prefer one empirical classification system over another. The conventions for labeling, observation, and categorization used in D-PIPOS attempts to synthesize some of these divers systems but it, too, has no *a priori* claim to be superior to the others. They are what they are: reasonable empirical systems which, for all their elegance, are epistemologically closer to a work of natural history than one of natural science.

The operationalizations aspect descends more or less linearly from pioneering work begun in the 1950s, particularly in regard to the work of Leary and his colleagues [Leary (1957)]. It attempts to label and classify non-verbal aspects of interpersonal communication which are picked up on by other people and enter into their processes of semantic representing. The labeling system used in D-PIPOS is the work of noted professor of psychology Donald Kiesler [Kiesler (1983; 1985); Kiesler *et al.* (1997)].

In the world of commercial enterprises, if the work of psychologists and psychiatrists is used at all, it is used by people who are not themselves professional psychologists or psychiatrists. One can and should think of managers, teachers, and others (whose professional successes depend on how they influence others) as craftsmen practicing a *lay psychology*. For their practices to be based in science (and therefore Enlightened in the connotation discussed earlier), the esoteric expressions used by professional scientists have to be re-presented in ways accessible to them. It is also important to provide some sorts of guidelines as to how much faith a reasonable layperson should place in the many diverse mini-theories found in psychology and psychiatry. To a limited degree, training consultant companies like the Wilson Learning Corporation try to do this. The remainder of this chapter also attempts to do this. Key applications of D-PIPOS theory to the important topics of *interests* and *stereotyping* are discussed in chapter 11.

⁸ In 2013 the APA came out with its 5th edition of the DSM, called DSM-5. That edition retains the same categorizations and descriptions of personality disorders as its predecessor edition, DSM-IV-TR.

§ 5.1 The Personality Style Aspect

In lay practice in industrial conglomerate environments, the personality style aspect is the one least accessible to craftsmen-practitioners and, consequently, it carries the highest risk of misapplication and development of malpractices. Quack practices are worse than no practice at all in any social environment. For this reason, the personality aspect is a *cautionary* aspect best used for considerations of *restraint* in actions of managers and leaders rather than for proactive policies.

Even in cases of personality disorder diagnosed by professional psychiatrists, there is a high degree of diagnostic variability exhibited among different psychiatrists who examine the same subject. One psychiatrist might diagnose a person as having a borderline personality disorder and another psychiatrist might diagnose that same person as having a histrionic personality disorder (figure 9). A third psychiatrist might diagnose that same person as having no disorder at all. This sort of thing is what is implied when someone says of psychiatry that it "is not an exact science." That statement is true; a natural history is not quite yet a natural science, exact or otherwise. One goal of on-going research in psychiatry is to improve this state of affairs. DSM-5, released in 2013, contains a new section suggesting changes in diagnostic methodology for personality disorders, although what this section says is currently a controversial topic among psychiatrists.

Because the behaviors are less extreme, personality style is even more difficult to diagnose. It follows from this that a layperson – e.g. a manager – should not attempt to play doctor and render a personality style diagnosis on the basis of descriptions found in Sperry (2003). Rather, what he might do is *infer* a personality style from the easier to use and more reliable clues for classifying social style and externalized Kiesler operationalizations. The inference is possible because of the empirical relationships among the three aspects pictured by the D-PIPOS circumplex. However, any putative insights gained by doing so should be regarded with great caution and *never* made the basis for any important decisions or policies because the likelihood of error is just too high.

Furthermore, one should never assume that any person is sufficiently describable by any single personality style label. The popular idea that a person has only *one* personality style is an idea that is simply not true. A person can have one personality style at work, a second when he is playing with his children, a third when he attends a party. He might exhibit one personality style before he has his first cup of coffee, a different one afterwards. If his teenage son dented the family car the previous evening, today at work he might exhibit a different personality style than he did yesterday. (This would be an example of a field effect arising from his personal society).

It is true enough that a person with rigid *habits* of behavior (low versatility) is likely to exhibit a preferential personality style. But it is also true that people who exhibit high versatility in their social styles are chameleons when it comes to trying to peg them with just one personality style label. Remember: a personality style is not a disease. Personality style phenomena all come back to the individual's manifold of rules. Therefore, this aspect of D-PIPOS should only be used for purposes of cautionary restraint when a leader or manager formulates *his* actions and makes decisions. Personality style should *only* be used as a tool of prudence and self-restraint.

§ 5.2 The Operationalizations Aspect

An operationalization is the act of putting something into operation. In the psychological context of interpersonal interactions and communication transactions, it refers to facial expressions, gestures, posture, tone of voice, and other outward appearances by which a person seems to convey messages to other people. For example, imagine you and I are sitting at a table. I scowl and lean towards you with my shoulders tensed while saying, "Christmas is a wonderful time of year." You are likely going to describe me as acting hostile or aggressive towards you despite my words. My operationalizations make you *feel* like I'm really saying something else to you.

Table I
Kiesler (1983) Levels and subclasses of operationalizations

Dominant (Controlling): a. Leading/influencing b. Active/self-assertive c. Strong/managing d. Taking charge	Submissive (Docile): a. Following/complying b. Passive/acquiescent c. Weak/yielding d. Obedient	Hostile (Antagonistic/Harmful): a. Antagonistic b. Quarrelsome c. Impolite d. Harmful	Friendly (Cooperative/Helpful): a. Cooperative b. Agreeable c. Courteous d. Helpful
Competitive (Critical/Ambitious): a. Energetic b. Enterprising c. Competitive d. Critical	Deferent (Respectful/Content): a. Insolent b. Unimaginative c. Content d. Approving	Detached (Aloof): a. Disinterested b. Distant c. Preoccupied	Sociable (Outgoing): a. Involved b. Sociable c. Extraverted
Mistrusting (Suspicious/Resentful): a. Vigilant b. Suspicious/jealous c. Cunning d. Resentful e. Covetous/stingy	Trusting (Trusting/Forgiving): a. Unguarded b. Trusting c. Innocent d. Forgiving e. Generous	Inhibited (Taciturn): a. Silent/private b. Undemonstrative c. Stiff/controlled d. Opinionated	Exhibitionist (Spontaneous/Demonstrative): a. Talkative/disclosing b. Demonstrative c. Casual/spontaneous d. Suggestible
Cold (Cold/Punitive): a. Cold b. Stern c. Strict/punitive	Warm (Warm/Pardoning): a. Warm b. Gentle c. Lenient/pardoning	Unassured (Self-doubting/Dependent): a. Self-doubting b. Dependent c. Unassured d. Awkward e. Glum	Assured (Confident/Self-Reliant): a. Confident b. Self-reliant c. Assured d. Self-composed e. Cheerful

The operationalizations aspect of D-PIPOS is the aspect concerned with a taxonomy for trying to describe how the receiver in a communication transaction "feels" about the person who has transmitted an evoking message. There are various taxonomies that have been put forth by divers psychologists over the years. All are basically labeling systems corresponding to a ratings system designed by psychologists by which evaluators use preselected adjectives to describe their own subjective reactions to a communicator's 'body language', tone of voice, etc. All present systems of this sort do suffer from this inherent subjectivity. This is not to be wondered at because what these taxonomies are trying to do is put into words affective reactions of the receiver that are essentially autistic in nature. The problem of finding a reasonably reliable taxonomy with low variability from one rater to the next is an important problem because it bears directly on the semantic representing process. However, by any reasonable scientific criteria the problem is one that has to be considered as not adequately solved and in need of continued research and refinement.

D-PIPOS uses a taxonomy developed by the late Donald Kiesler of Virginia Commonwealth University (VCU). It has sixteen labels, each of which has several descriptive sub-labels used to "fine tune" how the major label is to be understood. Table I summarizes the Kiesler operationalizations [Kiesler (1983)]. The table is an abridged version of a more detailed taxonomy that was provided by Kiesler in 1982 as a 133 page unpublished manuscript. The full text document by Kiesler contained some 350 segment, level, and subclass definitions important for proper technical interpretation of the labels in Table I. Kiesler later revised his manuscript to try to make it less subject to the vagueness of adjectival label descriptions [Kiesler (1985)] and this revised version is available via the Internet from the Society for Interpersonal Theory and Research (SITAR). The revised manual contains 416 verb-phrase descriptors with 519 corresponding adjective descriptors. Whether or not this revision adds to the clarity of Kiesler's circumplex is a point psychologists can debate. Table I uses the original (1982) Kiesler taxonomy upon which Kiesler (1983) is based. The D-PIPOS model also uses this original taxonomy⁹. It is possible for a person to use Table I to approximately interpret others' operationalizations, but to use it reliably and accurately does require training. It should not be used as an isolated tool.

⁹ As of August, 2015, SITAR was promising to also post the original Kiesler manual to their website. As of the date of this writing, they have not yet done so.

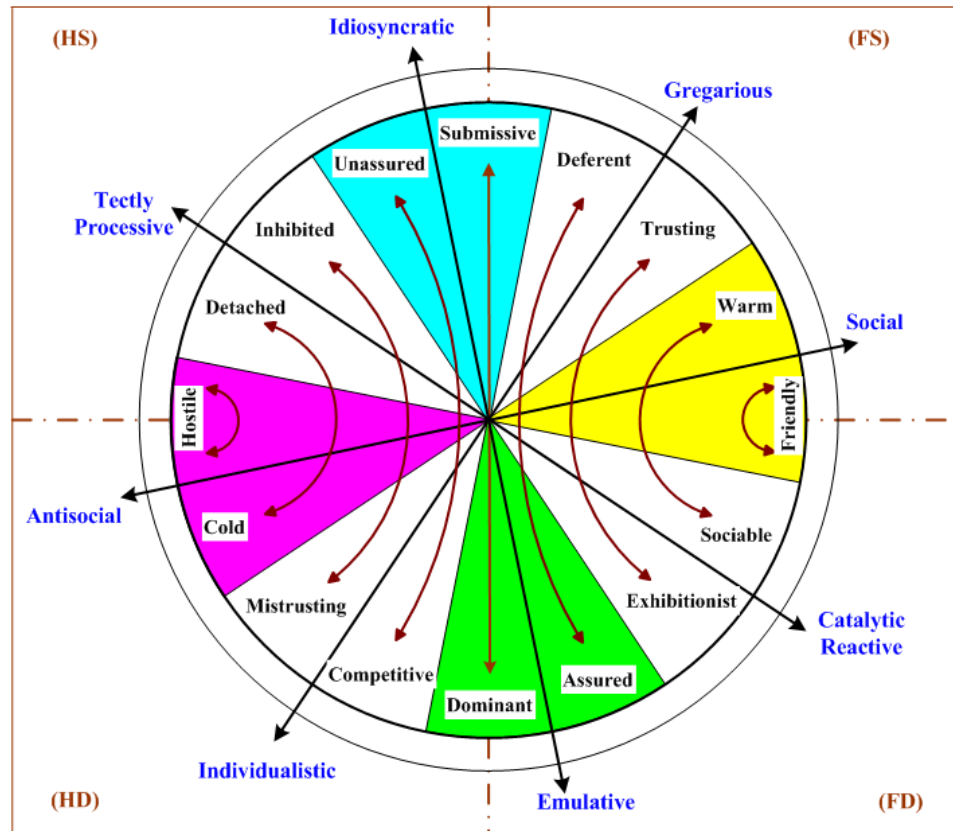


Figure 11: Complementarities in Kiesler operationalizations [Kiesler (1983); Wells (2012), chap. 8].

It was once thought patterns of operationalizations reflected a person's "core personality." It is true that a person's habitual expressions of operationalizations are related to his personality, but this is only because these expressions *partially* reflect a person's manifold of rules. What habitual expressions of operationalizations actually reflect are learned *habits*, not "core personality." The Kiesler circumplex uses two axes, called "affiliation" and "control," to divide the circumplex into four quadrants (FS = friendly-submissive; HS = hostile-submissive; HD = hostile-dominant; FD = friendly-dominant). A habit might be described as "behavior on autopilot" in the sense that when a person acts out of habit, he isn't really thinking about his actions; he is just acting out according to heavily interconnected maxims he has built over time in his manifold of rules that have brought satisfactory results to him. Habitual operationalizations are just that: habits. One of Kiesler's most important empirical findings is that one person's habitual operationalizations tend to "pull" an habitual operationalization response from the person with whom he is interacting. He finds, in other words, that when both persons are acting habitually without conscious attention to how they are acting, a reciprocity of action is set up between them. Kiesler called this "complementarity." He and his colleagues found,

The broadest notion of reciprocity or complementarity is that interpersonal acts are designed to invite, pull, elicit, draw, entice, or evoke restricted classes of reactions from those with whom we interact, especially from significant others. Reactions by others to these acts are not random, nor are they likely to include the entire range of possible reactions. Rather, they tend to be restricted to a relatively narrow range of interpersonal responses. . . . Complementarity occurs on the basis of (a) reciprocity in respect to the control dimension (dominance pulls submission, submission pulls dominance) and (b) correspondence in regard to the affiliation dimension (friendliness pulls friendliness, hostility pulls hostility). In other words, complementarity exists among interactants when

Interactant B reacts to Interactant A with interpersonal acts that are reciprocal in terms of control and corresponding in terms of affiliation. [Kiesler *et al.* (1997), pg. 223]

Figure 11 shows the empirical complementarity pairs they observed. For example, a dominant expression by Person A tends to provoke (with a probability higher than average) a submissive operationalization response from Person B. Person B's submissive operationalization then, in turn, tends to provoke further dominant operationalization expressions from Person A. After only a few such communication transactions, the two persons tend to settle into an equilibrium cycle in their communication transactions, with one person behaving as a dominant person, the other behaving as a submissive person. Figure 11 depicts all eight complementarity response pairs. This finding depends on two aspects of their interactions. First, neither person is consciously attending to his operationalization behaviors. Second, both persons express their behaviors at more or less the same level of intensity.

Complementarities of operationalizations do not mean the two persons are "getting along" in a mutually satisfactory way. A person expressing himself via dominant operationalizations might think a submissive respondent is "weak" or meekly obedient without ever suspecting that this "weak" individual actually despises him and is planning to undertake a passive-aggressive action in response to the dominant's leader's actions. Here is a grand example of miscommunication in the semantic representing processes of the two individuals. If Julius Caesar hadn't so badly misinterpreted the sycophancy of some of the Roman senators, he might have avoided that last fatally sharp interaction he had with them on the Ides of March in 44 BC. Complementarity equilibrium does not necessarily imply either harmony or disharmony in interpersonal relationships. It only implies both individuals have settled into practical maxims suitable for each to attain a state of personal equilibrium, even if this equilibrium is short-lived.

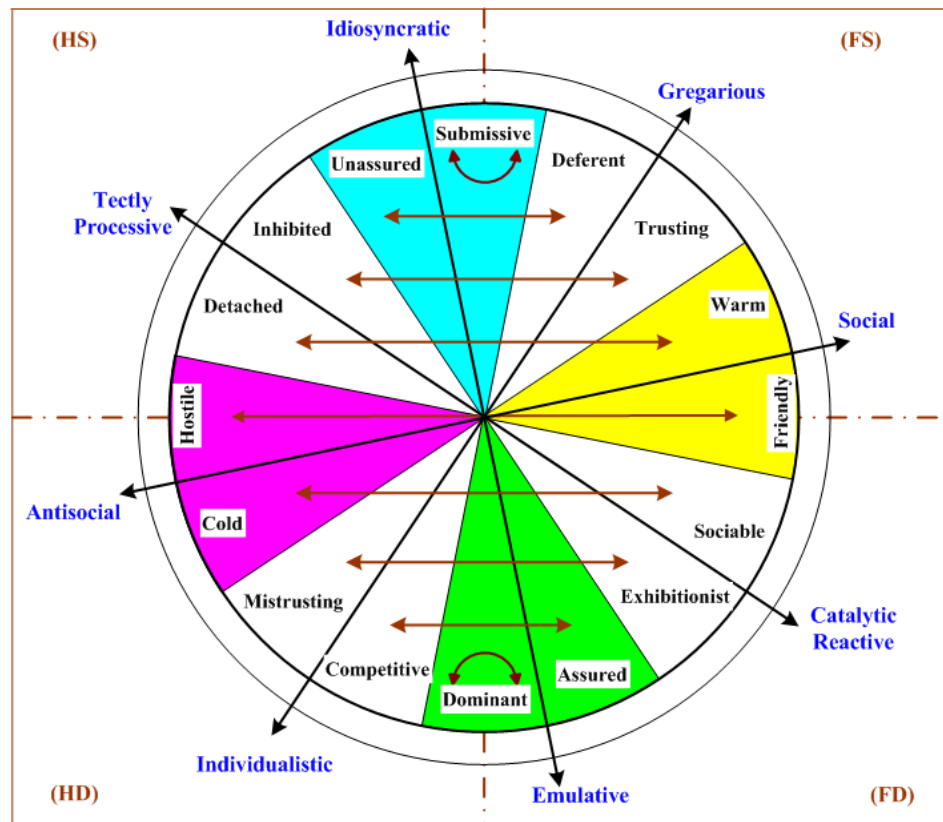


Figure 12: Anti-complementarity pairs among Kiesler operationalizations.

A person does not necessarily respond with a complementarity interaction to the evoking message he receives from another person. Indeed, if that person has a good understanding of the phenomenon of complementarity and wishes to steer their communication transaction toward a different destination, he might deliberately choose to respond with a different operationalization, one he designs to evoke some operationalization by the other person that he desires to effect. Any reaction that is not one of complementarity is called *acomplementarity*. One of the propositions Kiesler *et al.* proposed is that the greatest "pressure" for change in a person's interpersonal actions is effected when a person provides *anticomplementarity* responses (figure 12).

This is something professional behavioral modification therapists do for a living. It is also something leaders must learn how to do in order for their leader's actions to be successful. Kiesler *et al.* likened the control and affiliation axes to a "force field emitted by human interactants," and body language to a sort of psychological "force field." They found

A given instance of successful negotiation for the complementary response consists of a two-stage sequence occurring rapidly in Interactant B: (a) a covert response, labeled the *DE impact message*, and (b) the subsequent overt reaction, labeled the *complementary response*. To illustrate, Person B initiates a transaction with Person A, whose characteristic interpersonal behaviors are measured at the circle octant hostile-submissive [HS]. As their transaction proceeds, B increasingly experiences the covert first stage of complementarity pull by registering covert impacts that are complementary to Person A's circle categories: direct feelings such as feeling "superior to him" and "frustrated that he won't defend his position"; action tendencies such as "I should be very gentle with him" and "I could tell him anything and he would agree"; and perceived evoking messages such as "he thinks he is inadequate" and "he would accept whatever I said." As B continues to experience these pulled-for complementary internal engagements, his actions (the second stage of the complementary response) increasingly reflect overt behaviors from the complementary circle octant, hostile-dominant [HD]. [Kiesler *et al.* (1997), pp. 224-225]

If, however, "Person B" in this example has the developed interpersonal skill to see where this is going, he might choose to break this complementarity-building cycle by exhibiting some other operationalization for which "Person A's" complementarity reaction is better suited to steer their interaction in a direction Person B wants it to go in. To learn how to do this is to learn what Wilson calls "versatility" in social style and interpersonal interaction. One way Person B can grope to elicit a desired interaction is to enact what Kiesler called *anticomplementarity*. The significance of complementarity in interpersonal transactions is this: Complementarity establishes a stable cycle of behavioral exchanges between the two interactants. The actor's operationalizations "pull" or "draw" the complementary reaction from Person B, which in turn reinforces Person A's original operationalization. In this way an equilibrium in behavioral exchanges is set up. Acomplementarity, in contrast, produces a disturbance in the transactional exchange. It is possible for this to lead to an entirely different stable transaction cycle if at least *one* of the interactants is not low-versatility. Anticomplementarity responses tend to "pull" the other person toward a response that is the polar opposite of his original one.

For example, suppose you respond to an evoking message from me with a deferent response but what I really want from you is a competitive response (see Table I). *My* complementarity response to your deferent operationalization would normally be the assured response, but if I give this back to you, it's likely to lead you into taking the sort of unimaginative, unenergetic "thinking inside the box" actions I'm trying to avoid. What I *really* want from you is energy, enterprise, and for you to knock holes in my ideas by finding their weak points and coming up with better ideas. In other words, I want a *competitive* response from you. To get one, I try responding with an *unassured* response (expressing self doubt; conveying *my* dependency on *you*). Instead of *telling* you what to do, I'm *asking* you what we should do. I'm manipulating to have **you take the lead**.

The unfortunate thing about Kiesler's operationalizations is that they're hard to "read" during ongoing communication transactions and call for a leader to have very well-honed perceptions and a very highly developed level of interpersonal skills. The fortunate thing about them is that they're linked to easier-to-read and trainable social style behaviors in the D-PIPOS circumplex.

§ 5.3 The Social Style Aspect

Figuratively speaking, the three aspects can be regarded as three successively deeper layers of behavior description. The deepest and least accessible to observation by laymen is the personality style aspect. The middle layer, less deep but still not easy to access by observation, is the Kiesler aspect (operationalizations). The surface layer, most accessible to observation and easiest to put in relationship to diverse circumstances, is the social style layer. If one wishes to embark upon the task of learning about these three layers and how to put them to good use, one could not do better than to begin with the social style layer first, then the operationalization layer, and, last of all, the personality layer. This sequence for learning is a method for heeding Aristotle's dictum of starting with "what is most obvious to us" and gradually digging deeper to uncover "what is most obvious by nature." My own opinion is that Kiesler's sixteen operationalizations (and the sub-descriptions in Table I) are more understandable and their meaning implications more clear if one begins with a thorough understanding of the social style layer. The personality style layer "makes more sense" when viewed through the perspectives of the social style and operationalization layers.

Ultimately all these layers are products of a person's construction of his manifold of rules in practical Reason, and these constructions are constructions of experience. The types of experience a person acquires and how his constructions progress are heavily dependent on human social organizations. What I mean by this is that the great majority of children grow up acquiring their early experience in a caring, protective, and *limited* social environment dominated by their families. It seems no great mystery, therefore, that children's earliest developments of their manifolds of rules reflect habits of social styles peculiar to their family environments.

It is true enough that children in the same families exhibit different "personalities" – one may develop the habits of a Driver (figure 9), his brother might develop those of an Analytic, etc. In infancy these are *partially* due to biological diversity. But by the time a child is a few years old, they are more heavily due to their different experiences. I have an older sister and had an older brother, and there is no doubt that they were significant social factors for me when I was a small boy. I also have a younger sister, and she, too, had a very pronounced social influence on me when we were growing up together. When I was born my parents already had acquired much parenting experience from raising my older sister and brother. Their experience with me was likewise a factor when my younger sister was born. All this is to say the four of us, even though we are the same family, had different experiences while we were growing up and the four of us developed social styles that in many ways are alike but also in many ways different. The old arguments over "nature versus nurture" are misguided because "nature" and "nurture" do not form a competitive dichotomy; they are like dance partners, each contributing to an overall synthesis.

The great majority of children grow up in a protected and experientially limited environment. It seems no great wonder, then, that the earliest habituated behaviors and social styles are limited and tend to produce habituated social style quadrants as depicted in figure 9. All constructions of the manifold of rules are provoked and reinforced during youth by relatively restricted social environments and circumstances. As these earliest constructions of the manifold of rules are made under such limited experiential conditions, it seems no great wonder that some people become habituated to a "Driver" social style, others to an habituated "Expressive" style, and so on. Social style, however, is not the same thing as a "core personality." It is a collection of behavioral habits accompanied by an accidental system of pseudo-metaphysics each person self-develops as he or

she grows up. Furthermore, one and the same person may and often does develop practical maxims that underlie different social styles of behavior in different circumstances. The four labels of Driver, Analytic, Amiable, and Expressive depicted in figure 9 are labels of *circumstantial* social styles. A person might exhibit a Driver social style at work and an Amiable style at home with his family. This is because the styles are expressions of different context-dependent habits constructed in practical sub-manifolds of the manifold of rules (e.g., figure 10).

The social styles aspect divides the D-PIPOS circumplex into four quadrants labeled Driver, Analytic, Amiable, and Expressive. These labels are *exterior* characterizations. What I mean by this is that the labels describe how an individual's interpersonal transaction expressions tend to affect how *other* people subjectively react to his expressions in their semantic representing of the impact messages his expressions convey to them. *You* might think you are "really" an Expressive and be shocked to learn that others "see" you as a Driver. I once had a colleague I was fond of, a very nice woman who worked in Personnel, who became upset almost to tears when her social style evaluation by the Wilson Learning Corporation labeled her as an Amiable (an assessment I completely concur with). She had thought she was an Expressive. The social style aspect does not assess how you see yourself; it assesses how others typically see you. This is, of course, a form of stereotyping but it is scientific stereotyping based on sound psychology research. After more than three decades of experience with this systematic doctrine, I find it to be impressively accurate and extremely useful.

The interpersonal social style aspect of D-PIPOS makes a synthesis of two approaches to the problem of modeling habits of interpersonal social transactions. The first approach is that which is used in the "Managing Interpersonal Relations" course taught by the Wilson Learning Corporation. The second is a less-well-documented social psychology model developed by Maccoby in the early 1970s [Maccoby (1976)]. Aside from terminology, the principal difference between the two models is in the psychological factor axes defined for each. The axes used by Wilson *et al.* use psychological dimensions of (i) assertiveness and (ii) expressed responsiveness during social intercourse. Maccoby did not provide label names for his axes, but my analysis of his model tells me that his axes can be described well enough as (i) a *focusing* dimension (what the person appears to focus his attention on) and (ii) a *valuing* dimension (what the person appears to value). Like all circumplex models, both sets of axes model polar opposite behavioral expressions.

One empirically interesting characteristic of the two models is that their axes coincide when placed on a common circumplex map calibrated in relationship to the personality styles defined by DSM-IV. To put this another way, the Wilson and Maccoby model quadrants overlay each other one-to-one when placed on a common circumplex. Their axes also coincide with axes in the D-PIPOS model (figure 13), but this is a mathematical artifact of the way D-PIPOS was developed. Specifically, the D-PIPOS axes can be regarded as a synthesis of the axis-defining ideas in the Wilson and Maccoby models. Table II shows the correspondences of the factor axes used in the D-PIPOS, Wilson, and Maccoby circumplexes.

Table II
Model Axis Coincidences in the D-PIPOS, Wilson, and Maccoby Circumplexes

D-PIPOS	Wilson	Maccoby
individualistic	high-assertive	competitively focused
gregarious	low-assertive	socially focused
tectly processive	low-responsive	tangibles valuing
catalytic reactive	high-responsive	intangibles valuing

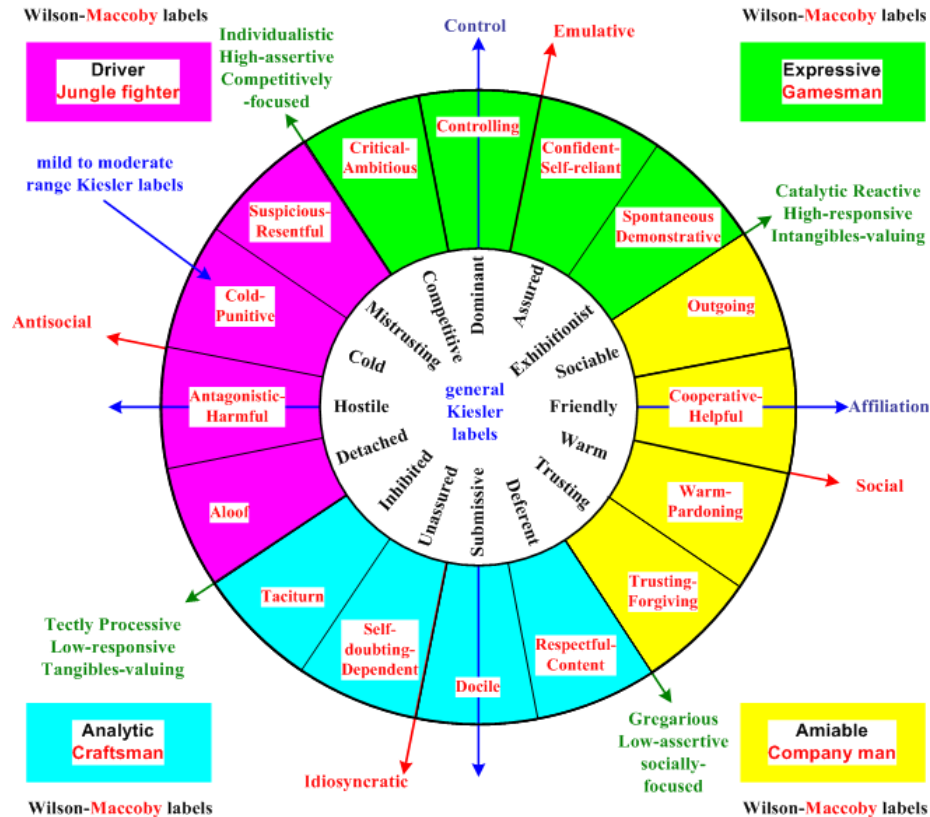


Figure 13: The Wilson-Maccoby social styles quadrants in relationship to the Kiesler operationalizations. The figure illustrates the Kiesler factor axes (affiliation and control) and the axes of the D-PIPOS, Wilson, and Maccoby circumplexes [Wells (2012), chap. 8]

The Maccoby axes are modeled in terms of others' inferences about the person's goals and purposes. A person who exhibits tangibles-valuing expressions tends to exhibit a 'thing' or 'results' orientation pattern in his behaviors. A person who exhibits intangibles-valuing expressions tends to exhibit an orientation toward people-centered outcomes, e.g., acclaim, friendship, good collegiality, the respect of others for his reputation, etc. A person who exhibits competitively focused actions tends to direct his energies toward achievement of specific ends, whether these be of a financial or physical nature or of an emulative nature of triumphing over adversaries. If the person exhibits Maccoby's "jungle fighter" social style, he tends to impress others that he views everything as a kind of battle for survival; if he exhibits Maccoby's "gamesman" social style, he tends to impress others that he views everything as some kind of competitive game with "winners" and "losers." A person who exhibits socially-focused actions impresses others as being one who seeks personal validation for his efforts, a desire to prove himself, fear of failure, or desire for others' approvals. Overall, the Maccoby axes are defined within a context of what seems to drive the person and can be thought of as how others interpret his basic motivations. Maccoby's dimensions are closely related to types of stereotypes others form about the person.

The Wilson axes are modeled in terms of the ways a person's mannerisms tend to be expressed during interpersonal communication transactions. They are more closely linked to Kiesler's taxonomy of evoking and impact messaging. They are not so much concerned with whatever the objective situation or task-at-hand is about as they are with how the person interacts with others. The Maccoby axes are oriented toward motives, while the Wilson axes are oriented toward how the person appears to regard and deal with others. The fact that the Wilson and Maccoby models overlay each other in the D-PIPOS circumplex raises the intriguing question of what relationships

between motives and social styles might underlie a person's behaviors. That such connections do exist in the causality of personal actions is at present merely a speculation. More research must be carried out to establish the objective validity of this speculation.

The quadrant labels used by Wilson and by Maccoby are suggestive metaphors meant to bring to mind particular stereotype images of the person whose behavior is being described. However, these metaphors are easily misinterpreted unless one pays close attention to the more technical descriptions of behavior they are used to label. These descriptions are provided in Wells (2012), chapter 8. The Maccoby and Wilson quadrants overlay each other as follows:

Driver: high-assertive, low-responsive;
 Jungle Fighter: competitively-focused, tangibles-valuing

Analytic: low-assertive, low-responsive;
 Craftsman: socially-focused, tangibles-valuing

Amiable: low-assertive, high-responsive
 Company Man: socially-focused, intangibles-valuing

Expressive: high-assertive, high-responsive
 Gamesman: competitively-focused, intangibles-valuing.

As I said above, the Wilson labels (Driver, Analytic, Amiable, Expressive) are intended to be indicative of the person's mannerisms in a particular social context. The Maccoby labels (Jungle Fighter, Craftsman, Company Man, Gamesman) are meant to be indicative of how other people interpret the person's goals and purposes. The Maccoby labels are significantly more pejorative than the Wilson labels are. For example, the Jungle Fighter label tends to call to mind people who exhibited more or less extreme and somewhat socially villainous behavior patterns, *e.g.*, Andrew Carnegie's partner, Henry Clay Frick, and tends to convey the image of a dangerously antisocial person. However, there are many people in the Driver/Jungle Fighter category for whom such a stereotype is a very unfair characterization of their persons. People tend to associate the Wilson/Maccoby labels with "personality," but it must always be kept in mind that the categories pertain to behavioral expressions and not to vulgar notions of "personality." Behavior can be observed; "personality" cannot.

Figure 13 presents an overall summary of the structure of social style in relationship to Kiesler operationalizations. It should be noted that the Kiesler labels in this figure are twofold. Labels in the innermost center of the figure are general labels applicable to the entire continuum of behavioral expressions (sociable, friendly, warm, etc.). Labels within the annulus (outgoing, cooperative-helpful, trusting-forgiving, etc.) are Kiesler labels used for the mild-to-moderate range of expressive behaviors which make up the normative range of expressions in a population. Labels for more extreme behavioral expressions (not shown in the figure) were also defined by Kiesler [Kiesler (1983)]. These labels pertain to what we typically call emotion-charged situations when their exhibition is atypical of a person's behavior, and pertain to what we typically call behaviors indicative of a personality disorder when they are typical of that person's usual behaviors. The latter labeling range is not topical for the subject of civic free enterprise.

§ 6. General Scholium on the Social Styles and Operationalizations Aspects

The previous section is to be regarded as a kind of panoramic overview of the topic. My purpose in writing it is to provide a general orientation to help prepare those who wish to understand the topic in greater detail for additional study-in-depth of it.

In order to put the theory presented in section 5 to practical use, it is necessary for you to study in more detail the specifics of the Wilson, Maccoby, and Kiesler models. I do not present

these details in this treatise because this greater depth of coverage is already provided in Wells (2012), chapter 8, and there seems to me little to be gained by repeating here what is written there. As I mentioned above, it is best to begin with the social styles aspect, and particularly with the Wilson model of interpersonal social styles. There are two reasons for this emphasis.

The first reason is that this model presents the broadest and easiest to observe characteristics of behavior applicable to the widest scope of applicable situations. The second reason is that this model has the longest track record of actual applications in real-world commercial environments and has been able to stand without major modifications being needed for over four decades. It also enjoys the practical benefit of having a well-written and up to date instructional handbook available [Wilson Learning Corporation (2011)].

The Maccoby model is also useful but useful in a slightly different context. This context has to do with the topic of stereotyping, which is a topic contained in the next chapter. Maccoby brought his model to a less extensive state of development (and he did not present it explicitly in the form of a circumplex). The Wells (2012) source provides a more orderly exposition of the arrangement of its parts. Its usefulness in actual practice I take up in the next chapter.

Understanding Kiesler's operationalizations requires a deeper level of comprehension than is needed for the social styles aspect if one wishes to employ its theory to actual real-world situations with a minimally necessary degree of competence. Kiesler was a psychologist and a somewhat more extensive background in psychology is needed to properly understand his labels and how to recognize them in people's behavioral expressions. In my opinion, the better versed one becomes in the social styles aspect, the easier it is to adequately comprehend Kiesler's labels.

Finally, the personality styles aspect is the most difficult of the three aspects for any layperson not trained in psychiatry to safely use in real-world circumstances. Psychiatry is a professional branch of medical science and a person must have a better appreciation and understanding of its methods before he can use it and not have his use of it constitute quackery. If you are a manager, you are in a position to do a lot more harm than good if you misuse it. I think having a deeper level of understanding of the topic can be extraordinarily beneficial in some circumstances, but acquiring this deeper level of understanding requires much study. One should always remember: psychiatry and psychology are not the same thing, and the topic of personality styles stands right at the edge where the two empirical sciences meet. This is why I cautioned you earlier about restraint in the use of the ideas of personality styles.

This completes the summary of human factors which apply in interpersonal interactions and interpersonal communication transactions. The ideas presented here apply at the level of person to person social-chemical bonding within an industrial conglomerate. They are ideas of underlying causative factors pertaining to the social atoms of mini-Societies. We must also take into account wider considerations ("field effects") that have significant effects on the institution and the organization of commercial mini-Societies. For these considerations, we now proceed to the next chapter of this treatise.

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