

other NFs, a remarkable facility with language. Often they hear a calling to go forth into the world to help others, and they seem ready to make the personal sacrifices involved in responding to that call, even if it means asking their loved ones to do likewise.

In their mating role, Healers have a deep commitment to their vows. They are loyal to their mates and, while they might dream of greener pastures, if they stray into those pastures they soon locate the nettles. They like to live in harmony and they go to great lengths to avoid interpersonal conflict. They are sensitive to the feelings of their mates and enjoy pleasing them, although they may have difficulty in expressing interest and affection openly or directly. INFPs cling to their dreams, and often find it difficult to reconcile a romantic, idealized concept of conjugal life with the realities of everyday living with another person. Even at the best of times, they seem fearful of too much marital bliss, afraid that current happiness may have to be paid for with later sacrifices. The devil is sure to get his due if one experiences too freely of happiness, or, for that matter, of success, or beauty, or wealth, or knowledge. This almost preconscious conviction that pleasure must be paid for with pain can cause a sense of uneasiness in INFPs when they marry; they may feel they must be ever-vigilant against invasion, and can therefore have trouble relaxing in the happiness of mating.

These reserved and soft-spoken Advocates are fierce protectors of home and family—their home is indeed their castle. As parents, they are devoted to the welfare of their children, treating them with great sympathy, and adaptability. In the routines of daily living, INFPs tend to be flexible, even compliant with their mate's ideas of discipline, and thus are easy to live with. They will often give their children a voice in family decisions—until their value system is violated. Then they dig in their heels and will not budge from their ideals. Life with a Healer parent will go harmoniously along for long periods, until an ideal is stepped on. Then they will resist and insist.

# Rationals

*To me it suffices to wonder at these secrets and to attempt humbly to grasp with my mind a mere image of the lofty structure of all that there is.*

This is how Albert Einstein concluded his essay, *My Credo*, a statement summing up his philosophy of life, and expressing the essence of his fascination with science. Einstein's insatiable curiosity about the secrets of the natural world, coupled with his prodigious (and reportedly rather arrogant) ability to comprehend the structure of "all that there is," enabled him to change fundamentally the way in which, not just physicists, but all educated people look at the universe. From 1905 to 1925, Einstein not only conceived the theory of relativity, but he made indispensable contributions to new understandings of thermodynamics, the nature of light, atomic structure, and quantum physics, and created in the process nothing less than the first new model of the universe since Isaac Newton's, over two centuries earlier.

A truly astonishing achievement for any human being, but particularly for someone who was considered a slow-learner as a child, who dropped out of (and was then expelled from) his secondary school, who graduated from a mere technical college with a teaching diploma, and who, of all his classmates, was passed over for a teaching position and post-doctorate appointment. Rejected by academia, Einstein went his own way and took a job at the Swiss Patent Office, where he evaluated the plans of would-be inventors, correcting errors of design, and deciding (he could do this almost instantaneously) if an invention would work. In his youth, Einstein had enjoyed building models and playing with mechanical devices, and so his work at the Patent Office taxed him very little, and left him free in his spare time, and on his own, to do the theoretical work that would change the face of physics for the rest of the century.

Professorships at leading universities soon came his way, and as his fame grew so did the legend of his eccentric character. Shy and reserved as a child, with a calm detachment from all personal ties, Einstein grew into an thoroughly self-contained young man. Though popular with his colleagues and students, he remained remote, enjoying the company of other brilliant friends, but letting none get close to him. And then in his

later years he became the very icon of the absent-minded professor, the abstracted, fuzzy-haired scientific genius all but unaware of his social context. Stories about his forgetfulness are legion, but one is delightfully succinct: on his way to an important meeting, Einstein telephoned his wife and asked, "Where am I and where am I meant to be?"

One thing he never forgot, however, throughout his long and celebrated life: what he called "the never-ending task of Reason."

In the mid 1970s, while writing *Please Understand Me*, I chose the Greek god Prometheus to represent these Rationals (Myers's NTs), naming them the "Prometheans." Myth has it that Zeus commissioned Prometheus to fashion a creature to live on earth with the animals. The animals had already been given many different means of survival, weapons and defenses such as fangs, claws, and horns, fur, feathers, and shells, not to mention powers such as strength, swiftness, and flight. Very few protections and powers were left to give human beings, so Prometheus decided to provide his creation with gifts outdoing those of the animals. First he shaped Man differently, upright like the gods; then he went to heaven and stole fire from the wheel of the sun, giving this precious knowledge to mankind as its means of surviving among the animals, even of triumphing over them. This gift of fire, however, cost Prometheus dearly. Zeus, CEO of the Greek Pantheon, was so enraged that mortal humanity had been given divine knowledge that he condemned Prometheus to live forever chained to a barren rock, with, in some stories, a vulture eating daily at his liver ('liver' symbolizing life-sustaining). But Prometheus suffered this agony with dignity and serenity, for his was the noble cause of imparting to mankind knowledge of light and energy (symbolized by fire) in defiance of authority. Prometheus, the god of pre-learning ('pro' = pre + 'methus' = learning), secured for humanity the powers of science and technology, thereby rescuing human beings from helplessness and ignorance, even though he had to rob heaven to do so.

In the 1980s I chose the Owl as the Rational's totem animal. Owls are among the most efficient winged predators, rarely missing their prey owing to their keenness of sight, swiftness, and timing. With their ability to see in the dark, and with their oversized talons, owls surpass even the hawk and the eagle in their ability to spot and to seize their prey. And this is very much the nature of Rationals, particularly in abstract matters: to penetrate the dark recesses of nature with their keen insight, and to grasp ideas with their sharp intellects. It is no wonder that, of all the animals, it is the professorial owl that best serves as the symbol of Rational pragmatics.

Looking back, I remember meeting only two Rationals during the war years. The first was another cadet like me. We were buddies during preflight and primary flight training. After that, only one other, an engineer sent along with my squadron to oversee our use of a giant rocket. Then in graduate school after the war I met two students and one professor in the psychology department who were Rationals, the rest of the students and

professors seemingly quite different from us. Strangely, I found the professors and students in the philosophy department more given to reason than those in the psychology department. Finally, in the thirty years I worked for schools in corrective counseling I met so few Rationals that I kept lowering my estimate of their numbers. My guess now, as I've said elsewhere, is that they're no more than five or six percent of the population. In any case that ought to be enough of these strategic pragmatists to keep science and technology advancing at a steady pace.

## Plato's Rationals

Plato's word for men like Einstein was '*dianoetic*' which roughly translated means "dialectical thought"—coordinate thought, parallel reasoning, ratiocination—hence he considered this type as the "Rationals." Plato regarded the Rationals as serving a particular function in society: to study nature and figure out ways to tame it, that is, to make the natural order confluent with the social order. Not, mind you, to violate Nature, but to civilize it.

A generation after Plato, his student Aristotle defined logic for the Western world. Aristotle said that the "Dialectical" types (Plato's Rationals) try their best to be accurate, to get things straight, to sort things out, in order to avoid errors in reasoning. Logic, he said, tells us how to avoid such errors. One way is to realize that whatever we can identify is unique, has an identity, no matter how hard it is to distinguish it from other things. For example, though two peas in the same pod may seem identical, they really aren't, and careful scrutiny will reveal their difference. This is Aristotle's Law of Identity. The other cornerstone of Aristotelian logic is that things that are identifiable in a given context are either one thing or another, and so can't be both. For example, there is no such thing as half man and half beast, such as a Centaur, even though we can imagine such a creature. This is Aristotle's Law of Contradiction. These two rules of logic are called "truisms," meaning that they are obvious even though unprovable. But provable or not, to violate them is to talk nonsense, something that Aristotle's Dialecticals are careful to avoid doing.

Galen named the Rationals the "Phlegmatics." The word 'phlegmatic' has come to mean disinterested, bland, distant, seemingly detached from social involvement. And indeed these Rationals, concerned as they are with logical investigation, seem detached and distant from others, who conclude that this type has no interest in social reality. This conclusion is correct in the sense that when the Rationals are concentrating on some complex problem they do detach themselves from their social context and remain distant until they solve the problem. At that moment they are not interested in others, but that does not mean they do not care about others. They are just as caring as any other type when they are focused on those they care about.



Plato's Rationals are not only logical and contemplative, they are also usually absorbed in some enquiry, some investigation into complexity, some experimental probing into the nature of things. Perhaps this was why Paracelsus chose the mythical Sylphs to be their tutelary spirit. Sylphs were believed to live high above the ground, in forest canopies, and on mountain tops; they were cerebral spirits (much like the owl, who might have given rise to them), with their enlarged eyes which gave them penetrating sight, their oversized forebrain which gave them powerful reasoning, their sensitive antennae which gave them vivid imagination, and their gossamer wings which gave them access to places otherwise impossible to explore. Thus it was Paracelsus who first emphasized the insatiable curiosity and restless research of the Rationals.

Adickes spoke of Plato's Rationals as "Agnostics," for these people have their doubts about everything complicated. Despite all their rigorous logic, their studied contemplation, and particularly their probing empiricism, this type maintains a hint of uncertainty. With certitude so hard to come by, Rationals think it best to speak only of the possible and the probable. So it was Adickes who first touched upon one of the more puzzling features of the Rational character, their doubting nature.

In his intricately reasoned treatise on what he called different "forms of living" (translated as "types of men"), Spränger saw the Rationals, as did Plato, Aristotle, and Adickes, as rational, logical, and skeptical. But he focused even more closely on their penchant for theory building, calling them the "Theoretic" type. For the Rationals, to be sure, theory building is heady wine, one of the most fulfilling operations that tests and measures the mettle of their intellect.

Kretschmer, the first investigator to look carefully at the dark side of character, called the Rationals the "Anesthetics" which roughly translated means "unfeeling." In thus speaking of them he was echoing Galen, who had said that they are distant and detached, but Kretschmer was saying more than this. He believed that if and when life's problems get the better of them, Rationals, like the other three types, have no choice in which kind of absurd behaviors to use in their self-defense, their temperament alone deciding the matter.

Like Kretschmer, Fromm examined both sides of personality, presenting negative as well as positive traits of character. Fromm considered the Rationals to be "Marketers," thinking of marketing (or pragmatic transacting) as a negative trait, while he lauded them for their efficiency and other desirable traits. Thus in his view Rationals are not only "efficient," they are also "adaptable," "curious," "experimental," "farseeing," "flexible," "generous," "intelligent," "open-minded," "purposeful," "sociable," "tolerant," "undogmatic," "witty," and "youthful." It would appear that Fromm, probably a Rational himself, thought better of them than the other types.

Myers contributed to the study of the Rational personality by naming them the "Intuitive Thinking" types—"NTs"—and saying of them that

they are "abstract," "analytical," "competent," "complex," "curious," "efficient," "exacting," "impersonal," "intellectual," "independent," "inventive," "logical," "scientific," "theoretical," "research-oriented," and "systematic." Though apparently unaware of the contributions of her predecessors, she was clearly able on her own to identify the more salient traits that characterize Plato's Rationals.

## The Abstract Utilitarians

Plato's Rationals, Aristotle's Dialecticals, Myers's NTs, whatever their name, have something very important in common with the Idealists and Artisans, and little in common with the Guardians. With the Idealists they share a predominantly abstract manner of communicating their messages, and with the Artisans a predominantly utilitarian manner of implementing their goals. Of necessity we communicate messages with words, and implement goals with tools, and thus these two dimensions, word usage and tool usage, constitute the underlying basis of personality development. As shown in the matrix at the side, the base of NT personality is their unique combination of abstract word usage with utilitarian tool usage. It is for this reason that I think of Plato's Rationals as the "Abstract Utilitarians." Since these two dimensions are the bases of personality development, it is well that we examine them in some detail.

Abstract Concrete

NF	SJ
Abstract NT Utilitarians	SP

Cooperative

Tools

Utilitarian

### Abstract Word Usage

Abstract words refer to imaginable things, concrete words to observable things. Rationals talk little of what is observable and much of what is imaginable. They are inclined to speak more of what can be seen only with the mind's eye, conceptual things rather than perceptual things, ideas rather than objects. All of us, of course, can observe what is before us as well as imagine what is not. But this does not mean that we do both equally. Very early in life we begin to exercise one focus of language—observables or imaginables—more than the other, and we continue to do so throughout life. Like the NFs, the NTs choose the imaginative, conceptual, or inferential things to speak of over the observational, perceptual, or experiential.

In conversation Rationals try to avoid the irrelevant, the trivial, and the redundant. They will not waste words, and while they understand that some redundancy is necessary they still are reluctant to state the obvious, or to repeat themselves on a point, limiting their explanations and definitions because they assume that what is obvious to them is obvious to others.

would surely be bored, if not offended. Their tacit assumption is that what is obvious to them is obvious to others, and the overly terse and compact style of speech that results is hard for others to follow. Because of this Rationals sometimes lose their audience and wonder why.

The basis of coherence in Rational thought and speech is deductive inference. This basis has much in common with the inductive inference of the Idealists, little in common with the harmonic thought and speech of the Artisans, and nothing in common with the associative thought and speech of the Guardians. Although inferential, induction requires the so-called "intuitive leap," a leap only dubiously taken by NTs, even when it is necessary to get on with their current speculation. On the other hand, associative thought and speech requires topic hopping, something NTs will only occasionally and reluctantly do, and only as an excursion before returning to the unfinished topic. And harmonic thought and speech requires selecting and arranging words for the way they sound, a skill not usually acquired by Rationals, though some (like Shakespeare) can become masters of it when they take it as their province.

While we cannot observe deductive thought (going from general to specific, whole to part), we can observe the language that makes it possible. Defining words to limit their usage is a deductive process, so too is arranging words in logical order to control coherence, and so too is choosing words to control shades of meaning. Thus, the coherence, reference, arrangement, and choice of words tend to be done deductively by Rationals.

Rationals are unusually exacting about definitions. Our words can have distinct reference only if we are careful in defining them, and so NTs make distinctions, lots of them, most of the time. Indeed, they're sometimes called "nitpickers" and "hairsplitters" by other types. NFs are even affronted by NT hairsplitting, bent as they are on erasing the NTs' finely drawn distinctions. But Rationals don't mind being teased with such names because they assume that their distinctions enable them to control arguments and, it might be added, enterprises. The way Rationals see it, whoever controls categories, controls useful operations. They leave control of other things to others.

Many Rationals are dictionary readers, even specialty dictionaries—anthropology, aphorisms, etymology, law, medicine, philosophy, psychology, slang. Some spend a good deal of time with their dictionaries, and so are aware of definitions and word families, of roots and derivations, of denotations and connotations, things the other types are content to gloss over.

While their word arsenal grows through the years, Rationals also tend to enjoy playing with words, finding pleasure in puns and paradoxes. They are delighted by comments such as Einstein's reference to mathematics: "The laws of mathematics, as far as they refer to reality, are not certain, and as far as they are certain, do not refer to reality." And the more puckish of them are tickled by Disraeli's retort to Gladstone. Gladstone:

"You will either die on the gallows or from syphilis." Disraeli, in instant repartee: "Depending on whether I embrace your morals or your wife."

Rationals are careful in subjoining one word to another to avoid errors of sequence or of category. An obvious sequence error would be to join the word 'meow' to the word 'dog' such as in saying that "The dog's meow is worse than its bite." Everyone minds such obvious errors, but the NT, far more than others, is mindful of unnoticed errors of category that result in subtle contradiction. For example, the expression 'disorder leads to chaos' presumes that chaos differs from disorder, when in fact the words are synonymous. Chaos cannot follow disorder because it is disorder.

Errors of category are just as scrupulously avoided by Rationals. For example it's a mistake to say that "there were weeds among the plants" because weeds are plants, the latter being the category that weeds belong to. NTs frequently note such trivial errors of category in others' speech, but they rarely comment on them. However, let the error occasion contradiction in an argument being made, and NTs are compelled by their very nature to point out the error.

Many Rationals are obsessed with speculative enquiry, so their speech tends to be laced with assumptions and presuppositions, probabilities and possibilities, postulates and premises, hypotheses and theorems. In such speech data plays only a supportive and secondary role, as does the merely factual. It is this feature of their language—their disinterest in dative and factual information—that sets NTs farther away from their concrete cousins, the SPs, and their concrete opposites, the SJs. Hegel, the most arrogant of the German philosophers, is credited with (and condemned by some for) saying "if the facts do not comport with my theory, so much the worse for the facts." Facts, say the NTs, cannot speak for themselves, but must be spoken for by those conversant with and observant of the canons of logic.

Above all else Rationals want to be coherent in their arguments, and so they try to make certain that each phrase and clause advances the argument, introducing nothing that doesn't logically belong, and leaving out nothing that is logically required. This style produces carefully crafted communications, NTs tending to qualify their statements with modifiers such as 'likely,' 'probably,' 'usually,' 'occasionally,' and 'in some degree.' Note how concerned the great anthropologist James Frazer is with the accuracy of his statements in *The Golden Bough*, and how he qualifies almost everything he says, as if he cannot allow himself to overstate his case:

Now that the theory, which necessarily presented itself to me at first in outline, has been worked out in detail, I cannot but feel that in some places I may have pushed it too far. If this should prove to have been the case, I will readily acknowledge and retract my error as soon as it is brought home to me. Meantime my essay may serve its purpose as a first attempt to solve a difficult problem, and to bring a variety of scattered facts into some sort of order and system.

RATIONALS can also become highly technical in their vocabulary. Not only will they use an extensive, erudite vocabulary (the speech of William F. Buckley, Jr., is a good example), but NTs in emerging scientific or technological fields will often develop their own high-tech terminology to talk about their theories and inventions—thus the computerese of the 1980s with its esoteric vocabulary of 'RAM,' 'ROM,' 'bits,' 'bytes,' and so on.

The opposite of high-tech speech is small talk, a way of communicating in which Rationals are notoriously disinterested. In Shaw's play *Pygmalion*, Professor Higgins' mother has learned not to let her famous NT son meet her high society friends:

*Mrs. Higgins:* ...I'm serious, Henry. You offend all my friends: they stop coming whenever they meet you.

*Higgins:* Nonsense! I know I have no small talk; but people don't mind.

*Mrs. Higgins:* Oh! Don't they? Small talk indeed! What about your large talk?...Henry: you are the life of the Royal Society [of Science]; but really you're rather trying on more commonplace occasions.

Rationals prefer to appear unemotional when they communicate (and they can seem rather stiff), trying to minimize body-language, facial expression, and other non-verbal qualifiers as much as possible. But when they become animated their characteristic hand gestures express their need for precision and control. NTs will make one or both hands into claws or talons, as if to seize the idea they are discussing. They will also bend their fingers and grasp the space in front of them, turning and shaping their ideas in the air. They will use their fingers like a calculator, ticking off point after point, and they will take small objects at hand (salt and pepper shakers, pens and paper weights) and arrange them on a table or desk to help map out their ideas. But perhaps the most telling gesture of all is the opposition of the thumb against the finger tips, as if the NT is bringing an idea or an argument to the finest possible point and is savoring the precision.

### Utilitarian Tool Usage

Rationals are utilitarian in going after what they want, which means that they consider the usefulness of their tools as more important than their social acceptability—whether they should be used, are moral, are legal, are legitimate. Not that Rationals prefer to be immoral, illegal, or illegitimate in their tool usage. They do not refuse to cooperate with their social groups, but like their utilitarian cousins, the Artisans, they see pleasing others and obeying rules as secondary considerations, coming only after they have determined how well their intended means will work in achieving their ends. However, it must be emphasized that the Artisan's concrete utility is different from the Rational's abstract utility. Where SPs are interested in effective operations, NTs are interested in efficient operations. If a given operation promises to be too costly for the results it gets, that is,

efficient though effective, the NT will look for operations that are likely to take less effort to get the same result.

If not socially or politically correct, neither are Rationals at all snobbish in their utilitarianism. Indeed, they will listen to anybody who has something useful to offer regarding their choice of ways and means, but they will also disregard anyone who does not. Status, prestige, authority, degree, licence, credential, badge of office, reputation, manners—all of these marks of social approval mean nothing to the NTs when the issue is the utility of goal-directed action. They will heed the demons if their ideas are fruitful, and ignore the saints if theirs are not. Niccolò Machiavelli acquired his knowledge of statecraft by studying many effective means of taking and holding power: "With the utmost diligence I have long pondered and scrutinized the actions of the great," he wrote in *The Prince*, and by "the great" he meant any successful ruler, from the trusted Moses to the treacherous Cesare Borgia. The design of efficient action toward well-defined goals is no place for incompetents, even nice ones.

Rationals are wont to think of themselves as the prime movers who must pit their utilitarian ways and means against custom and tradition, in an endless struggle to bring efficiency and goal-directedness to enterprise, in an attitude regarded by many as arrogant. But if this be arrogance, then at least it is not vanity, and without question it has driven Rationals to engineer the technology upon which civilization is based.

## The Strategic Intellect

Strategy has to do with identifying the ways and means necessary and sufficient to achieve a well-defined goal. But not just any goal is of interest to Rationals; invariably the goal that Rationals set for themselves is increasing the efficiency of systems.

Some Rationals concern themselves mainly with social systems, like families and companies, while others are concerned with organic systems, like plants and animals, and still others with mechanical systems, like computers and aircraft and automobiles. But no matter what system they're working with, NTs want to increase the efficient operation of that system. Other sorts of objectives are of considerably less interest and so are given little effort. The way Rationals reach their objective of maximizing efficiency in systems is by analyzing systems in search of inefficiency, which is to say, they look for error in the order or in the organization of systems. Indeed, perhaps the most important thing to understand about the strategic intellect is that it is activated by errors found in complex systems. In other words, Rationals are ever on the lookout for systemic problems and are intent on solving them. They're problem solvers, one and all.

The concept of systems was understood and used by only a handful of behavioral and physical scientists during the first half of the 20th century. Then at mid-century Norbert Wiener wrote his seminal work on what he



called "cybernetics," meaning by that term network ('netics') governance ('cyber'), that is, network control. He made his concept of cybernetics intelligible to those not conversant with systems theory by borrowing the term 'feedback' from radio technology and using it as a metaphor for circular processes in systems. Magorah Maruyama would later say that feedback in systems is a matter of "mutually causal processes," thus distinguishing sharply between linear and circular causality. Causality, in the view of systems theorists, is always relative to the conditions surrounding an event, as the "necessary and sufficient conditions for the occurrence of an event." Rationals, never really having much use for the notion of linear causality, now embraced circular causality with enthusiasm and undertook the construction and reconstruction of complex systems with renewed vigor.

### Order and Organization

Unity in systems is a two sided matter. On the one hand there is the unity of order, while on the other hand there is the unity of organization. Order and organization are different from each other: order is concerned with what follows what, organization with what is simultaneous with what. Those Rationals interested primarily in order I call the "Coordinators" and those primarily interested in organization I call the "Engineers." Before we consider what the Coordinators and Engineers do, let us study for a moment the distinction between their different objectives, the one in search of disorder in systems, the other in search of disorganization in systems.

Order, first of all, has two forms, one having to do with above-and-below, and the other with before-and-after. Some things are of higher order than others. For example, a colonel in the army has higher rank than a major, a major higher than a captain, a captain higher than a lieutenant and so on down the ranks to the buck private. Lower ranks are said to be subordinate to higher ranks, being as they are of lower order. This kind of order is hierarchical and is usually referred to as "rank order."

The other kind of order can be called "serial order." For instance, certain technical procedures require a series of actions that must follow in a very specific order. Take firing a single action revolver. First load it, then cock the hammer, then pull the trigger. Reversing this order will not do. Of course the kind of series that interests Rationals is a bit more complex than firing a gun. The preparations for the invasion of Europe in World War II is an example of extreme complexity involving hundreds of planners over a period of years, any error in the sequencing of operations fraught with peril and inviting disaster.

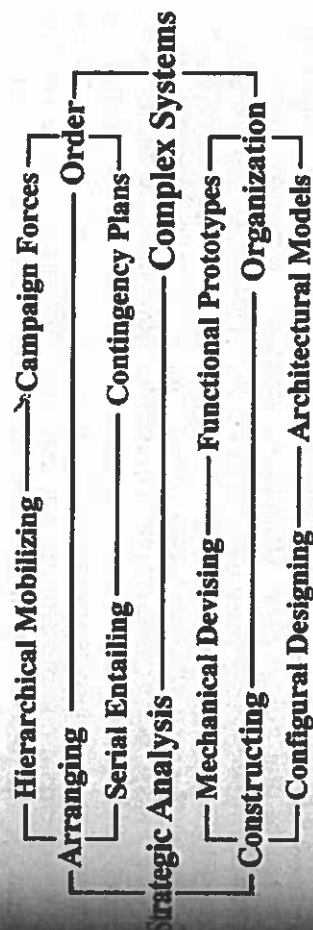
Organization, on the other hand, has to do with either devising (and revising) or configuring (and reconfiguring) complex systems that are composed of parts, not ranks or steps. Where the ranks or steps of an ordinal system are separate from each other, the parts of an organizational system are connected organically to each other, such that what happens anywhere in the system reverberates throughout the system. Thus organizations, of

whatever kind, are said to be integrated, every part being present to every other part of that system.

Now, Coordinators do the work of what might be called "arranging." Arranging is the act of determining the various levels of rank (in other words, hierarchy, layers, echelons) or the consecutive steps (sequence, series, succession) that are required to achieve long range objectives. Hierarchical arrangement enables the mobilizing of field forces in conducting campaigns. Serial arrangement, in contrast, enables the entailing of contingencies in a plan of action.

For their part, Engineers do the work of constructing. Constructing is the act of determining what the parts of a system are supposed to do (its mechanism) or what parts of a system are required for it to work (its configuration). Mechanical constructing involves building functional, working prototypes, while configurational constructing involves making detailed two-dimensional blueprints and three-dimensional models. Both kinds of construction are undertaken to determine what structures are necessary and sufficient for the system to do its work most efficiently.

To summarize: Arrangement works to reduce disorder in systems, the two forms of it being the mobilizing of campaign forces and the entailing of contingency plans. Construction, in contrast, works to reduce disorganization in systems, the two forms of it being the devising of prototypes and the designing of models. To help visualize the relationship between these many concepts of strategic operations, consider the following diagram:



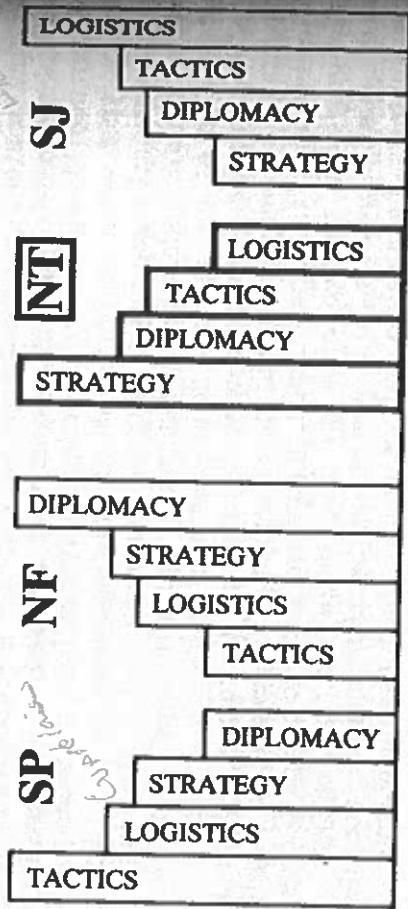
### Interest, Practice, Skill

Any skill is acquired by practice, increasing precisely in the degree it is exercised, and diminishing in the degree it is neglected. Neural cells are like muscle cells; if they aren't used they lie dormant and even degenerate.

Moreover, there is reciprocity between interest and skill, which means that we practice and so improve in doing things we're interested in, and are interested in things we practice and improve in. Interest reinforces skill, skill reinforces interest, in a feedback relationship. So the Rationals' lifelong interest in strategic operations—both arranging and constructing—fuels their daily exercise of such operations, and as strategic skills

NT is, coordinating operations, and the other side having to do with the organization of things, or engineering operations. Thus Rationals naturally at their minds to mastering the roles of Coordinator or Engineer, and these enable them to play four strategic role variants, what I call the "Fieldmarshal" (ENTJ), the "Mastermind" (INTJ), the "Inventor" (ENTP), and the "Architect" (INTP)—all Rational to the core, but decidedly singular in their rationality. Let us examine the strategic roles that Rationals are temperamentally inclined to take.

The diagram below indicates the symmetry between the strategic roles and role variants, and systemic work. Those Rationals who develop their strategic intelligence to a high degree tend to gravitate to work with systems and to be preoccupied with the technology involved in such work. Note on the right side that work with systems involves both arranging and constructing; that arrangement is concerned with either mobilizing forces or entailing contingencies; and that construction is concerned with either devising prototypes or designing models.



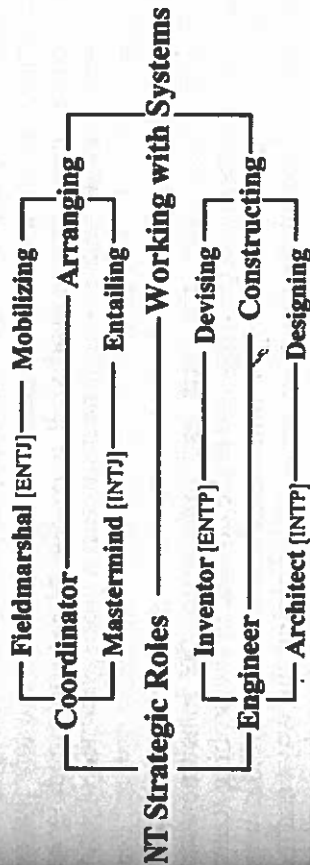
Notice in the graph above that logistics in the case of the NT profile falls far short of strategy. Note also that diplomatic and tactical skills lag behind strategic skills but outdo logistical skills, owing to the middling amount of practice usually given them as second and third suits. Another glance at the bar graph will suggest that, although NTs and SJs are opposites in the way they tend to use words and tools, they are likely to be equal in the extent they develop their diplomatic and tactical skills. Why? Rationals, like Idealists, are abstract in word usage and do considerable introspection, so it is not difficult for them to identify with others and to talk in a diplomatic way. As for tactics, Rationals share with Artisans a utilitarian way of selecting and using tools, so they, given enough practice, can get very good at making the right moves when in the field of action. On the other side, Guardians share cooperative implementation with Idealists and concrete communication with Artisans, so they can match with Rationals in both diplomacy and tactics.

### Strategic Role Variants

Rationals all have strategic intelligence in common, but they differ sharply among themselves in the kinds of strategic operations they choose to practice. The two sides of strategy explained above mark the first division, with one side having to do with the order in which things are to be done,

Fieldmarshal [ENTJ], the "Mastermind" [INTJ], the "Inventor" [ENTP], and the "Architect" [INTP]—all Rational to the core, but decidedly singular in their rationality. Let us examine the strategic roles that Rationals are temperamentally inclined to take.

The diagram below indicates the symmetry between the strategic roles and role variants, and systemic work. Those Rationals who develop their strategic intelligence to a high degree tend to gravitate to work with systems and to be preoccupied with the technology involved in such work. Note on the right side that work with systems involves both arranging and constructing; that arrangement is concerned with either mobilizing forces or entailing contingencies; and that construction is concerned with either devising prototypes or designing models.



### Strategic Coordinators

Those Rationals who are quick to judge and to make schedules are eager to take the part of Coordinator. Coordinators determine who is to do what at a given time and place, and this role requires a directive character. Coordinators steadily increase in directiveness as they mature, such that they easily and comfortably command others and expect to be obeyed. Indeed, Coordinators are surprised by any resistance to their directives, because it is so clear to them that others do not know what to do, presumably because their goal is unclear or absent, and because they apparently have no strategy in mind by which to proceed. So, in the view of the Coordinator, most people are operating blindly and going around in circles, plainly in need of direction.

Fieldmarshals arrange a well-ordered hierarchy that makes possible the chain of command and the mobilizing of forces. In their campaigns these expressive, energetic Coordinators commandeer whatever human capabilities and material resources are available and use them to execute a complex strategy, such as was done by Napoleon in his twenty years of

campaigning in Europe, by Grant at Vicksburg and Chattanooga, by Sherman in his "scorched earth" march from Atlanta to Savannah, by Eisenhower at the beachheads of the Normandy invasion and the conquest of Germany, and by MacArthur in his Pacific island hopping, his reconstruction of Japan, and his Inchon landing. I hasten to add that although military campaigns are the most publicized, they are by no means the most common form of mobilized operation. Any kind of undertaking, whether commercial, educational, political, or military—whatever—can be arranged hierarchically, indeed must be if success is to be achieved, and the more efficient the hierarchy, the greater the success.

**Masterminds** arrange things in coherent and comprehensive sequential order, that is, they coordinate operations by making efficient schedules with each item entailing the next, as a necessary precursor or consequence. Moreover, Masterminds make contingency plans for keeping their schedules on track. If plan A is in jeopardy or is aborted, switch to plan B. If that doesn't work, then plan C. Often working behind the scenes, these quiet reserved Coordinators are able to anticipate nearly everything that can go awry and generate alternatives that are likely to avoid the fate that might befall the first operation. And so it goes, the Mastermind ending with a flow chart of alternate ways and means to reach clearly defined objectives.

**Strategic Engineers**

Engineers structure the form and function of the instruments to be employed in pursuing objectives, and is the domain of the probing Rationals, those who prefer to keep their options open and to follow an idea where it leads them. Concentrated as they are on determining the ways and means of operation, Engineers tend to have an informative rather than a directive character, which is to say that they are usually eager to provide information and reports regarding what they are currently engineering, but not at all eager to tell others what to do.

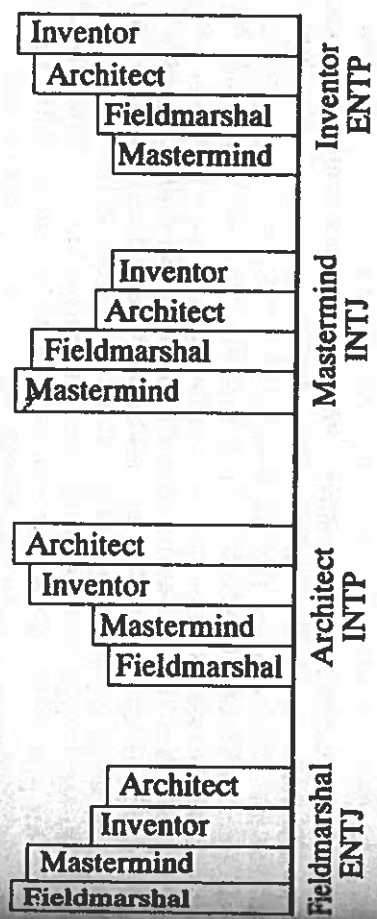
**Inventors** develop their skill in devising prototypes more than their skill in designing models. To these outgoing Engineers, functionality is the objective, as in the case of Nikola Tesla, the gifted inventor of the split-phase electric motor, the giant coil, alternating current, the radio, the inert gas light bulb, and countless other ingenious devices. Inventors must make sure their prototypes don't just make sense on paper, but work in the real world, or else face the consequences. Consider the international airport at Denver, Colorado, completed in early 1994. Doubtless the construction of the airport was coordinated well enough, but the devising of the automated baggage transport apparatus was flawed, delaying the opening of the airport for nearly a year. Whoever engineered it apparently was insufficiently skilled for the level of complexity involved.

**Architects** make structural plans, models, blueprints. To these reserved Engineers, often working alone at their desks, drafting tables, and computers, the coherence of their designs is what counts, the elegance of their config-

urations, be they plans for a building, an experiment, a curriculum, or a weapon of war. Howard Hughes, for example, designed a wonderfully versatile fighter aircraft in the late thirties. He offered his design to the United States, then to Britain and other European nations, all of which turned him down. But Japan bought the plans, and when the plane came to be built and used in the Pacific theater, it turned out to be the marvelous Zero, for which the allied fighters, the Curtiss P40, Brewster Buffalo, and Grumman Wildcat, were no match. And Hughes's racer, and much later, his giant seaplane, the "Spruce Goose," were like the Zero ingeniously designed, at least in the eyes of aviators.

**Comparing the Strategic Role Variants**

Every Rational plays these four roles well, but not equally well. Rationals differ from one another in the structure of their intellect, that is, their profile of strategic roles. Some Coordinators are better as Fieldmarshals, getting campaigns on track and moving, others as Masterminds, formulating a plan of operations; and even though campaigning is not contingency planning, these coordinating operations are interdependent, and so can never be found far apart. Similarly, some Engineers are better as Inventors of functional prototypes, others as Architects of structural designs, even though the two skills are often side-by-side, with Inventors drawing plans and Architects building working models of their designs. Consider the following chart of the four strategic role variant profiles:



Note that in the most likely development of their strategic capabilities the Fieldmarshals (ENTJs) are the mirror image of the Architects (INTPs), as are the Masterminds (INTJs) of the Inventors (ENTPs). Thus Fieldmarshals are usually better able to mobilize forces to achieve a goal than to make structural configurations. The reverse holds for the Architects, who are better at designing efficient models than marshalling efficient campaigns. Just so, the Masterminds are better able to do the exacting research required to make contingency plans than to engage in technological invention. And last, the Inventors are the best of all in devising ingenious prototypes,



though not the best at detailing a strategic plan. Still, even with their long and short suits, Rationals will tend to practice, and thus will develop, any one of these four strategic operations well above those tactical, logistical, or diplomatic operations developed by the other temperaments. (Portraits of the four variants of the Rational type can be found at the end of this chapter, beginning on page 196.)

## The Interests of Rationals

Everybody has interests, but not everybody has the same interests. Moreover, our interests are reciprocal with our abilities, so that we are interested in doing what we do well, and tend to do well in what we are interested in doing. The interests of Rationals are diametrically opposite of those of Guardians and quite different from those of Artisans and Idealists. It may help to juxtapose the interests of all four types so that comparisons can be easily made:

Interests	Rationals	Artisans	Guardians	Idealists
Education	Sciences	Artcrafts	Commerce	Humanities
Preoccupation	Technology	Techniques	Morality	Morale
Vocation	Systems	Equipment	Materiel	Personnel

At school Rationals typically choose courses in the sciences (and mathematics) and avoid the humanities and commerce. Some will try arts and crafts owing to their utilitarian way with tools, but they only rarely stay with a given art or craft long enough to develop saleable skills in it. While preoccupied with technology from an early age, NTs are rarely interested in morality, and only slightly interested in morale building. On the other hand, they will work hard in adding new techniques to their collection, but they are not as consumed by this as they are by mastering technology. In career choice, it is best that they work with systems and not materiel, tools, or personnel. We will understand the Rationals better if we look carefully at their interests in science, technology, and systems.

### Educational Interest in the Sciences

It is hard to get Rationals in school to study information that does not pertain to one of the sciences, and even harder to get them to practice clerical or maintenance operations. Long ago Rationals were the tribal sorcerers, attempting to bend nature to their will; later, in medieval times, they were the alchemists seeking the philosopher's stone. Today, the largely clerical curriculum in most elementary and secondary schools is boring to NTs, simply because the curriculum is wrong for them. What arouses their inherent curiosity is the work of science—logical investigation, critical experimentation, mathematical description—and it can engage and absorb

them in lifelong study. Rationals do not have the function-lust of the Artisans so much as a lust to discover natural law, that is, an indomitable drive to find in nature what Francis Bacon thought of as

those laws and determinations of absolute actuality, which govern and constitute any simple nature....Of a given nature to discover the [fixed law]...is the work and aim of Human Knowledge...and the investigation, discovery, and explanation of it is the foundation as well of knowledge as of operation.

The Rationals' desire to know how nature works never really ends for them. Even when in their nineties, if fortunate enough to reach them, NTs are still studying their books, still observing the world's patterns, still designing their experiments, still learning what there is to learn about whatever sciences captured their attention and interest in youth.

### Preoccupied with Technology

Rationals are preoccupied with technology, and continue to be preoccupied with it all their lives. Technology is related to technique, something that Artisans are preoccupied with—to be sure, both words stem from the Indo-European root 'tekt,' with some of its more important derivatives being 'architect,' 'technical,' 'tectonics,' and 'text' (as in 'context,' 'pretext,' 'textile,' and 'texture'). All of these terms have something to do with build, structure, fabric, form, configuration, and the like. In the word 'technology,' however, the suffix, 'logy' modifies the stem 'techno' so as to make it an abstract word meaning "the logic of building." Compare this with the Artisan's 'technique' which means "skill in building." The abstract logic and the concrete skill are thus fundamentally different, indeed, so different that Rationals and Artisans usually end up going down totally different paths in life.

Two widely different pioneers in electricity, Nikola Tesla and Thomas Edison, were both Rationals, and both preoccupied with technology all their lives, although Tesla was more interested in prototyping and Edison in product development. Then there was Abraham Lincoln, one of our eight Rational Presidents, who constantly tinkered with mechanical objects, (including his son's toys, which he occasionally wrecked in the process), and who had an invention registered in the U. S. Patent Office. Then, when the Civil War erupted, Lincoln gathered information on how to conduct military campaigns, and he took special pleasure in trying out new weapons in the course of examining the latest technology of warfare. Another of our Rational Presidents, Thomas Jefferson, was more preoccupied than most others of his time with the technological aspects of 18th century science—astronomy, botany, optics, zoology, and more—keeping up with them to his dying day.

**Vocational Interest in Systems**

Rationals are intrigued by machines and by organisms, the two kinds of systemic entities. Organisms are the province of anthropologists, biologists, ethologists, psychologists, and sociologists; machines, the province of engineers of any kind. Organismic systems are self-regulating and self-developing, while mechanical systems are regulated by servo-mechanisms developed by engineers. Of course, any organism, whether plant or animal, is infinitely more complex than any machine. Even a sub-system, the mammalian eye for instance, is vastly more complex than the most modern airport, a giant machine itself with countless sub-assemblies. But whatever the level of complexity, it is complexity itself that intrigues NTs and therefore beckons them to take up systems-work, whether organismic or mechanical. Indeed, if some Rationals do systems-work in an organismic domain as their vocation, biology for example, those same Rationals will sooner or later get into mechanical systems as an avocation. And the reverse holds true, with many physicists in their later years getting into anthropology, biology, or psychology, Schrödinger, for example, writing *What is Life?* or Capra *The Tao of Physics*.

**The Orientation of Rationals**

We are born into a social field and live out our lives in that field. Our periods of disorientation, owing to shock, danger, or surprise, are usually short-lived, after which we quickly reorient ourselves and come back to our ordinary waking social frame of reference. After all, we humans are the most social of all the animals, our intense sociability ending in massive and complex societies, and it is our choice of social membership groups that creates our life-long frame of reference. Whatever we think or feel, say or do, occurs, indeed must occur, in the iron crucible of social reality. Each act and attitude is shaped and governed by a prevailing outlook, perspective, or point of view determined by our social matrix. We are oriented always from a certain angle, a standpoint, something Adickes spoke of as our built-in "*Weltanschauung*" or "worldview."

But different personalities have different perspectives, viewing time and place as well as past, present, and future, differently. Consider the following chart in making these comparisons:

Orientation	Rationals	Artisans	Guardians	Idealists
Present	Pragmatic	Hedonistic	Stoical	Altruistic
Future	Skeptical	Optimistic	Pessimistic	Credulous
Past	Relativistic	Cynical	Fatalistic	Mystical
Place	Intersections	Here	Gateways	Pathways
Time	Intervals	Now	Yesterday	Tomorrow

Here it is claimed that Rationals are pragmatic about the present, skeptical about the future, relativistic about the past, their preferred place is at the intersections of interaction, and their preferred time is the interval. How different from the other temperaments in the way they view these things. So let us look closely at these five dimensions of orientation so that we will not be surprised when our Rationals friends prove, in their insistent pragmatism, to be less hedonistic, for example, or less altruistic, or less stoical than we are.

**Pragmatic in Looking Around**

All of the different types of personality have a different way of viewing the world around them. For Artisans, the prevailing perspective is hedonistic, which means that they look for pleasurable actions in the here and now. Guardians are stoical in perspective, requiring themselves to bear up under the burdens of life and to keep an eye on the current needs and responsibilities of others. And Idealists are altruistic in this matter, always concerned with giving of themselves to those they care about.

The perspective of the Rationals is like none of these. The Rationals instead construe their immediate surroundings from a pragmatic perspective. Pragmatism consists in having one eye on what John Dewey called "the relationship between means and ends," and the other eye on what William James called "the practical consequences" of achieving one's ends. Now, one of the most important things to know about the Rationals is that they are pragmatic to the core, and so must look to the efficiency of their means and must anticipate the practical consequences of their intended actions before they act. Thus they go for what might be called "mini-max" solutions, those that bring about maximum results for minimum effort. Minimum effort, not because they are lazy—this they could never be—but because wasted effort bothers them so much. To NTs, the other types, the SPs, SJs, and NFs, seem relatively unclear about ends, and all but incapable of coming up with effective means, so they feel it incumbent upon themselves to select if available, or to devise if not, the most efficient tools, materials, and actions possible to make sure that the goal is reached. Efficiency is always the issue with Rationals. They are efficiency-mongers at all times, everywhere they go, no matter what they do, no matter with whom they interact.

Rationals regard social custom neither respectfully nor sentimentally, but, again, pragmatically, as something useful for deciphering the lessons of history, and thus for avoiding errors. (NTs heed the warning that "Those who are ignorant of the lessons of history are doomed to repeat them," and they have a horror of repeating an error.) All too often, however, Rationals and that the actions of others are based on mere prejudice or convention, both of which they brush aside, unless some use can be found for them. Even when they take part in the customary or the conventional, Rationals tend to do so somewhat halfheartedly, and never seem to learn to do such

things as a matter of habit. Since NTs are naturally disinterested in tradition and custom, it should be no surprise that they readily abandon the customary for the workable.

Unfortunately, other types, especially Guardians and Idealists, believe that everyone should observe—and respect—social conventions, and so are likely to believe that Rationals are uncaring, and this can lead to interpersonal problems. Rationals, though seemingly indifferent to convention in their single-minded pursuit of pragmatic ways and means, are just as caring as others, but are reluctant to communicate such feelings.

### Skeptical in Looking Ahead

In their anticipation of things to come Artisans are optimistic, expecting to get the breaks, Guardians are pessimistic, expecting pitfalls, and Idealists are credulous, expecting the best of people. Rationals are strikingly different in their anticipations: they are skeptical, and thus expect all human endeavors, even their own, to be shot through with error. To an NT, nothing can be assumed to be correct; all is uncertain and vulnerable to mistakes—all evidence of the senses, all procedures and products, means and ends, observations and inferences—and thus all must be doubted. That's what skepticism is, an attitude of doubt about whether appearances or beliefs are to be trusted. René Descartes, that quintessential seventeenth century Rational mathematician and philosopher, began his *Meditations concerning First Philosophy* by arguing for the rational necessity of Universal Doubt:

Since reason already convinces me that I should abstain from the belief in things which are not entirely certain and indubitable no less carefully than from the belief in those which appear to me to be manifestly false, it will be enough to make me reject them all if I can find in each some ground for doubt.

One must doubt, says the Rational, for error ever lurks in what appears true just as much as what appears false. Best therefore to take a long and careful look at any proposed method or objective, otherwise those inevitable errors of order or organization are likely to go undetected. The only thing that cannot be doubted is the act of rational doubt, and this first principle Descartes expressed in his famous formula: "I think, therefore I am. Of nothing else can I be certain."

If not born skeptical, Rationals soon become so, having their doubts about almost everything proposed either to them or by them. If looking for solutions is the engine of research and development, looking for errors in coordinating or engineering is its brake. Too often what appears to be the way to go ends up in a box canyon with no way out except back to the entry. Not that one can or should put a solution to all possible tests before a prototype is built. That of course is impossible. But the new solution will be flawed in many ways, that's for sure, no matter how careful its creator.

Rationals know this, and that's why they consider their skepticism as a useful and even necessary attitude.

### Relativistic in Looking Back

The different temperaments have different ways of looking back, of reflecting on past events, of coming to terms with things that have transpired, especially those things that did not turn out well. Guardians are usually fatalistic about their troubles, Idealists mystical, Artisans cynical. But Rationals, while at times they might use any of these other ways of rationalizing the past, are far more often relativistic in their hindsight. To Rationals, events aren't of themselves good or bad, favorable or unfavorable. It's all in the way one looks at things, they say—all is relative to one's frame of reference. Reality, like truth and beauty, is in the eye of the beholder, or so the Rational phenomenologists Husserl, Sartre, and Merleau-Ponty tell us in their poetic manner. And bear in mind that Einstein, on presenting his theory of relativity, saw the real as subjective—"Reality," he said, "is a joint phenomenon of the observer and the observed."

Such a relativistic way of dealing with setbacks also gives Rationals a slipshod view of the world. Rationals believe that others, even those who are about us, cannot really share our consciousness, cannot know our minds, cannot feel our desires and emotions, much as they might wish to. Each of us is alone in an envelope of consciousness, marooned, as it were, on the earth as its sole inhabitant. There is no way to contact directly some independent reality, what Kant called the "thing-in-itself." All is subjective; we live in our mind's eye and can only imagine the world about us. All is relative to our point-of-view; we make up our world and only then find it outside of us. "Physical concepts," Einstein reminds us, "are free creations of the human mind and are not, however it may seem, uniquely determined by the external world."

### The Place is the Intersection

Rationals do not view places as simply positioned in space. With their eye always on relations between things, Rationals structure space as if making a map or plotting a graph—as a two-dimensional network, with an "x" and a "y" axis—and they define a place as the junction of these two independent coordinates, the point at which these two lines cross each other. "I'll meet you at the corner of First and Main" is a common enough expression, indicating the spot at which two dimensions intersect, and to a Rational it is this intersection which defines the "place." Nor do they confine themselves to two dimensions, often adding a third, specifying "on the fifth floor," and to finish defining the event, they might add the fourth dimension (time): "at four P.M." Or look at any global model of the earth and you will see lines of latitude and longitude, and some modern maps add lines of altitude. It is in terms of such axes or crossing lines that the Rationals look at spaces and places.



Now consider the matrix, or more recently, the spread sheet of the computer, with its row and column factors, and with the intersection of rows and columns—cells—resulting in a systematic array of combinations. Such coordinate tables speak powerfully to Rationals, since they enable them to stay on target and to produce accurate distinctions. With such an orientation the Rational has little time and no interest in other spatial orientations, such as the Artisan's centers, the Guardian's gateways, and the Idealists' pathways. It is this attitude about spaces and places that is probably more puzzling to other kinds of character than any other of the Rational's strange ways of construing reality.

### The Time is the Interval

The other types tend to view time as a line or a stream running from yesterday (the focus of the Guardians), through the now (the focus of the Artisans), and into tomorrow (the focus of the Idealists). But not so the Rationals. For them time exists not as a continuous line, but as an interval, a segment confined to and defined by an event. Only events possess time, all else is timeless. For example, Dagny Taggart, Ayn Rand's Rational heroine in *Atlas Shrugged*, is aware of time only in relation to the task at hand—in this case, getting her small airplane aloft:

Then she climbed aboard—and the next span of her consciousness was not separate moments and movements, but the sweep of a single motion and a single unit of time, a progression forming one entity, like the notes of a piece of music: from the touch of her hand on the starter—to the blast of the motor's sound that broke off, like a mountain rockslide, all contact with the time behind her—to the circling fall of a blade...—to the start for the runway—to the brief pause—then to the forward thrust—to the long, perilous run...that gathers power by spending it on a harder and harder and ever-accelerating effort...—to the moment, unnoticed, when the earth drops off...in the simple, natural act of rising.

In a sense, the focus of Rationals is outside of time as it is ordinarily understood, and it is in this sense that they can be considered atemporal. Rationals instinctively, if not deliberately, heed Einstein's dictum that events do not happen in time, rather that time is of events: "Every reference-body (coordinate system) has its own particular time; unless we are told the reference-body to which the statement of time refers, there is no meaning in a statement of the time of an event."

The Gestalt psychologists describe time similarly when they speak of "temporal configurations," in which the parts or movements of a whole are "contemporaneous." Thus a melody is composed of notes all of which belong to the same time, even though the last note comes well after the first note. The melody is not complete until the last note is sounded. This time for Rationals, like time for Gestaltists, is not fixed and flowing, but

relative and contingent, since it is created by events rather than being a medium in which events occur.

This concept that events are not mere points on a time-line, but create their own period of time, unfolding across their own temporal interval, might be difficult to understand, but it does explain why Rationals tend to be track of clock time, and can be oblivious to schedules, timetables, calendars, even changes from day to night, absorbed as they are in the unique time interval of whatever event they are considering.

## The Self-Image of Rationals

All of us have a concept of ourselves composed of things we believe about ourselves. Three aspects of our self-image, or "self-concept" as it is sometimes called, are of special importance in determining how well we regard ourselves: self-esteem, self-respect, and self-confidence. For all the types, including the Rationals, I think the self-image is a triangular matter, a three bases of self-regard affecting each other. Thus when our self-esteem increases, this increment tends to bolster our self-respect as well as our self-confidence. Likewise, as we gain in self-respect, it becomes less difficult for us to maintain our self-confidence and self-esteem.

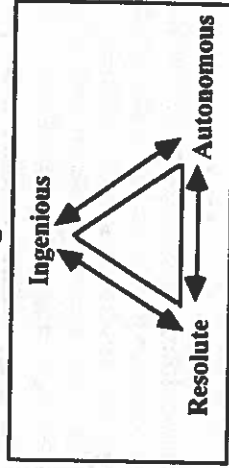
But different types of personality base their self-image on different things. Since having a good opinion of ourselves is one of the keys to our happiness, and often to our success, it is well that we pause for a moment to compare the four character types on this vital aspect of personality:

Self-Image	Rationals	Artisans	Guardians	Idealists
Self-Esteem	Ingenious	Artistic	Dependable	Empathic
Self-Respect	Autonomous	Audacious	Benevolent	Benevolent
Self-Confidence	Resolute	Adaptable	Respectable	Authentic

Note that Rationals, to feel good about themselves, must look upon themselves, and be seen by others, as ingenious, autonomous, and resolute, while feeling or appearing, say, dependable and beneficent, attributes so important to Guardians, contributes little to their sense of well-being.

If ingenuity, autonomy, and resolve are mutually reinforcing, then we are mutually reinforcing, then the self-image of the Rationals is triangular, with the three bases interdependent, as suggested by the figure on the side. But even if they are not interdependent, they still deserve individual attention, so that we can understand how Rationals are alike in

The Self-Image of Rationals



this regard and how they are so different from others in how they view themselves.

### Self-Esteem in Ingenuity

Rationals pride themselves on their ingenuity in accomplishing the many and varied tasks they set their minds to. Indeed, so important is ingenuity to the Rationals' self-esteem that artistry, dependability, and empathy, so important to the other character types, pale into insignificance for them. It doesn't matter whether the task be to design a machine or an experiment, to develop a theory or a long-range plan, to build a computer or a business. The degree of inventiveness which they bring to these tasks is the measure of their ingenuity and therefore the measure of their pride in themselves. Rationals aren't comfortable bragging on themselves, but listen as one of the engineers of the national information highway lets his NT pride show for a moment when he speaks of ingenuity:

You want to be the first to do something. You want to create something. You want to innovate something....I often think of Edison inventing the light bulb. That's what I want to do. I want to drive over the bridge coming out of New York there and look down on that sea of lights that is New Jersey and say, 'Hey, I did that!'

And yet Rationals do not confine their ingenuity to business or professional matters; they apply it to almost anything they set out to master. For example, Rationals play not so much to have fun but to exercise their ingenuity in acquiring game skills. Fun for NTs means figuring out how to get better at some skill, not merely exercising the skills they already have, and so for the Rational the field of play is invariably a laboratory for increasing their proficiency. In tennis or golf, for example, each game or round must be the occasion for pondering the physics of the most effective swing, and for trying out new strokes that seem to fit the paradigm.

Thus it is impossible for Rationals to play with the thoughtless abandon of Artisans. For the Artisans, playing is a free, impulsive activity, engaged in for the fun of it, with improved game skills coming as a result of the doing. Rationals are just the opposite, in that they mightily tax themselves with improving their skills during play, which makes improvement come rather slowly and with great difficulty. In this sense the Artisans are the Rationals' mirror image. Both can become absorbed in practicing their sport or game, but if the SP's practice is absorbing because it is free, unconscious doing, the NT's doing is absorbing, and less effective, because it is deliberate, conscious practice. If the Artisan is naturally impulsive and effortless in action, the Rational is naturally thoughtful and purposeful in action. If the Artisan cannot be induced to try, the Rational cannot be induced not to try.

Although it is too much to say Rationals are grim in their recreational

activities, they can be quite unhappy with themselves when they fail to eliminate errors. When an NT plays sports, or even cards and board games, there must be continuous improvement, with no backsliding. On the golf course or the tennis court, at the bridge table or the chess board, others may shrug off mistakes, but not Rationals. In other words, just as ingenuity is the NTs' pride, so lack of it is their shame, and when they see themselves slow or second-rate in any activity they are merciless in their self-condemnation, calling themselves "klutz," "idiot," "numbskull," "turkey," and other pejoratives. Such self-recriminations are not mere critiques of their performance, but are also likely to be scathing self-denunciations, with each term indicating the unforgivable crime of stupidity.

Rationals are easily the most self-critical of all the temperaments regarding their abilities, rooting out and condemning their errors quite ruthlessly. But others beware. NTs allow no one else to criticize them without warrant—and even with warrant, the critic is advised to be cautious and accurate. Just as NTs hold themselves to be precise, so they require those who remark on their errors to be precise as well, at the risk of learning the precise value they put upon such criticisms. And when unjustly or inaccurately criticized, Rationals burn with resentment and have even been known to fantasize about revenge, efficiently and poetically executed.

### Self-Respect in Autonomy

While ingenuity is the basis of Rational self-esteem, autonomy is the basis of their self-respect. As much as possible, at times even regardless of the consequences, Rationals desire to live according to their own laws, to see the world by their own lights, and they respect themselves in the degree that they act independently, free of all coercion. Individualists all, NTs resist any effort to impose arbitrary rules on them. Indeed, they prefer to ignore any law, regulation, or convention that does not make sense to them, though they are willing to obey those that do. Little wonder that the Declaration of Independence, the United States Constitution, and the Bill of Rights were largely the work of Rationals such as Thomas Jefferson, Benjamin Franklin, and James Madison.

Rationals want to govern themselves, and also to think for themselves. From an early age Rationals will not accept anyone else's ideas without first scrutinizing them for error. It doesn't matter whether the person is a widely accepted authority or not; the fact that a so-called "expert" proclaims something leaves the Rational indifferent. Title, reputation, and credentials do not matter. Ideas must stand on their own merits, and NTs simply do not trust anyone else to have done the necessary research and applied the rules of logic adequately. "I understand that Einstein said so," comments the Rational, "but even the best of us can err." This natural lack of respect for established authorities tends to make the Rationals seem irreverent, some might say arrogant.

Instinctively taking autonomy to be the greatest virtue, Rationals regard

dependence on others as the greatest vice. Whether or not they agree entirely with Ayn Rand's political and economic theories, Rationals are hard pressed, after careful consideration, not to join in her contempt for interpersonal dependency: "All that which proceeds from man's independence is good," she wrote in *The Fountainhead*, "All that which proceeds from man's dependence upon men is evil." Self-respecting Rationals want to be self-directed and self-determined, and their own occasional lapses into dependency is their only source of guilt.

**Self-Confidence in Resolution**

Rationals are self-confident in so far as they sense in themselves a strength of will or an unwavering resolution. NTs believe they can overcome any obstacle, dominate any field, conquer any enemy—even themselves—with the power of their resolve. In Charlotte Brontë's *Jane Eyre*, Rochester must will himself to live with the secret of Thornfield Hall:

He ground his teeth and was silent: he arrested his step and struck his boot against the hard ground. Some hated thought seemed to have him in its grip, and...to hold a quivering conflict...under his ebony brow. Wild was the wrestle which should be paramount; but another feeling rose and triumphed: something hard...self-willed and resolute: it settled his passion and petrified his countenance; he went on:— 'During the moment I was silent, Miss Eyre, I was arranging a point with my destiny.'

Once Rationals resolve to do something they have in a sense made a contract with themselves, a contract they dare not go back on. Indeed, their worst fear is that their determination might weaken, their will power might falter, and that they will fail in their resolve. Why is this? Why are NTs so fearful of their will power weakening? It is because they can never take will power for granted, however strong it has proved itself in the past. They know, perhaps better than others, that they are not in charge of their will, but that their will is in charge of them. Einstein was fond of quoting Schopenhauer's words: "Man can do what he wants, but he cannot will what he wills." Rationals know, for instance, that they cannot will themselves to control involuntary functions, such as speech, sexual desire, digestion, warding off infection, and so on. After all, the involuntary is by definition not subject to the will, but must occur spontaneously.

And yet, even though they know some things must happen of themselves, Rationals can dread this loss of control. This is why so many NTs turn out to develop unreasonable fears, especially of germs and other forms of filth, something they have no control over. The Rationals Mark Twain, Nikola Tesla, Howard Hughes, and Buckminster Fuller each developed disease phobias, some of them incapacitating, as in the case of Hughes. And speech is a special problem for the Rationals, who are the most likely of all the types to develop gestural tics when they try to take control of

their speech. Though it tends to impair their performance, strength of resolve is of such extreme importance to Rationals that, under stress, they have no choice but to invoke their will and try harder.

**The Values of Rationals**

The different kinds of personality differ in what they value. Thus they differ in their preferred mood, in what they put their trust in, in what they long for, in what they continuously seek, in what they prize most, and in what they aspire to. It is in the domain of values that Rationals separate themselves most clearly from the other types, and particularly from the Guardians. Where Guardians value being concerned, Rationals value being calm; where Guardians trust authority, Rationals trust reason; where Guardians yearn for belonging, Rationals yearn for achievement; where Guardians seek security, Rationals seek knowledge. And the contrast extends to what they prize and what they aspire to, Guardians gratitude and executive power, Rationals deference and wizardry. But NTs are also very different in their values from SPs and NFs, as shown in the following chart:

	Rationals	Artisans	Guardians	Idealists
Being	Calm	Excited	Concerned	Enthusiastic
Trusting	Reason	Impulse	Authority	Intuition
Learning	Achievement	Impact	Belonging	Romance
Seeking	Knowledge	Stimulation	Security	Identity
Prizing	Deference	Generosity	Gratitude	Recognition
Aspiring	Wizard	Virtuoso	Executive	Sage

These differences in values are so extreme that it will serve us to study six Rational values in some detail, lest we are surprised to find them, or, less generous, less authoritarian, or less enthusiastic than we are.

**Being Calm**

The preferred mood of Rationals, as Galen suggested, is one of calm. This is particularly true in stressful situations, when things around them are in turmoil, as C.S. Forester's Horatio Hornblower discovers in a moment of crisis, after having set fire to the enemy ship which held him captive:

A side pane fell in as they watched, and a rush of flame came through the opening. That store of paint, Hornblower calculated—he was calmer now, with a calm that would astonish him later, when he came to look back on it—must be immediately under the cabin, and blazing fiercely.

Artisans like to be excited, Guardians are likely to get concerned about their responsibilities, and Idealists give their enthusiasm free rein, Rationals prefer to remain calm, cool, and collected. And if they cannot avoid these



emotional states, they will try hard to avoid letting their concern, excitement, or enthusiasm show. SPs, SJs, and NFs are puzzled more by this seeming unflappability in trying circumstances than by any other trait of the NT character. Indeed, because they are reluctant to express emotions or desires, NTs are often criticized for being unfeeling and cold. However, what is taken for indifference is not indifference at all, but the thoughtful, absorbed concentration of the contemplative investigator. Just as effective investigators carefully hold their feelings in check and gauge their actions so that they do not disturb their inquiry or contaminate their results, so Rationals are prone to examine and control themselves in the same deliberate manner, being careful to avoid reading their own desires, emotions, and expectations into their observations.

But make no mistake, although they hold back on any intemperate displays, Rationals are not the cold and distant persons they are often made out to be. For one thing they can get quite intense and pressured about matters under their control (and few things will they admit they cannot control), becoming as tight as a bowstring when they think they might be able to solve a problem if they put their mind to it. For another, being closet romantics, their feelings are just as varied and strong as those of other character types, though again, and more than others, Rationals tend to hold them tightly in check.

### Trusting Reason

The only thing Rationals trust unconditionally is reason—all else they trust only under certain conditions. Thus they trust their intuition only now and then, their impulses even less often, and they completely distrust titular authority. Of all these only reason, NTs say, is universal and timeless, and only its laws beyond dispute. Thus Rationals take it for granted that “if men would but reason together,” even the most difficult of problems might be solved. When the Rational Thomas Jefferson wrote the charter for the University of Virginia, he insisted that here education “will be based upon the illimitable freedom of the human mind, for here we are not afraid to follow truth wherever it may lead, nor tolerate error so long as reason is left free to combat it.”

Jefferson’s vision was of a free competition of ideas, unfettered by convention or tradition, an inquiry limited only by the scope of the human mind and the laws of reason. In this he was a typical Rational. More than the other temperaments, NTs listen carefully to new ideas as long as they make sense—as long as they are logical. But they have little or no patience for ideas that don’t make sense, and they will not be swayed by any argument that fails to meet their criterion of logical coherence.

### Yearning for Achievement

One of the most important things to remember about Rationals, if they are to be understood, is that they yearn for achievement. Some might

suppose that these seemingly calm and contemplative types have no strong desires. But beneath the calm exterior is a gnawing hunger to achieve whatever goals they set for themselves. While NTs prefer to acquire know-how, and would like to be ingenious, they must achieve, and their longing is never fully satisfied.

Because their hunger for achievement presses them constantly, Rationals live through their work. For them, work is work and play is work. Condemning an NT to idleness would be the worst sort of punishment. However, Rationals work not so much for the pleasure of action (like the Artisans), nor for the security a job provides (like the Guardians), nor for the joy of helping others (like the Idealists). Rationals work with a single-minded desire to achieve their objectives; indeed, once involved in a project, they tend to be reluctant, if not unable, to limit their commitment of time and energy. Unfortunately, at this point they can be unreasonably demanding of both themselves and others, setting their standards too high and becoming quite tense under stress. No wonder that NTs frequently achieve notable success in their chosen field.

Achievement eats at NTs in this way because it demands of them ever greater knowledge and skill, a challenge they eagerly accept, as Sinclair Lewis explains in *Arrowsmith*, his novel about a gifted young scientist:

There was no strength,....no knowledge, that Arrowsmith did not covet, when consciousness of it has pierced through the layers of his absorption. If he was but little greedy for possessions, he was hungry for every skill.

Thus, and because of their persistence, Rationals tend over their lifetimes to collect a large repertoire of skilled actions, few of which they employ very extensively. In this they are quite unlike the Artisans, who also become skillful. For the SPs, skills are opportunities for action and have no meaning if they are not used, while for the NTs skills are competencies to be sharpened through practice, then held in reserve until actually needed.

Rationals demand so much achievement from themselves that they often have trouble measuring up to their own standards. NTs typically believe that what they do is not good enough, and are frequently haunted by a sense of teetering on the edge of failure. This time their achievement will not be adequate. This time their skill will not be great enough. This time, in all probability, failure is at hand.

Making matters worse, Rationals tend to ratchet up their standards of achievement, setting the bar at the level of their greatest success, so that anything less than their best is judged as mediocre. The hard-won triumph becomes the new standard of what is merely acceptable, and ordinary achievements are now viewed as falling short of the mark. NTs never give themselves a break from this escalating level of achievement, and so constant self-doubt and a niggling sense of impending failure are their lot.

## Seeking Knowledge

While Artisans go in search of stimulation, Guardians security, Idealists identity, Rationals are on the lookout for knowledge. Some of them are so relentless in their search, that (like their benefactor, Prometheus) they would steal knowledge even from the gods. Francis Bacon declared the beginning of the 17th century that knowledge is power, and advised that nature be "put to the rack," so that her secrets could be extracted by scientific experimentation. In doing so he established the Rational method of scientific investigation which has prevailed in the West for 400 years.

The Rationals' search for knowledge has two objectives: they know *how* to as well as *know about*. To know about is to comprehend the necessary and sufficient conditions under which events occur. To know how is to comprehend the operational capabilities and limits of technologies—the possibilities and constraints of their tools, be they cutters, planes, or computers. By knowing about and knowing how to, Rationals increase their capability to predict and to control events.

Knowledge for Rationals is never merely speculative. When NTs ask "why?" they are really asking "how?" or even "how to?" To ask why the sky is blue, why water is wet, why a lever has power, is not to ask for its meaning or significance of these things (something that greatly concerns their abstract cousins, the Idealists). The Rationals' questions are about why things take the form they do, about how things work—and thus about definition and description of structure and function. As his biography, James Gleick notes, Nobel prize winning physicist Richard Feynman had no use for what he called the philosopher's "soft" questions:

Feynman's reinvention of quantum mechanics did not so much explain how the world was, or why it was that way, as tell how to confront the world. It was not knowledge of or knowledge about. It was knowledge how to.... There were other kinds of scientific knowledge, but pragmatic knowledge was Feynman's specialty. For him knowledge did not describe, it acted and accomplished.

Such a quest for pragmatic knowledge arises early for Rationals, as soon as they have the language for inquiring, and seems fueled by an insatiable curiosity. But since they are likely to pose their question as "why?" they will often be unsatisfied with the answer they receive, for they are actually interested in "how?" not "why?" And since they are insistent in their questioning, they often dismay their parents and teachers who don't understand what they are really asking. Further, NTs want to be given a rationale in the answers they receive, something most parents and teachers have difficulty giving them.

As Rationals grow up, their pursuit of knowledge leads them to grapple with an ever-widening range of complex problems. Whether the problem is one of engineering machines or of coordinating operations, Rationals consider problems of central importance, and they will persist in their

search for models and maps, for paradigms and algorithms, with which to define and attack these problems. Problem-solving for the Rationals is a twenty-four hour occupation, and if they don't have a problem to work on they will actually set one for themselves as a way of exercising their skills. They are especially drawn to problems that tax their knowledge base, and practice with such problems adds to their knowledge and naturally expands their repertoire of useful models. And the more extreme the Rational gets, the more exacting and stringent the demand they place on themselves at acquiring knowledge.

Another way of looking at this is that, in contrast to the social and moral shoulds and oughts of the Guardians and Idealists, the Rationals are a good many should-knows itemized in massive lists inside their heads. And though they can concentrate fully on one thing at a time, they are inclined to accumulate more and more useful knowledge, rarely deleting anything, and to work continually on solutions to the many problems that intrigue them. Having won a Nobel prize in 1972 for his work on immunology, biologist Gerald Edelman was not at all content to cease his inquiries:

About three years after Edelman won the prize he essentially left the field to pursue even bigger questions—the biggest ones imaginable, concerning the essential mysteries of biology.... I have a small romantic streak and a very definite belief that's coupled to it, which is that the asking of the question is the important thing.... So if you said to me, "Well, now, you're the czar of immunology." Horrors!... None of that really interests me. What interests me is dark areas.'

So intent are Rationals in their pursuit of knowledge, that they might be thought of as the "Knowledge-Seeking Personality." Of all the traits of character that set the Rationals apart—and at the same time group them together—it is their life-long search for knowledge.

## Prizing Deference

What is pleasing to one sort of person may not be nearly as pleasing to another. Artisans are quite pleased by generous treatment, Guardians by gratitude, Idealists by being recognized as their unique selves. Certainly Rationals are not indifferent to generosity, gratitude, or recognition, but they are much more pleased when asked by an admirer to comment on something the NT has produced, especially if the request is for an exposition of their rationale. NTs regard such deference as being given not so much to themselves personally as to their productions. After all, when they make something or do something it is usually after long and sometimes obsessive analysis. So even if they are not especially brilliant, it is to be expected that their productions have been carefully devised, with pros and cons considered, and errors of inclusion and exclusion rooted out.

But Rationals cannot ask for deference, any more than Guardians can

ask for appreciation, or Idealists for recognition. It must come to them spontaneously, out of interest in their work. And, of course, if in their view they haven't achieved anything they regard as worth noting, they have no desire to be consulted in the matter. But if they have something rather well, they are pleased when someone defers to their definition and explanation of their production, and they can be disappointed if none comes their way, or worse, if someone else is asked to explain what they've accomplished.

Their problem is that their accomplishment is often so highly technical—designing a computer chip for instance—that most people are vaguely aware of how difficult it was to make, and so have little reason to acknowledge and give credit to its maker. So the vast majority of Rationalists who manage to achieve something great are unsung heroes to the public, and therefore heroes only to their family or their colleagues—perhaps in their own eyes.

**Aspiring to be a Wizard**

Because Rationalists value the strategic intellect so highly, they tend to take as their idol the technological wizard, especially the scientific genius. After all, a wizard is the ultimate scientist, with what seems an almost magical power over nature, and in single-minded pursuit of the four corners of science: the prediction and control of events, and the understanding and explanation of their contexts. Scratch a Rational, find a scientist; but give the figure the Rationalists would aspire to become, and behold a wizard. Listen as Merlin, King Arthur's wizard in Lerner and Loewe's *Camelot*, teaches young Arthur what he considers the most important lesson of all:

*Merlin:* There's only one thing for all of it. Learn! Learn why the world wags and what wags it.  
*Arthur:* How could I learn if I couldn't think?...  
*Merlin:* Yes...thinking, boy, is something you should definitely get into the habit of making use of as often as possible.

But listen also to Jonas Salk as he explains his view of the magic of biological science:

When I discovered there was more to learning than the books we were exposed to, and then when I became interested in bringing science into medicine, I recognized that there was a logic to the magic. Life is magic the way nature works seems to be quite magical....I started to try to understand how that system works. I began to tease out the logic of the magic that I was so impressed by.

**The Social Roles Rationalists Play**

It is impossible not to play a role in all of our social transactions, as

there are two kinds of social roles, those that are allotted to us by virtue of our position in our social milieu, and those that we reach out and take for ourselves. We perform play offspring to our parents, siblings to our brothers and sisters, and relatives to our extended family members. On the other hand we choose to play mate to our spouse, parent to our offspring, superior to our subordinate, subordinate to our superior, friend to friend, and so on. Unloved or embraced, we have no choice but to enact our roles, since to interact with others can never be role-free.

Three of our roles—mating, parenting, leading—are of special interest in the context of the study of personality. In these three roles the different aspects of personality differ significantly in the effects their roles have on their offspring, and followers. Consider the following chart which compares how differently the mating, parenting, and leading roles are played:

Social Roles	Rationalists	Artisans	Guardians	Idealists
Mating	Mindmate	Playmate	Helpmate	Soulmate
Parenting	Individuator	Liberator	Socializer	Harmonizer
Leading	Visionary	Negotiator	Stabilizer	Catalyst

Note the striking difference between playing the Rational's Mindmate and the Guardian's Helpmate role, the Idealist's Soulmate role, and the Artisan's Playmate role. These different roles will require lengthy and complex study and so a chapter (Chapter 7) on mating is provided later in the book. Separate chapters (Chapters 8 and 9) are also furnished on the roles of parenting and leadership roles, to distinguish the NT Individuator from the SP Liberator, the SJ Socializer, and the NF Harmonizer, as well as to differentiate the NT Visionary leader from the SP Negotiator, the SJ Stabilizer, and the NF Catalyst. Even so, a few remarks can at least give an outline of how Rationalists play their social roles.

**The Mindmate**

Sharing with their spouses what they have on their minds is of primary importance to Rationalists. They are prone to initiate discussions with their mates on a wide variety of topics and to pursue them until the issue is clear, whether or not there is agreement. The issues they pursue with their mates are almost invariably abstract rather than concrete—issues such as points of politics and economics, questions in ethics and religion, epistemology and linguistics, and, of course, breakthroughs in science and technology, although the latter are usually too technical for much sharing, if that is, the Rational is a scientist or technologist and the mate is not.

This desire for intellectual sharing puts limits on the kind of mate that Rationalists are apt to choose. The desire will not be fulfilled in the event they are mated with either Guardians or Artisans, neither of whom are willing to pursue abstract topics either recurrently or for more than a few



... a grip on the whole configuration of the Platonic-Aristotelian Di-  
 Rational Personality and getting a feel of its uniqueness and  
 difference from the others.

### The Traits of Temperament and Character

	Concrete	Cooperative	Abstract
	Utilitarian	Cooperative	Utilitarian
	Artisan	Guardian	Idealist
	Artisan	Guardian	Idealist
<b>Harmonic</b> Indicative Descriptive Heterodox	<b>Logistical</b> Administrator • Supervisor • Inspector Conserving • Provider • Protector	<b>Inductive</b> Interpretive Metaphoric Hyperbolic	<b>Deductive</b> Categorical Subjunctive Technical
<b>Tactical</b> Operator • Promoter • Crafter Entertainer • Performer • Composer	<b>Stoicist</b> Commercer Morality Materiel	<b>Diplomatic</b> Mentor • Teacher • Counselor Advocating • Champion • Healer	<b>Strategic</b> Coordinator • Fieldmarshal • Mastermind Engineer • Inventor • Architect
<b>Artcraft</b> Technique Equipment	<b>Stoicism</b> Pessimism Fatalism Gateways Yesterday	<b>Humanities</b> Morale Personnel	<b>Sciences</b> Technology Systems
<b>Hedonism</b> Optimism Cynicism Here Now	<b>Dependable</b> Beneficent Respectable	<b>Altruism</b> Credulism Mysticism Pathways Tomorrow	<b>Pragmatism</b> Skepticism Relativism Intersections Intervals
<b>Artistic</b> Audacious Adaptable	<b>Concerned</b> Authority Belonging Security Gratitude Executive	<b>Empathic</b> Benevolent Authentic	<b>Ingenious</b> Autonomous Resolute
<b>Excited</b> Impulse Impact Stimulation Generosity Virtuoso	<b>Helpmate</b> Socializer Stabilizer	<b>Enthusiastic</b> Intuition Romance Identity Recognition Sage	<b>Calm</b> Reason Achievement Knowledge Deference Wizard
<b>Playmate</b> Liberator Negotiator		<b>Soulmate</b> Harmonizer Catalyst	<b>Mindmate</b> Individuator Visionary

... the desire for cognitive sharing is the Rational's  
 criterion for choosing a mate, he or she is prudent to choose  
 Rational or an Idealist. On the other hand, if for some reason the  
 role is set aside, the Rationals have just as much leeway as other  
 finding their mate, though choosing the more friendly types, Co-  
 Guardians (ESFJs and ISFJs) and Improvisor Artisans (ESFPs and ISFPs)  
 will probably entail less marital conflict.

Rationals usually approach mate selection as a difficult and even  
 ening problem, one requiring careful empirical study and calm but  
 introspection. After all, they say to themselves, there is no room for  
 in this choice since mating is for life. Those who do err in this are  
 owing to their rather stringent code of ethics, to honor the contract  
 made and do their best to minimize the underlying conflict of values  
 in marriage NTs are pragmatic.

### The Individuator Parent

Rational parents are usually more concerned about the growth of  
 viduality in their children than the other types. It is vitally impor-  
 them that each and every child in the family becomes progressively  
 self-directed and self-reliant in handling the challenges of life. Oth-  
 cerns, such as the Idealist's self-esteem and the Artisan's venturesome-  
 important though they may be, are thought to follow along naturally  
 wake of their children developing a firm sense of their individual  
 autonomy. And civility of conduct, so important to Guardian parents,  
 but ignored by Rational parents in their determination to encourage  
 children's individuation.

### The Visionary Leader

Rational leaders usually have a vision of how an organization will  
 and how it will fare in the long haul, their long suit in intelligent  
 strategic planning. They look far ahead and all around, their plans are  
 nothing important to chance. And owing to their early and long per-  
 coherent and comprehensive speech, they are often able to convert  
 vision of things to come to their followers, such that their followers  
 join them in the enterprise they have envisioned.

### Matrix of Rational Traits

The matrix that follows arranges and highlights the terms used in  
 chapter to define the personality of the Rationals. These terms are placed  
 beside those used to define the other three personalities, thus enabling  
 to compare the Rational traits to those of others.  
 There can be considerable payoff for those who take time to study  
 matrix, and refer back to it from time to time, the payoff being the

to articulate their own complicated ideas and to follow the complex verbalizations of others. They may, however, deliberately employ debate tactics to the disadvantage of their opponents, even when the opponents happen to be close associates and valued friends. Versatile and agile of mind, they respond quickly and adeptly to another's shifting position. Often they are several jumps ahead. Indeed, ENTPs are the most able of all the types to maintain a one-up position with others, while to be taken-in or manipulated by another is humiliating to them, offending their pride in being masters of the art of one-upmanship.

Their home environment also tends to be full of life. They are gregarious, laugh easily and often, and are typically in good humor. Although usually dependable providers of economic necessities, life with ENTPs is at times an adventure, and they can unknowingly navigate the family into dangerous economic waters. Orderliness in the routines of daily living is not apt to inspire them, and they usually solve this problem by letting their mates pick up after them. Inventors like to spar verbally with their loved ones, and if their mates are not intellectually competitive they are likely to find one-up/one-down transactions somewhat wearying. If the mate is reticent, however, the result might be delightful give-and-take—or, at least, marital conflict.

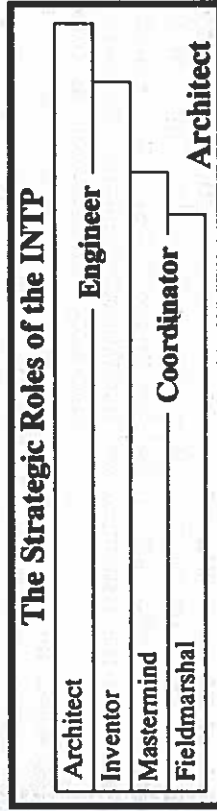
Inventors tend to have all sorts of hobbies and to be experts in unexpected areas, but they are not apt to share these hobbies with their mate or children as a sense of teaching them. In fact, Inventors may be very inconsistent in the attention they give to their offspring. Usually, it is feast or famine, plentiful warmth and affection when they are with their children, but they often neglect when they are engrossed in their many outside interests. Inventors have little time for the everyday tasks of caring for and disciplining their children, and if possible will leave such domestic tasks to their mate.

### The Architect [INTP]

Architectonics is the science of spatial relationships—organization, structure, build, configuration—and Architects from a very early age are preoccupied with spatial relativity and systems design. But INTPs must not be thought of as only interested in configuring three-dimensional spaces such as buildings, bridges, and machines; they are also the architects of curricula, of corporations, and of all kinds of theoretical systems. In other words, INTPs are men and women whose aim is to design systemic structures and to engineer structural models. All of these Architects look upon the world as little more than raw material to be reshaped according to their design, as formless stone that must yield to their coordinate lines of demarcation. Indeed, in their later years (after finding out that most others are making an understanding of the laws of nature), INTPs are likely to think of themselves as the master organizers who must pit themselves against nature and society in an unending effort to create organization out of the raw

materials of nature. Where the Mastermind Rational is would-be masters of order, the Architect Rational would-be masters of organization.

As a variant of Plato's Rationals and Aristotle's Dialecticals, the INTPs are little different from the other NTs in most respects. Like all the Rationals, they are abstract in communication and utilitarian in how they implement their goals. They choose to study science, are preoccupied with technology, and work well with systems. Their point of view is pragmatic, skeptical, relativistic, focused on spatial intersections and intervals of time. They base their self-image on being ingenious, autonomous, and resolute. They would if possible be calm, they trust reason, are hungry for achievement, seek knowledge, prize deference, and aspire to be wizards of science and technology. Intellectually, they are prone to practice strategy far more than diplomacy, tactics, and especially logistics. Further, with their probing or exploring nature they tend to opt for the Engineer's informative role rather than the quick-scheduling Coordinator's directive role. And because they are reserved and highly attentive they seem to prefer the role variant of Architect over Inventor. To visualize INTP intellectual development consider the following graph depicting the most probable profile of their strategic roles:



Architects are rare—say one percent of the population—and therefore not to be encountered in ordinary places, or if encountered, not recognized. For this type of Rational, the world exists primarily to be analyzed, understood, and explained. External reality in itself is unimportant, a mere arena for checking out the usefulness of ideas. What is important is that the underlying structures of the universe be uncovered and articulated, and that whatever is stated about the universe be stated correctly, with coherence and without redundancy. Curiosity concerning these fundamental structures is the driving force in INTPs, and they care little whether others understand or accept their ideas. Architects will learn in any manner and degree they can. If knowledge can be gathered from observing someone or taking some action, then such is worthwhile; if not, then not.

Architects prize intelligence in themselves and in others, and seem constantly on the lookout for the technological principles and natural laws upon which the real world is structured. The cognitive scanning of INTPs is not global and diffuse like an NF's; on the contrary, Architects limit their search to only what is relevant to the issue at hand, and thus they seem able to concentrate better than any other type. Architects can also



become obsessed with analysis. Once caught up in a thought process, that process seems to have a will of its own, and they persevere until they comprehend the issue in all its complexity. Moreover, once INTPs know something, they remember it. With their grand desire to grasp the laws of unity and diversity, they can be a bit snobbish and may show impatience at times with others less endowed with engineering ability, or less driven. Unfortunately, their pride in their ingenuity can, at times, generate hostility and defensive maneuvers on the part of others.

Architects exhibit the greatest precision in thought and language of all the types. They tend to see distinctions and inconsistencies in thought and language instantaneously, and can detect contradictions in statements no matter when or where the statements were made. Only sentences that are coherent carry weight with them, and thus authority derived from office, credential, or celebrity does not impress them. Like the ENTPs, INTPs are devastating in debate or any form of adversarial discussion, their skill in differential analysis giving them an enormous advantage in discrediting their opponents' arguments and in structuring their own. They regard all discussions as a search for understanding, and believe their function is to eliminate inconsistencies, no matter who is guilty of them. It is difficult for an INTP to listen to nonsense, even in a casual conversation, without pointing out the speaker's error, and this makes communication with them an uncomfortable experience for many.

This type of Rational is the logician, the mathematician, the technologist, the scientist—that person given to any pursuit that requires architectonics, systems analysis, or structural design. Mind you, architecting is not the Artisan's fitting of physical shapes into pleasing forms, but the more abstract process of designing models. For the Architect, the model is the thing, whether a two, three, or four dimensional model.

It is hard for some types to understand these terse, observant Engineers because of their complex and technical speech and their avoidance of redundancy. However, they can be excellent teachers, particularly for advanced students, although here again they rarely enjoy much popularity, for they can be hard taskmasters. They are not good at clerical jobs and are impatient with routine details. They prefer to work quietly, without interruption, and often alone. They are inclined to be shy except when with close friends, and their reserve is difficult to penetrate. For all these reasons, INTPs are often seen as difficult to know, and are seldom perceived at their true level of competency. If an organization is to use their talents effectively, Architects must be given an efficient support staff who can capture their ideas as they emerge and before they lose interest and turn to another idea.

Architects take their mating relationship seriously and are faithful and devoted—albeit preoccupied at times, and somewhat forgetful of appointments, anniversaries, and other common social rituals. They are not likely to welcome much social activity at home, nor will they arrange it, content

to leave the scheduling of social interactions to their mate. If left to their own devices, INTPs will retreat into the world of books and emerge only when physical needs become imperative. Architects are, however, even-tempered, compliant, and easy to live with—that is, until one of their principles is violated, in which case their adaptability ceases altogether. They prefer to keep their desires and emotions to themselves, and may seem insensitive to the desires and emotions of others, an insensitivity that can puzzle and frustrate their mates. But if what their mates are feeling is a mystery to them, Architects are keenly aware of what their mates actually say and do, and will often ask their mates to give a rationale for their statements and actions.

Architects are devoted parents; they enjoy children, and are very serious about their upbringing. Each of their children is treated as a rational individual, with rights, privileges, and as much autonomy as that child can handle safely. INTPs encourage their children to take responsibility for their own lives and to chart their own course. They do not visit their own expectations on their children and never attack them physically or verbally. When safe to do so Architects let the natural consequences of their children's actions teach them about reality. When this is unsafe, they somehow contrive to design logical consequences to inform their children's actions.