

THE OBJECTIVIST

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Edited by AYN RAND
and NATHANIEL BRANDEN

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VOLUME 5 • NUMBER 7

JULY 1966

THE OBJECTIVIST

Formerly THE OBJECTIVIST NEWSLETTER

Ayn Rand and Nathaniel Branden

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Published monthly by THE OBJECTIVIST, Inc. at 120 East 34th Street, New York, N.Y. 10016

Subscription rate in United States, its possessions, Canada and Mexico: one year, \$5; 2 years, \$9; 3 years, \$13. Other countries: one year, \$6; 2 years, \$11; 3 years, \$16.

Additional copies of this Magazine: single copy 50¢ (coins, not stamps); 10-99 copies, 25¢ each plus postage (for first-class delivery add 1¢ per copy, for third-class delivery add ½¢ per copy); 100 or more copies, 15¢ each plus postage (same as above). (Bulk rates apply only to multiple orders of a single issue.)

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Second-class postage paid at New York, N.Y.

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INTRODUCTION TO OBJECTIVIST EPISTEMOLOGY

By Ayn Rand

Foreword

This series of articles is presented “by popular demand.” We have had so many requests for information on Objectivist epistemology that I decided to put on record a summary of one of its cardinal elements—the Objectivist theory of concepts. These articles may be regarded as a preview of my future book on Objectivism, and are offered here for the guidance of philosophy students.

The issue of concepts (known as “the problem of universals”) is philosophy’s central issue. Since man’s knowledge is gained and held in conceptual form, the validity of man’s knowledge depends on the validity of concepts. But concepts are abstractions or universals, and everything that man perceives is particular, concrete. What is the relationship between abstractions and concretes? To what precisely do concepts refer in reality? Do they refer to something real, something that exists—or are they merely inventions of man’s mind, arbitrary constructs or loose approximations that cannot claim to represent knowledge?

“All knowledge is in terms of concepts. If these concepts correspond to something that is to be found in reality they are real and man’s knowledge has a foundation in fact; if they do not correspond to anything in reality they are not real and man’s knowledge is of mere figments of his own imagination.” (Edward C. Moore, *American Pragmatism: Peirce, James, & Dewey*, New York: Columbia University Press, 1961, p. 27.)

To exemplify the issue as it is usually presented: When we refer to three persons as “men,” what do we designate by that term? The three persons are three individuals who differ in every particular respect and may not possess a single *identical* characteristic (not even their fingerprints). If you list all their particular characteristics, you will not find one representing “manness.” Where is the “manness” in men? What, in reality, corresponds to the concept “man” in our mind?

In the history of philosophy, there are, essentially, four schools of thought on this issue:

1. The “extreme realists” or Platonists, who hold that abstractions exist as real entities or archetypes in another dimension of reality and that the concretes we perceive are merely their imperfect reflections, but the concretes evoke the abstractions in our mind. (According to Plato, they do so by evoking the memory of the archetypes which we had known, before birth, in that other dimension.)

2. The “moderate realists,” whose ancestor (unfortunately) is Aristotle, who hold that abstractions exist in reality, but they exist only *in* concretes, in the form of metaphysical *essences*, and that our concepts refer to these essences.

3. The “nominalists,” who hold that all our ideas are only images of concretes, and that abstractions are merely “names” which we give to arbitrary groupings of concretes on the basis of vague resemblances.

4. The “conceptualists,” who share the nominalists’ view that abstractions have no actual basis in reality, but who hold that concepts exist in our minds as some sort of ideas, not as images.

(There is also the extreme nominalist position, the modern one, which consists of declaring that the problem is a meaningless issue, that “reality” is a meaningless term, that we can never know whether our concepts correspond to anything or not, that our knowledge consists of words—and that words are an arbitrary social convention.)

If, in the light of such “solutions,” the problem might appear to be esoteric, let me remind you that the fate of human societies, of knowledge, of science, of progress and of every human life, depends on it. What is at stake here is the cognitive efficacy of man’s mind.

As I wrote in *For the New Intellectual*: “To negate man’s mind, it is the *conceptual* level of his consciousness that has to be invalidated. Under all the tortuous complexities, contradictions, equivocations, rationalizations of the post-Renaissance philosophy—the one consistent line, the fundamental that explains the rest, is: *a concerted attack on man’s conceptual faculty*. Most philosophers did not intend to invalidate conceptual knowledge, but its defenders did more to destroy it than did its enemies. They were unable to offer a solution to the ‘problem of universals,’ that is: to define the nature and source of abstractions, to determine the relationship of concepts to perceptual data—and to prove the validity of scientific induction. . . . The philosophers were unable to refute the Witch Doctor’s claim that their concepts were as arbitrary as his whims and that their scientific knowledge had no greater metaphysical validity than his revelations.”

These are the reasons why I chose to introduce you to Objectivist epistemology by presenting my theory of concepts. I entitle this series an “Introduction,” because the theory is presented outside of its full context. For instance, I do not include here a discussion of the validity of man’s senses—since the arguments of those who attack the senses are merely variants of the fallacy of the “stolen concept.” (That fallacy consists of “*the act of using a concept while ignoring, contradicting or denying the validity of the concepts on which it logically and genetically depends.*” See “The Stolen Concept” by Nathaniel Branden, THE OBJECTIVIST NEWSLETTER, January 1963.)

For the purposes of this series, the validity of the senses must be taken for granted—and one must remember the axiom: *Existence exists*. (This, incidentally, is a way of translating into the form of a proposition, and thus into the form of an axiom, the primary fact which is existence.) Please bear in mind the full statement: “Existence exists—and the act of grasping that statement implies two corollary axioms: that something exists which one perceives and that one exists possessing consciousness, consciousness being the faculty of perceiving that which exists.” (*Atlas Shrugged*.)

This series is a condensation of what is probably the most difficult and complex issue in philosophy. For a more detailed presentation and discussion, I will refer you to the course on "Objectivism's Theory of Knowledge" to be given by Dr. Leonard Peikoff, at NATHANIEL BRANDEN INSTITUTE in New York City, beginning on October 7, 1966.

* * *

1. Cognition and Measurement

Consciousness, as a state of awareness, is not a passive state, but an active process that consists of two essentials: differentiation and integration.

Although, chronologically, man's consciousness develops in three stages: the stage of sensations, the perceptual, the conceptual—epistemologically, the base of all of man's knowledge is the *perceptual* stage.

Sensations, as such, are not retained in man's memory, nor is man able to experience a pure, isolated sensation. As far as can be ascertained, an infant's sensory experience is an undifferentiated chaos. Discriminated awareness begins on the level of percepts.

A percept is a group of sensations automatically retained and integrated by the brain of a living organism. It is in the form of percepts that man grasps the evidence of his senses and apprehends reality. When we speak of "direct perception" or "direct awareness," we mean the perceptual level. Percepts, not sensations, are the given, the self-evident. The knowledge of sensations as components of percepts is not direct, it is acquired by man much later: it is a scientific, *conceptual* discovery.

The building-block of man's knowledge is the concept of an "*existent*"—of something that exists, be it a thing, an attribute or an action. Since it is a concept, man cannot grasp it *explicitly* until he has reached the conceptual stage. But it is implicit in every percept (to perceive a thing is to perceive that it exists) and man grasps it *implicitly* on the perceptual level—i.e., he grasps the constituents of the concept "existent," the data which are later to be integrated by that concept. It is this implicit knowledge that permits his consciousness to develop further.

(It may be supposed that the concept "existent" is implicit even on the level of sensations—if and to the extent that a consciousness is able to discriminate on that level. A sensation is a sensation of *something*, as distinguished from the *nothing* of the preceding and succeeding moments. A sensation does not tell man *what* exists, but only *that* it exists.)

The (implicit) concept "existent" undergoes three stages of development in man's mind. The first stage is a child's awareness of objects, of things—which represents the (implicit) concept "*entity*." The second and closely allied stage is the awareness of specific, particular things which he can recognize and distinguish from the rest of his perceptual field—which represents the (implicit) concept "*identity*."

The third stage consists of grasping relationships among these entities

by grasping the similarities and differences of their identities. This requires the transformation of the (implicit) concept "entity" into the (implicit) concept "unit."

When a child observes that two objects (which he will later learn to designate as "tables") resemble each other, but are different from four other objects ("chairs"), his mind is focusing on a particular attribute of the objects (their shape), then isolating them according to their differences, and integrating them as units into separate groups according to their similarities.

This is the key, the entrance to the conceptual level of man's consciousness. *The ability to regard entities as units is man's distinctive method of cognition*, which other living species are unable to follow.

A unit is an existent regarded as a separate member of a group of two or more similar members. (Two stones are two units; so are two square feet of ground, if regarded as distinct parts of a continuous stretch of ground.) Note that the concept "unit" involves an act of consciousness (a selective focus, a certain way of regarding things), but that it is *not* an arbitrary creation of consciousness: it is a method of identification or classification according to the attributes which a consciousness observes in reality. This method permits any number of classifications and cross-classifications: one may classify things according to their shape or color or weight or size or atomic structure; but the criterion of classification is not invented, it is perceived in reality. Thus the concept "unit" is a bridge between metaphysics and epistemology: units do not exist *qua* units, what exists are things, but *units are things viewed by a consciousness in certain existing relationships*.

With the grasp of the (implicit) concept "unit," man reaches the conceptual level of cognition which consists of two interrelated fields: the *conceptual* and the *mathematical*. The process of concept-formation is, in large part, a mathematical process.

Mathematics is the science of *measurement*. Before proceeding to the subject of concept-formation, let us first consider the subject of measurement.

Measurement is the identification of a relationship — a quantitative relationship established by means of a standard that serves as a unit. Entities (and their actions) are measured by their attributes (length, weight, velocity, etc.) and the standard of measurement is a concretely specified unit representing the appropriate attribute. Thus, one measures length in inches, feet and miles—weight in pounds—velocity by means of a given distance traversed in a given time, etc.

It is important to note that while the choice of a given standard is optional, the mathematical rules of using it are not. It makes no difference whether one measures length in terms of feet or meters; the standard provides only the form of notation, not the substance nor the result of the process of measuring. The facts established by measurement will be the same, regardless of the particular standard used; the standard can neither alter nor affect them. The requirements of a standard of meas-

urement are: that it represent the appropriate attribute, that it be easily perceivable by man and that, once chosen, it remain immutable and absolute whenever used. (Please remember this; we will have reason to recall it.)

Now what is the purpose of measurement? Observe that measurement consists of relating an easily perceivable unit to larger or smaller quantities, then to infinitely larger or infinitely smaller quantities which are not directly perceivable to man. (The word "infinitely" is used here as a mathematical, not a metaphysical, term.) The purpose of measurement is to expand the range of man's consciousness, of his knowledge, beyond the perceptual level: beyond the direct power of his senses and the immediate concretes of any given moment. Man can perceive the length of one foot directly; he cannot perceive ten miles. By establishing the relationship of feet to miles, he can grasp and know any distance on earth; by establishing the relationship of miles to light-years, he can know the distances of galaxies.

The process of measurement is a process of integrating an unlimited scale of knowledge to man's limited perceptual experience—a process of making the universe knowable by bringing it within the range of man's consciousness, by establishing its relationship to man. It is not an accident that man's earliest attempts at measurement (the evidence of which survives to this day) consisted of relating things to *himself*—as, for instance, taking the length of his foot as a standard of length, or adopting the decimal system which is supposed to have its origin in man's ten fingers as units of counting.

It is here that Protagoras' old dictum may be given a new meaning, the opposite of the one he intended: "Man is the measure of all things." Man *is* the measure, epistemologically—not metaphysically. In regard to human knowledge, man has to be the measure, since he has to bring all things into the realm of the humanly knowable. But, far from leading to subjectivism, the methods which he has to employ require the most rigorous mathematical precision, the most rigorous compliance with objective rules and facts—if the end product is to be *knowledge*.

This is true of mathematical principles and of the principles by which man forms his concepts. Man's mathematical and conceptual abilities develop simultaneously. A child learns to count when he is learning his first words. And in order to proceed beyond the stage of counting his ten fingers, it is the *conceptual* level of his consciousness that man has to expand.

2. Concept-Formation

A *concept* is a mental integration of two or more units which are isolated according to a specific characteristic(s) and united by a specific definition.

The units involved may be any aspect of reality: entities, attributes, actions, qualities, relationships, etc.; they may be perceptual concretes or other, earlier-formed concepts. The act of isolation involved is a

process of *abstraction*: i.e., a selective mental focus that *takes out* or separates a certain aspect of reality from all others (e.g., isolates a certain attribute from the entities possessing it, or a certain action from the entities performing it, etc.). The uniting involved is not a mere sum, but an *integration*, i.e., a blending of the units into a *single*, new *mental* entity which is used thereafter as a single unit of thought (but which can be broken into its component units whenever required.)

In order to be used as a single unit, the enormous sum integrated by a concept has to be given the form of a single, specific, *perceptual* concrete, which will differentiate it from all other concretes and from all other concepts. This is the function performed by language. Language is a code of visual-auditory symbols that serves the psycho-epistemological function of converting concepts into the mental equivalent of concretes. Language is the exclusive domain and tool of concepts. Every word we use (with the exception of proper names) is a symbol that denotes a concept, i.e., that stands for an unlimited number of concretes of a certain kind.

(Proper names are used in order to identify and include particular entities in a conceptual method of cognition. Observe that even proper names, in advanced civilizations, follow the definitional principles of *genus* and *differentia*: e.g., John Smith, with "Smith" serving as *genus* and "John" as *differentia*—or New York, U.S.A.)

Words transform concepts into (mental) entities; *definitions* provide them with *identity*. (Words without definitions are not language but inarticulate sounds.) We shall discuss definitions later and at length.

The above is a general description of the nature of concepts as products of a certain mental process. But *the* question of epistemology is: what precisely is the nature of that process? To what precisely do concepts refer in reality?

Let us now examine the process of forming the simplest concept, the concept of a single attribute (chronologically, this is not the first concept that a child would grasp; but it is the simplest one epistemologically)—for instance, the concept "*length*." If a child considers a match, a pencil and a stick, he observes that length is the attribute they have in common, but their specific lengths differ. *The difference is one of measurement*. In order to form the concept "length," the child's mind retains the attribute and omits its particular measurements. Or, more precisely, if the process were identified in words, it would consist of the following: "Length must exist in *some* quantity, but may exist in *any* quantity. I shall identify as 'length' that attribute of any existent possessing it which can be quantitatively related to a unit of length, without specifying the quantity."

The child does not think in such words (he has, as yet, no knowledge of words), but *that* is the nature of the process which his mind performs wordlessly. And that is the principle which his mind follows, when, having grasped the concept "length" by observing the three objects, he uses it to identify the attribute of length in a piece of string, a ribbon, a

belt, a corridor or a street.

The same principle directs the process of forming concepts of entities—for instance, the concept “*table*.” The child’s mind isolates two or more tables from other objects, by focusing on their distinctive characteristic: their shape. He observes that their shapes vary, but have one characteristic in common: a flat, level surface and support(s). He forms the concept “table” by retaining that characteristic and omitting *all* particular measurements, not only the measurements of the shape, but of all the other characteristics of tables (many of which he is not aware of at the time).

An adult definition of “table” would be: “A man-made object consisting of a flat, level surface and support(s), intended to support other, smaller objects.” Observe what is specified and what is omitted in this definition: the distinctive characteristic of the shape is specified and retained; the particular geometrical measurements of the shape (whether the surface is square, round, oblong or triangular, etc., the number and shape of supports, etc.) are omitted; the measurements of size or weight are omitted; the fact that it is a material object is specified, but the material of which it is made is omitted, thus omitting the measurements that differentiate one material from another; etc. Observe, however, that the utilitarian requirements of the table set certain limits on the omitted measurements, in the form of “no larger than and no smaller than” required by its purpose. This rules out a ten-foot tall or a two-inch tall table (though the latter may be sub-classified as a toy or a miniature table) and it rules out unsuitable materials, such as non-solids.

Bear firmly in mind that the term “measurements omitted” does not mean, in this context, that measurements are regarded as non-existent; it means that *measurements exist, but are not specified*. That measurements *must* exist is an essential part of the process. The principle is: the relevant measurements must exist in *some* quantity, but may exist in *any* quantity.

A child is not and does not have to be aware of all these complexities when he forms the concept “table.” He forms it by differentiating tables from all other objects *in the context of his knowledge*. As his knowledge grows, the definitions of his concepts grow in complexity. (We shall discuss this when we discuss definitions.) But the principle and pattern of concept-formation remain the same.

The first words a child learns are words denoting visual objects, and he retains his first concepts *visually*. Observe that the visual form he gives them is reduced to those *essentials* which distinguish the particular kind of entities from all others—for instance, the universal type of a child’s drawing of man in the form of an oval for the torso, a circle for the head, four sticks for extremities, etc. Such drawings are a visual record of the process of abstraction and concept-formation in a mind’s transition from the perceptual level to the full vocabulary of the conceptual level.

There is evidence to suppose that written language originated in the

form of drawings—as the pictographic writing of the Oriental peoples seems to indicate. With the growth of man's knowledge and of his power of abstraction, a pictorial representation of concepts could no longer be adequate to his conceptual range, and was replaced by a fully symbolic code.

A concept is a mental integration of two or more units possessing the same distinguishing characteristic(s), with their particular measurements omitted.

The element of *similarity* is crucially involved in the formation of every concept; similarity, in this context, is the relationship between two or more existents which possess the same characteristic(s), but in different measure or degree.

Observe the multiple role of measurements in the process of concept-formation, in both of its two essential parts: differentiation and integration. Concepts cannot be formed at random. All concepts are formed by first differentiating two or more existents from other existents. All conceptual differentiations are made in terms of *commensurable characteristics* (i.e., characteristics possessing a common unit of measurement). No concept could be formed, for instance, by attempting to distinguish long objects from green objects. Incommensurable characteristics cannot be integrated into one unit.

Tables, for instance, are first differentiated from chairs, beds and other objects by means of the characteristic of *shape*, which is an attribute possessed by all the objects involved. Then, their particular kind of shape is set as the distinguishing characteristic of tables—i.e., a certain category of geometrical measurements of shape is specified. Then, within that category, the particular measurements of individual table-shapes are omitted.

Please note the fact that a given shape represents a certain category or set of geometrical measurements. Shape is an attribute; differences of shape—whether cubes, spheres, cones or any complex combinations—are a matter of differing measurements; any shape can be reduced to or expressed by a set of figures in terms of *linear measurement*. When, in the process of concept-formation, man observes that shape is a commensurable characteristic of certain objects, he does not have to measure all the shapes involved *nor even to know how to measure them*; he merely has to observe the element of *similarity*.

Similarity is grasped *perceptually*; in observing it, man is not and does not have to be aware of the fact that it involves a matter of measurement. It is the task of philosophy and of science to identify that fact.

As to the actual process of measuring shapes, a vast part of higher mathematics, from geometry on up, is devoted to the task of discovering methods by which various shapes can be measured—complex methods which consist of reducing the problem to the terms of a simple, primitive method, the only one available to man in this field: linear measurement. (Integral calculus, used to measure the area of circles, is just one example.)

In this respect, concept-formation and applied mathematics have a similar task, just as philosophical epistemology and theoretical mathe-

matics have a similar goal: the goal and task of bringing the universe within the range of man's knowledge—by identifying relationships to perceptual data.

Another example of implicit measurement can be seen in the process of forming concepts of colors. Man forms such concepts by observing that the various shades of blue are similar, as against the shades of red, and thus differentiating the range of blue from the range of red, of yellow, etc. Centuries passed before science discovered the unit by which colors could actually be measured: the wavelengths of light—a discovery that supported, in terms of mathematical proof, the differentiations that men were and are making in terms of visual similarities. (Any questions about “borderline cases” will be answered later.)

A commensurable characteristic (such as shape in the case of tables, or hue in the case of colors) is an essential element in the process of concept-formation. I shall designate it as the “Conceptual Common Denominator” and define it as “The characteristic reducible to a unit of measurement, by means of which man differentiates two or more existents from other existents possessing it.”

The distinguishing characteristic(s) of a concept represents a specified category of measurements within the “Conceptual Common Denominator” involved.

New concepts can be formed by integrating earlier-formed concepts into wider categories, or by subdividing them into narrower categories (a process which we shall discuss later). But all concepts are ultimately reducible to their base in perceptual entities, which are the base (the given) of man's cognitive development.

The first concepts man forms are concepts of entities—since entities are the only primary existents. (Attributes cannot exist by themselves, they are merely the characteristics of entities; motions are motions of entities; relationships are relationships among entities.)

In the process of forming concepts of entities, a child's mind has to focus on a distinguishing characteristic—i.e., on an attribute—in order to isolate one group of entities from all others. He is, therefore, aware of attributes while forming his first concepts, but he is aware of them *perceptually*, not conceptually. It is only after he has grasped a number of concepts of entities that he can advance to the stage of abstracting attributes from entities and forming separate concepts of attributes. The same is true of concepts of motion: a child is aware of motion *perceptually*, but cannot conceptualize “motion” until he has formed some concepts of that which moves, i.e., of entities.

(As far as can be ascertained, the perceptual level of a child's awareness is similar to the awareness of the higher animals: the higher animals are able to perceive entities, motions, attributes, and certain numbers of entities. But what an animal cannot perform is the process of abstraction—of mentally separating attributes, motions or numbers from entities. It has been said that an animal can perceive two oranges or two potatoes, but cannot grasp the concept “two.”)

Concepts of *materials* are formed by observing the differences in the constituent materials of entities. (Materials exist only in the form of specific entities, such as a nugget of gold, a plank of wood, a drop or an ocean of water.) The concept of "gold," for instance, is formed by isolating gold objects from all others, then abstracting and retaining the material, the gold, and omitting the measurements of the objects (or of the alloys) in which gold may exist. Thus, the material is the same in all the concrete instances subsumed under the concept, and differs only in quantity.

Concepts of *motion* are formed by specifying the distinctive nature of the motion and of the entities performing it, and/or of the medium in which it is performed—and omitting the particular measurements of any given instance of such motion and of the entities involved. For instance, the concept "walking" denotes a certain kind of motion performed by living entities possessing legs, and does not apply to the motion of a snake or of an automobile. The concept "swimming" denotes the motion of any living entity propelling itself through water, and does not apply to the motion of a boat. The concept "flying" denotes the motion of any entity propelling itself through the air, whether a bird or an airplane.

Adverbs are concepts of the characteristics of motion (or action); they are formed by specifying a characteristic and omitting the measurements of the motions and of the entities involved—e.g., "rapidly," which may be applied to "walking" or "swimming" or "speaking," etc., with the measurement of what is "rapid" left open and depending, in any given case, on the type of motion involved.

Prepositions are concepts of relationships, predominantly of spatial or temporal relationships, among existents; they are formed by specifying the relationship and omitting the measurements of the existents and of the space or time involved—e.g., "on," "in," "above," "after," etc.

Adjectives are concepts of attributes or of characteristics. Pronouns belong to the category of concepts of entities. Conjunctions are concepts of relationships among thoughts, and belong to the category of concepts of consciousness.

As to concepts of consciousness, we shall discuss them later and at length. (To anticipate questions such as: "Can you measure love?"—I shall permit myself the very philosophical answer: "And how!")

Now we can answer the question: To what precisely do we refer when we designate three persons as "men"? We refer to the fact that they are living beings who possess the *same* characteristic distinguishing them from all other living species: a rational faculty—though the specific measurements of their distinguishing characteristic *qua* men, as well as of all their other characteristics *qua* living beings, are different. (As living beings of a certain kind, they possess innumerable characteristics in common: the same shape, the same range of size, the same facial features, the same vital organs, the same fingerprints, etc., and all these characteristics differ only in their measurements.)

Two links between the conceptual and the mathematical fields are

worth noting at this point, apart from the obvious fact that the concept "unit" is the base and start of both.

1. A concept is not formed by observing every concrete subsumed under it, and does not specify the number of such concretes. A concept is like an arithmetical sequence of *specifically defined units*, going off in both directions, open at both ends and including *all* units of that particular kind. For instance, the concept "man" includes all men who live at present, who have ever lived or will ever live. An arithmetical sequence extends into infinity, without implying that infinity actually exists; such extension means only that whatever number of units does exist, it is to be included in the same sequence. The same principle applies to concepts: the concept "man" does not (and need not) specify what number of men will ultimately have existed: it specifies only the characteristics of man, and means that any number of entities possessing these characteristics is to be identified as "men."

2. The basic principle of concept-formation (which states that the omitted measurements must exist in *some* quantity, but may exist in *any* quantity) is the equivalent of the basic principle of algebra, which states that algebraic symbols must be given *some* numerical value, but may be given *any* value. In this sense and respect, perceptual awareness is the arithmetic, but *conceptual awareness is the algebra of cognition*.

The relationship of concepts to their constituent particulars is the same as the relationship of algebraic symbols to numbers. In the equation $2a = a + a$, any number may be substituted for the symbol "*a*" without affecting the truth of the equation. For instance: $2 \times 5 = 5 + 5$, or: $2 \times 5,000,000 = 5,000,000 + 5,000,000$. In the same manner, by the same psycho-epistemological method, a concept is used as an algebraic symbol that stands for *any* of the arithmetical sequence of units it subsumes.

Let those who attempt to invalidate concepts by declaring that they cannot find "manness" in men, try to invalidate algebra by declaring that they cannot find "*a*-ness" in 5 or in 5,000,000.

(To be continued in our next issue)

GOLD AND ECONOMIC FREEDOM

By Alan Greenspan

An almost hysterical antagonism toward the gold standard is one issue that unites statist of all persuasions. They seem to sense—perhaps more clearly and subtly than many consistent defenders of *laissez-faire*—that gold and economic freedom are inseparable, that the gold standard is an instrument of *laissez-faire* and that each implies and requires the other.

In order to understand the source of their antagonism, it is necessary first to understand the specific role of gold in a free society.

Money is the common denominator of all economic transactions. It is

that commodity which serves as a medium of exchange, is universally acceptable to all participants in an exchange economy as payment for their goods or services, and can; therefore, be used as a standard of market value and as a store of value, i.e., as a means of saving.

The existence of such a commodity is a precondition of a division of labor economy. If men did not have some commodity of objective value which was generally acceptable as money, they would have to resort to primitive barter or be forced to live on self-sufficient farms and forego the inestimable advantages of specialization. If men had no means to store value, i.e., to save, neither long-range planning nor exchange would be possible.

What medium of exchange will be acceptable to all participants in an economy is not determined arbitrarily. First, the medium of exchange should be durable. In a primitive society of meager wealth, wheat might be sufficiently durable to serve as a medium, since all exchanges would occur only during and immediately after the harvest, leaving no value-surplus to store. But where store-of-value considerations are important, as they are in richer, more civilized societies, the medium of exchange must be a durable commodity, usually a metal. A metal is generally chosen because it is homogeneous and divisible: every unit is the same as every other and it can be blended or formed in any quantity. Precious jewels, for example, are neither homogeneous nor divisible.

More important, the commodity chosen as a medium must be a luxury. Human desires for luxuries are unlimited and, therefore, luxury goods are always in demand and will always be acceptable. Wheat is a luxury in underfed civilizations, but not in a prosperous society. Cigarettes ordinarily would not serve as money, but they did in post-World War II Europe where they were considered a luxury. The term "luxury good" implies scarcity and high unit value. Having a high unit value, such a good is easily portable; for instance, an ounce of gold is worth a half-ton of pig iron.

In the early stages of a developing money economy, several media of exchange might be used, since a wide variety of commodities would fulfill the foregoing conditions. However, one of the commodities will gradually displace all others, by being more widely acceptable. Preferences on what to hold as a store of value, will shift to the most widely accepted commodity, which, in turn, will make it still more acceptable. The shift is progressive until that commodity becomes the sole medium of exchange. The use of a single medium is highly advantageous for the same reasons that a money economy is superior to a barter economy: it makes exchanges possible on an incalculably wider scale.

Whether the single medium is gold, silver, seashells, cattle or tobacco is optional, depending on the context and development of a given economy. In fact, all have been employed, at various times, as media of exchange. Even in the present century, two major commodities, gold and silver, have been used as international media of exchange, with gold becoming the predominant one. Gold, having both artistic and functional uses and

being relatively scarce, has always been considered a luxury good. It is durable, portable, homogeneous, divisible, and, therefore, has significant advantages over all other media of exchange. Since the beginning of World War I, it has been virtually the sole international standard of exchange.

If all goods and services were to be paid for in gold, large payments would be difficult to execute, and this would tend to limit the extent of a society's division of labor and specialization. Thus a logical extension of the creation of a medium of exchange, is the development of a banking system and credit instruments (bank notes and deposits) which act as a substitute for, but are convertible into, gold.

A free banking system based on gold is able to extend credit and thus to create bank notes (currency) and deposits, according to the production requirements of the economy. Individual owners of gold are induced, by payments of interest, to deposit their gold in a bank (against which they can draw checks). But since it is rarely the case that all depositors want to withdraw all their gold at the same time, the banker need keep only a fraction of his total deposits in gold as reserves. This enables the banker to loan out more than the amount of his gold deposits (which means that he holds claims to gold rather than gold as security for his deposits). But the amount of loans which he can afford to make is not arbitrary: he has to gauge it in relation to his reserves and to the status of his investments.

When banks loan money to finance productive and profitable endeavors, the loans are paid off rapidly and bank credit continues to be generally available. But when the business ventures financed by bank credit are less profitable and slow to pay off, bankers soon find that their loans outstanding are excessive relative to their gold reserves, and they begin to curtail new lending, usually by charging higher interest rates. This tends to restrict the financing of new ventures and requires the existing borrowers to improve their profitability before they can obtain credit for further expansion. Thus, under the gold standard, a free banking system stands as the protector of an economy's stability and balanced growth.

When gold is accepted as the medium of exchange by most or all nations, an unhampered free international gold standard serves to foster a worldwide division of labor and the broadest international trade. Even though the units of exchange (the dollar, the pound, the franc, etc.) differ from country to country, when all are defined in terms of gold the economies of the different countries act as one—so long as there are no restraints on trade or on the movement of capital. Credit, interest rates and prices tend to follow similar patterns in all countries. For example, if banks in one country extend credit too liberally, interest rates in that country will tend to fall, inducing depositors to shift their gold to higher-interest paying banks in other countries. This will immediately cause a shortage of bank reserves in the "easy money" country, inducing tighter credit standards and a return to competitively higher interest rates again.

A fully free banking system and fully consistent gold standard have not as yet been achieved. But prior to World War I, the banking system in the United States (and in most of the world) was based on gold; and even though governments intervened occasionally, banking was more free than controlled. Periodically, as a result of overly rapid credit expansion, banks became loaned up to the limit of their gold reserves, interest rates rose sharply, new credit was cut off and the economy went into a sharp, but short-lived recession. (Compared with the depressions of 1920 and 1932, the pre-World War I business declines were mild indeed.) It was limited gold reserves that stopped the unbalanced expansions of business activity, before they could develop into the post-World War I type of disaster. The readjustment periods were short and the economies quickly reestablished a sound basis to resume expansion.

But the process of cure was misdiagnosed as the disease: if shortage of bank reserves was causing a business decline—argued economic interventionists—why not find a way of supplying increased reserves to the banks so they never need be short! If banks can continue to loan money indefinitely—it was claimed—there need never be any slumps in business. And so the Federal Reserve System was organized in 1913. It consisted of twelve regional Federal Reserve banks nominally owned by private bankers, but in fact government sponsored, controlled and supported. Credit extended by these banks is in practice (though not legally) backed by the taxing power of the federal government. Technically, we remained on the gold standard; individuals were still free to own gold, and gold continued to be used as bank reserves. But now, in addition to gold, credit extended by the Federal Reserve banks (“paper” reserves) could serve as legal tender to pay depositors.

When business in the United States underwent a mild contraction in 1927, the Federal Reserve created more paper reserves in the hope of forestalling any possible bank reserve shortage. More disastrous, however, was the Federal Reserve’s attempt to assist Great Britain, who had been losing gold to us because the Bank of England refused to allow interest rates to rise when market forces dictated (it was politically unpalatable). The reasoning of the authorities involved was as follows: if the Federal Reserve pumped excessive paper reserves into American banks, interest rates in the United States would fall to a level comparable with those in Great Britain; this would act to stop Britain’s gold loss and avoid the political embarrassment of having to raise interest rates.

The “Fed” succeeded: it stopped the gold loss, but it nearly destroyed the economies of the world, in the process. The excess credit which the Fed pumped into the economy spilled over into the stock market—triggering a fantastic speculative boom. Belatedly, Federal Reserve officials attempted to sop up the excess reserves and finally succeeded in braking the boom. But it was too late: by 1929 the speculative imbalances had become so overwhelming that the attempt precipitated a sharp retrenching and a consequent demoralizing of business confidence. As a result, the American economy collapsed. Great Britain fared even worse,

and rather than absorb the full consequences of her previous folly, she abandoned the gold standard completely in 1931, tearing asunder what remained of the fabric of confidence and inducing a worldwide series of bank failures. The world economies plunged into the Great Depression of the 1930's.

With a logic reminiscent of a generation earlier, statisticians argued that the gold standard was largely to blame for the credit debacle which led to the Great Depression. If the gold standard had not existed, they argued, Britain's abandonment of gold payments in 1931 would not have caused the failure of banks all over the world. (The irony was that since 1913, we had been, not on a gold standard, but on what may be termed "a mixed gold standard"; yet it is gold that took the blame.)

But the opposition to the gold standard in any form—from a growing number of welfare-state advocates—was prompted by a much subtler insight: the realization that the gold standard is incompatible with chronic deficit spending (the hallmark of the welfare state). Stripped of its academic jargon, the welfare state is nothing more than a mechanism by which governments confiscate the wealth of the productive members of a society to support a wide variety of welfare schemes. A substantial part of the confiscation is effected by taxation. But the welfare statisticians were quick to recognize that if they wished to retain political power, the amount of taxation had to be limited and they had to resort to programs of massive deficit spending, i.e., they had to borrow money, by issuing government bonds, to finance welfare expenditures on a large scale.

Under a gold standard, the amount of credit that an economy can support is determined by the economy's tangible assets, since every credit instrument is ultimately a claim on some tangible asset. But government bonds are not backed by tangible wealth, only by the government's promise to pay out of future tax revenues, and cannot easily be absorbed by the financial markets. A large volume of new government bonds can be sold to the public only at progressively higher interest rates. Thus, government deficit spending under a gold standard is severely limited.

The abandonment of the gold standard made it possible for the welfare statisticians to use the banking system as a means to an unlimited expansion of credit. They have created paper reserves in the form of government bonds which—through a complex series of steps—the banks accept in place of tangible assets and treat as if they were an actual deposit, i.e., as the equivalent of what was formerly a deposit of gold. The holder of a government bond or of a bank deposit created by paper reserves believes that he has a valid claim on a real asset. But the fact is that there are now more claims outstanding than real assets.

The law of supply and demand is not to be conned. As the supply of money (of claims) increases relative to the supply of tangible assets in the economy, prices must eventually rise. Thus the earnings saved by the productive members of the society lose value in terms of goods. When the economy's books are finally balanced, one finds that this loss in value represents the goods purchased by the government for welfare or other

purposes with the money proceeds of the government bonds financed by bank credit expansion.

In the absence of the gold standard, there is no way to protect savings from confiscation through inflation. There is no safe store of value. If there were, the government would have to make its holding illegal, as was done in the case of gold. If everyone decided, for example, to convert all their bank deposits to silver or copper or any other good, and thereafter declined to accept checks as payment for goods, bank deposits would lose their purchasing power and government-created bank credit would be worthless as a claim on goods. The financial policy of the welfare state requires that there be no way for the owners of wealth to protect themselves.

This is the shabby secret of the welfare statist's tirades against gold. Deficit spending is simply a scheme for the "hidden" confiscation of wealth. Gold stands in the way of this insidious process. It stands as a protector of property rights. If one grasps this, one has no difficulty in understanding the statist's antagonism toward the gold standard.

OBJECTIVIST CALENDAR

■ On Sunday, September 4, NATHANIEL BRANDEN INSTITUTE will offer a workshop in Objectivist psychotherapy in New York City. Time: 9 A.M. to 5 P.M. Place: Sheraton-Atlantic Hotel, 34th St. and Broadway. Fee: \$15.00. Coffee and luncheon will be served. The workshop will be conducted by Nathaniel Branden, Dr. Allan Blumenthal and Dr. Roger Callahan. This workshop is open only to professionals in the mental health field—psychology, psychiatry, psychiatric social work, etc. For further information, contact NBI.

■ NBI's Tape Transcription Division has scheduled the following starting dates: "The Principles of Efficient Thinking" in Cincinnati, July 22—"Three Plays by Ayn Rand" in Detroit, July 29; Los Angeles, Aug. 12—"Contemporary Theories of Neurosis" in Phoenix, July 29—"The Esthetics of the Visual Arts" in Orange, Calif., Aug. 3; Denver, Aug. 5—"Contemporary Philosophy" in Los Angeles, Aug. 10—"The Economics of a Free Society" in Youngstown, Aug. 5; San Francisco, Aug. 23. For further information, contact NBI.

■ Ayn Rand's article "The Roots of War" (originally published in the June 1966 issue of *THE OBJECTIVIST*) has been reprinted in pamphlet form. Price: 50¢. (N.Y. State residents add sales tax.) —B.B.

Nathaniel Branden was invited by Dr. Roger Callahan to meet with a group of teenagers for the purpose of answering their questions on the subject of sex. The discussion was tape recorded and is now available, on a single LP record, from NBI BOOK SERVICE; price: \$3.75. (Title: Nathaniel Branden Discusses Teenagers' Questions on Sex.)

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