

Course Outline

Day 1: Preliminaries

Introduction

- AR on the nature and importance of epistemology
- The nature of ITOE and other sources
- The nature of this course

Consciousness

- As a state of awareness and as a faculty
- Awareness as
 - an active process
 - with identity (the form/object distinction)
 - which is volitional at the conceptual level
- The need for epistemology
- Definitions of cognition and knowledge
- The faculty of consciousness

Perception

- Relevance to epistemology
- As distinct from sensation
- As distinct from perceptual judgment
- As distinct from “visualization”
- As infallible
- As the basis of knowledge

Day 2: Concepts

The Problem of Concepts

- The role of concepts in knowledge
- Generic definition of “concept”
- The nature of the problem
- Traditional conception of and solutions to the problem
 - Lack of methodological guidance
 - The false theory of “context omission”

Measurement-omission and its presuppositions

- The nature of difference
- The nature of similarity
- Units and the “unit perspective”
- Omission of measurements to form a concept
- Concepts as future-looking
- Measurement omission contrasted with context omission
- Multidimensional attributes

Concepts of Entities

- How entities are measured and integrated
- Application of this point to other existents
- Why units must be essentially similar

Definition

- Parts of a definition
- Changes in definition

First-Level Conceptualization

- Formation of concepts directly from perception
- Propositions validated directly from perception
- The unit-perspective at the first-level
- Induction as beginning with first-level generalizations

Higher-Level Conceptualization

- Formation of higher-level concepts
 - Widenings and Narrowings
 - What each is
 - The hierarchies of knowledge and of generality
 - How widenings depend on prior concepts
 - How narrowings depend on prior concepts
 - Concepts of characteristics
 - How they presuppose earlier concepts
 - Concepts of Consciousness
 - Concepts for conceptually discovered existents
 - Cross-classification
- Dependence of higher-level propositions on lower
- Logical order distinguished from chronological order
- Induction

The Nature of Conceptualization

- Identification by interrelation
 - as performed in a certain logical order
 - and at different levels of generality
 - The role of axioms
- AR's Definition of "reason"
 - As opposed to rationalism and mysticism
 - As opposed to empiricism and skepticism

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Day 4: Objectivity

Logic

- Why it's necessary
- As self-consciousness of the process of conceptualizing
- As the art of non-contradictory reasoning
- Compared to epistemology

Objectivity

- as volitional adherence to reality by the method of logic
- “Objective reality”
- Objective and subjective mental products
- The errors of intrinsicism and subjectivism
 - as theories of knowledge
 - as cognitive methods

Integration and reduction

- How each flows from the nature of conceptualization
- Relation between the two

Validating Concepts and Definitions

- Why validated definitions are necessary
- Intrinsicism about concepts
- How to validate a definition
- Subjectivism about concepts
- Invalid concepts and uses of concepts

Validating Judgments

- Basis for Judgments
- Hypothetical reasoning
 - The process
 - Evidentiary statuses (possible, probable, and certain)
- The arbitrary
 - Contrasted with the possible
 - Why it must be rejected out of hand
 - Why an arbitrary assertion is not a judgment
 - Why its contents are not a proposition (and not true or false)

The Status of Validated Cognitions

- Contextual absolutism
- Possibility of error
- Relation between objectivity and conceptual knowledge

Exhibit A: Simplified man- and animal-shapes that vary along 35 dimensions

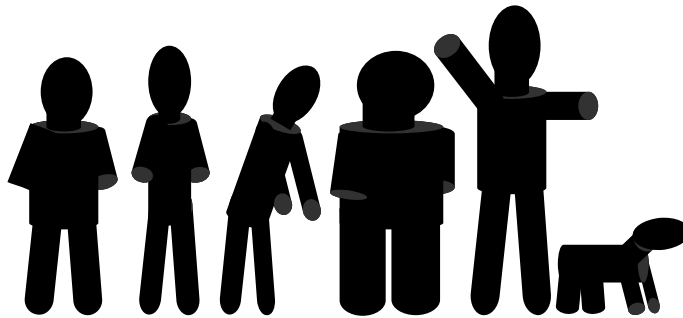


Exhibit B: Graphs on which entities are plotted along two axes representing different characteristics

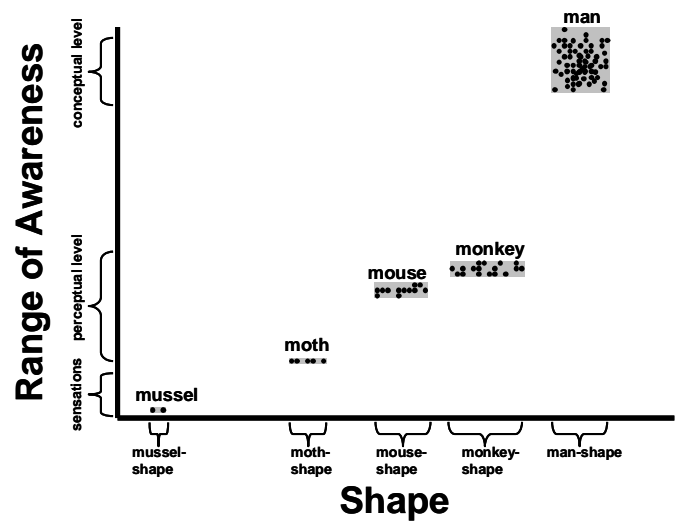
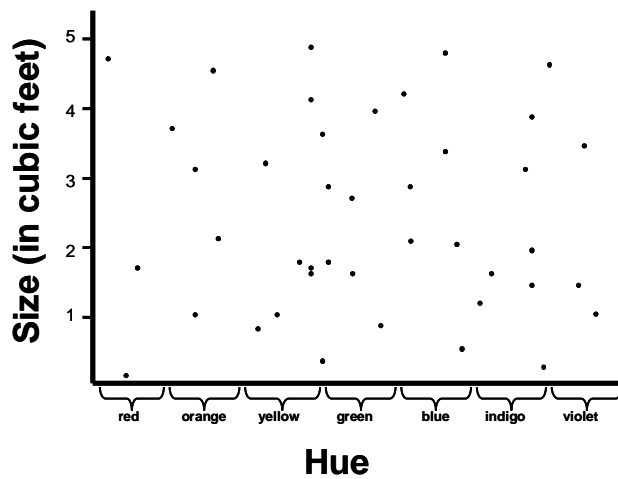


Exhibit C: Diagrams illustrating the contrast between the Hierarchy of Knowledge and the Hierarchy of Generality

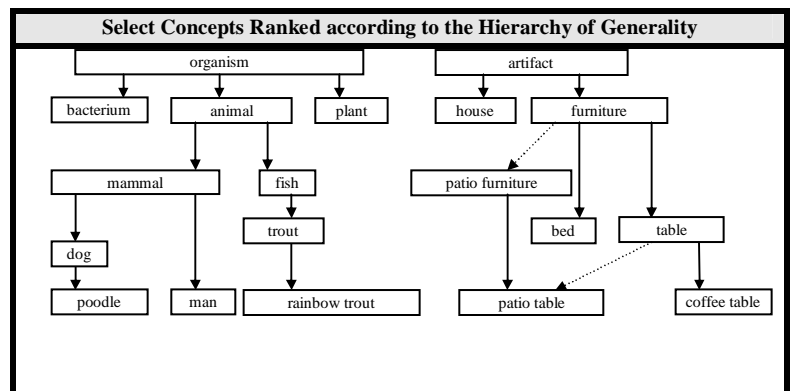
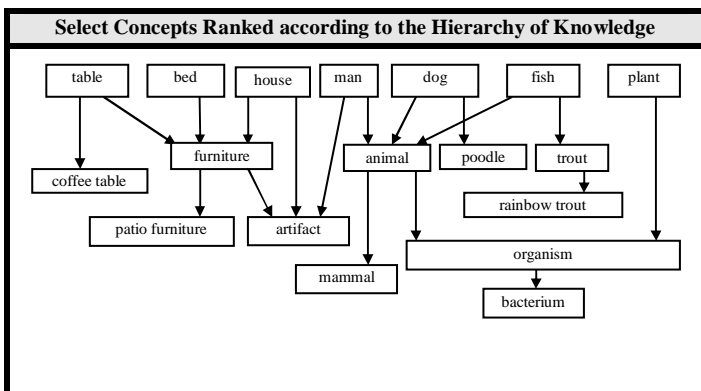


Exhibit D: Simplified differential diagnosis

Chief Complaint: chest pain and trouble breathing

Possible causes (grouped by type):

- infectious: skin rash, pneumonia (bacterial or viral), pleuritis, pericarditis
- ischemic: myocardial infarction, pulmonary embolism
- trauma: hemothorax, bruise, broken rib
- gastrointestinal: acid reflux, esophageal tear

Data obtained by questions asked or tests performed based on knowledge of the possible causes of chief complaint:

Data	Relevance
Patient suffered no recent injury or accident.	Rules out trauma.
Patient has a productive cough.	A productive cough is one in which fluid is coughed up from the lungs, which normally wouldn't be there. Possible causes of fluid in the lung include pneumonia (especially bacterial).
Patient has a fever.	Fever can be caused by the immune response to an infection, so the patient is likely to have an infectious disease.
Hurts more on right side and when patient breaths deeply.	Heart is on left side, so this data makes cardiac causes less likely. Correlation of pain with depth of breath indicates lung-related cause (or trauma, which has been ruled out).
Pain did not come on suddenly.	Sudden pain could be caused by a pulmonary embolism, whereas the symptoms of infectious diseases usually come on more gradually as the infection spreads and the immune system begins combating it.
Patient has an elevated white blood cell count.	<p>White blood cells are produced to fight infections; so an acute rise in the number of white blood cells suggests that the patient has an infectious disease. (There are other possible causes, including steroid use, but there is no independent evidence for any of them.)</p> <p>In conjunction with other evidence, this makes it nearly certain that pneumonia is the cause of the chief complaint.</p>
X-ray reveals density in bottom of the right lung.	<p>The bottom of the right lung contains something—e.g., fluid or a tumor—that is denser than lung tissue. Pneumonia, especially bacterial, causes fluid in the lungs, and there is no independent evidence for any other disease that would produce dense material in the lungs.</p> <p>Given the other data, this makes a diagnosis of pneumonia certain and bacterial pneumonia probable.</p> <p>There are many varieties of bacteria that can cause pneumonia.</p>
Lab analysis of sputum sample reveals an abnormal predominant type of bacteria: Gram positive cocci in clusters.	"Cocci" is a shape of bacteria, and "Gram positive" is a sub-classification of bacteria by type of cell wall. This new data narrows down range of possible bacteria considerably.
Lab tests reveal that the bacteria is <i>Staphylococcus aureus</i> , which is responsible for a minority of pneumonia cases.	

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Appendix: definitions and discussions of key concepts

This course is intended as an outline; its goal was to sketch many points and their interrelation without developing any at length. I have decided to include further discussion of some of these points as a written appendix to the recorded editions of the course. The discussion takes the form of entries on key concepts, which I have included below. The entries appear in (roughly) the order in which the concepts are discussed in the course. In most cases I begin with a definition of the concept (usually one that is given in the course itself) and then add further comment. In some cases, there is only a definition and in other cases the definition is absent. In those cases where the definition given below differs slightly from the one I gave in the course itself, the written definition is meant to supplant the spoken one. These discussions are intended to further develop or clarify points raised in the class, not to stand as independent essays.

In these entries, as in the class itself, I include points that are not present in Rand's own writings. Some of these points are my own, others I have learned from other Objectivists, most often from Leonard Peikoff. I've marked all these concepts which do not appear in Rand's writings with asterisks; double asterisks indicate concepts that I am introducing myself. I often include material that is not present in Rand's writings even in entries on concepts that she discussed. The entries are not exegeses of Rand's work; they are discussions of epistemological concepts based on my understanding of Objectivism.

DAY 1: Preliminaries

epistemology: "a science devoted to the discovery of the proper methods of acquiring and validating knowledge." (*ITOE* 36)

validation: the process of establishing that a cognition is knowledge. (See further discussion under Day 4)

consciousness (two senses, both axiomatic and indefinable):

(1) "consciousness as a state of awareness" (*ITOE* 5): This sense of consciousness subsumes sense-perception and conceptual knowledge, and any other states in which we are aware of existence. All such states are active processes of identifying existents. This sense of "consciousness" is equivalent to "awareness" and to "perception" and "knowledge" in their broadest senses (see below).

(2) consciousness as the faculty of awareness (thus, "consciousness being the faculty of perceiving that which exists" [*Atlas* 933]): Not all states or exercises of the faculty of consciousness are states of awareness. There are other sorts of conscious states—e.g., desires, dreams, intentions to act, imaginings, etc. All these states are *based on* awareness and have *contents* which derive from awareness, but they are not all *awarenesses* of objects.

faculty: an enduring attribute of an entity (especially an organism) in virtue of which it is able to engage in some activity or set of activities.

object (of awareness): the existent of which one is aware.

form (of a state of consciousness): the identity of a state or action of consciousness as distinct from the identity of its object or content.

content (of consciousness): what a state of consciousness is *of* or *about*. In the case of states of awareness, the content is the object—the existent of which one is aware. But states of consciousness which are not awarenesses may have contents that do not exist independently of the state of consciousness. To identify something as a content is to identify it as an aspect of a state of consciousness, whereas to identify it as an object is to identify it as something that exists independent of consciousness and stands in a certain relation to it.

cognition: any act or state of the faculty of consciousness aimed at producing awareness. The concept subsumes both genuine awarenesses and errors, and to identify something as a "cognition" is not to take any position on the issue of whether it is an awareness or a failed attempt. Concepts like "judgment" and "theory" denote different cognitions *qua* cognitions—i.e., without regard to whether they are awarenesses or errors (whether they are true or false). A cognition has a content but not necessarily an object; if a given cognition is an awareness, then, *qua* awareness, it does have an object.

knowledge (three senses, all valid and all used by AR):

(1): awareness. This is the broadest sense and includes even sensations (on which see below), which AR once describes as a form of knowledge (*VOS* 19-20).

(2): stable and enduring (as opposed to fleeting) awareness. Thus the use of the word "grasp" in AR's definition of knowledge—"a mental grasp of a fact(s) of reality, reached either by perceptual observation or by a process of reason based on perceptual observation" (*ITOE* 35)—grasps are stable and enduring.

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(3): propositional knowledge—awareness in the form of concepts organized into propositions. (AR used this, narrowest, sense in some unpublished lectures in which she said that the senses give us not knowledge, but the material for knowledge.)

sensation: “A sensation is produced by the automatic reaction of a sense organ to a stimulus from the outside world; it lasts for the duration of the immediate moment, as long as the stimulus lasts and no longer.” (VOS 19) Sensations are never experienced as such by adult human beings. Rather, they are experienced as aspects of perceptions and are isolated only conceptually. Thus, their existence is a conceptual discovery, and it is a scientific question whether any organisms ever experience isolated sensations.

perception: “A ‘perception’ is a group of sensations automatically retained and integrated by the brain of a living organism, which gives it the ability to be aware, not of single stimuli, but of entities, of things.” (VOS 20) Perceptions are physiologically performed integrations of sensory material, and they constitute the basic form in which man experiences existence. As such, they form the infallible foundation for all knowledge. (When used in this sense, “perception” is equivalent to “sense-perception”. It is sometimes used in a wider sense, in which it is equivalent to “awareness”.)

***perceptual judgment:** the conceptual identification of the content of a perception. A perceptual judgment necessarily omits some of the content from the corresponding perception and includes some content which is not present in the perception. For example, the judgment “That’s red” omits the particular shade of red of the seen object, and it includes knowledge of the relationship between the perceived red and other shades of red, which information is not part of the present perception.

****visualization:** the projection, in a perceptual form, of how an object will act or respond in certain circumstances, which projection is based on prior perceptual knowledge of the object or similar objects.

****post-perceptual processing:** any mental process which takes perceptual material (or material derived ultimately from perception) as input. In the higher animals and man, this includes all actions of the faculty of consciousness other than those which give rise to perception itself. Some, but not all, post-perceptual processing is cognition—i.e., is aimed at producing further awareness. The epitome of such processing is the process of conceptualization, which distinguishes man from animals and produces a whole new form of mental content. However, there is some post-perceptual cognition that takes place at the perceptual level. Examples include visualization and some other complex acts of association by which higher animals are able to be aware of more than the contents of their perception in a given moment. These actions are perceptual-level, in that their content is held in perceptual form, but they are not part of perception itself. Rather, they are the results of further processing of (current and remembered) perceptual data for the sake of achieving a wider range of awareness than is possible by perception alone. Unlike perception, it is possible for any post-perceptual cognition to err in the sense that its content can contradict reality.

error: In its broadest sense, “error” denotes any cognition the content of which contradicts reality (as grasped, ultimately, through perception). In this sense, even animals can err in their post-perceptual cognition. But, in a more significant sense, error is unique to man. An animal can produce a cognition with contents that contradict reality, but it cannot produce the cognition *wrongly*. Because the animal’s consciousness is deterministic, its contents at any given moment are as they *have to be*, given the animal’s nature and the perceptual data available to it. By contrast, man has free will; the process by which he forms and applies concepts is volitional. Because of this, man can go about cognizing wrongly, and it is his capability to do so that gives rise to what we normally call error. It is because of the possibility of this sort of error (and because volition enables man to acquire more knowledge than automatically occurs to him) that man needs a *method*—that man needs epistemology. In this narrower sense, animals are incapable of error. It is controversial, even amongst Objectivists, how what I’m calling “errors in the broader sense” ought to be understood, and whether they should be classified as errors at all. However this phenomenon is understood, I think it is relevant to epistemology for at least two reasons: first, recognizing this sort of error allows us to more clearly distinguish the factors that make perception infallible (and thereby to more fully understand perception’s role as the basis for conceptual knowledge). Second, it is illuminating to compare animal error to the false conclusions that can, in rare circumstances, be reached by men despite the flawless application of a proper method. (Such cases are discussed briefly on Day 4, without reference to the parallel with animal-error.)

infallibility: the inability of a faculty to err. Perception is man’s only infallible cognitive faculty. Its infallibility derives from the fact that it is both *deterministic* and *basic*. Perception’s status as our *basic* form of cognition is essential to its infallibility. It is why the idea of an erroneous perception is incoherent: there is no standard against which a perception can be judged erroneous (either by the perceiver himself, or by some third party). There is nothing that the contents of a perception might contradict that is not itself built on perception; so, in the case of conflict, it is never the perception which is to be rejected. One might think that two perceptions can contradict one another, but this is not so. Perception is an awareness only of the present, so two differing perceptions of the same object on different occasions are not a contradiction; rather, this is how one is aware of change. We cannot have two conflicting perceptions at the same time because perception provides us with a single, integrated field of awareness, rather than with multiple discrete perceptions. The belief that perception can err (or “deceive” us) stems from the confusion of perception with perceptual judgment, from the form-object confusion, or from failing to grasp the essential difference between perception and such states as dreams or hallucinations. Once we have differentiated these states from perception and grasped the relation between perception and other forms of cognition, we can see that there is nothing left to be meant by the phrase “erroneous perception”.

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tabula rasa: a Latin phrase meaning “blank slate”. It denotes the thesis that all of man’s mental content derives from perception. This thesis is a crucial tenet of Objectivism, Aristotelianism, Thomism, and of the empiricist school.

***nativism** (or **innatism**): the theory that man is born with conceptual knowledge or with the capacity to develop such knowledge without basing it on perceptual evidence.

DAY 2: Concepts

concept (generic definition): a unitary cognition (expressed by a word) of (or applying to) indefinitely many, differing objects.

unit (of a concept): one of the many objects of a given concept—e.g., George Washington is a unit of the concept “man.” This use of “unit” is just an application of AR’s more general definition (see below).

the problem of concepts (or **the problem of universals**): How do we have unitary cognition of what are (to perception at least) many, differing objects?

universal: The term derives from the Latin *unum versus alia*, meaning “one over many”, and originated in as a translation for the Greek term *katholou*, which Aristotle coined from a phrase meaning “on the whole”. As an adjective describing a state of consciousness, “universal” means “having a unitary form but a multiplicity of differing objects”. As a noun, “universal” is usually a result of the error of conflating form and object. It refers to the object of a universal cognition, understood as a mind-independent, unitary existent.

realism (about concepts): the theory that concepts are awarenesses of “universals” and that conceptual knowledge applies to the units of concepts derivatively because of some relation between the units and the “universal”. The two historically dominant varieties of this view are “extreme realism” and “moderate realism”. Extreme realism understands universals as supernatural archetypes and units as defective copies of them. Moderate realism understands universals as “metaphysical essences” that exist identically in each of a concept’s units.

conceptualism: the theory that concepts are mental products distinct from percepts and without any basis in reality.

nominalism: the theory that concepts are perceptual contents (images or words) used, without any objective basis, to stand for indefinitely many existents.

****context-omission**: theorized process by which concepts are formed, according to many moderate realists. Moderate realists suppose that all the units of a concept share some identical characteristic—the essence—and differ only in their other characteristics. These other characteristics thus form a context of difference which surrounds the identical essence, and which must be omitted if the essential sameness of the units is to be grasped. One performs the process by first identifying a characteristic(s) of an existent that is shared identically by many other existents and then omitting all the existent’s other characteristics to yield purified awareness of the identical characteristic(s). The purified awareness qualifies as a concept that applies equally to all of the existents possessing the identical characteristic, because its object is limited to the characteristic(s) which is present in all of them. (I take the term “context omission” from John Linnell [“Locke’s Abstract Ideas”, *Philosophy and Phenomenological Research*, Vol. 16, No. 3, 1956: pp. 400-405.]

difference: the relationship between two commensurable, but non-identical, things. For two things to differ, there must be some respect in which they differ—some axis along which they can be compared.

conceptual common denominator (CCD): “The characteristic(s) reducible to a unit of measurement, by means of which man differentiates two or more existents from other existents possessing it.” (*ITOE* 14)

similarity: the relationship between things whose difference from one another along a CCD is insignificant in comparison with their difference from other things along that same CCD.

unit: “an existent regarded as a separate member of a group of two or more similar members.” (*ITOE* 6)

measurement omission: the process by which concepts are formed; it consists in de-specifying all measurements that differentiate the members of a group of similars from one another, on the premise that these measurements “must exist in *some* quantity but may exist in *any* quantity” (*ITOE* 10). The result of the process is a unitary and holistic awareness of a range of existents, where previously one had discrete awarenesses of a number of existents within that range.

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distinguishing characteristic (DC): a characteristic, consisting in a category or range along a CCD, that is shared by all the units of a concept and distinguishes them from other existents.

concept (Objectivist definition): “a mental integration of two or more units possessing the same distinguishing characteristic(s), with their particular measurements omitted.” (*ITOE* 13)

context: metaphysically, all of the existents that interact with a given existent; epistemologically, “the sum of the cognitive elements conditioning an item of knowledge” (*OPAR* 123). In both senses of context, an item’s context must be held in mind when dealing with it. Ultimately something’s context is, metaphysically, the whole of existence and, epistemologically, the whole of one’s knowledge, and these wholes are held in mind by means of axiomatic concepts. Each item has a more proximate context as well, consisting of the things that are more directly related to it. For example, the context for a given law would include ethical and political principles, other laws, and the specific circumstances and problems that led to the proposal of the law.

fundamental: “that on which everything in a given context depends” (*OPAR* 209). “Dependence” here denotes a class of relations of which “causality” is the paradigm case (but not the only case). (For further discussion of this issue see my course *The Hierarchy of Knowledge*, available from the Ayn Rand Bookstore”.)

essential: a fundamental insofar as focusing on it enables one to achieve a unitary grasp the whole context that depends on it.

fundamental characteristic(s) (of a concept): “that distinctive characteristic(s) which, metaphysically, makes the greatest number of other distinctive characteristics possible and which, epistemologically, explains the greatest number of others.” (*ITOE* 85)

essential characteristic(s) (of a concept): “the fundamental characteristic(s) which makes the units the kind of existents they are and differentiates them from all other known existents” (*OPAR* 97).

definition: “a statement that identifies the nature of the units subsumed under a concept.” (*ITOE* 40)

nature: identity, especially when conceived as the cause of metaphysically given actions.

genus: the wider class to which the units of a given concept belong.

differentia: the characteristic(s) that distinguishes the units of a concept from the other existents in the same genus.

DAY 3: Conceptualization

conceptualizing: “The process of concept-formation does not consist merely of grasping a few simple abstractions, such as ‘chair,’ ‘table,’ ‘hot,’ ‘cold,’ and of learning to speak. It consists of a method of using one’s consciousness, best designated by the term ‘conceptualizing.’ It is not a passive state of registering random impressions. It is an actively sustained process of identifying one’s impressions in conceptual terms, of integrating every event and every observation into a conceptual context, of grasping relationships, differences, similarities in one’s perceptual material and of abstracting them into new concepts, of drawing inferences, of making deductions, of reaching conclusions, of asking new questions and discovering new answers and expanding one’s knowledge into an ever-growing sum. The faculty that directs this process, the faculty that works by means of concepts, is: *reason*. *The process is thinking.*” (*VOS* 21-2)

first-level: “A first-level concept... is one formed directly from perceptual data.” (*OPAR* 91). First-level concepts presuppose no other concepts. A first-level-judgment, likewise is a judgment formed directly from perception, which presupposes no prior judgments and no concepts other than those involved in the judgment itself. A first-level generalization is a first-level judgment, in which the subject is universal, rather than particular—e.g. “balls roll” as opposed to “this ball rolls.”

judgment: the identification (or misidentification) of an existent by subsuming it or one of its characteristics as a unit of a concept (or of a complex description composed of concepts). E.g.: If Sam judges that John is a man, Sam identifies John by subsuming him under the concept “man”; and if Sam judges that “John runs”, Sam grasps part of John’s identity by subsuming his action under the concept “run”; if Sam judges that John is a fine scholar, he subsumes him under the description “fine scholar”, which is composed of the concepts “fine” and “scholar”.

proposition: the content of a judgment or any other content in the same form. A judgment is a cognition—an act of consciousness. Its content is a proposition. This same content can be the content of other mental acts. For example, instead of judging that John is a fine scholar, one can hope that he is, or wonder whether he is. The proposition “John is a fine scholar” is the content of all these actions. The basic form of proposition is the predication, which consists of a subject and a predicate. The subject is the thing that would be identified in a judgment of which the proposition would be the content, and the predicate is the concept (or description) by which the

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subject would be identified. (There are also complex propositions formed by using concepts like “if” and “and” to combine predications.)

higher-level concept (or **abstraction from abstraction**): “Starting from the base of conceptual development—from the concepts that identify perceptual concretes—the process of cognition moves in two interacting directions: toward more extensive and more intensive knowledge, toward wider integrations and more precise differentiations. Following the process and *in accordance with cognitive evidence*, earlier-formed concepts are integrated into wider ones or subdivided into narrower ones.” (ITOE 19)

***widening**: a concept formed by integrating earlier concepts as units. It, therefore, presupposes less general concepts for (some of) its units. E.g.: the concept “organism”, which presupposes “animal” and “plant”.

narrowing (or **subdivision** or **specification**): a concept formed by differentiating the units of an earlier concept from one another. It presupposes the wider concept, which forms the genus to which its own units belong. E.g.: the concept “parrot”, which presupposes “bird”.

hierarchy: “A body of persons or things ranked in grades, orders, or classes, one above another.” (*Oxford English Dictionary*) A hierarchy is a set of things, ranked according to some relation in which they stand to one another. The relation must be *iterable* and *asymmetrical*. The parent-child relationship for example is iterable in that a child can have children of his own, and it is asymmetrical in that his parents cannot also be his children. Thus there is a hierarchy of parentage—a genealogy or “family tree”. Many hierarchies, including the family tree and all the philosophically significant hierarchies, exhibit a branching structure whereby each member of a later level stands in the relevant relation to some (but not all) members of the previous level. Thus, a given child is the child of some (but not all) members of the previous generation. Hierarchies of interest to philosophy include: the hierarchy of knowledge, the hierarchy of generality, the hierarchy of values, and causal hierarchies (in which the earlier items are causes of the later), and other hierarchies in the special sciences. (For more information on these types of hierarchies and how they relate to one another, I refer you to my course *The Hierarchy of Knowledge*, especially, lectures 1 and 5.) The two hierarchies most relevant to epistemology are the hierarchies of knowledge and of generality. When Objectivists speak simply of “hierarchy”, they are usually referring to the hierarchy of knowledge.

hierarchy of knowledge (or **epistemic hierarchy** or **logical hierarchy**): a ranking of concepts or judgments in terms of their logical dependence, such that later items in each chain presuppose earlier ones. One must hold one’s knowledge in a hierarchical manner to grasp the relation of derivative items of knowledge to their basis in perception, and thus to keep them tied to reality.

logical order: the order of dependency between items of knowledge, and, therefore the necessary order of learning. “Logical order” differs from “logical hierarchy” in that the former refers to the *order* in which the items fall, while the latter refers to the system of items so ordered.

***hierarchy of generality** (or **taxonomy**): a ranking of concepts or judgments by their generality, such that later items in each chain are more precise specifications of earlier ones. The hierarchy of generality is the means by which one holds the integration of each concept and judgments into the whole of one’s knowledge.

characteristic (or **aspect**): This is a general concept to subsume attributes, actions, relations, and any other existents which similarly depend on entities. Characteristics can have characteristics. (An action, for example, can be quick.) A concept of a characteristic presupposes concepts for some existents that can possess the characteristic.

cross-classification: a narrowing in which the distinguishing characteristic is not a sub-range within the distinguishing characteristic of the wider concept from which it is formed, but instead lies along some orthogonal CCD. E.g.: “bachelor” is a cross-classification of men. A cross-classification presupposes a concept(s) for its distinguishing characteristic, and, like all narrowings, it presupposes the wider concept from which it is subdivided.

axiom: “a statement that identifies the base of knowledge and of any further statement pertaining to that knowledge, a statement necessarily contained in all others.” (*Atlas* 956) Metaphysical axioms are basic facts about reality, which stand at the base of all knowledge and are implicit in all knowledge, including perception. These axioms are made explicit in the form of axiomatic concepts, of which the basic three are “existence”, “identity”, and “consciousness”. Because these concepts identify material contained in all knowledge, including all perception, they stand at the beginning of the hierarchy of knowledge, and because the facts they identify apply to all knowledge, they also stand at the beginning of the hierarchy of generality. They are the form in which we hold the need and basis for integrating our knowledge into a whole. (On this issue, see ITOE, chapter 6.)

reason: “the faculty that identifies and integrates the material provided by man’s senses.” (VOS 22)

mysticism: “the theory that man has a means of knowledge other than sense perception or reason, such as revelation, faith, intuition.” (OPAR 182)

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rationalism: the theory that reason has access to knowledge independent of the senses. Rationalism and mysticism are alike in positing a non-existent source of knowledge, but they differ in that rationalism attributes this source to reason, and typically sees it as responsible for such things as the principles of mathematics and logic. Mystics see the posited faculty as independent of (and superior to) reason, and they usually think it reveals facts about another world. Consistently applied, mysticism and rationalism merge into one another, but the motivation is often different, and in more moderate forms, the two are importantly different.

empiricism: Sometimes “empiricism” refers to the thesis that all knowledge derives from perception, but more often refers to a school of philosophy whose members both held this thesis and were skeptical (to various degrees) of the possibility of attaining any conceptual (as opposed to perceptual) knowledge, because they did not see how such knowledge could be derived from perception. Thus “empiricism” might be defined as the thesis that all knowledge is perceptual in form.

DAY 4: Objectivity

logic: “the art of non-contradictory identification” (*Atlas* 934)

objectivity: “volitional adherence to reality by the method of logic” (*OPAR* 116). “Objectivity is both a metaphysical and an epistemological concept. It pertains to the relationship of consciousness to existence. Metaphysically, it is the recognition of the fact that reality exists independent of any perceiver's consciousness. Epistemologically, it is the recognition of the fact that a perceiver's (man's) consciousness must acquire knowledge of reality by certain means (reason) in accordance with certain rules (logic). This means that although reality is immutable and, in any given context, only one answer is true, the truth is not automatically available to a human consciousness and can be obtained only by a certain mental process which is required of every man who seeks knowledge...” (*VOR* 18)

objective reality: reality considered as the object of consciousness, and thus as setting the standard for cognition.

objective (as a characteristic of mental products): resulting from the self-conscious logical processing of perceptual data.

subjective (as a characteristic of mental products): resulting from illogical (non-reality) based processing of perceptual data.

intrinsicism

(as a theory of knowledge): the theory that knowledge and concepts are passive states, involving no exercise of volition and possessing no identity as distinct from the identity of their objects.

(as a cognitive method): the practice of regarding one's concepts and/or judgments as unchallengeable absolutes, without the need for validation or possible qualification in light of new knowledge.

subjectivism

(as a theory of knowledge): the theory that consciousness is active and that its activity renders all judgments and concepts subjective, so that it is impossible to grasp the identity of mind-independent objects.

(as a cognitive method): the practice of ascribing equal epistemic standing to all concepts and/or judgments, on the premise that it is impossible to objectively validate any of them.

validation: Some cognitions qualify as knowledge without being validated. The cognitions in this category are: perception (including the axioms, which are perceptually self-evident) and any conceptual knowledge that is primitive enough that its relation to perception can be held in perceptual form. We validate these cognitions by grasping that perception is metaphysically given and infallible. Because higher-level cognitions consist in a complex and volitional process of interrelating perceptual data, they do not qualify as knowledge unless they have been validated. The process of knowing at these higher-levels, can only be enacted, sustained and directed *conceptually*—i.e., with explicit knowledge of what one is doing and why. Validation is the process of making establishing *this* knowledge. Specifically, a higher-level cognition is validated by conceptualizing the relation in which it stands to perceptual data and to one's other knowledge. Thus validation consists in *reduction* and *integration*.

reduction: “the process of identifying in logical sequence the intermediate steps that relate a given cognitive item to perceptual data.” (*OPAR* 133)

integration: “the process of uniting elements into an inseparable whole” (*OPAR* 77) In particular, the process of interrelating various items of knowledge into a whole, into concepts, propositions, and ultimately a systematic body of knowledge.

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invalid concept: Attempts to integrate existents which are not essentially similar. The existents might not exist at all (as in the case of “god”), or may exist, but not actually be similar (as with “choleric”, a term from ancient medicine) or they may be similar only superficially (in which case the result is a package-deal).

package-deal: An invalid concept which attempts to integrate existents based on a non-essential similarity.

anti-concept: “an unnecessary and rationally unusable term designed to replace and obliterate some legitimate concept” (“Credibility and Polarization”, *ARL* Oct. 11, 1971, 1.) The concept “anti-concept” is a cross-classification of invalid concepts by the introduction of a distinguishing characteristic along a new CCD—namely, their purpose. It denotes any invalid concept devised for the purpose of obliterating a valid concept(s), by institutionalizing a perspective that is incompatible with it.

floating abstraction: A concept (or phrase) used without knowledge of the specific units it denotes. It is not a genuine cognition but “a memorized linguistic custom representing in the person’s mind a hash made of random concretes, habits, and feelings that blend imperceptibly into other hashes which are the content of other, similarly floating abstractions.” (OPAR 96)

frozen abstraction: The substitution of “one particular concrete for the wider abstract class to which it belongs”—e.g., of altruism for morality. (VOS 94)

stolen concept: The use of a concept while ignoring or denying its hierarchical presuppositions.

evidence: the knowledge upon which a conclusion is based. For example, the evidence for a child’s judgment that a certain perceived entity is a dog is his perception that the entity has the characteristics (the shape and type of motion) that are the distinguishing characteristics of dogs and are, therefore, essentially similar to the other units of the concept. This case involves a first-level judgment. In the case of higher-level judgments, the pattern of reasoning and the evidence required may be more complex. Consider the case of concluding that there was a dog in your yard this afternoon, while you were absent. This judgment would be based on observed changes in the state of your yard and on general knowledge about dogs, which would enable you to identify a dog as the cause of these effects. The evidence might include your observation of dog droppings, paw prints, and characteristic holes in the lawn as well as your general knowledge of what sorts of entities are capable of producing these effects. The evidence for a conclusion is the whole body of knowledge on which it rests, however not every component of this body of knowledge in isolation qualifies as a *piece of evidence* for the conclusion. A given item of knowledge qualifies as a piece of evidence only insofar as it is known to play some specific role in the process of establishing the conclusion.

hypothesis: a proposition being entertained as a prospective judgment, from which one draws provisional inferences that enable one to identify the evidence necessary to support or refute it. A hypothesis can be thought of as a judgment held in abeyance because, though there is not sufficient evidence to make the judgment, there is reason to think that more evidence might be found. Hypothetical reasoning is quite common (and invaluable) when attempting to identify the causes of known effects. This includes the diagnosis of diseases and the solution of crimes as well as most scientific discoveries.

possible (as an epistemological concept): the epistemic status of a hypothesis that can be rationally considered because there is some evidence for it and no evidence that contradicts it. This status must be understood in relation to the cognitive process of which it is a part—the process of hypothetical reasoning. A hypothesis is possible when the evidence is such that the thinker is justified in thinking that he can advance his knowledge by entertaining and pursuing the hypothesis. By nature, we can only pursue a small number of possibilities at any given time, and this places limits on what qualifies as possible. Since one cannot weigh the evidence for and against 1,000 alternative possibilities, 1,000 competing hypotheses on a single issue cannot all qualify as simultaneously possible. For example, if a patient exhibits symptoms which could be caused by each of 1,000 known factors, it is not thereby possible that each factor is present; nor, in the absence of any further evidence, is it possible that any particular one of the factors is present. If however, there are four known broad types of factor that can cause the symptoms, then four hypotheses, corresponding to the four types, would qualify as possible; it is by exploring these possibilities that one would begin the process of diagnosis. For a putative hypothesis to qualify as a hypothesis rather than a mere arbitrary guess, it must have at least the status of possibility.

possible (as a metaphysical concept): the ability of an action or condition to be performed or effected by some entity. A metaphysical possibility is a capability, and an entity’s capability to perform a given action does not alone constitute any evidence that the entity did perform the action. Thus it does not follow from the fact that it is (metaphysically) possible for men (and thus for any given man) to commit murder that it is (epistemologically) possible that any given man did commit murder. However, since much of our hypothetical reasoning concerns the identification of the causes of known effects, in many contexts the capability of an entity of causing a certain effect does qualify as evidence. For example, if a murder is known to have been committed, and only a small number of people were capable of causing it (i.e., only a few people had the opportunity and means), then, in many contexts, this would be sufficient evidence to render the hypotheses that each of them committed the crime (epistemologically) possible.

arbitrary: the epistemological status of a claim for which there is no evidence. An arbitrary claim is not a judgment because it is not a product of the cognitive process in which judgment consists—the process of identifying existents under concepts on the basis of

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evidence. The contents of an arbitrary claim do not even constitute a proposition, though they are expressed in the same language as a proposition. To engage in the arbitrary is to violate the basic rules of cognition, which set the conditions under which all of one's concepts (and thus any propositions composed from them) are meaningful. An arbitrary claim, therefore, is cognitively meaningless.

probable: the epistemic status of a hypothesis that is supported by “the burden of a substantial body of evidence”. (*OPAR* 178)

certain: the epistemic status of a judgment whereby “the evidence in its favor is conclusive” so that it should not be treated as a hypothesis but considered knowledge. (*OPAR* 179) While it is possible in rare cases for a man to be certain of a falsehood, it is arbitrary to entertain doubts about a certain conclusion. If there are any rational grounds for doubting a given conclusion, the conclusion is thereby not certain.