Chapter 7

Thought: unsing what we know.

The element of cognition:

* Concept: A mental category that groups objects, relat0ions, activities, abstractions, or qualities having common properties.
* Basic concepts: it has a moderate number of instances and are easier to acquire than those having either few or many instances.
* Prototype: a representative example of concept.
* Propositions: units of meaning that are made up of concepts and that express a unitary idea.
* Cognitive schemas, complicated networks of knowledge, associations, beliefs, and expectations.
* Mental image: A mental representation that mirrors or resembles the thing it represents; mental images occur in many and perhaps all sensory modalities.
* Subconcious processes: mental proceses occuring outside of conscious awareness but accessible to onsciousness when necessary.
* Nonconscious processes: mental processes occuring outside of and not available to conscious awareness.
* Implicit learning: Learning that occurs when you acquire knowledge about something without being aware of how you did so and without being about to state exactly what it is you have learned

Reasoning Rationally

Formal Reasoning: Algorithms and Logic

* Reasoning: the drawing of conclusions or inferences from observations, facts, or assumptions.
* Algorithm; Aproblem solving strategy guaranteed to produce a solution even if the user does not know how it works.
* Deductive reasoning; A form of reasoning in which a conclusion follows necessarily from give premises; if the premises are true, the conclusion must be true.(sciencetific inquire)
* Inductive reasoning: A form of reasoning in which the premises provide support for a conclusion, but it is still possible for the conclusion to be false.
* Heuristic: a rule of thumb that suggests a course of action or guides problem solving but does not guarantee an optimal solution.
* Dialectical reasoning: A process in which opposing facts or idea are weighed and compared, with a view to deterimining the best solution or resolving differences. (comparsion between seniros)

Barriers to Reasoning Rationally:

* Affect heuristic: the tendency to consult one’s emotions instead of estimating probbilities objectively.(judging “goodness, badness”)
* Availability heuristic: The tendency to jedge the probability of a type of event by how easy it is to think of examples or instances.(remember the exmaple to the events)
* Framing effect: tHe tendency for people’s choices to be affected by how a choice is presented or framed, such as whether it is worded in terms of potential losses or gains.(5% fat milk, or 95% fat free milk, they are the same)
* Hindsight bias: The tendency to overestimate one’s ability to have predicted an event once the outcome is knows the “I knew it all along” phenomenon.
* Confirmation bias: The tendency to look for or pay attention only to information that confirms one’s own belief.
* Mental set: a tendency to solve problems using procedures that worked before on similar problems.
* Cognitive dissonance: A state of tension that occurs when a person holds two cognitions that are psychologically inconsistnet, or when a person’s belief is incongruent with his or behavior(hyoicrit)
* Postdecision dissonance: in the theory of cognitive dissonance, tension that occurs when you believe you may have made a bad decision.
* Justification of effort: The tendency of individuals to increase their liking for something that they have worked hard or suffered to attain; a common form of dissonance reduction.

Measuring intelligence: The psyhometric approach

* Intelligence: An inferred characteristic of an indiidual, usually defined as the ability to profit from experience, acquire knowledge, think abstractly, act purposefully, or adapt to changes in the environment.
* Psychometrics: the measurement of mental abilities, traits, and processes.
* Factor analysis: A statistical method for analyzing the intercorrelations among various measures or tests scores; clusters of measures or scores that are highly correlated are assumed to mesure the same underlying trait, ability, or aptitude.
* G factor: a general intellectual ability assumed by many theorists to underlie specific mental abilities and talents.
* Mental age: a measure of mental development expressed in terms of the average mental ability at a given age.
* Intelliegence quotient: a measure of intelligence originally computed by dividing a person’s mental age by his or her chronological age and multiplying the result by 100; it is now derived from norms provided for standardize intelligence tests.
* Triatchic theory of intelligence a theory of intelligence that emphasizes information-processing strategies, the ability to creatively transfer skills to new situations, and the practical application of intelligence.
* Metacognition: the knowledge or awareness of one’s own cognitive processes.
* Tacit knowledge: strategies for success that are not explicity taught but that instead must be inferred.
* Emotional intelligence: The ability to identify your own and other people’s emotions accurately, express your emotions clearly, and regulate emotions in yourself and others.
* Heritability: A statistical estimate of the proportion of the total variance in some trait that is attributable to genetic differences among individuals within a group.
* Cognitive ethology: The study of cognitive processes in nonhuman animals.
* Theory of mind: A system of beliefs about the way one’s own mind and the minds of others work, and of how individuals are affected by their beliefs and feelings.