

FOCUS ON VOCABULARY AND LANGUAGE

Page 369: . . . our species is *kin to* . . . Myers notes that we are biological creatures related to (*kin to*) other species of animals. We have exceptional abilities for innovation, learning, memory, and rational thinking; yet, at the same time we are prone to making mistakes and thinking and acting irrationally.

Thinking

Page 370: For most of us, the robin is the *birdier bird* . . . We develop our ideas of how things go together (our **concepts**) from definitions or by using **prototypes**. The best example (*prototype*) of a bird is a robin (it's the *birdier bird*) rather than a penguin, a kiwi, or an ostrich.

Page 371: Thomas Edison tried thousands of lightbulb filaments before *stumbling upon one that worked*. Edison was a famous inventor and he used a trial-and-error method to develop the metal filament that makes a lightbulb glow brightly. Using trial and error, he came upon the solution by chance (*stumbled upon one that worked*). Myers contrasts this method with following an **algorithm** (a step-by-step method that always ends with the answer and is typical of computer programs).

Page 371: . . . insight often *pops into the mind with striking suddenness*, with no prior sense *that one is "getting warmer"* or feeling close to the answer. **Insight** is the sudden and often novel realization of the solution to a problem. The answer typically arrives in conscious awareness quickly and unexpectedly (*pops into the mind with striking suddenness*) without any forewarning that the solution is imminent (*that one is "getting warmer"*). When we solve a problem through insight (*when the "Eureka moment" hits us*), we feel a sense of accomplishment.

Page 373: Should I *shoot the basketball* or pass to the player *who's hot*?—we seldom take the time and effort to reason systematically. (Don't take this sentence literally.) Myers is using basketball to illustrate that we usually follow our subjective feelings (*intuitions*) rather than taking the time to use logic and reason. For example, in a game of basketball, the player holding the ball must decide whether to throw the ball through the hoop (*shoot the basketball*) or pass it to a player who has scored frequently (*who's hot*).

Page 374: . . . they do it [make decisions] mostly by *the seat of their pants*. When we make decisions based on subjective or intuitive reasons, rather than using logical, reflective problem-solving strategies, we are using *seat-of-the-pants* judgments. Thus, when we employ **heuristics** (simple thinking strategies), we may make decisions that are incorrect and not very smart (*dumb decisions*).

Page 374: The **representativeness heuristic** enabled you to make a *snap* judgment. We can make quick (*snap*) judgments using a strategy that allows us to determine the probability of things by how well they appear to be typical of some *prototype* (the *representativeness heuristic*). For example, is a person who is intelligent, unimaginative, compulsive, and generally lifeless, more likely to (a) play jazz for a hobby or (b) play jazz for a hobby and work as an accountant? The *representativeness heuristic* leads most people to incorrectly pick (b) as the answer.

Page 376: . . . responding to global climate change—which some scientists regard as a future "*Armageddon in slow motion*"—was one of the lowest priorities. *Armageddon* refers to the battle between the forces of good and evil and is predicted to mark the end of the world. Because of the **availability heuristic** along with readily available images, we have come to fear extremely rare events, such as terrorist attacks. And, we display less concern for something that may be ultimately much more destructive, such as gradual global climate change ("*Armageddon in slow motion*").

Page 376: *Overconfidence plagues* decisions outside the laboratory, too. Many factors combine to produce the tendency to overestimate the accuracy of our decisions, judgments, and knowledge (**overconfidence**). In everyday life, as well as in lab experiments, our judgments are greatly afflicted (*plagued*) by *overconfidence*.

Page 377: *Belief perseverance* often *fuels social conflict* . . . Our irrationality is on display when we persist (*persevere*) in our views despite evidence to the contrary (**belief perseverance**). This irrationality can lead to an increase in strong feelings or passions over controversial issues (*fuels social conflict*). Myers suggests one solution for those who wish to restrain (*rein in*) the effect of belief perseverance—give serious consideration to beliefs *opposite* to your own.

Page 378 (Box): Human emotions were *road tested in the Stone Age*. During our evolutionary past, certain traits or characteristics were selected for because they helped our ancestors survive. Those that survived because of these attributes passed them on to their descendants. Fearful reactions to snakes, lizards, spiders, confinement, and heights were selected for (*they were road tested*) during earlier times (*in the Stone Age*) and are part of human nature today.

Page 379: From this you might conclude that our *heads are indeed filled with straw*. The discussion about human irrationality might lead to the conclusion that we have ineffective and inefficient cognitions (*heads filled with straw*). Myers, however, is optimistic and suggests that we can learn about our irrational inclinations (*tendencies*) and be alert to the dangers that can result in poor or foolish (*dumb*) decisions.

Page 380 (Table 9.1): . . . judgments *flip-flop*, depending on how the same issue or information is *posed*. Presenting the same information in two different ways can cause people to react more negatively or positively, depending on how the (*logically equivalent*) information was framed (*posed*). The **framing effect** can cause alarming and dramatic reversals (*flip-flops*) in people's decisions and judgments. For example, a very fatty food product made by grinding meat (*ground beef*) will be seen more positively if described as "75 percent lean" as opposed to "25 percent fat," despite the fact that exactly the same information is conveyed in each case.

Page 380 (Table 9.1): . . . *hunches* . . . We have a propensity to make mistakes because we seek information that will confirm our intuitive feelings (*hunches*) about situations, people, or future events. We rely on heuristics, we are overconfident in our estimates, and we are unduly influenced by the effects of **framing**.

Page 381: More than we realize, *thinking occurs off-screen*, with the results occasionally *displayed on-screen*. Humans process a great deal of information without any conscious awareness of doing so. This is similar to a computer's hidden processing, which is not displayed on the monitor (*it occurs off-screen*). Once in a while the results of our unconscious processing enter consciousness (the results are occasionally *displayed on-screen*).

Language

Page 384: *They are hunting dogs*. This sentence is syntactically correct, but its meaning (**semantics**), derived from the context, is ambiguous. In one context, it could mean that people (*they*) are out searching (*hunting*) for dogs. In another context, it could refer to dogs (*they*) that are used to track or seek (*hunt*) animals.

Page 384: With remarkable efficiency, we selectively sample tens of thousands of words in memory, effortlessly *assemble them* with near-perfect syntax, and *spew them out at a rate of three words* (with a dozen or so phonemes) *a second*. Humans have an amazing facility for language. With little or no effort, we can select the appropriate words from the tens of thousands in memory, put them together (*assemble them*) quickly, and verbally produce them in rapid succession (*spew them out at the rate of three words a second*).

Page 385: Yet by 4 months of age, babies can *discriminate* speech sounds. *They can also read lips*. When people speak, their lips move in ways that correspond to the sounds they utter. Many

deaf people can understand what is being said by watching how the lips move (by *lip reading*). Not only can very young children tell the difference (*discriminate*) between sounds, but they can also recognize lip movements that correspond with certain sounds (*They can also read lips*). This capacity to understand what is said to and about them (*receptive language ability*) matures before the ability to produce language (*productive language ability*).

Page 386: It is as if the *switches need to be turned either “on” or “off”* for us to understand and produce language. Myers likens learning a particular **grammar** during early childhood to *turning on switches* that influence language acquisition. When the switches have been turned on for one grammar, it becomes much harder to master a second grammar. During the early years of language development, we easily and accurately acquire (*master*) grammar and accent. After that critical period, the language acquisition system tends to work less hard, and mastering another grammar becomes more difficult (*the window for learning language closes*).

Page 390: *What you experience as a continuous, indivisible stream of experience is actually but the visible tip of a subdivided information-processing iceberg, most of which lies beneath the surface of your awareness.* Just as most of the mass or volume of an iceberg is below the surface of the ocean and out of sight, most mental functioning goes on without conscious awareness. Our conscious awareness (*stream of experience*) appears to be without gaps or breaks (*it is continuous and indivisible*) but it arises from subsystems (*it is subdivided*) localized in particular brain regions. The unified consciousness we experience is a small part (*the tip of the iceberg*) of total information processing.

Thinking and Language

Page 391: *Thinking and language intricately intertwine.* Asking which comes first is one of psychology’s *chicken-and-egg* questions. “Which came first: the chicken or the egg?” Clearly, you need an egg to produce a chicken, but you also need a chicken to lay the egg. So, like this age-old riddle, psychologists have argued over which comes first, our ideas and thoughts or the words we use to name and verbalize them. Myers concludes that language influences (but does not determine) thought, and our thinking affects our language, which in turn affects thought.

Animal Thinking and Language

Page 395: If in our use of language we humans are, as the *psalmist* long ago *rhapsodized*, “little lower than God,” where do other animals fit in the scheme of things? The *psalmist* (an author of religious or sacred songs) spoke in an extravagantly enthusiastic manner (*rhapsodized*) about human nature, and Myers notes that it is our use of human language that elevates us above nonhumans. Nevertheless, we do share a capacity for language with other animals.

Page 396: *Spying* the short stick, Sultan [the chimp] grabbed it and tried to reach the fruit. Kohler’s experiment with the chimpanzee Sultan showed that our closest relatives are capable of cognition. When the fruit was out of reach, Sultan noticed (*spied*) the short stick and used it to pull a longer stick into the cage, which he then used to get the fruit.

Page 397: Until his death in 2007, the grey parrot, Alex, also displayed a *jaw-dropping numerical ability*. Alex the parrot could name and categorize objects he was shown. He had an amazing capacity (a *jaw-dropping ability*) to identify the number of objects displayed and to add the numbers together, saying which of two sets of numbers was larger. As Myers notes, humans are not the only species with *numerical ability*.

Page 398: Were the chimps *language champs* or were the researchers *chumps*? Critics of “ape language” argue that, for animals, language acquisition is painfully slow, resembles conditioned responses, does not follow **syntax**, and is little more than imitation. In addition, demonstrations of animal language are always subjectively interpreted by their trainers. Myers asks: Were the chimps exceptionally talented (*language champs*) or were the researchers

just easily fooled or duped (*were they chumps*) and acting foolishly (*making monkeys of themselves*)? The answer is that the controversy has led to further research and progress, as well as a renewed appreciation of our own—and of our closest relatives’—capacity for communication and language.