

## FOCUS ON VOCABULARY AND LANGUAGE

Page 85: . . . *drops by* . . . If a person casually visits the author without an appointment (*drops by* his office) and begins talking to him (*strikes up a conversation*), Myers can continue typing the sentence he has been working on without difficulty. This ability to engage in two tasks simultaneously illustrates how consciousness can split or separate.

Page 85: To psychologists, consciousness is similarly a *fundamental yet slippery concept*. In science, many fundamental concepts are difficult to define (e.g., life, matter, energy). **Consciousness** is one of the most basic (*fundamental*) ideas in psychology, yet it is an elusive and difficult concept to grasp (a *slippery concept*).

Page 85: . . . psychology had nearly *lost consciousness* . . . Myers is using a little humor to illustrate the fact that changes have taken place during psychology's history. To "*lose consciousness*" can have two meanings here: (1) to fall unconscious or pass out and (2) to fail to keep (*lose*) "consciousness" as the subject matter of psychology. Psychology started out as the study of conscious experience; then, because of problems in scientifically investigating the mind, overt behavior replaced consciousness during the first half of the twentieth century. Finally, in the 1960s, psychologists regained consciousness as a legitimate subject for study.

### *The Brain and Consciousness*

Page 86: In today's science, one of the most *hotly pursued* research *quests* is to understand the biology of consciousness. In contemporary science, the search to comprehend (*quest to understand*) the biology of consciousness is popular, exciting, and interesting (a *hotly pursued* topic). Nevertheless, it is a very difficult endeavor. For example, how do neurons (*brain cells*), which rapidly communicate (*jabber*) with one another, give rise to conscious awareness and the mind? (This is known as the "*hard-problem*").

Page 87 (Figure 3.2): . . . *vegetative patient* . . . This refers to a person who is in a coma and whose routine functions are reduced or absent. Despite being unable to respond in a normal fashion, these non-communicative patients exhibit brain activity similar to a healthy person's brain. Such brain activity suggests that, even in a comatose, paralyzed (*motionless*) body, the brain and the mind may still be active.

Page 87: What is *mind-blowing* to many of us is the growing evidence that we have, *so to speak*, *two minds*, each *supported* by its own neural equipment. What is surprising or even astonishing (*mind-blowing*) is that we possess two separate levels of consciousness (*two minds*, *so to speak*). Each is helped and sustained (*supported*) by its own neural systems; one level is conscious awareness (*what's on screen*) and the other is out of awareness and unconscious (*off stage and out of sight*).

Page 87: *We know more than we know we know*. This sentence sounds confusing, but it simply means that we have more knowledge than we are consciously aware of having. There is information contained at both the unconscious, automatic level ("*low road*") and at the aware, deliberate, conscious level ("*high road*"). Perception, memory, thinking, language, and attitudes all operate at these two levels, and this is referred to as **dual processing**.

Page 88: So, consciousness . . . is but *the tip of the information-processing iceberg*. 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. Consciousness is a small part (*the tip of the iceberg*) of total information processing.

Page 88: *Running on automatic pilot* allows consciousness—your mind's *CEO*—to *monitor* the whole system and *deal with* new challenges . . . Myers is pointing out that much of our information processing occurs outside of conscious awareness (*we run on automatic pilot*). Conscious awareness is similar to the top manager of an organization (the *CEO* or *chief*

*executive officer*) whose many assistants take care of all the routine tasks, allowing him or her to pay attention to (*monitor*) the total system and tackle (*deal with*) new challenges.

Page 89: Now, suddenly, *your attentional spotlight shifts*. Your *feet feel encased*, your *nose stubbornly intrudes on the page* before you. **Selective attention** refers to our tendency to focus on only a small part of what is possible for us to experience. If you do attend to more aspects of your experience (*your attentional spotlight shifts*), you will be surprised at the amount of stimulation you process without awareness, such as the feel of the shoes on your feet (*your feet feel encased*) and the fact that your nose actually blocks your line of vision (*your nose stubbornly intrudes on the page*).

Page 89: . . . *you may draw a blank* . . . This means that you do not know something and cannot answer (*you draw a blank*). The *cocktail party effect* is an example of selective attention and refers to our ability to attend to only one voice among many. When participants in an experiment attended to a message relayed to one ear, they were unable to perceive what was said in the other ear when asked to do so later (*they drew a blank*).

Page 90: . . . they failed to notice a young woman carrying an umbrella *saunter* across the screen midway through the video. In this experiment, viewers had to watch a video of basketball players and signal when the ball was passed. Because of their intense selective attention, they generally failed to notice a female walking slowly (*sauntering*) through the players, thus demonstrating **inattentive blindness**.

Page 91: . . . *can you see the twinkle in their eyes?* . . . To say that someone has a *twinkle in his eyes* means that he is joking or making fun of something. Participants in an experiment failed to notice that some of the photos they had picked had been surreptitiously replaced (*switched by sleight-of-hand*), a phenomenon called *choice blindness*. When asked later if they would have noticed such a switch in a hypothetical experiment, 84 percent believed they would have. The researchers half jokingly (*they had a twinkle in their eyes*) called this effect *choice-blindness blindness*.

Page 91: . . . *pop-out* . . . A very unique object or event (a *strikingly distinct stimulus*) will automatically attract our attention (*it draws our eye*). This experience is called the *pop-out phenomenon*.

Page 91: We may feel “*dead to the world*,” but we are not. When we are sound asleep we may be hard to awaken and unresponsive (*dead to the world*). Nevertheless, part of our mind is still processing information outside our consciousness awareness (*our perceptual window is actually not completely shut*).

### **Sleep and Dreams**

Page 92: . . . limbs often *move in concert* . . . To “*move in concert*” is to move simultaneously or in synchrony. When we dream of doing something, our arms and legs do *not* move in synchrony (do not *move in concert*) with the activity in the dream.

Page 92: *Pulling an all-nighter*, we may feel *groggiest* about 4:00 A.M., and then *we get a second wind* after our normal wake-up time arrives. If we decide to stay up all night (*pull an all-nighter*), say, to finish a term paper by the deadline, we feel most mentally confused and uncoordinated (*groggiest*) around the middle of the night. But as our usual time for getting up approaches, we begin to feel renewed energy (*we get a second wind*).

Page 92 (*Margin note*) . . . “*owls*” . . . “*larks*” . . . Like birds that are nocturnal (*owls* are an example), many younger adults stay up late and are lively at nighttime (evening-energized “*owls*”). As we get older, we are more energetic in the morning and performance tends to decline as the day progresses—much like birds that wake and become active with the dawn of a new day (*larks* are birds who do this).

Page 93: . . . Aserinsky watched the machine *go wild*, tracing *deep zigzags* on the graph paper. The discovery of **REM** (rapid eye movement) **sleep** occurred accidentally. To see if an EEG (*electroencephalograph*) was working properly, Aserinsky placed the electrodes near his 8-year-old son's eyes. Periodically during the night the machine responded vigorously (*went wild*), producing a pattern of high-frequency waves (*deep zigzags*) on the printout. These patterns were produced by rapid, spasmodic (*jerky*) eye movements and accompanied by very frantic brain activity. When awakened during one of these periods, the boy said he was dreaming.

Page 95: Rather than continuing in deep *slumber*, you *ascend* from your initial *sleep dive*. During a typical night's sleep (*slumber*), you go through a number of distinct stages. If you were awake and relaxed, perhaps with your eyes closed, an EEG would show **alpha waves**. As you fall deeper and deeper into sleep (*sleep dive*), your brain waves continue to slow down. By Stage 4 your brain waves are long and slow (*delta waves*), but you do not stay here all night. Instead, you go back up (*ascend*) through the stages into the most unique and interesting stage of all, **REM** (rapid eye movement) **sleep**, where most dreams occur. Here, your brain waves resemble the fast, uneven Stage 1 waves (*saw-toothed*), but there is much more internal physiological arousal and, paradoxically, your muscles are almost paralyzed.

Page 96: As the night *wears on*, deep Stage 4 sleep gets progressively briefer and then disappears. As the night progresses (*wears on*), the time spent in Stage 4 deep sleep gets shorter (and eventually ceases altogether), and time spent in REM sleep gets longer.

Page 97: . . . *drowsy* . . . If you were deprived of sleep for a few nights, you would feel very tired and sleepy (*drowsy*) and also unsteady and dazed (*groggy*).

Page 98: Unfortunately, many of us are suffering from patterns that not only leave us sleepy but also *thwart* our having an energized feeling of well-being. Because of the pressures of work, school, social obligations, and so on, we often have sleep schedules that prevent (*thwart*) us from getting the amount of sleep we need. The consequence of this accumulated insufficient sleep (*sleep debt*) is a general lack of energy and discomfort and a frequent feeling of sleepiness.

Page 100: . . . "*spring forward*" to "daylight savings" time and "*fall backward*" to "standard" time. Many countries adopt daylight savings time, which means that in the spring people move their clocks ahead one hour (*spring forward*) and back one hour in the fall (*fall backward*). Consequently, people lose one hour of sleep in the spring, which results in more traffic accidents on the Monday following the Sunday time change. With the extra hour of sleep in the fall, traffic accidents decline on the Monday following the time change.

Page 101: Such discoveries are beginning to solve the ongoing *riddle* of sleep. Recent research has shown that sleep helps us repair and restore body tissue (*recuperate*), promotes physical growth, increases memory and learning capacity, provides a protective mechanism (this was especially true in our evolutionary past), and enhances (*feeds*) creative thinking. These findings are starting to clear up the continuing puzzle (*riddle*) of why we need to sleep.

Page 101: The most common quick fixes for true insomnia—sleeping pills and alcohol—can *aggravate* the problem, reducing REM sleep and leaving the person with *next-day blahs*. The most popular fast remedies (*quick fixes*) for **insomnia** are sleeping pills and alcohol. Unfortunately, they can make the problem worse (*aggravate it*) by suppressing REM sleep; the next day the person may have less energy and feel very tired (*next-day blahs*). When these "remedies" are discontinued, the insomnia may get worse.

Page 102: As a traffic menace, "*snoozing is second only to boozing*," says the American Sleep Disorders Association, and those with narcolepsy are especially at risk (Aldrich, 1989). Falling asleep (*snoozing*) while driving is almost as serious a problem as drinking (*boozing*) and driving. People with **narcolepsy** suffer from occasional periods of uncontrollable sleepiness often associated with emotional arousal, and are thus in danger, and dangerous, while driving.

Page 104: We spend six years of our life in dreams, many of which are *anything but sweet*. **Dreams** during REM sleep are vivid, emotional, and often very strange (*bizarre*). Many of our dreams are not very pleasant (they are *anything but sweet*) and about 80 percent have at least one distressing episode (*negative event*), such as repeatedly falling, being attacked, chased, rejected, or experiencing misfortune.

Page 105: . . . Dreams provide a *psychic safety valve* that discharges otherwise unacceptable feelings. The story line of the dream (the **manifest content**) is a disguised version of the real, but hidden, meaning of the dream (the **latent content**). According to Freud, by symbolically expressing our hidden desires and erotic wishes, dreams allow us to ventilate unconscious drives that might otherwise be harmful (act as a *psychic safety valve*). Note that a *safety valve* allows a system to dissipate built-up pressure and thus may prevent an explosion.

Page 105: However, his [Freud's] critics say *it is time to wake up* from Freud's dream theory, which is a scientific *nightmare*. Here, Myers is having some fun with a play on words. The expression "it is time to wake up from something" means one should start paying attention to reality and facts, rather than fantasy. To say something is "a nightmare" means that it is unruly, difficult, or even frightening. Most contemporary psychologists believe that REM sleep and dreams are important aspects of our life but that Freud's theory of dream interpretation is erroneous, unscientific, and misguided (a *nightmare*); thus, we should not place much reliance on its explanations (*it is time to wake up from it*).

Page 105: The brain regions that *buzz* as rats learn to navigate a maze, or as people learn to perform a visual-discrimination task, *buzz again* during later REM sleep. Studies demonstrate that sleeping helps memory and learning. The areas of the brain that are active (that *buzz*) when learning is taking place are active once more (they *buzz again*) during REM sleep. This is important news for sleep-deprived students who tend to learn and remember less than their non-sleep-derived counterparts. Attempting to make up for the loss of sleep by sleeping longer and later on weekends (*a kind of sleep bulimia—binge sleeping*) will not compensate for the lower levels of learning and recall.

### **Hypnosis**

Page 109 (margin): "Hypnosis is not a psychological *truth serum* and to regard it as such has been a source of *considerable mischief*." Research shows that hypnotists can subtly influence what people recall and may inadvertently create *false memories* by making suggestions and asking leading questions. Thus, **hypnosis** is not like a so-called *truth serum* (a drug alleged to make people tell the truth). Rather, it has caused a great deal of annoying—and possibly harmful—effects (*considerable mischief*).

Page 112: So, might the two views—social influence and divided consciousness—*be bridged*? Although there are a number of different explanations about what hypnosis really is, Myers suggests that it may be possible to bring together some of these theories (*bridge the differences*). Thus, hypnosis may be both a part of the normal aspects of social influence and of our ability to have a divided (*or split*) consciousness—the unified account of hypnosis.

### **Drugs and Consciousness**

Page 113: Why might a person who rarely drinks alcohol get *tipsy* on one can of beer, but an experienced drinker show few effects until the *second six-pack*? Prolonged use of a psychoactive drug produces the ability, through *neuroadaptation*, to take more and more of the substance to experience the same effect (*tolerance*). Thus, an infrequent user of alcohol may get somewhat intoxicated (*tipsy*) from one beer. But for a regular drinker there might be little effect until six or more beers have been consumed (*until the second six-pack* [of beer]).

Page 114 . . . *kicked the habit* . . . This means that the person who has been using a substance on a regular basis (*habitual* behavior) has now stopped doing so (has *kicked the habit*). Myers notes

that addiction is not a disease (such as diabetes) and many people voluntarily stop using addictive drugs without treatment or therapy.

*Page 115:* . . . as when *tipsy* restaurant patrons leave *extravagant tips*. Alcohol can increase both harmful and helpful inclinations. Thus, it often happens that restaurant clientele give larger gratuities (*extravagant tips*) when they are more intoxicated (*tipsy*). Whatever tendencies you have when sober will be more obvious when you are drunk.

*Page 115:* In larger doses, alcohol can become a *staggering problem*. Myers is using humor here to make an important point. To describe a problem as *staggering* means that the problem is enormous and has serious consequences (for example, a “staggering debt” is one that is overwhelming). One of the consequences of ingesting large amounts of alcohol is slowed reaction time, memory loss (*blackouts*), language disruptions (*slurred speech*), and uncoordinated physical movement (the person *staggers*). Thus, drinking too much alcohol has serious implications (it is a *staggering problem*).

*Page 116:* If, as commonly believed, *liquor is the quicker pick-her-upper*, the effect lies partly in *that powerful sex organ, the mind*. Alcohol (*liquor*) is thought by many to speed up the process of meeting members of the opposite sex and lower sexual inhibitions. Thus, a male may believe that use of alcohol will facilitate his ability to initiate contact and get to know a female (a *quicker pick-her-upper*). Myers points out that not only alcohol is involved, but also our beliefs about its effects on sexual behavior (the effect lies partly in *that powerful sex organ, the mind*).

*Page 116:* But for this short-term pleasure *the user may pay a long-term price: a gnawing craving* for another *fix* . . . There is a cost (*one pays a long-term price*) for enjoying drug-induced pleasures and for an addict this may be a persistent inner torment (*gnawing*) and an urgent, persistent desire (*craving*) for another dose of the drug (*a fix*).

*Page 120:* . . . *crack* . . . *Crack* is a very potent, synthetic form of cocaine, which produces a feeling of euphoria (*a rush*) followed by deep depression, tiredness, and irritability (*a “crash”*).