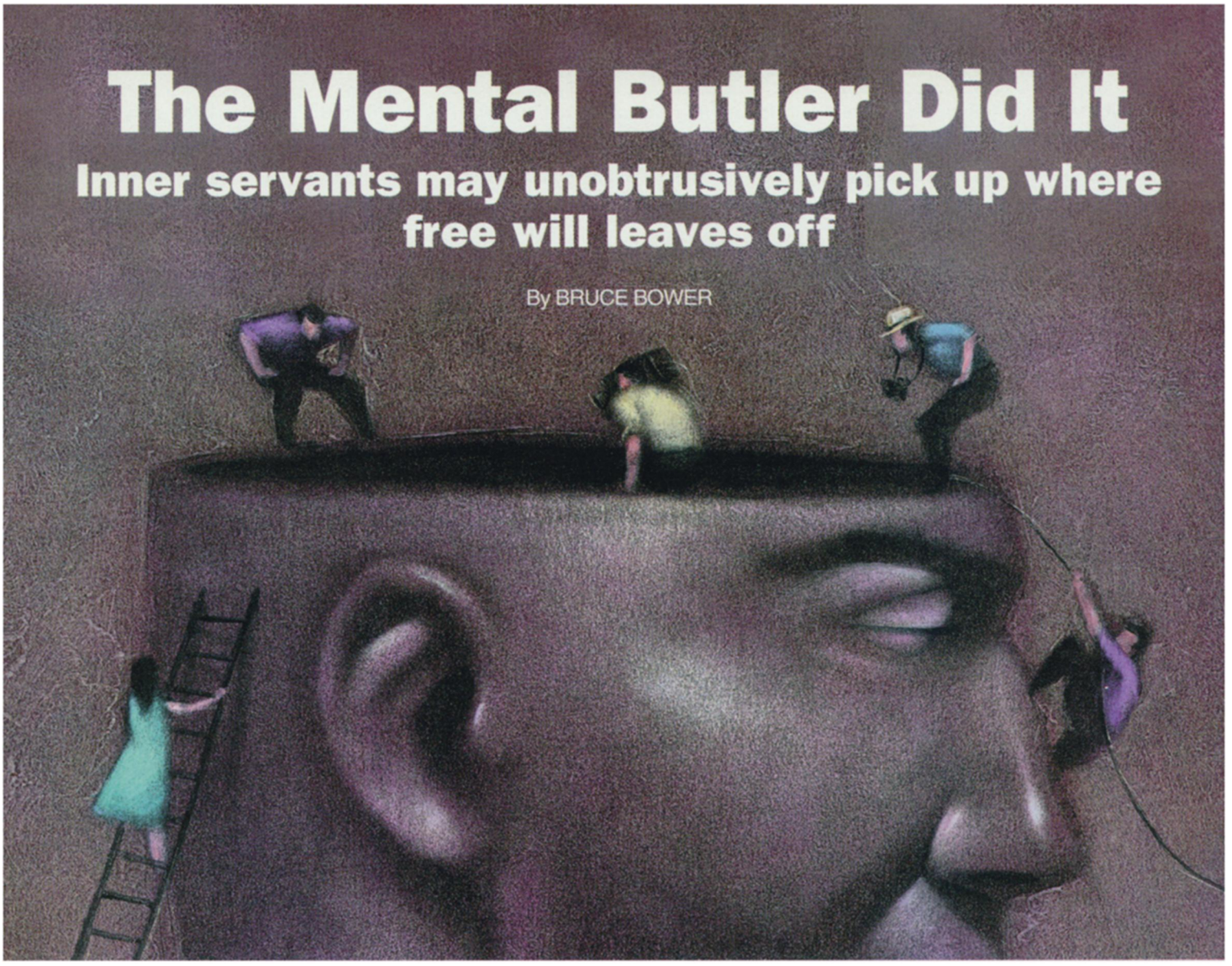
The Mental Butler Did It

Inner servants may unobtrusively pick up where free will leaves off

By BRUCE BOWER



The philosopher Alfred North Whitehead, writing in 1911, championed a cause that he knew would strike many people as weird. He urged everyone to cultivate the habit of acting without thinking.

"Civilization advances by extending the number of operations which we can perform without thinking about them," Whitehead contended. "Operations of thought are like cavalry charges in a battle—they are strictly limited in number, they require fresh horses, and must only be made at decisive moments."

To put it another way, there's no such thing as a free *free will*. Considering the mental effort required to subject a single unconscious intention to conscious direction, he proposed, it's fortunate that a bevy of ongoing thought processes hum along outside of awareness. Accept it, and try to spend your limited account of free will wisely, Whitehead suggested.

Whitehead's message doesn't have the makings of a best-selling self-help book. Yet nearly 90 years after his rejection of conscious reflection, a growing number of psychological researchers see merit in exploring the implications of the idea. They agree with Whitehead that most behavior stems not from intentional choices but from mental activities triggered outside of awareness by features of the environment. Conscious deliberation primarily interprets feelings and thoughts and shapes the behaviors that bubble up automatically, according to these researchers.

By definition, unconscious operations occur in a dark corner of the mind where they elude appreciation, especially when compared with vivid memories of conscious reactions. The slipperiness of the unconscious feeds into a popular conviction: "I know exactly what I'm doing, and I meant to do it all along."

In contrast, scientists increasingly find that conscious control comes highly overrated. To some folks, unconscious dominion raises the specter of a world inhabited by hollowed-out zombies, incapable of changing for the better or taking responsibility for their actions. It also seems to ratify recurring worries that people can't resist subliminal commands in advertisements to buy everything from popcorn to power tools.

John A. Bargh, a psychologist at New York University and a leading investigator of what he calls "the automaticity of being," views such fears as unfounded. Unconscious mental influences, for the most part, serve people's best interests by orchestrating ingrained behaviors, he argues.

"They are, if anything, 'mental butlers,' who know our tendencies and preferences so well that they anticipate and take care of them for us, without having to be asked," Bargh holds. "Conscious direction of behavior is important, but it takes place a small minority of the time."

Over the past century, conscious acts of will have attracted both scientific detractors and promoters. Sigmund Freud proposed that an individual's unconscious conflicts, inspired by biological impulses toward sex and aggression, lie at the root of behavior. Behaviorists, such as John Watson and B.F. Skinner, also emphasized unconscious influences on behavior but located the source of con-

trol in environmental events that had acquired reinforcing power.

In the 1950s, a humanist movement in psychology focused on the conscious choices and goals that guide behavior. Conscious thought has also grabbed much of researchers' attention in the 1990s. Witness the spate of recent books and investigations addressing the nature of consciousness (SN: 10/10/92, p. 232). Current theories of motivation similarly look at ways that people consciously process information to interpret the world and plan courses of action.

Most researchers today acknowledge that thought consists of conscious and unconscious operations proceeding in tandem. For example, neuroscientists have distinguished brain systems for unconscious, or procedural, knowledge, such as how to drive a car, that are separate from those for conscious, or declarative, knowledge of factual material.

One approach to the unconscious mind examines so-called implicit memory—stored information that can't be brought to mind although it affects behavior (SN: 11/17/90, p. 312). The psychologists exploring implicit memory, however, often regard the power of unconscious processes as fairly crude and limited.

In the July AMERICAN PSYCHOLOGIST, Bargh and several like-minded researchers present the case for far more sophisticated, pervasive unconscious forces.

Quien te lo dijo? *(1973), Alfredo Castañeda.*

It's remarkably easy for people in all walks of life to take a big swig of what Bargh calls "thought lite," a label inspired by Harvard psychologist Daniel Gilbert's description of automatic mental processes as "one-third less effort than regular thinking."

Just belly up to the social world with its well-stocked racks of stereotypes.

Bargh and his colleagues, for example, find that they can influence volunteers' behavior noticeably by providing subtle, unrecognized reminders of a group's stereotypical characteristics.

In one study, college students first completed a language test that, for some of them, contained words related to a stereotype of the elderly (such as "Florida," "sentimental," and "wrinkle"). Immediately afterward, those exposed to stereotypical words walked much more slowly down an adjoining hallway as they departed, apparently responding to the automatically evoked notion of physical deterioration among seniors.

Unobtrusive triggering of the elderly stereotype in volunteers also resulted in their remembering fewer features of the experimental room when questioned later.

More ominously, psychologist Claude M. Steele of Stanford University has found that black college students score worse than their white counterparts on standardized tests when informed that they're taking tests of intelligence but not when told that they're completing problems unrelated to general mental ability. The unstated threat of being judged according to a negative stereotype about their intelligence, or of fulfilling that stereotype, subtly but surely undermines black students' performance, Steele theorizes. College-level instruction aimed at diminishing the "stereotype threat" experienced by minority students has proven effective, he says.

Other evidence also indicates that negative stereotypes automatically influence behavior even in people who consciously denounce such attitudes, Bargh says. For instance, white college students who endorse racial tolerance nonetheless tend to react more angrily to a mild provocation after seeing pictures of young, black males flashed on a screen. Each image appeared for a fraction of a second, too short for conscious perusal. The unintentional adoption of stereotype-related feelings of hostility and fear intensified antagonistic responses, Bargh asserts.

On a more positive note, he and Tanya L. Chartrand of Ohio State University in Columbus have chronicled people's tendency to mirror the movements and postures of social partners and the good will such imitation automatically inspires. This "chameleon effect" serves as a social glue, whether it arises in romantic partners or members of large ethnic and religious communities, the researchers propose.

Bargh and Chartrand first asked individuals to take turns describing a series of photographs with a partner they hadn't met before. In some cases, the partner had been secretly instructed to do a lot of either face rubbing or foot shaking during the session. Participants showed a strong tendency to mimic their partners' movements. Afterward, none of them reported any awareness of having rubbed their face or shaken their feet to an unusual extent.

In another experiment, volunteers who described themselves as empathic and willing to examine issues from others' perspectives exhibited the strongest tendency to mimic a partner's face-rubbing or foot-shaking. Still, these folks were unaware of their copycat leanings.

A third experiment approached the chameleon effect from another direction. As some volunteers completed the same lab task, their partner tactfully copied their physical mannerisms and posture. Afterward, mimicked participants reported liking their partner more and thinking that the sessions had gone more smoothly than did test subjects whose behavior had not been mirrored.

Bargh also explores ways in which personal goals take on an unconscious life of their own as "auto-motives." When an environmental cue turns on the ignition of an auto-motive, it roars into action before conscious intent can get off the blocks, he proposes.

In one series of studies, Bargh's group first asked participants to search a list of words for synonyms of achievement-related words (such as *strive*), affiliation-related words (such as *friend*), or neutral words. Volunteers then worked on what they thought was an unrelated puzzle task with a partner whom the researchers had told to act as though he couldn't grasp how to solve it. Influenced by the earlier cue, the test subjects tended to either succeed as quickly as possible on their own while humiliating the partner or take a slower, more collaborative approach to allow the partner to save face.

Participants initially exposed to achievement words solved puzzles the most quickly and accurately, often entirely on their own; volunteers who had searched for affiliation words took the other approach.

The influence of these auto-motives wore off after volunteers had completed several problems with an inept partner, and then their long-term personal goals took over. Task performance improved noticeably and partner interaction flagged among participants who had displayed a strong need to achieve on a previous psychological test.

In other words, experimenters had briefly influenced volunteers' unconscious goals, after which individuals' underlying motivations reasserted their sway.

Emotional reactions also appear to

thrive outside of conscious choice, Bargh says. Evidence suggests that people immediately classify most objects and events that they encounter as good or bad based on prior experience, without a shred of deliberation.

To measure feelings toward objects, the scientists had volunteers view an upbeat picture, such as a puppy or a guitar, flashed on a screen too quickly for conscious evaluation. The volunteers then read positively tinged words, such as *sunshine* and *friend,* quickly and accurately.

When they had been similarly presented with negative pictures—of a cockroach, for example—their reading of negative words, such as *awful,* improved. Moreover, an emotional mismatch, such as a negative picture flashed before positive words, slowed reading markedly.

No such effect occurred when participants viewed pictures long enough to realize what they had seen, underscoring the unique power of unconsciously perceived objects.

The extent to which people automatically evaluate the emotional tenor of real-life scenes and situations remains poorly understood, Bargh notes. However, the experimental evidence suggests that "everyday objects can be immediately and implicitly evaluated on sight," he says.

Outside the rarefied confines of psychological laboratories, all behavior is first automatically elicited and then consciously considered and modified, argues psychologist Irving Kirsch of the University of Connecticut in Storrs. This applies even to the simplest of acts, Kirsch holds.

One provocative experiment conducted by physiologist Benjamin Libet of the University of California, San Francisco suggests that awareness of the intention to move a finger in response to a signal emerges just after the brain emits distinct electrical surges that precede physical movements.

Building on such findings, Kirsch theorizes that reactions to particular experiences often represent self-fulfilling prophecies. The conscious anticipation of how one will respond paves the way for an experience to elicit automatically the expected response.

A striking example of this phenomenon, in Kirsch's view, is the placebo effect, in which people derive benefits from substances that don't have the physical properties the people attribute to them.

For instance, his analysis of antidepressant drug studies indicates that depressed patients taking placebo pills exhibit 75 percent of the clinical improvement reported by those taking antidepressants.

That effect grows even stronger when patients get what Kirsch calls "active placebos," which are drugs intended for conditions other than depression, that trigger physical reactions that the patients regard as antidepressant side effects, Kirsch says.

Intuition, the ineffable brand of insight that seems about as easy to grasp as a ball of mercury, represents another function of unconscious processes, says psychologist Jonathan W. Schooler of the University of Pittsburgh. Intuitive knowledge lies in a mental realm beyond words, according to evidence that Schooler discussed in the February/March JOURNAL OF CONSCIOUSNESS STUDIES.

Attempts by people to explain their intuition or to enhance it with a verbal analysis end up diluting its clout, Schooler contends. "Intuitions, like faint stars, may vanish if scrutinized too closely," he remarks.

In one study, participants who had viewed a staged bank robbery either described the robber's appearance to an experimenter or completed an unrelated task. When then asked to pick the robber out of a lineup, those who had talked about his looks chose the wrong guy more often than the others did.

A follow-up investigation found that talking about a person's appearance degraded memory at the lineup only among people who said they selected the robber intuitively, without being aware of any reason for their choices. In contrast, those who cited specific reasons for picking one person over the other suspects suffered no talk-induced lapses.

Intuitive insights may also lay the groundwork for academic advances (SN: 1/2/99, p. 5). During practice with simple mathematics tasks called inversion problems, such as solving 8+10–10, second graders often start out by laboriously computing the answers. With practice, they adopt a more efficient strategy: They ignore the number that's both added and subtracted. However, the first few times the youngsters use the new approach, they don't recognize that they have changed their method. Only later do they become conscious of the timesaving tactic.

Further experiments indicate that second graders who grapple with inversion problems featuring large numbers, such as 256+172–172, discover the efficient strategy without first employing it intuitively, says psychologist Robert S. Siegler of Carnegie Mellon University in Pittsburgh. When faced with numbers too unwieldy to add and subtract easily, math beginners throw in the computational towel and consciously search for a new approach, he argues.

These results underscore the importance of shedding familiar ways of thinking in order to gain insight, Siegler contends, whether through personal intuitive force or by changing the structure of a problem.

Either way, a lot of hard work typically sets the stage for what feels like a sudden flash of insight. Scientists likewise know that insights into the mind's unconscious operations won't come served on a silver platter. It's one thing to ring for a mental butler but quite another to get him to show up. □