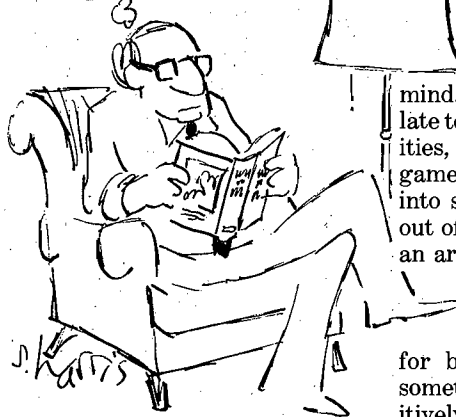


BEEPER MAN

A thought-provoking experiment with some signal results

Well, I'm finally reading War and Peace, a book I've always wanted to read, but was afraid it would be too deep for me, but now, because I'm thinking this, all I'm doing is looking at the words, and I have no idea what the book is about.



It was test day in Psychology 3-400 at the University of Minnesota at Morris. Students hunched over their exam papers. Suddenly the silence was broken by a shrill *beep!* from a small box on the instructor's desk. Without hesitation, the students turned to jot down on separate sheets of paper whatever thoughts had been running through their minds just before the signal. The exam resumed. Twice again the *beep*; twice again thoughts were recorded.

The students in Eric Klinger's psychology courses have come to expect these interruptions, which are part of a series of thought-sampling experiments the professor has been conducting for the past seven years. "It's surprising how little we know about what goes on in people's heads," says Klinger. "What I'm hoping to do is find out how much time is spent on different thoughts and how much impact those thoughts have on a person's life." Some of that impact, he has discovered, is reflected in students' grades. As might be expected, those who concentrate on exam questions get consistently higher marks than those who dwell on the weekend football game.

While thought sampling is now a routine part of Klinger's research, it has not always been considered respectable by psychologists. "Until about 1960, it was virtually taboo to study conscious-

ness this way," says Klinger. "For most of the century, psychology was dominated by the behavioral approach—the observation of one person's conduct by another. Going into the mind, it was felt, would not produce consistent results." But by the 1970s, psychologists devised a number of ways of producing what they considered reliable data.

Klinger pioneered the method that he has been using at Minnesota. Student volunteers are given pocket-sized alarm devices for a day and are expected to respond appropriately whenever they hear a beep (sounded at random, but once every 40 minutes on the average). Says Klinger: "Each student is trained to fix his mind on the inner experience that occurred right before the signal, to estimate the duration, and to write down those thoughts on a special questionnaire." One student, for example, reported that during a lecture he had been thinking of a station wagon, the Minnesota Vikings football team, and his church pastor.

After analyzing hundreds of questionnaires, Klinger concluded that a great deal of thought is unrelated to the task at hand. It ranges from fantasy (a boy daydreaming about being shaved by two girls) to mundane considerations (Will there be ham or turkey for dinner?). "If you define daydreaming as undirected thought, you could say that for

a third of our waking time we day-dream," notes Klinger. "In fact, as I read the evidence, it may be our normal mode of thought. When we direct our thoughts the remaining two-thirds of the time—that is, work with our heads in some deliberate, goal-oriented fashion—we have to make a special effort to do so."

These findings have raised other questions in Klinger's mind. How do a person's thoughts relate to his performance in various activities, such as sports? "Both within games and within seasons, players go into slumps and, with any luck, come out of them again," Klinger reports in an article to be published in *Cognitive Therapy and Research*. "The same is true of whole teams.

There is no firm *a priori* basis for believing that concentration has something to do with slumps, but intuitively that seems likely."

Klinger's intuition is supported by his sports research. He took his questions onto the court during university basketball games. Using the beeper during the game was obviously out of the question. But as soon as a player was relieved by a substitute, he was asked to speak into a tape recorder about what was on his mind just before he left the game. At random intervals, other men on the bench were also questioned.

Some of the samplings occurred during "hot" periods—when the Minnesota team was sinking baskets and playing well defensively. Others came during "gap" time, when their opponents were scoring heavily. The results were hardly surprising: during hot periods, the men's thoughts were more often totally focused on the game and strategy. Says Klinger: "Some players were so absorbed in the action while they were hot that it was like being in a trance." Gap time, on the other hand, was distinguished by the players' reflecting on how well or how badly the team was doing, by cursing other players, or by exhorting themselves to do better.

This suggests that a team's play might improve if its members were trained to stifle what Klinger calls "interfering, self-centered thoughts" during a game. "If a team tends to go into slumps," he concludes, "they may be able to nip it in the bud faster if the players deliberately focus on their playing." In other words, if they concentrate.

—Marcia Bartusiak