Journal of Social and Clinical Psychology, Vol. 24, No. 1, 2005, pp. 22-29

WHAT'S THE BEST SECRET DEVICE FOR ENGAGING STUDENT INTEREST? THE ANSWER IS IN THE TITLE

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The most frequent form of classroom lecture presentation involves the description of course–relevant phenomena. A better, but still suboptimal, approach involves asking students questions about these phenomena. An even better approach involves the generation of mystery stories that can only be solved through an understanding of the phenomena under consideration. Although descriptions demand attention and questions demand answers, one reason for the superiority of mystery stories is that they demand something more pedagogically valuable—explanation. By spurring students to engage in the process of providing explanation (rather than mere attention or answers), teachers offer students the best opportunity to understand psychological phenomena in a conceptual, meaningful, and enduring fashion.

I want to advocate that, as teachers, we commission the power of a grossly underused pedagogical device in our classroom lectures: the mystery, the puzzle, the enigma that, on its face, seems bewildering in its defiance of logic or common sense.

It might be best to begin by explaining how I came to be so enamored of this particular device as a teaching tool. Several years ago, I was writing a book on persuasion and social influence—not for students initially—but for a popular audience. Before writing my first word, I decided to go to the library and get all of the books I could find that had been written by academics for nonacademics. My strategy was to read thebooks, identify what I thought were the most and least successful sections, photocopy those sections, and put them into separate piles. When I was done, I reread the sections looking for particular features that characterized each type, thereby engaging in a kind of eyeball version of principal components analysis.

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In the unsuccessful pieces, I found the usual suspects, such as lack of clarity, turgid prose, and overuse of jargon. In the successful group, I found pretty much what I expected: logical structure, vivid examples, humor, and so on. But I also found something there that I had not expected— the most successful of these pieces each began with a mystery story. The authors described a state of affairs that seemed to make no sense and then invited the reader into the subsequent material as a way of solving the mystery. Two things struck me as curious about my discovery. In keeping with the character of this article, I'll pose them as puzzles.

Why hadn't I noticed the use of this technique before, much less its effective use? After all, I was at the time an avid reader of such material. In fact, I had been reading this kind of work for years. How could the effective use of this device have eluded me the whole while? The answer, I think, has to do with one reason that the device is so effective. It grabs readers by the collar and pulls them into the material. When structured properly, mysteries are so compelling that the reader cannot remain an aloof and neutral outside observer of the story's form and structure. In the throes of this particular pedagogical device, one is simply not thinking of pedagogy; one is focused on the mystery. I think it is telling that I came to see the presence of this technique as a technique only after I applied a conscious, structural analysis to the material.

Why were natural scientists better and more frequent commissioners of the technique than social or behavioral scientists? My best guess is that they never deluded themselves into believing that the device was unnecessary. They don't hold the misperception that we behavior scientists do that their material is so inherently interesting that it needs no presentational boost to engage an audience's focused attention. We psychologists, on the other hand, make this error all the time, assuming in the classroom that because we find the lecture material intriguing and relevant, our students will, too. How often unenthusiastic students prove us wrong in this particular conceit. The natural scientists, with the task of communicating about cell membranes or chemical properties or rock compositions, know better; and the best of them use every communication advantage at their command—hence, their recognition and use of the power of mystery.

WHY ARE MYSTERIES SO EFFECTIVE IN ENGAGING AND HOLDING STUDENT INTEREST?

I can provide an example of how the natural scientists use mystery stories. The same example also gives us an idea of why such stories are so effective. One of the most successful book sections I registered was writ-

ten by an astronomer. He began a 20–page section with a puzzle: How can we account for what is perhaps the most spectacular planetary feature in our solar system, the Rings of Saturn? There's nothing else like them. What *are* the Rings of Saturn made of. anyway?

Then, he deepened the mystery by asking how three internationally acclaimed groups of scientists could come to wholly different conclusions on the answer. One, at Cambridge University, proclaimed they were gas. Another group, at MIT, was convinced they were made up of dust particles. The third, at Cal Tech, insisted they were composed of ice crystals. How could this be? After all, each group was looking at the same thing, right? So, what was the answer?

I will not take you through the whole process of discovery and tell you how the differing backgrounds of the teams—astrophysicists here, astronomers there—led them to look at different aspects of the phenomenon and how a crucial measurement error led one team down the wrong path. Suffice it to say that the process of unraveling the mystery was not unlike the process of scientific investigation, wherein hypotheses are generated, implications are tested, nonproductive approaches are taken, errors of interpretation are made, and evidence is marshaled until a satisfactory resolution occurs. By the way, this is no small benefit of the use of mysteries in our lectures. The process of resolving mysteries is remarkably similar to the process of science. So, in the use of the mystery approach, we not only give students information about content, we also send them a sub–rosa message about process.

Let us get back to the main point. Which answer was revealed at the end of 20 pages? The beautiful, mysterious Rings of Saturn are mostly dust! Actually, they are ice–covered dust, which accounts for some of the confusion, but they are mostly dust nonetheless.

Now, I do not care about dust, and the composition of the Rings of Saturn is entirely irrelevant to my life. But, that scientist had me turning pages like a speed–reader. Here's the telling thing: I am sure that I will never forget the answer to the mystery he constructed. Moreover, I am sure that I will never forget how three groups of scientists could have been so confident in their opposing answers to the question. This strikes me as an enormous advantage of mystery stories. They can get our students to become engrossed in and to remember important material that they otherwise would not care about because it does not seem relevant to their daily lives. Mystery stories do not need personal relevance—they bring their own.

Mystery stories bring their own relevance in the form of a need for closure that most everyone shares to some degree (Kruglanski & Webster, 1996). Mysteries create a need for closure in two ways. First, they initiate wonder, or the "Huh?" experience. All of us have heard of the famous

"Aha!" experience. Well, the "Aha!" experience becomes much more satisfying when it is preceded by the "Huh?" experience. This is why the same student who will fall asleep reading vital course material will stay up until 4 a.m. turning the pages of a mystery novel. And, is why the same student who hates processing the details of the material in the text will vigorously "shush" anyone who interferes with the processing of the details of a detective mystery on TV—because, in mysteries, one needs to know the details to achieve the solution. Think of it. This is something that not only keeps students awake but also makes them want to pay attention to the details—the necessary and previously dreaded details—of text material.

A second reason that mysteries engage a need for closure is that they are stories, and stories have a beginning, a middle, and an end. It is this narrative sequence that helps to make mystery stories so absorbing. The beginning propels us toward the middle, which impels us toward the end, which compels us home (See Green, Strange, & Brock, 2002, for a thorough analysis of narrative impact).

I first saw evidence of the force of the need for closure aspect of mysteries shortly after I began using them in my lectures. I still was inexperienced enough that, on one particular day, I got the timing wrong and the bell ending the class session rang before I revealed the solution to a puzzle I had posed earlier. Normally, 5–10 minbefore the scheduled end time, some students start preparing to leave. We all know the signals: pencils are put away, notebooks folded, and backpacks zipped. In this instance, not only were there no such preparations, no one moved when the bell rang. In fact, when I tried to end the lecture, I was pelted with protests. The students would not let me stop until I had given them closure on the mystery. I remember thinking, "Cialdini, you've stumbled onto dynamite here!"

WHY ARE MYSTERY STORIES SUPERIOR TO OTHER FORMS OF CLASSROOM PRESENTATION?

Besides mystery stories being excellent devices for engaging and holding student interest, there is another reason to recommend their increased use. Mystery stories are pedagogically superior to other, more common forms of classroom presentation, such as providing descriptions of course–relevant phenomena or asking questions about the phenomena. Whereas descriptions demand attention and questions demand answers, mysteries demand explanations. When we spur our students to engage in the process of providing explanation (rather than mere attention or answers), we offer them the best opportunity to under-

stand psychological phenomena in a conceptual, meaningful, and enduring way.

Of course, there are various ways to set up and execute the mystery story sequence. Let me illustrate one that has worked especially well for me. Suppose we want to teach about the power of counterarguments in resisting a persuasive appeal. Before describing the research evidence (Brock, 1967; Hass & Grady, 1975; Romero, Agnew, & Insko, 1996), we might engage student attention by taking the following steps.

Pose the Mystery. We are all familiar with cigarette advertising campaign successes featuring Joe Camel, the Marlboro Man, and "You've come a long way, Baby." But perhaps the most effective marketing decision ever made by the tobacco companies lies buried and almost unknown in the industry's history. After a three–year slide of 10% in tobacco consumption in the U.S. during the late 1960s, Big Tobacco did something that had the extraordinary effect of ending the decline, boosting consumption dramatically, and slashing advertising expenditures by a third. What was it?

Deepen the Mystery. The answer seems equally extraordinary. On July 22, 1969, during U.S. Congressional hearings, representatives of the major American tobacco companies strongly advocated a proposal to ban all of their own ads from television and radio, even though industry studies showed that the broadcast media provided the most effective routes to new sales. As a consequence of that unprecedented move, tobacco advertising has been absent from U.S. airwaves since 1971.

Home in on the Proper Explanation by Considering (and Offering Evidence Against) Alternative Explanations. Could it be that American business interests, sobered by the Surgeon General's report that detailed the deadly denouement of tobacco use, decided to forego some of their profits to improve the well-being of fellow citizens? That appears unlikely, because representatives of the other major U.S. business affected by the ban—the broadcast industry—filed suit in Supreme Court to overturn the law one month after it was enacted. Thus, it was only the tobacco industry that supported the restriction on its ads. Could it have been the tobacco company officials, then, who suddenly became concerned with the health of the nation? Hardly. They did not reduce their concentrated efforts to increase tobacco sales one whit. They merely shifted their routes for marketing their products—away from the broadcast media to print ads, sports sponsorships, promotional giveaways, and even movie product placements. For example, secret documents of one tobacco firm included a letter from movie actor and director Sylvester Stallone agreeing to use its cigarettes in several films in exchange for $500,000 (Massing, 1996).

Provide a Clue to the Proper Explanation. So, by tobacco executives' logic, magazines, newspapers, billboards, and films were fair game;

only the airwaves should be off limits to their marketing efforts. Why? What was special about the broadcast media? Two years earlier, the U.S. Federal Communications Commission (FCC) had ruled that its "fairness doctrine" applied to the issue of tobacco advertising. The fairness doctrine required that equal advertising space must be granted (solely) on radio and television to all sides of important and controversial topics. If one side purchased broadcast time on these media, the opposing side must be given free time to counterargue.

Resolve the Mystery. The FCC's decision had an immediate effect on the landscape of broadcast advertising. For the first time, anti–tobacco forces such as the American Cancer Society could afford to air counterarguments to tobacco company messages. They did so via counter–ads that disputed the images created in tobacco company commercials. If a tobacco ad featured healthy, attractive, and independent characters, the opposing ads would counterargue that, in truth, tobacco use led to diseased health, damaged attractiveness, and slavish dependence.

During the three years that they ran, these anti–tobacco spots eviscerated tobacco consumption in the U.S.—by nearly 10% (Simonich, 1991). At first, the tobacco companies responded predictably, increasing their advertising budgets to try to meet the challenge. By the rules of the fairness doctrine, however, for each tobacco ad, equal time had to be provided for a counter–ad that would take another bite out of industry profits. When the logic of the situation finally hit them, the tobacco companies maneuvered masterfully. They worked politically to ban their own ads, solely in the media where the fairness doctrine applied, thereby ensuring that anti–tobacco forces would no longer get free airtime to make their case. As a consequence, in the year following the elimination of tobacco commercials on the most effective advertising medium for producing new sales, the tobacco companies witnessed a significant jump in sales coupled with a significant reduction in advertising expenditures (Fritschler, 1975)—a nearly unheard of combination.

Draw the Implications for the Phenomenon under Study. Tobacco opponents found that they could use counterarguments to undercut tobacco ad effectiveness. But tobacco executives learned (and profited from) a related lesson: one of the best ways to reduce resistance to a message is to reduce the availability of counterarguments to it.

Note that, at this stage in the mystery story sequence, our teaching point about the impact and availability of counterarguments is neither a description nor an answer—it is an explanation.

I trust it goes without saying that this sequence is best approached by not providing it to students as a set of pronouncements. Instead, at appropriate intervals, students should be invited into the process. They

should be given the opportunity to offer their own speculations and explanations. They should be asked to consider how these explanations could account for all of the evidence revealed up to that point, and for new pieces of evidence that you reveal. At the end of the sequence, the students should be asked if they could develop an alternative explanation that fits all of the evidence. This is not something that deserves special emphasis in the present article, it is just good teaching. And good teaching—drawing student participation and spurring critical thinking—applies to mystery stories, too.

ONE MORE REASON TO FAVOR MYSTERY STORIES IN THE CLASSROOM

There is a final reason for the instructional superiority of mystery stories. To best describe what it is, I first need to describe a little trick I learned to play on myself long ago to improve my teaching. After a few years in the classroom, I noticed that there were some lectures I dreaded giving because the students were bored by the material. There were other lectures that I loved to deliver because the students enjoyed the material. I am sure that the self–fulfilling prophecy phenomenon played a role. On certain days, I expected to be uninteresting and, dispirited by the prospect, I was. On other days, I expected to be interesting and, enlivened by the prospect, I was.

Anyway, the trick was to reconfigure my lectures so that I inserted into each one something that I genuinely looked forward to presenting because students loved it, such as a humorous anecdote, a riveting example, or an especially clever experiment. The key was to have at least one such high point per session. Sometimes this meant rearranging the material so that I removed a highlight from a lecture that had two and placed it in a lecture that had none.

The intention was to motivate students to look forward to class by motivating *myself* to do the same. I found I was a much better teacher when I had a special reason to want to be in each class session. The consequent boost in my performance was not restricted to the day's home run. It extended to the other material I presented that day.

This is how mystery stories offer that final instructional advantage: they are ready–made high points. Students love them, which energizes both students and teachers to want to be in class. A lot can be said for thinking about ways to generate teacher excitement for the classroom, and not just student excitement. After all, each kind of excitement feeds the other. If we find something (like mystery stories) that works both sides of the street simultaneously, we would do everyone a disservice by not using it.

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