

Teaching Current Directions in Psychological Science

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Aimed at integrating cutting-edge psychological science into the classroom, Teaching Current Directions in Psychological Science offers advice and how-to guidance about teaching a particular area of research or topic in psychological science that has been the focus of an article in the APS journal *Current Directions in Psychological Science*. *Current Directions* is a peer-reviewed bimonthly journal featuring reviews by leading experts covering all of scientific psychology and its applications and allowing readers to stay apprised of important developments across subfields beyond their areas of expertise. Its articles are written to be accessible to nonexperts, making them ideally suited for use in the classroom.

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Getting at the Heart of the Love Hormone

By C. Nathan DeWall

[Bartz, J. \(2016\). Oxytocin and the pharmacological dissection of affiliation. *Current Directions in Psychological Science*, 25, 104–110.](#)

It's easy to look for love in the wrong places. What makes some people feel loved makes others cringe. But recently, psychological scientists thought they had identified a biological answer to the question of what causes us to love and feel loved. Oxytocin, a neuropeptide that is found in breast milk and that helps babies bond with their mothers, showed promise in promoting prosocial behavior. Several studies showed that oxytocin increased trust and empathy (Zak, 2012). The popular press celebrated the discovery of the newly labeled "love hormone." Oxytocin headlines swept through mainstream media. TED talks, trade books, and talk-show segments abounded.

And they all missed the mark. The talks, books, and show hosts weren't wrong, but according to Jennifer Bartz (2016), they underestimated the complexity of how oxytocin affects human thoughts, feelings, and actions. They failed to get at the heart of the "love hormone."

Humans need other humans, and oxytocin can motivate people to think, feel, and act in ways that will strengthen their relationships. The downside is that the prosocial oxytocin effect is only found in about

20% of published studies (Bartz et al., 2011). Oxytocin increases prosociality only among certain people and under certain circumstances. Sometimes oxytocin boomerangs to produce undesirable outcomes: People become green with envy (Shamay-Tsoory et al., 2009), report aggressive inclinations (DeWall et al., 2014), and opt to antagonize rather than cooperate (Bartz et al., 2011).

What is the most straightforward explanation for the so-called love hormone? Bartz argues that oxytocin increases the desire to affiliate unless there are barriers to social connection. These barriers include chronic low social motivation, negative attitudes toward others in our environment, and a general distrust of others (Bartz et al., 2011, 2015; De Dreu et al., 2010, 2011). Love is complicated, so it's no surprise that a hormone that can ignite the flame of social desire also can produce results that are rough rather than smooth.

Most students enjoy talking about relationships. It's part of what drives them to study psychology. But few students understand the nuances of how biology, personality, and our environment interact to influence our relationships. Two teaching activities offer instructors tools to illustrate the intricate outcomes that can accompany the rise and fall of oxytocin.

The first activity illustrates how the type of relationship — friend or foe — can change how oxytocin affects cooperation. Instructors can begin by reviewing Bartz's (2016) interactionist model of oxytocin as a hormone that increases the motivation to affiliate depending on whether there are significant barriers to closeness or not.

Students should begin by thinking of their most satisfying relationship. It could be a romantic relationship, a lifelong friendship, a strong family bond, or some other close personal connection. Instructors then can ask students to imagine their worst relationship — one with someone whom they would never consider a friend or depend on.

Ask students to close their eyes. Instructors will say:

"Now I want you to imagine that you are receiving a dose of the hormone oxytocin. Researchers often use nasal spray, similar to what people use when they have a stuffy nose. I'll play the researcher who will spray the oxytocin up your nose. I'm going to stay at the front of the class.

Arch your back, tilt your head back, and inhale through your nose. Now that your body is ready, I'm going to spray a short mist of the drug into your right and left nostrils. It's normal to want to sniff after each spray.

Okay, let's begin. We'll start with your left nostril. I'll count down from three. Three...two...one...and inhale.

[Pause 3 seconds.]

Good job. Now let's do your right nostril. I'll count down again from three. Three...two...one...and inhale. Nice work. You're done now. You've imagined getting a dose of the hormone oxytocin."

Instructors then can ask students to bring back to mind their best and worst relationships. If they had

actually received a dose of oxytocin, would they be more or less likely to feel close to their most satisfying relationship partner? How might their responses to oxytocin differ when confronted with their worst relationship partner? Why? Instructors then should summarize APS Fellow Carsten K. W. De Dreu and colleagues' (2010) findings, which showed that oxytocin increased cooperation with in-group members and reduced cooperation with out-group members.

The second activity shows students how individual differences in attachment style can influence responses to oxytocin. Students may benefit from a brief description of attachment orientation and a discussion of how people tend to vary along the dimensions of avoidance and anxiety (Mikulincer & Shaver, 2007). Instructors also could mention that oxytocin may increase the desire to affiliate among those who normally show little interest in seeking out social connections (Bartz, 2016; Bartz et al., 2011; Bartz et al., 2015). In contrast, oxytocin may disrupt social motivation among people who normally have a strong desire to affiliate but lack the self-confidence to have close relationships.

Ask students to read the following two descriptions, printed on PowerPoint slides. The first slide describes someone who is avoidantly attached, whereas the second slide describes someone who is anxiously attached.

Slide 1

Maria doesn't like getting close to others. She keeps her distance. Her wife says that people describe Maria as cold and detached. Maria values her independence but warms up to others once she's comfortable.

Slide 2

Jameer's friends describe him as needy. In his marriage, Jameer requires constant assurance that his wife loves him. He fears being rejected and remains alert to the smallest signs that she will leave him.

Ask students to imagine that both Maria and Jameer had received a dose of oxytocin. How might oxytocin affect each person? Would it increase Maria's sense of interpersonal warmth? Would she have greater interest in making new friends? Might a boost of oxytocin have similar or different effects on Jameer? What are the broader implications of these findings? For example, what would be your arguments for and against a proposal for physicians to prescribe oxytocin for struggling couples?

Love is a mystery that baffles even the brightest among us. Oxytocin is not a silver bullet that will help all people to love and to be loved. Instead, oxytocin is another ingredient that can align or disrupt our orbit around others. Whether we sniff it through nasal spray or simply read another headline related to the "love hormone," oxytocin research will continue to help us appreciate the complexities of how humans relate to each other.

‘Ask and Ye Shall Receive’: Underestimating Our Social Power

By David G. Myers

[Bohns, V. K. \(2016\). \(Mis\)understanding our influence over others: A review of the underestimation-of-compliance effect. *Current Directions in Psychological Science*, 25, 119–123.](#)

In one of Stanley Milgram's lesser-known experiments, he and John Sabini (1978) asked students to violate a simple social norm — to ask New York City subway riders for their seats (“Excuse me. May I please have your seat?”). To their and their students' surprise, even when no justification was given, 56% of riders complied.

After inviting students to make similar varied requests of more than 14,000 strangers, Vanessa Bohns (formerly Vanessa Lake) has likewise found a much-greater-than-expected compliance rate. Some examples from Francis Flynn and Lake's (2008) studies with Columbia University students:

“Will you fill out a questionnaire?” Instructors asked, “How many people do you think you will have to approach before you get five people to fill out a questionnaire?” The average student estimated 20.5, but it took only half that many “asks” — 10.5.

“Can I use your cell phone to make a call?” Students guessed it would take 10.1 requests to get three people to agree, but it only took 6.2.

“Can you show me where the gym is? Will you walk me there?” Students expected to ask 7.2 students to find someone willing to escort them the two blocks to within sight of the gym, but it only took 2.3.

The bottom line: People underestimate the power of the ask. That's even true when people are asked to electrically shock someone (as in Milgram's famous experiments), donate to charity, sign their name to a white lie, or write a prank word in a library book (as in Bohns's experiments). The common result: When making requests, people tend to expect a “no” but often get a “yes.”

These findings, which testify to our influence on others (not just others' influence on us), suggest a demonstration activity. Students could be asked, “If you asked 10 strangers to loan you their cell phones to make a call, how many would agree?” Then, before the next class period, have them perform this experiment and report their findings.

Invite students to reflect on their (dis)comfort in making this simple request. Most of Milgram and Sabini's students found it excruciatingly difficult to make the norm-breaching request for a subway seat. Often, the words got stuck in their throats, and they had to withdraw. Once they made the request and got a seat, they sometimes justified their norm violation by pretending to be (or actually being) sick. Years later, one student recalled being “afraid I was going to throw up” (Luo, 2004).

Did your students find even the simple phone ask a bit awkward? And are there real-life situations during which they have dreaded or felt anxious making asks — perhaps knocking on doors to sell cookies, requesting a recommendation letter, or asking someone on a date? If so, might their knowledge of the underestimation-of-compliance phenomenon give them greater courage in making future asks?

Bohns's findings bring to mind the famous finding that when approached by someone of the other sex —

“Hi, I’ve been noticing you around campus lately, and I find you very attractive. Would you have sex with me tonight?” — most men but no women on one university campus answered yes (Clark & Hatfield, 1989). But the lesser-known finding from this study — which perhaps can embolden students making an ask — is that half the students of both sexes answered “yes” when simply asked for a date (“Would you go out with me tonight?”).

Why Do We Underestimate Compliance?

Can your students anticipate Bohns’s explanations for people’s underestimating their own social power?

People don’t appreciate the discomfort of saying “no” to a personal, face-to-face request. Invite your students to “imagine that a student comes up to *you* and asks to borrow your phone. Would you agree?” Students likely will understand that they would probably say “yes” lest they appear to not trust the person or to be unhelpful.

People focus too much on the costs of others’ compliance (and too little on the embarrassment and awkwardness of saying “no”).

Factors That Do and Don’t Influence Compliance

Size of request. Bohns reports that people expected that a more burdensome request — completing a 10-page rather than a 1-page questionnaire — would yield a much higher rate of noncompliance. But it didn’t.

Culture. Compared with people in the individualistic United States, people in China better appreciate the social awkwardness of saying “no” (and therefore exhibit less underestimation of compliance).

The door in the face. People expect that those who say “no” to an initial request to fill out a questionnaire will then be more likely to refuse another request (to mail a letter). Actually, compliance went *up* following a prior refusal. Saying “no” twice apparently is more uncomfortable than doing so once.

How the request is conveyed. People find it harder to say “no” when approached face-to-face (rather than via e-mail or flyers) and with a direct request (“Will you lend me your phone?”) rather than with an indirect one (“I could really use a phone right now”).

Bohns’s findings ring true as I reflect on my own responses to the many asks for money that my wife and I receive (related to a family foundation). Saying “no” is easy when requests are conveyed by mail and from strangers and more difficult when made directly, face-to-face, and by acquaintances. We humans are, after all, social animals. Our ancestors flourished in groups that practiced mutual support and reciprocity. So perhaps we shouldn’t be surprised at the compelling power of a reasonable ask. ∞

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