Double Standards in the Use of Enhancing Products by Self and Others

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Technological advances have provided new opportunities for otherwise normal, healthy adults to improve themselves, raising questions about the ethical use of products with such effects. Yet what constitutes ethical use is in the eye of the beholder. Our research shows that the same product or service will be believed to enable the self but enhance others, in part because people see their potential abilities as a part of who they are but see others’ potential abilities as external to who they are. This belief creates an ethical double standard: people believe that it is less morally acceptable to enhance traits, and thus less acceptable for other people to use such products than it is for themselves to do so. Across six studies, we demonstrate that consumers have different beliefs about the effects of such products depending on who is using them, and that this affects how fair that use is perceived to be.
“I was given a gift to hit home runs… The only reason I took steroids was for health purposes.”

— Mark McGwire

Former single-season home run record-holder McGwire has repeated this explanation of why he took steroids when he played baseball in the late 1990s, and seems to truly believe it. The reaction of the rest of the world to this assertion, however, ranged from disbelief (Levin 2010) to utter disbelief (Stewart 2010). Why might McGwire persist in a claim that the rest of the world perceives as patently false? And did he use such beliefs to justify his behavior in the first place?

Questions like these are coming to be of great relevance, not only for sports fans, but for all modern citizens. We have reached the point where many medical and technological advances—including plastic surgery, blood doping, and medications ranging from Provigil to Viagra—are intended to be consumed not only by the sick or otherwise disadvantaged, but also by healthy, normal individuals looking to give themselves a boost. Because of their expanding presence and availability, it is important to understand what consumers perceive the effects of these products to be for themselves and others and how that might affect people’s judgments about the ethicality of themselves or others using these products.

The present research shows that consumers interpret the effects of enhancing products and services differently depending on whether they or another person is using them, seeing them as unlocking their own true traits but adding abilities to others. These different interpretations lead to an ethical double standard for self and others, such that people believe that it is less morally acceptable for other people to use such products than it is for themselves to do so.

**THINKING ABOUT ONESELF VERSUS THINKING ABOUT OTHERS**

Fundamental differences in the way that people think about themselves versus others have been well documented. By virtue of having exclusive access to what goes on inside their
own heads and only indirect access to what goes on inside other people’s heads, people are prone to rely more on internally available information when assessing themselves than when assessing others (for a review, see Pronin 2009). This means that introspective thoughts and beliefs (Andersen and Ross 1984; Pronin and Kugler 2007; Williams and Gilovich 2008) and intentions and desires (Buehler, Griffin, and Ross 1994; Epley and Dunning 2000; Kruger and Gilovich 2004) play a greater part in how people judge themselves than in how they judge others.

Of specific interest to the present research is the recent finding that people consider perceived potential—that is, beliefs about what one is capable of achieving but has not yet achieved—to be more informative about the self than others (Williams, Gilovich, and Dunning 2011). When considering their own capabilities, people are likely to incorporate thoughts of what they believe they can but have not yet been able to accomplish. People are highly aware of how they intend to behave and how they could have behaved without (real or imagined) situational constraints, and thus they readily utilize that information in assessing themselves. But because that information is less vivid or even absent with regard to others’ behavior, people are more likely to judge others based on how they actually performed in the past and present, rather than how they could potentially perform. This leads people to think of their own potential as already existing within themselves, just waiting to be unlocked, but others’ potential as not yet existing within them. This does not mean that they would not grant that other people have potential, or that they necessarily believe that others have less potential than they themselves have. It does mean, however, that regardless of the size or extent of the other person’s potential, it does not seem to be as informative of who they are currently and what they are essentially capable of accomplishing. It is instead something external to the person, and less certain to be attained.
With this idea in mind, we hypothesize that people will see enhancing treatments and interventions as helping them to attain levels of ability that already exist within themselves but have not yet been achieved. They will see the use of those same treatments by others, however, as adding extra abilities that do not currently exist within them. Thus:

**H1: When consumers think about the effects of enhancing products and services, they will perceive an identical product or service as enabling the self, but enhancing others.**

In this paper, the term “enhancing” can refer both to the *objective* effects of a drug or other product as well as to the *perceived* effects of such products on their users. Both uses of the term are established in the literature (e.g., Lucke et al. 2011; Lynch 2006; Riis, Simmons, and Goodwin 2008). When the term describes the objective effects of a product or service, *enhancing* means that the product or service will improve a person’s traits, abilities, or performance relative to their normal, healthy state. When the term describes the perceived effects of a product or service on its users, enhancing means that the product or service is seen to give its users traits or abilities they do not already have; *enabling* is its counterpart and means that the product or service unlocks or otherwise facilitates pre-existing traits and abilities.

**THE FAIRNESS OF ENHANCEMENT**

If consumers construe the effects of enhancing products and services differently, they may come to different conclusions about the morality of their use. In philosophical discussions of the ethicality of neuroenhancing medications, whether such medications serve to enable or enhance their users is often seen as the line separating ethical from unethical neuroenhancer use (e.g., Lynch 2006). Other empirical work suggests that people are more accepting of policy interventions when they are framed as enabling versus enhancing. People are more amenable to policies that would reduce inequity by giving to those who are needier when those policies are
framed as helping to bring the needy up to a higher standard state of being represented by a less needy person (i.e., enabling the needy) than when those policies are framed as moving the needier person beyond the standard state of being that they themselves represent (i.e., enhancing the needy). Likewise, people prefer policies that would reduce inequity by taking away from those who are less needy when needier people represent the standard (i.e., reducing enhancement) than when the less needy represent the standard state of being (i.e., reducing enablement; Lowery, Chow, and Crosby 2009). Consistent with this idea, Riis, Simmons, and Goodwin (2008) found that consumers show less interest in a drug that could change a fundamental aspect of who they are, if that drug is advertised using the tagline “Become More Than Who You Are” instead of “Become Who You Are.” More generally, this suggests that people may be uncomfortable with the idea of enhancing a person’s traits, giving them abilities they would not otherwise have. If people are inclined to see such treatments as enabling the self but enhancing others, then they may be less comfortable with others’ use of said treatments. Thus:

**H2:** Due to differences in whether they are perceived to enhance or enable the person who uses them, people will perceive the same enhancing products or services as less ethically acceptable when other people use them than when they themselves use them.

**OVERVIEW OF STUDIES**

We conducted six studies to demonstrate that consumers have different beliefs about the effects of enhancing products and services depending on who is using them, and that this affects how acceptable that use is perceived to be. Studies 1a and 1b establish that people regard their own and others’ use of enhancing products in different ways. Study 2 tests the generality of self-other differences in perceptions of the enhancing nature of such treatments by examining
whether the asymmetry is due in large part to the “unnaturalness” of taking a medication to alter one’s traits or if this same disparity will occur in nonmedical domains. Studies 3 and 4 examine whether this asymmetry creates an ethical double standard for the perceived acceptability of self or other using enhancing treatments. Study 3 examines how fair people perceive their own and a competitor’s use of an enhancing drug to be, and study 4 replicates these findings in a noncompetitive setting. Both studies will demonstrate that the degree to which enhancing treatments seem to enable or enhance their users underlies how acceptable participants perceive the use of these treatments to be, and that these differences in perceived acceptability have other consequences for the users of such enhancing treatments. Finally, study 5 examines how perceived enablement or enhancement affects people’s reactions to policies regarding drugs that can improve their own or others’ performance. We will show that people will believe a policy against using an enhancing product to be more fair when it is framed as being targeted toward the population at large rather than just themselves personally; their perceptions that the product enhances people in general, but enables themselves, makes prohibition more appealing when that prohibition is framed as affecting the larger population.

**STUDIES 1A AND 1B: GETTING AHEAD**

To test whether people have different interpretations of the effects of enhancing treatments, we had participants imagine a situation in which they or another person stood to benefit from an increase in a personal trait—their ability to concentrate in study 1a and their energy level in study 1b—which they chose to enact through the use of a prescribed medication. Participants then indicated whether their own or the other person’s use of the medication revealed or exaggerated their true level of the trait. We predicted that the same medication would be seen as enabling the self’s true abilities, but enhancing the other person’s.
Further, we sought to demonstrate that differences in beliefs about the enhancing nature of such treatments for self and others are not due to perceived differences in how effective such treatments are for self and other. If consumers believe that the same treatments are more effective for other people than they are for themselves, it would make sense that this greater advantage would seem more enhancing. Indeed, there is some suggestion that a reduction in necessary effort to succeed underlies part of consumers’ discomfort with neuroenhancing medications (Lucke et al. 2011). The perception that someone is getting something for nothing, so to speak, can make such drugs unappealing. In study 1a, we provided explicit measures of the participants’ own and the other person’s performance before and after the drug was consumed, so that they received objective information about how effective the medication was. In study 1b, we attempted to rule out this explanation by assessing how effective participants perceived the treatment to be for self and others.

Study 1a Method

Participants. One hundred eighty-seven undergraduates at a large southeastern university participated in exchange for extra credit in introductory business and psychology classes.

Procedure. Participants were asked to imagine that they and a coworker, Jennifer, were taking the GMAT, and that they (or Jennifer) took a prescription medication to help improve focus and concentration on the day of the exam. The scenario read as follows (in this and all subsequent studies, the wording for when the other person is the user of the enhancing product is in brackets):

Suppose that you and a coworker, Jennifer, are interested in getting your MBAs and are studying together for the GMAT. The GMAT is a standardized test that measures verbal,
quantitative, and writing skills. The score you get on this test will play a large role in whether you get accepted to your preferred MBA program.

To prepare for the exam, you and Jennifer both enroll in Kaplan’s GMAT prep course, which consists of 9 classroom review sessions and 8 practice tests. Both you and Jennifer score between 550 and 600 (out of 800) on the practice exams and have average scores of 570.

The Kaplan instructors advise that to do well on the GMAT, it will be important for you to maintain your concentration for several hours and block out any distractions from the other test takers. Beyond the stressfulness of the test situation, the GMAT will take four hours to complete and will be administered to 20-30 people at a time, so the instructors warn you that some people find it difficult to maintain concentration in that setting.

On the day of the GMAT, to ensure that you [she] did as well as possible, you [Jennifer] took Zeltor, a prescription medication that improves focus and concentration. The exam seemed to go well – you [she] had no problem concentrating for the full four hours and were [was] not at all distracted by the other test takers.

In the end, you get a GMAT score of 610 [565] and Jennifer gets a score of 565 [610].

To examine the extent to which Zeltor was seen as enabling or enhancing their own or Jennifer’s ability to concentrate, we asked participants, “What is the most accurate way to describe the effect of Zeltor on your [Jennifer’s] GMAT performance?” on a scale from 1 = It made me [her] look like I am [she is] better than I actually am [she actually is] (an enhancement
interpretation) to $7 = \text{It enabled me [her] to perform up to my [her] full potential}$ (an enablement interpretation).

Study 1a Results

As we predicted, participants believed that their own use of Zeltor to take the GMAT was more enabling (and thus less enhancing) than Jennifer’s use was. They indicated that it was more accurate to say that Zeltor helped them perform up to their true potential ($M = 5.11, SD = 1.35$) than it was to say the same of Jennifer ($M = 4.63, SD = 1.13$; $t(178.27) = 2.15, p = .03, d = .39$).

Study 1b Method

participants were recruited to fill out an online survey via Amazon.com’s Mechanical Turk service, an online forum where volunteers complete surveys in exchange for credit toward Amazon.com products. Participants ranged in age (from 18 to 81, $M = 34$), ethnicities (45% percent of participants were Asian, 44% were White, 6% were Black), and occupations (from engineers to educators to medical professionals). The survey took about two minutes to complete, and participants were compensated with $0.10 Amazon.com credit.

Procedure. Participants were asked to imagine that they or a woman they knew named Jennifer were being considered for a big promotion at work that required high levels of energy, and that they (or Jennifer) took a medication to help increase energy levels while being evaluated for the job. The scenario read as follows:

Suppose that you are [a woman you know, Jennifer, is] being considered for a big promotion. The new job requires someone who is especially alert and on top of things,
who is able and willing to work long hours without burning out, and who is capable of handling even the most demanding situations with energy and enthusiasm.

To assess whether you are [Jennifer is] a good match for the new position, your [her] performance at work will be observed for one month. Because being constantly watched and judged will be a mentally and physically draining process, especially given the stakes involved, you were [Jennifer was] worried that your [her] true potential to be alert and active might not be revealed to your [her] reviewers.

Because of this, you take [Jennifer takes] Zatex, a prescription medication that helps increase wakefulness, alertness, and activity levels. The observation period goes really well, and you earn [she earns] the promotion.

We examined the extent to which the drug was seen as enabling or enhancing their own or Jennifer’s traits, by asking participants, “What is the most accurate way to describe the effect of Zatex on your [her] energy level?” on a scale from $1 = \text{It would make me [Jennifer] appear to have abilities I don’t [she doesn’t] actually possess (an enhancement interpretation)}$ to $7 = \text{It would help reveal my [Jennifer’s] true abilities in the observation period (an enablement interpretation)}$.

To rule out the possibility that differences in beliefs about the enhancing nature of such treatments for self and others might instead be rooted in different beliefs about the effectiveness of Zatex for self versus others, we also asked participants, “Think about where your [Jennifer’s] energy level would be while you [she] were taking Zatex, compared to where it would be on your [her] best day without the drug. How do the two levels compare?” on a scale from $1 = \text{My [Jennifer’s] energy level on Zatex would be much lower than my [her] best day}$ to $7 = \text{My [Jennifer’s] energy level on Zatex would be much higher than my [her] best day.}$
Study 1b Results

Consistent with our predictions, participants thought that the drug was more likely to enable their own abilities but enhance Jennifer’s abilities. They indicated that it was more accurate to describe the effect of Zatex as revealing true abilities (versus making one appear to have abilities that one doesn’t actually possess) when they took Zatex ($M = 4.65, SD = 2.08$) than when Jennifer took Zatex ($M = 3.51, SD = 1.91; t(86) = 2.66, p = .009, d = .57$).

Further, different beliefs about the effectiveness of the drug for self and others did not seem to underlie this asymmetry. Participants indicated the drug would be equally effective when Jennifer took it ($M = 4.95, SD = 1.23$) as when they themselves took it ($M = 4.62, SD = 1.40; t(86) = 1.17, p = .24, d = .25$). If we include perceived effectiveness as a covariate in the previous enhancement versus enablement analysis, condition remains a significant predictor of whether the drug enables or enhances its user ($F(1, 85) = 5.93, p = .02, \eta^2 = .07$).

Discussion

Studies 1a and 1b provide initial evidence that consumers interpret the effects of enhancing products differently for self and others, seeing the same product as enabling the self but enhancing others. This is despite the fact that the product, situation, and outcome were identical for both. These studies also serve to demonstrate that differential effectiveness cannot account for differences in beliefs about the enhancing nature of such treatments for self and others. Further, the two studies demonstrate that these differences can be found in multiple domains, for multiple traits, with student and adult samples. To continue to explore the generality of this phenomenon, study 2 will extend these findings into a nonmedical domain.

**STUDY 2: RESUME POLISHING SERVICE**
The scenarios participants considered in studies 1a and 1b revolved around the use of a medication to enable or enhance the target person. But medications are sometimes seen as unnatural, and people can be uncomfortable with things they perceive as unnatural (e.g., Gladwell 2001; Takala 2004; Tenbült et al. 2005). Compounded with divergent awareness of the users’ potential and what the medication might do, our utilization of medication as the means to enhancement in studies 1a and 1b might have exacerbated any self-other differences we found. In study 2, we aimed to test whether consumers would have differing interpretations of the effects of products and services from other categories as well. We chose a resume polishing service, a service designed to help its user gain an advantage, but one that could be seen in a very different light depending on who was using it. We predicted that the use of a professional resume polishing service to improve one’s own resume would be seen as less enhancing than another person’s use of the same service.

Method

Participants. One hundred fifty-five people (57 male, 98 female) were recruited to fill out an online survey via Mechanical Turk. Participants were limited to those who lived in the United States and who had approval ratings of 95% or higher. Participants ranged in age (from 18 to 64, \( M = 35 \)), and ethnicities (9% percent of participants were Asian, 82% were White, 5% were Black, 2% were Hispanic, and 2% were of another race or ethnicity). The survey took about two minutes to complete, and participants were compensated with $0.20 Amazon.com credit.

Procedure. In the self condition, participants were asked to suppose that they were about to start conducting a job search, and that they were thinking about how to make their application as strong as possible. They were told that one of the things they were considering was a resume polishing service. They were presented with an advertisement from an actual resume service.
named CareerStrides, and were told that this was the company they were thinking about hiring. The ad promised, among other things, to “reorganize, re-energize, and rework your existing resume and make it a whole new document.” In the other condition, participants imagined that the same situation applied to a man they knew named Brian.

Participants were told to examine the advertisement carefully, and consider what they thought about [Brian] using the resume service to improve their own [his] resume. Namely, participants were asked, “How do you think CareerStrides resume service would impact the way you [Brian] came across?” on a scale from 1 = It would enhance my [his] resume so that it makes me [him] appear to be a more qualified candidate than I [he] actually am [is] (an enhancement interpretation) to 7 = It would enable my [his] resume to reveal how qualified a candidate I [he] truly am [is] (an enablement interpretation).

Results

Participants thought that the resume service would enable their own resumes to reveal how qualified a candidate they truly were to a greater extent than it would Brian’s resume, and thus that it was more likely to make him appear to be a more qualified candidate than he actually was than it was to make oneself appear so. They indicated that it was more accurate to describe the effect of the resume service as revealing how qualified a candidate they truly were (versus making them appear to be a more qualified candidate than they actually were) when they utilized the resume service ($M = 4.85$, $SD = 1.56$) than when Brian utilized the resume service ($M = 4.32$, $SD = 1.74$; $t(153) = 2.01$, $p < .05$, $d = .32$).

Discussion

Study 2 thus demonstrates in a nonmedical domain that consumers have different interpretations of the effects of products and services that give their users an advantage. The
interpretation depends on who is receiving the advantage, as people believe the products are more likely to reveal one’s true self but make others look better than they truly are. But even though consumers clearly hold a less flattering view of others’ use of potentially enhancing products, it is not yet clear whether this is related to a tendency to perceive that use as unfair or immoral. An initial correlational study that we ran to examine consumers’ views of the nature and fairness of performance enhancing drugs (PEDs) in sports revealed a strong relationship between whether the drugs were seen to enhance (versus enable) their users and whether they were seen to be unfair. How strongly student participants endorsed the idea that PEDs make athletes appear to have abilities they don’t actually possess (rather than help reveal their true abilities) was predictive of the degree to which they believed that PEDs were unfair to sports fans \( (r(103) = .48, p < .001) \), the degree to which they believed PEDs were unfair to other athletes \( (r(103) = .42, p < .001) \), the degree to which they believed policies against PEDs should be strengthened \( (r(103) = .48, p < .001) \), and the degree to which they believed that the use of PEDs by athletes should be a legal issue \( (r(103) = .22, p < .05) \). Studies 3, 4, and 5 were designed to examine whether this relationship would also reveal itself in self-other differences in the perceived acceptability of using enhancing interventions and the fairness of policies and regulations regarding that use.

**STUDY 3: A JOB INTERVIEW**

The most obvious setting for double standards for the fairness of using enhancing products and services is a competitive setting. A person would likely perceive the outcome of a competition as unfair if he or she were to abstain from using an enhancing product and lose to another person who did not. But would that same person acknowledge a lack of fairness if he or she were instead the one who benefited from the use of the product? In study 3, we sought to
demonstrate that people would believe that the use of a neuroenhancing medication in a job interview situation was more acceptable when they were the job applicant who used and benefited from the drug than when another person was, and that this difference is driven by the tendency to perceive the drug as having different effects for self and other.

We were also interested in demonstrating specific consequences of any differences in perceived acceptability. It is important to understand whether the use of such drugs will breed resentments and misunderstandings among colleagues, and whether the kinds of regulations or rules about using the products that people think are appropriate differ for self and other. We were particularly interested in examining whether these differences in perceived acceptability would affect which job candidate would be perceived as more deserving the job after having taking the enhancing drug. We also were also interested in whether the fact that participants perceive their own use of the drug as more acceptable leads them to feel less obligated to reveal that they used the drug than others would be. If participants believe that it is more acceptable for them to use the drug than another candidate, they are likely to have a more negative perception of whether the candidate deserves the job, and whether the candidate should have to admit they used the drug to succeed when the candidate is another person. Study 3 will show that the greater perceived acceptability of use for the self does lead people to believe themselves to be more deserving of the job than the other candidate, and that they should be under less compunction to disclose their use of the drug to get the job than the other candidate should be.

Lastly, we also sought to further eliminate the counterexplanation that double standards are driven by differences in the perceived effectiveness of the drug. Although study 1b found that differences in perceived effectiveness could not explain differences in beliefs about the enhancing nature of such treatments for self and others, it is possible that they could play a role
in creating ethical double standards for the use of such drugs by self and others. Effort is closely tied to perceptions of morality of behavior (Morales 2005; Reed, Aquino, and Levy 2007), such that the less effort that is required to reach a goal, the less morally commendable reaching that goal is perceived to be. If enhancing products are seen to be more effective for other people and thus require less effort from them to obtain the same results as the self, people may come to see enhancing products as less ethical for others to use than for themselves. This account suggests that double standards may arise because people feel that the drugs may provide an advantage and unfairly level the playing field for others who are less hard-working.

Method

Participants. Fifty-seven undergraduates at a large southeastern university participated in exchange for extra credit in marketing and business classes.

Procedure. Participants were asked to imagine that they had applied for a job and that the company was considering the participant and another student from their same university for the position. Participants were randomly assigned to one of two scenarios: in one version, the participant took an anti-anxiety drug to perform well at the interview and subsequently got the job, and in the other version, the other candidate took the drug and got the job. The scenario read as follows:

Suppose that you are about to graduate…and you have been applying for jobs. There is one potential job that you are particularly excited about: it will be challenging and rewarding, requires your exact skill set, and the pay is great for a first job out of college. You find out that the company is considering only two people for the position: you and a fellow student from the same university.
The company is bringing you both in for interviews, and they are particularly interested in someone who is easy-going and relaxed, who will get along well with the rest of the staff, and who can calmly deal with customer issues. You believe that you have [The other candidate believes that he has] the potential to get along really well with the other employees and handle any situation that might come up, but in order to guarantee that you don’t [he doesn’t] come across as too nervous or tense in the interview, you have your doctor prescribe you a medication [he has his doctor prescribe him a medication], Zatex, to reduce anxiety. You take [He takes] the medication for the interview, and it goes really well.

Two weeks later, you find out that you [the other candidate] got the job.

We were interested in three categories of dependent measures. To examine the extent to which the drug was seen as enabling or enhancing the job applicant’s traits and whether different interpretations of the effect of Zatex for self versus others might underlie self-other double standards, we asked participants, “What is the most accurate way to describe the effect of Zatex?” on a scale from 1 = It would make me [him] appear to have abilities I don’t [he doesn’t] actually possess (an enhancement interpretation) to 7 = It would help reveal my [his] true abilities in the interview (an enablement interpretation).

To assess whether participants held themselves and others to different standards, participants were asked to respond to questions about the perceived fairness of using Zatex to improve the outcome of the interview. Specifically, we asked them, “How acceptable was it for you [him] to have taken Zatex?” on a scale from 1 = completely unacceptable to 7 = completely acceptable. Additionally, to explore the consequences of self-other double standards, we asked participants, “How much would you [the other candidate] deserve to get the job?” on a scale
from $I = I \ [He] \ would \ completely \ NOT \ deserve \ it$ to $7 = I \ [He] \ would \ completely \ deserve \ it$; and

“Do you think that you [the other candidate] should have to disclose to the company that you [he] took Zatex for the interview?” on a scale from $I = \text{No, I [he] should not have to disclose that I [he] took Zatex}$ to $7 = \text{Yes, I [he] should have to disclose that I [he] took Zatex}$.

To further rule out the possibility that different interpretations of the effects of the drugs for self and other or self-other ethical double standards might instead be rooted in different beliefs about the effectiveness of Zatex for self versus others, we also asked participants, “How nervous do you think you [he] would have felt at the interview, having taken Zatex, compared to how nervous you [he] would have felt without having taken Zatex?” on a scale from $I = \text{no difference at all}$ to $7 = \text{much less nervous}$.

Results

Does Zatex enable or enhance self and other? Participants thought that the drug was more likely to enable their own abilities but enhance the other candidate’s abilities. Participants indicated that it was more accurate to describe the effect of Zatex as revealing true abilities (versus making one appear to have abilities that one doesn’t actually possess) when they took Zatex ($M = 4.11, SD = 1.50$) than when the other candidate took Zatex ($M = 2.93, SD = 1.87$; $t(55) = 2.62, p = .01, d = .70$).

In this study, as opposed to study 1b, participants did think that Zatex would be more effective when the other candidate took it than when they did. They indicated the drug would have less of an effect on how nervous they felt ($M = 4.36, SD = 1.52$) than it would have on how nervous the other candidate felt ($M = 5.24, SD = 1.66$; $t(55) = 2.09, p < .05, d = .55$). If we include perceived effectiveness as a covariate in the previous enhancement versus enablement analysis, condition remains a significant predictor of whether the drug is seen to enable or
enhance its user \( (F(1, 54) = 5.56, p < .05, \eta^2 = .09) \). To be conservative, all the remaining analyses will also control for effectiveness.

*Do participants hold double standards?* Participants did reveal that they held double standards for self and others, perceiving the use of Zatex as more fair when they were the job applicant using it than when someone else was. Controlling for effectiveness, participants indicated that it was more acceptable for them to have taken Zatex \( (M = 4.29, SD = 1.49) \) than it was for the other candidate to have taken Zatex \( (M = 2.52, SD = 2.01; F(1, 54) = 13.52, p < .001, \eta^2 = .20) \).

We next tested whether self-other double standards were mediated by differences in perceived enhancement, using a series of regression procedures that allowed us to look at the role of perceived enhancement. Having shown that the independent variable (condition: self vs. other) affected the potential mediator (perceived enhancement) and the dependent measure (acceptability), we conducted a regression for each of our dependent measures in which we regressed the dependent measure simultaneously onto the independent variable and potential mediator, while controlling for effectiveness.

Consistent with our predictions, when acceptability was regressed simultaneously onto the independent variable and potential mediators, perceived enhancement significantly predicted acceptability \( (\beta = .73, t = 7.03, p < .001) \). Condition remained a significant predictor of acceptability \( (\beta = 1.00, t = 2.67, p < .01) \), indicating that the mediation was partial. We next formally tested whether the indirect effect was significant, using bootstrapping procedures (Preacher and Hayes 2008). These procedures indicated that the indirect effect of perceived enhancement was significant \( (95\% CI = .16 \text{ to } 1.42) \).
What are the consequences of self-other double standards? Double standards led participants to see themselves as being more deserving of the job after having used the drug than the other candidate would be. Controlling for effectiveness, participants thought that the job was more deserved when they took Zatex and got the job ($M = 5.46, SD = 1.50$) than when the other candidate took Zatex and got the job ($M = 2.79, SD = 1.74; F(1, 54) = 34.08, p < .001, \eta^2 = .39$). When deservedness was regressed simultaneously onto the independent variable (condition) and potential mediator (acceptability) while controlling for effectiveness, acceptability significantly predicted deservedness ($\beta = .69, t = 8.22, p < .001$). Condition remained a significant predictor of deservedness ($\beta = 1.39, t = 4.12, p < .001$), indicating that the mediation was partial.

Bootstrapping procedures indicated that the indirect effect of acceptability was significant (95% CI = .59 to 2.08).

Double standards also led participants to believe that they should be less obliged to disclose their use of the drug than the other candidate. Controlling for effectiveness, participants felt more strongly that disclosure should not be mandatory when they took Zatex ($M = 2.82, SD = 2.04$) than when the other candidate took Zatex ($M = 4.72, SD = 2.10; F(1, 54) = 8.74, p < .01, \eta^2 = .14$). When opinions about mandatory disclosure were regressed simultaneously onto the independent variable (condition) and potential mediator (acceptability) while controlling for effectiveness, acceptability significantly predicted opinions about mandatory disclosure ($\beta = -.58, t = -4.35, p < .001$). Condition became a nonsignificant predictor of opinions about mandatory disclosure ($\beta = -.60, t = -1.11, p = .27$), indicating that the mediation was full.

Bootstrapping procedures indicated that the indirect effect of acceptability was significant (95% CI = -2.08 to -.31).

Discussion
Study 3 demonstrates that people do indeed hold double standards for how fair they view the use of neuroenhancing medications to be, seeing them as more acceptable when they themselves use them than when other people do. Because they believe their own use of the drug is more acceptable than another person’s use of the drug, they believe that they deserve a job more when they are hired after using such a drug than when someone else is hired after using it, and that they should be under less compunction to report using a neuroenhancing drug to an employer than another person should be. Further, these self-other ethical double standards are driven at least in part by the fact that the drug is seen to enhance rather than enable the other person’s true traits compared to the self. Although the effectiveness of the drug was perceived to be greater for the other candidate, this did not explain the differences in interpretations of the effects of the drugs for self and other or self-other ethical double standards.

One thing that might, though, is that participants may have felt defensive, having lost out in direct competition to someone else who medically ensured that he would do his best in the interview. Participants may have said the other person’s success was less fair than their own because that was the best way to denigrate the competitor. Thus, in study 4, we removed the element of competition from the scenario, instead comparing participants’ views of the acceptability of neuroenhancing drugs from the perspective of either a job candidate or an interviewer. This approach has the added benefit of reflecting a real-world concern: how do evaluators take into account the effects of neuroenhancing drugs or other enhancing products when trying to ascertain a person’s true abilities? As more neuroenhancing drugs come on the market, and as people see their use as increasingly acceptable, employers and other evaluators will have to determine how to account for their use, and potential employees will need to know
whether taking them or abstaining from them will give the better impression, and whether and when to disclose if they choose to utilize them.

**STUDY 4: INTERVIEWERS AND INTERVIEWEES**

The scenario in study 4 was similar to that of study 3, with the major exception being that perceptions of the other person’s behavior were from the point of view of an interviewer rather than a fellow interviewee. In addition, we wanted to examine another potential mediator of self-other double standards. The mediations in study 3 were partial, suggesting that there are other causal determinants of how acceptable the use of the neuroenhancing drug is seen to be. Thus far our interpretation of enhancement is based on the idea that people believe that others have potential, but it is less unlockable than the self’s own potential is, as it is less a part of who they currently are. But because they view themselves in flattering terms with regard to what they want or intend to accomplish, and certainly in more flattering terms than they see others (e.g., Epley and Dunning 2000; Kruger and Gilovich 2004; Pronin, Berger and Molouki 2007; Sedikides 1993), people may also be likely to see themselves as having more potential, period, than other people do, as well. To examine this idea, we had participants estimate the candidates’ potential future performance level, to see whether expectations were lower for another person than for the self. This can serve as an indirect measure of the size of one’s potential; the more potential one has at a job, the better chance one has of meeting expectations at that job. One might imagine that seeing oneself as having more potential than others, and seeing the potential one has as already more a part of oneself than others’ potential is a part of them, might both contribute to perceptions of fairness. Seeing other people trying to get around having less potential than the self, as measured by expectations of the user’s ultimate performance, as well as any potential they do have being less unlockable than the self’s, as measured by how much the drug allows the
person’s true trait to show, should lead participants to see the use of an enhancing medication as less acceptable for another person than for the self. Then, we will again demonstrate that perceiving the use of the drug to be more acceptable for the self leads people to see themselves as more deserving of the job, and less obligated to admit using the drug.

Method

Participants. One hundred twenty-two adults (54 male, 68 female) were recruited through Mechanical Turk, and received $0.10 in exchange for their participation. Participants ranged in age (from 18 to 81, $M = 30$), ethnicities (45% percent of participants were Asian, 46% were White, 4% were Black, 3% were Hispanic, and 2% were of another race or ethnicity), and occupations (from engineers to educators to medical professionals).

Procedure. Participants were randomly assigned to imagine that they were either a job candidate who was interviewing for a sales position or the manager who was interviewing a candidate for that sales position. In the scenario, the participant (or the job candidate the participant was interviewing) was said to have taken an anti-anxiety drug to perform well at the interview and subsequently gotten the job. The scenario read as follows:

Suppose that you are a job applicant, and you are interviewing for a sales position [Suppose that you are a manager, and you are interviewing a candidate for a sales position]. The job requires someone who is easy-going and relaxed, who will get along well with the rest of the staff, and who can calmly deal with customer issues.

Interviews are nerve-wracking experiences, though, and you were [the person you are interviewing was] worried that your [his] true potential to be calm and collected would not show in an interview context. Because of this, you [he] took Zatex, a
prescription medication that helps relieve anxiety. The interview goes really well, and you are hired [you hire the person] on the spot.

As in study 3, to assess whether self-other double standards might be rooted in different interpretations of the effect of Zatex for self versus others, participants were asked to respond to the question, “What is the most accurate way to describe the effect of Zatex?” on a scale from 1 = It would make me [him] appear to have abilities I don’t [he doesn’t] actually possess to 7 = It would help reveal my [his] true abilities in the interview.

To assess whether participants held themselves and others to different standards, participants were asked to respond to the question, “How acceptable was it for you [the applicant] to have taken Zatex?” on a scale from 1 = completely unacceptable to 7 = completely acceptable. To examine the consequences of self-other double standards, participants were also asked, “How much would you [the candidate] deserve to get the job?” on a scale from 1 = I [He] would completely NOT deserve it to 7 = I [He] would completely deserve it; and “Do you think that you [the candidate] should have disclosed to the company that you [he] took Zatex for the interview?” on a scale from 1 = No, I [he] should not have to disclose that I [he] took Zatex to 7 = Yes, I [he] should have to disclose that I [he] took Zatex.

To rule out the possibility that different perceptions of enhancement or fairness might be rooted in beliefs about the effectiveness of Zatex for self versus others, participants were asked to respond to the question, “How nervous do you think you [the applicant] would have felt at the interview, having taken Zatex, compared to how nervous you [he] would have felt without having taken Zatex?” on a scale from 1 = no difference at all to 7 = much less nervous.

Additionally, to assess whether self-other double standards might be rooted in different expectations for future performance for self versus others (i.e., different amounts of potential in
self and others), participants were asked to respond to the question, “How well do you think you [the candidate] will meet the interviewer’s [your] expectations for the job once you start [he starts] for real?” on a scale from $1 = I[He]$ will definitely NOT meet expectations to $7 = I[He]$ will greatly exceed the interviewer’s [my] expectations, with the midpoint labeled, $I[He]$ will exactly meet expectations.

Results

*Does Zatex enable or enhance self and other?* In the interviewer/interviewee context, participants thought that it was more accurate to describe the effect of Zatex as revealing true abilities (versus making one appear to have abilities that one doesn’t actually possess) to a greater extent when they themselves took Zatex ($M = 4.49, SD = 1.74$) than when the job candidate they interviewed took Zatex ($M = 3.61, SD = 1.68; t(120) = 2.86, p = .005, d = .51$).

Participants also thought that Zatex would have less of an effect on how nervous they felt ($M = 4.25, SD = 1.58$) than it would have on how nervous the other person felt ($M = 5.23, SD = 1.38; t(120) = 3.66, p < .001, d = .66$). If we include perceived effectiveness as a covariate in the previous enhancement versus enablement analysis, condition remains a significant predictor of whether the drug is seen to enable or enhance its user ($F(1, 119) = 11.29, p = .001, \eta^2 = .09$).

*Do participants have higher expectations for themselves than others?* Participants believed that the candidate would be better able to meet the interviewer’s expectations when they themselves were the candidate than when the candidate was someone else they were interviewing. Controlling for effectiveness, participants thought the job candidate was more likely to fulfill the interviewer’s expectations from the point of view of the candidate ($M = 4.74, SD = 1.29$) than from the point of view of the interviewer ($M = 3.92, SD = 1.45; F(1, 119) = 14.17, p < .001, \eta^2 = .11$).
**Do participants hold double standards?** Again, participants revealed that they held double standards for the acceptability of using Zatex for self and others. Controlling for effectiveness, participants indicated that it was more acceptable for a job candidate to take Zatex when the candidate was oneself ($M = 4.41, SD = 1.78$) than when it was someone they were interviewing ($M = 3.75, SD = 1.89; F(1, 119) = 6.51, p = .01, \eta^2 = .05$).

We next tested whether self-other differences in acceptability were jointly or differentially mediated by differences in perceived enhancement and expectations for future performance. Having shown that the independent variable (condition: self vs. other) affected the potential mediators (perceived enhancement and expectations) and the dependent measure (acceptability), we conducted a regression for acceptability in which we regressed the dependent measure simultaneously onto the independent variable and potential mediators, controlling for effectiveness.

When acceptability was regressed simultaneously onto the independent variable and potential mediators, both perceived enhancement ($\beta = .46, t = 5.02, p < .001$) and expectations ($\beta = .40, t = 3.51, p < .001$) significantly predicted acceptability. This analysis revealed that the effect of condition on acceptability was reduced and no longer statistically significant ($\beta = -.001, t = -.01, p = .99$), indicating that the mediation was full. Bootstrapping procedures (Preacher and Hayes 2008) indicated that the indirect effects of perceived enhancement (95% CI = .15 to .96) and expectations (95% CI = .14 to .80) were both significant.

**What are the consequences of self-other double standards?** Again, double standards led participants to see themselves as being more deserving of the job after having used the drug than another job candidate would be. Controlling for effectiveness, participants thought that the job was more deserved when they took Zatex and got the job ($M = 5.44, SD = 1.39$) than when the
candidate they interviewed took Zatex and got the job ($M = 4.02$, $SD = 1.65$; $F(1, 119) = 14.17$, $p < .001$, $\eta^2 = .11$). When deservedness was regressed simultaneously onto the independent variable and potential mediator, acceptability significantly predicted deservedness ($\beta = .51$, $t = 8.27$, $p < .001$). Condition remained a significant predictor of deservedness ($\beta = 1.06$, $t = 4.42$, $p < .001$), indicating that the mediation was partial. Bootstrapping procedures (Preacher and Hayes 2008) indicated that the indirect effect of acceptability was significant (95% CI = .11 to .83).

Finally, double standards also led participants to believe that they should be less obliged to disclose their use of the drug than a job candidate they interviewed. Participants felt more strongly that disclosure should not be mandatory when they took Zatex ($M = 2.48$, $SD = 1.61$) than when the another person took Zatex ($M = 4.13$, $SD = 2.31$; $F(1, 119) = 18.30$, $p < .001$, $\eta^2 = .13$). When opinions about mandatory disclosure were regressed simultaneously onto the independent variable (condition) and potential mediator (acceptability) while controlling for effectiveness, acceptability significantly predicted opinions about mandatory disclosure ($\beta = -.28$, $t = -2.87$, $p < .01$). Condition remained a significant predictor of opinions about mandatory disclosure ($\beta = -1.38$, $t = -3.64$, $p < .001$), indicating that the mediation was partial. Bootstrapping procedures indicated that the indirect effect of acceptability was significant (95% CI = -.63 to -.01)

Discussion

Study 4 reaffirms that people perceive enhancing treatments as less fair when others use them than when they themselves do. The degree to which participants saw self and other as allowing their true abilities to show, as well as the amount of potential participants saw self and other as possessing, mediated differences in perceptions of how acceptable it was to take Zatex. Additionally, how acceptable they viewed the use of the drug to be predicted whether they
believe that the job candidate deserved the job when they are hired after using such a drug, and how much the job candidate should feel obligated to report using a neuroenhancing drug to their potential employer. In other words, participants held double standards for how fair the drug was to use, and that in turn led them to believe that the drug was a less negative indicator of how much they deserved the job than how much the other candidate deserved it, and whether they should reveal they used the drug in the first place. The noncompetitive setting suggests that it is not merely a sense of being personally cheated out of something that leads to asymmetrical perceptions of fairness, but instead it is something more fundamental about what the drug is seen to do that leads people to believe that others’ use of such treatments is unfair.

One intriguing implication of studies 3 and 4 is that consumers’ attitudes towards policies regarding enhancing products may vary depending on whom the policy is targeted toward. In study 5, we examine whether people can be led to see a policy against using an enhancing product as more fair when it is framed as affecting the population at large rather than just themselves personally, and that this is because they perceive the effect of the product on the entire population as enhancing, but the effect on themselves as more enabling.

**STUDY 5: MESSAGE FRAMING**

If people think it is less fair for others to use enhancing products than it is for themselves to use the same products, it is likely that they will be more in favor of policies or regulations that will limit the use of those products when they are targeted toward people in general, even if they logically might be one of those people. If, however, the policies are framed more as rules or regulations that will specifically (although not solely) affect the self, they are likely to be seen as less fair, because those rules would be limiting a more acceptable behavior, i.e., enabling one’s true traits and abilities. In study 5 students were asked to consider a change to their university’s
honor code that would prohibit the nonprescribed use of attention-enhancing drugs like Ritalin and Adderall. This new policy was described as something they would need to agree to, or that students at their university would need to agree to. We asked them to report what the effect of the nonprescribed use of such drugs would be on themselves or on students at their school, and how fair or unfair the new policy would be. We expected to find that participants believe the drugs would be more likely to enhance students in general than they would be to enhance themselves, and this would predict how fair they perceived the new policy to be.

Method

Participants. Seventy-seven undergraduates at a large southeastern university either volunteered to participate at locations around campus or received extra credit in marketing and other business classes in exchange for their participation.

Procedure. Participants were asked to imagine that their university was considering a change to its honor code. Specifically, participants read:

Suppose that, to increase academic integrity, the Administration [at your university] would like to augment the honor code with a clause regarding the off-label or nonprescription use of Ritalin, Adderall, and other medications to increase concentration and energy in academic settings.

They subsequently read:

The official policy they would like you [students] to agree to reads as follows:

I [Students (at this university)] will not take medications that might inflate my [their] academic performance on a test or assignment unless I [they] have been validly diagnosed with a relevant medical condition.
They then responded to questions about their opinion of the drugs’ effects and the fairness of the policy. To examine the extent to which the drugs were seen as enabling or enhancing their users’ academic performance, we asked participants, “In your opinion, how would such medications affect your [students’] academic performance (assuming you [they] have NOT been validly diagnosed with an attention disorder)?” on a scale from $1 = \text{These drugs would enable me [students] to perform up to my [their] true academic abilities (an enablement interpretation)}$ to $7 = \text{These drugs would enhance my [students’] performance above and beyond my [their] true academic abilities (an enhancement interpretation).}$

To assess participants’ opinions of the policy, we asked participants, “How fair to you [to students at your university] do you think it would be for the Administration to make you [them] agree to such a policy?” on a scale from $1 = \text{It is completely unfair to make me [students] agree to such a policy; I [they] should be able to take such medications if I [they] feel it’s in my own [their own] best interest}$ to $7 = \text{It is completely fair to make me [students] agree to such a policy; the university is acting in everyone’s best interest.}$

Lastly, participants indicated whether they had ever used such drugs for a test or assignment.

Results

A minority of participants ($N = 16$) indicated that they had used Ritalin or other such drugs for academic assignments. The remaining analyses control for participants’ use of the drugs; the pattern of results does not change if users are omitted entirely.

*Do Ritalin, Adderall, and other medications enable or enhance self and other?*

Participants believed that their own nonprescription use of drugs that increase their concentration and energy would be more enabling than would use of those same drugs by students in general.
They were more likely to indicate that the drugs would enable them to perform up to their true academic abilities ($M = 3.83, SD = 1.70$) than would be the case for students in general ($M = 4.43, SD = 1.17; F(1, 74) = 4.12, p < .05, \eta^2 = .05$).

*Do participants hold policy double standards?* Participants thought the new policy against the nonprescribed use of attention-enhancing medication to be significantly less fair when it was framed as something they personally would have to agree to ($M = 3.89, SD = 2.12$) than when it was something that students in general would have to agree to ($M = 5.09, SD = 1.70; F(1, 74) = 4.38, p < .05, \eta^2 = .06$).

We next tested whether self-other differences in the perceived fairness of the policy were mediated by differences in perceived enhancement of academic performance. Having shown that the independent variable (condition: self vs. other) affected the potential mediator (perceived enhancement) and the dependent measure (fairness of the policy), we conducted a regression for perceived fairness in which we regressed the dependent measure simultaneously onto the independent variable and potential mediator, controlling for past use of attention-increasing drugs. When fairness was regressed simultaneously onto the independent variable and potential mediator, perceived enhancement significantly predicted perceived fairness of the policy ($\beta = .28, t = 2.02, p < .05$). This analysis further revealed that the effect of condition on perceived fairness was reduced and no longer statistically significant ($\beta = -.70, t = 1.62, p = .11$), indicating that the mediation was full. Although in this case bootstrapping procedures (Preacher and Hayes 2008) indicated that the indirect effects of perceived enhancement were just shy of significance (95% CI = -.59 to .01), this pattern is consistent with previous studies, and with the idea that people perceive themselves as more worthy of exception from policies that would prohibit the
use of enhancing products, as these products seem to have more enabling (and thus more acceptable) effects on themselves than they do on other people.

Discussion

In study 5, students were less in favor of policies that would limit their ability to use enhancing products to succeed at academic tasks when those policies were explicitly framed as something they personally would need to abide by than when they were framed as something students at their university in general would need to abide by. This difference in perceived fairness was driven by the degree to which they believed that the drugs enable or enhance their users. This suggests that people’s opinions toward policies about the use of enhancing products are malleable, and that changing or reframing who would be targeted by or affected by such policies from self to others can change people’s support for them.

GENERAL DISCUSSION

People perceive the use of enhancing treatments differently, depending on who is using them. Six studies revealed that consumers consider their own use of enhancing products and services to allow their true abilities to show, but perceive others’ use of the exact same products as giving them abilities they do not otherwise have. Participants interpreted the effects of products that improve concentration, increase energy, or relieve anxiety as helping them tap into their full potential, but augmenting others’ performance beyond their true capabilities. Likewise, participants made divergent interpretations of the effects of a resume polishing service, suggesting that these self-other differences in perceived enhancement extend beyond the medical domain and its attendant concerns with regard to perceived unnaturalness.

These different perceptions of the enhancing nature of such treatments for self and others are predictive of how fair these treatments are seen to be. This occurred both in a competitive
and noncompetitive setting, demonstrating that differences in perceived fairness occur whether or not the other person benefits from the use of an enhancing product to the exclusion of the self. Seeing an anti-anxiety drug’s use as enabling the self but enhancing another person led participants to judge the use of that drug to appear calm at a job interview as more acceptable. Further, the fact that participants believed the use of the drug as more fair for themselves than for others led them to perceive the job candidate who took a neuroenhancing drug as more deserving and less duty-bound to disclose that they used the drug when they themselves used the drug than when another person did. Neither different perceptions of the enhancing nature of such treatments for self and others nor self-other ethical double standards could be explained by different perceptions of the effectiveness of such treatments for self and others. Lastly, people are more in favor of policies that would limit the use of enhancing products when they are framed as targeting people in general than when they more expressly target the self; it seems more fair to limit general access to enhancing products than it does to limit their own access because they perceive use of said products by people in general as more enhancing than their own use.

This research suggests that the reason why people are likely to see others’ use of enhancing products as giving them abilities they would not otherwise (and perhaps should not) have is that it is easier for others to cross the line into enhancing territory: the boundary between potential and abilities one should not have is nearer for others, for two reasons. One is that people believe their potential lies within themselves, but outside of others. People thus actually see themselves as being further from reaching their full potential than others are—they have more room to grow until they reach their current natural limit. This is true even when the ultimate level or quality of that potential is identical for both self and other; in order to be seen as
having the same level of potential as the self, other people must have already shown tangible evidence they can truly attain that level of achievement, whereas intentions and other thoughts suffice as evidence for the self (Williams and Gilovich 2008; Williams et al. 2011). Separately, people are much more aware of their own intentions and future states than others’ (e.g., Kruger and Gilovich 2004; Pronin 2009), and this may lead them to see themselves as having more potential than others have. As suggested by study 4, one’s own potential may seem much larger than others’, leading people to have higher expectations for what they may ultimately be able to accomplish than for what others will be able to accomplish.

Influences on Perceptions of Enablement and Enhancement

While perceptions and awareness of potential clearly underlie the fairness double standard, there are certainly motivated contributing factors that may exacerbate it. Although perceptions of enablement and enhancement are integral components of self-other double standards in the use of enhancing products and services, those double standards are likely to be multiply determined. One source of these double standards may be that people have particularly cynical views of others’ motives, and are inclined to believe that the other person’s intention was to enhance their traits, rather than the self’s purer motive to enable them (e.g., Miller 1999). Our scenarios in studies 3 and 4 emphasized that the job candidate, both self and other, was attempting to attain his or her true potential, not exceed it. Nevertheless, it is possible that in situations without that information, participants would assume the worst of others’ intentions, exacerbating the double standard we found here. This suggests an interesting avenue for future research: what is the relative contribution of intentions and outcome on judgments of the ethicality of enhancing products? Past research suggests that not only will behavior stemming from desires to enhance one’s traits, i.e., to cheat, be judged more harshly (e.g., Pizarro,
Uhlmann, and Salovey 2003), but that this may be especially true for the self, as it could be more difficult to shift (already less positive) beliefs about others’ intentions and desires (Pronin and Kugler 2007).

Another possible contributing factor to self-other ethical moral standards for the use of enhancing treatments is that people desire to see themselves as good and moral people, at least more so than others (e.g., Ditto, Pizarro, and Tannenbaum 2009; Fetchenhauer and Dunning 2006). Therefore, they are more motivated to rationalize their own moral transgressions than others’. This rationalization takes many forms. Business people are known to perform superficial behaviors, like flipping a coin to allocate tasks or resources, in order to appear fair, only accepting results of these superficial behaviors if they happen to like the outcome (Batson, Collins, and Powell 2006). Once a moral transgression is committed, people seek ways to mentally neutralize them (Chatzidakis, Hibbert, and Smith 2007), to make them seem less important or immoral. At times, they may even disengage entirely from a moral dilemma to reduce complicity (Paharia and Deshpande 2009). While it is clear from our mediational data that more cognitively-based beliefs about self and others influence the moral double standards we demonstrate in studies 3 and 4, it is highly likely that the motivation to downplay a potentially “bad” behavior is at work as well.

Managerial Implications

Enhancing pharmaceuticals and other technologies present their marketers and users each with a challenge with regard to making their use seem more acceptable to others. One thing the double standards suggest about making these types of treatments as palatable as possible is to keep the focus on the self. By aiming ads at “you” rather than at “people,” marketers may be more likely to appeal to potential users. Not only might the ad’s recipients be more inclined to
consider themselves using such a drug or technology (e.g., Escalas 2004), but it will be more likely to frame the product’s effect in an appealing manner. Just as consumers are more interested in a drug if it helps you “become who you are” than if it helps you “become more than who you are” (Riis et al. 2008), describing an enhancing treatment as helping “you,” and thus enabling its users, will be more attractive than pointing out how it might help its users in general exceed their true abilities. Indeed, study 5 suggests that people find the use of enhancing medications to be more acceptable and less worthy of regulation when they personally are the ones who might be using the drugs than when people in general are.

Consumers who purchase and use enhancing products have to carefully consider disclosing their own use of these types of products. While ideally people would be honest about their use of products that might enhance their abilities, they may not see that honesty as necessary; after all, the drugs are just helping them demonstrate abilities they already have. Further, our work suggests that this approach might backfire, and those who hear about another person’s use will assume the worst about it. The studies in this paper suggest that people will see that use as endowing them with skills they should not have, as being unfair, or even as reflecting possible lower overall skill levels. Changing others’ views of such behavior to match one’s own may be an almost insurmountable problem (e.g., Pronin and Kugler 2007), although there may be a few tactics that can help. Our main piece of advice would be that those who disclose that they use these products should do everything they can to prove that the drugs are enabling them rather than enhancing them. The more evidence they can provide that under the right conditions they could “naturally” attain the same levels of performance that they do with the drug, the more likely others will be to see the drugs as “enablers”, rather than enhancers.

Future Directions
Part of the reason why enhancing technologies make people uncomfortable is that they seem to circumvent effort in obtaining better results (e.g., Gladwell 2001; Lucke et al. 2011). In recent work, Tsay and Banaji (2010) found that despite people’s explicit statements that they believed effortful talent would be more successful than innate talent, their responses implicitly revealed a preference for natural ability and a belief that for equal levels of output, naturally-abled people (“naturals”) were more talented than effortfully-abled people (“strivers”). Most basically, this suggests that across many contexts people might see improvements in themselves stemming from their self-perceived status as naturals, as they unlock hidden talents, and other people’s improvements reflecting their status as strivers, because potential is not necessarily already a part of them and new skills must be added from external sources. In this way, people may differentiate between two kinds of effort: that required to unlock potential waiting inside of oneself, and that required to add skills and abilities one does not naturally have. But what would participants make of an enhancing product that required effort for its true effects to show? Alli, a drug that reduces fat absorption, is an example of such a drug, producing increased weight loss in concert with diet and exercise. How would people judge others who took Alli and lost weight, thus demonstrating themselves to be strivers, but also demonstrating themselves to be willing to put in effort to achieve their goals, which is likely to make the use of enhancing treatments more acceptable?

It would also be interesting to investigate the degree to which practice at or investment in perceiving potential influences how fair the use of enhancing products and services is seen to be. Certainly parents will be particularly invested in perceiving potential in their children (e.g., Bird 1988; Galper, Wigfield, and Seefeldt 1997); after all, it is their main task as a parent to see that their child’s potential comes to fruition. This suggests that parents will be more understanding of
their own children’s use of enhancing products and services than other people would be, or than they would be of other people’s use of the same products. Indeed, the closer a loved one or friend is to the self, the more they will perceive that person as they would the self in these sorts of matters (e.g., Aron and Aron 1997). Beyond motivation, sheer practice at perceiving potential may also impact beliefs about what these kinds of treatments do to their users, and whether their use is fair. For instance, the ability to perceive potential in others may explain part of the reason why performance enhancing drugs have become commonplace in a wide variety of sports. Not only are the athletes and coaches incentivized to perform at their highest levels, or even higher, but coaches and scouts are particularly practiced at looking for the potential ability of those under their purview. Perhaps this is part of the reason why so many teams and coaches have in the past turned a blind eye to the use of PEDs: they see the unattained or blocked potential that may exist in their teammates and believe the drugs will enable them to reach their peak performance, rather than unfairly surpass it. Perhaps Mark McGwire’s teammates also saw only his gift to hit home runs, rather than the steroidal packaging that made that gift seem bigger than it was.
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