



# ASSOCIATION FOR CONSUMER RESEARCH

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## **The Experience Matters More Than You Think: Weighting Intrinsic Incentives More Inside Than Outside of an Activity**

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We document a shift in weighting intrinsic incentives: consumers value these incentives more inside an activity than outside of it. Six studies provide evidence for this shift across a variety of activities (exercising, working, and lab tasks), and measures (rated importance, actual and planned persistence, and choice regret).

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# For the Love of the Game: New Perspectives on Intrinsically Motivated Behavior

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## **Paper #1: Inspired to Create: How Awe Enhances Openness to Learning and Desire for Experiential Creation**

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## **Paper #2: Curiosity Kills the Cat**

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## **Paper #3: The Experience Matters More Than You Think: Weighting Intrinsic Incentives More Inside Than Outside of an Activity**

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## **Paper #4: The Cost of Quantification: Measurement Undermines Intrinsic Enjoyment**

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### **SESSION OVERVIEW**

Motivation – the drive to act – is a persistent feature of human nature. Whether to work or play, to approach or avoid, to change or stay the same, people’s behavior is often energized toward some valued end. Yet while motivation may look the same from an observer’s perspective, it can arise from very different underlying sources. Generally speaking, motivation is intrinsic if a course of action is autonomously chosen and self-determined, but extrinsic if imposed by external forces (Deci and Ryan 1985; Ryan and Deci 2000). Specific behaviors can also be intrinsically motivated if done for their own sake (i.e., the inherent pleasure they bring), but extrinsically motivated if done for the instrumental benefits they provide (Fishbach and Choi 2012; Laran and Janiszewski 2011). Compared to extrinsically motivated behaviors, intrinsic motivation has many positive consequences, including enhanced performance, persistence, and creativity (Sheldon et al. 1997) heightened vitality (Nix et al. 1999), self-esteem (Deci and Ryan 1995), and general wellbeing (Ryan, Deci, and Grolnik 1995). But beyond identifying its consequences, many important questions remain about intrinsic motivation processes. This session provides new perspectives on this topic.

Four papers explore consumers’ engagement in intrinsically motivated behaviors. The first two papers focus on classic intrinsic pursuits – learning, exploration, and curiosity – examining behaviors arising from each drive. Rudd and Vohs identify a novel factor (awe) that enhances intrinsic motivation to learn and create. Four experiments demonstrate that experiencing awe increases consumers’ desire (and willingness to pay) for experiential creation. Hsee and Ruan investigate people’s innate curiosity. Their findings identify a pernicious consequence of curiosity and the intrinsic drive to resolve it: curiosity makes people seek out information with negative hedonic repercussions.

The last two papers explore factors influencing the enjoyment of intrinsically motivated behaviors. Woolley and Fishbach examine the role of timing (i.e., whether consumers evaluate an experience while they are having it versus before or after). Six studies demonstrate that intrinsic incentives matter more inside (versus outside) an activity. These incentives increase persistence by enabling a positive experience, yet people outside pursuit do not anticipate this effect. Finally, Etkin and Berger investigate how measurement shapes motivation, testing how quantification affects the enjoyment of intrinsi-

cally motivated behaviors. Three experiments show that measuring how much of an intrinsically valuable activity people do (e.g., the number of steps taken or number of pages read) leads them to enjoy the activity less.

Together these papers connect classic research on intrinsic motivation processes with modern-day phenomena, using the former as a lens to help understand the latter. Further, by identifying factors that encourage intrinsically motivated behaviors, as well as ones that thwart their enjoyment, the findings shed light on what consumers can do to enhance and protect the activities they enjoy. This session should have broad appeal to scholars interested in motivation, enjoyment, experiential consumption, and wellbeing, as well as connections between them.

## **Inspired to Create: How Awe Enhances Openness to Learning and Desire for Experiential Creation**

### **EXTENDED ABSTRACT**

From birth, humans are endowed with an intrinsic drive to learn and explore (Harter 1978). However, this drive is easily disrupted (e.g., by time pressure, distractions, and depletion; Ryan and Deci 2000), transforming consumers into cognitive misers (Fiske and Taylor 1984). In this research, we identify a novel remedy for consumers’ lack of intrinsic motivation to learn, demonstrating that a particular emotion—awe—can enhance consumers’ openness to learning and, consequently, increase their intrinsic desire to partake in behaviors involving experiential creation.

Awe experiences are thought to have two defining features: perceptual vastness and a need for accommodation (Keltner and Haidt 2003). This need for accommodation refers to the belief that awe experiences are overwhelming and difficult to grasp, challenging existing mental structures (Fiedler 2001). Building upon this theoretical definition of awe, we predicted that those who experienced awe would exhibit greater openness to the prospect of learning (in hopes of satisfying their need for accommodation). We also predicted this effect would have consequences for consumer behaviors involving experiential creation.

Though prior work has largely focused on how competence and autonomy motivate the undertaking of creative tasks and behaviors (Dahl and Moreau 2007; Moreau and Herd 2010; Mocho et al. 2012), learning may also be an intrinsic incentive (Dahl and Moreau 2007). Moreover, play, construction, and working with one’s hands—all common aspects of experiential creation—are primal ways of learning (Cabrera and Colosi 2010; Kendall and Spores 1986; Piaget 1964). Therefore, we predicted that, by enhancing openness to learning, awe would increase people’s intrinsic desire to partake in experiential creation.

Our theory that openness to learning mediates awe’s effect on experiential creation led us to predict that need for closure would moderate it. When facing uncertainty or a lack of confidence in existing mental structures, individuals high (vs. low) in need for closure are more motivated to resolve this uncertainty (Kruglanski et al. 1991, 1993) and achieve the “coveted state of ‘knowledge’” (Kruglanski 1988, 122). Since awe is theorized to shake people’s confidence in their existing mental structures (Keltner and Haidt 2003)—something that should make those high (vs. low) in need for closure especially motivated to learn (Kruglanski 1988)—we predicted that

awe's ability to heighten experiential creation desires would be stronger for those high (vs. low) in need for closure.

Experiment 1 (which was conducted shortly before Valentine's Day) tested whether awe increases one's desire to partake in experiential creation. To manipulate emotions, participants watched a 60 second awe-eliciting, happiness-eliciting, or neutral commercial for an LCD television (Rudd, Vohs, and Aaker 2012) and responded to filler items. Then, as a "thanks for participating" gift, they chose to receive either "a recipe for Valentine's Day chocolates [they] could make and give to a loved one" (something involving experiential creation) or "a coupon for pre-made Valentine's Day chocolates [they] could buy and have delivered to a loved one" (something not involving experiential creation) and reported their emotions. Manipulation checks confirmed the target emotions were successfully manipulated and, as predicted, logistic regression analyses revealed those in the awe (vs. happiness or neutral) condition more frequently chose the experiential creation option: the recipe.

Experiment 2 conceptually replicated experiment 1's results using a different operationalization of experiential creation desire: willingness to pay for products with experiential creation elements. To manipulate emotions, participants watched either an awe-eliciting or happiness-eliciting slideshow. Participants subsequently reported their willingness to pay for 16 products from different categories (i.e., furniture, food, and art)—eight of these products involved experiential creation and eight did not. Importantly, although the products within each category differed in whether they did or did not involve experiential creation, they were matched on other key features. Last, participants reported their emotions. Manipulation checks confirmed the target emotions were successfully manipulated and a mixed-measures ANOVA revealed that, as predicted, those in the awe (vs. happiness) condition were willing to pay more for products that involved experiential creation. As a test of specificity, participants in the awe and happiness conditions were equally willing to pay for the control products.

Experiment 3 tested our mediation hypothesis. Emotions were manipulated as in experiment 2 and participants subsequently responded to a 7-item experiential creation desires index (e.g., "I want to create something"), five hypothetical choices between comparable meal options that either required or did not require experiential creation (e.g., make homemade soup vs. eat canned soup), a 4-item openness to learning index (e.g., "I am curious"), and reported their emotions. Manipulation checks confirmed the target emotions were successfully manipulated and one-way ANOVAs revealed that those in the awe (vs. happiness) condition reported stronger experiential creation desires, stronger preferences for experiential creation meals, and were more open to learning. Mediation analyses revealed that, as predicted, those in the awe (vs. happiness) condition exhibited greater desire for experiential creation (via both the index and the meal preferences) because they were more open to learning. (Note: A subsequent study conceptually replicated these mediations.)

Experiment 4 tested our moderation hypothesis. After completing the Need for Closure Scale (Roets and Van Hiel 2011) and the emotion manipulation from experiment 2, participants responded to the experiential creation desires index from experiment 3 and reported their emotions. Manipulation checks confirmed the target emotions were successfully manipulated. Regression and spotlight analyses also revealed a significant main effect of emotion (i.e., those in the awe vs. happiness condition expressed stronger experiential creation desires) that was qualified by the predicted interaction between need for closure and emotion. Specifically, those who experienced awe (vs. happiness) exhibited greater desires to create

things if they had a high need for closure, but not if they had a low need for closure.

In sum, our findings theoretically contribute to and connect the literature on learning, emotions, and experiential creation, offering evidence that awe is a novel way to enhance consumers' openness to learning and incentivize experiential creation. Moreover, from a practical perspective, this research highlights awe's ability to influence consumer behavior and the need for further research on this emotion.

## Curiosity Kills the Cat

### EXTENDED ABSTRACT

Let us start with a stylized and provocative example. Suppose you know for sure that your beloved significant other recently had an affair with your neighbor and you have decided to break up with him/her. Their intimate activities were captured vividly on a surveillance camera and you have acquired a copy of the video. The video is in front of you. The question is: Will you watch it?

The "rational" answer is probably no, because watching the video will not give you additional useful information, given that you know for a fact they had sex, and you have made up your mind to break up the relationship. Watching the video will only make you more miserable.

Yet we predict that many people under such situations will watch the video. Why? Because of curiosity.

Curiosity is one of the most deeply-rooted human desires, but relative to other basic desires, such as those for food and achievement, it is understudied (for notable exceptions, see Berlyne 1960; Golman and Loewenstein 2012; Litman 2005; Loewenstein 1994).

Curiosity is a double-sided sword. On one hand, curiosity can motivate people to explore and make important and beneficial discoveries, and give people pleasure when their curiosity gets resolved. Indeed, in another line of work, we have been examining and found such beneficial hedonic effects of curiosity. On the other hand, curiosity can drive people to seek "detrimental information" – information that they know has no functional benefits to them and will even make them unhappy. The current research explores this latter proposition.

We have conducted and completed a series of experiments showing this "perverse" side of curiosity. In one such experiment, we presented participants with the opportunity to view 24 pictures. At the beginning of the experiment, each picture was covered and had only a label on it. Participants were told that if they turned a picture labeled "DP," they would view a picture of a dog poop (pre-tested to be highly negative); if they turned over a picture labeled "ST," they would view a picture of a stone (pre-tested to be neutral), and if they turned over a picture labeled "??," they would view either the dog poop picture or the stone picture.

The experiment consisted of four between-subjects conditions: (1) Unknown Mixed: All pictures were labeled "??"; (2) Known Mixed: Some pictures were labeled "DP" and some "ST"; (3) All Dog Poop: All pictures were labeled "DP"; (4) All Stone: All pictures were labeled "ST".

The dependent variable was how many pictures Ps decided to turn over and view. The result: Those in the Unknown Mixed condition turned over and viewed more pictures (including the negative pictures) than those in any of the other conditions ( $M_s = 16.4$  (Unknown Mixed) vs. 11.5 (Stone), 10.0 (Known Mixed), 3.8 (Dog Poop); all  $p_s < .05$ ). Notably, this result cannot be attributed to variety-seeking, because if participants simply wanted variety, those in the Known-Mixed condition should have opened as many pictures.

Also notably, the result could not be attributed to wishful-thinking either, because wishful-thinking could not explain why participants in the Unknown Mixed condition viewed even more pictures than participants in the All Stone condition. It seems that curiosity, or rather, the desire to resolve curiosity, drove participants to experience what they knew was negative, in this case, the image of a disgusting dog poop.

In another experiment, we showed participants 48 buttons on a computer screen, and they could choose to click any number of them. Each button was labeled either “Water,” “Nails,” or “??.” Ps were told in advance that if they clicked a button labeled “Water,” they would hear the sound of water pouring into a jar (pretested to be neutral). If they clicked a button labeled “Nails,” they would hear the sound of nails scratching chalkboard (pretested to be highly negative). If they clicked a button labeled “??,” they would hear either the Water sound or the Nails sound.

The study consisted of two between-participants conditions: (1) Unknown Mixed: Most of the buttons were labeled “??,” with only a couple of buttons labeled as “Water” or “Nails”; (2) Known Mixed: Most of the buttons were labeled “Water” or “Nails,” with only a couple of buttons labeled as “??.”

The primary DV was how many buttons participants clicked (i.e., how many sounds they listened to). The secondary DV was their hedonic experience, which we measured every 30 seconds throughout the study.

The results: Those in the Unknown condition pressed more buttons, and hence heard more of the excruciating Nails sound, than those in the Known condition ( $M_s = 39.3$  vs.  $28.2$ ;  $p < .01$ ), and they also felt worse throughout the experiment ( $M_s = 3.8$  vs.  $4.6$ ;  $p < .001$ ). Again, curiosity drove people to expose themselves to things which they knew were unpleasant.

We have replicated these findings in other domains, and are in the process of running additional experiments to identify the boundary of these effects. This research joins a still-thin yet growing body of literature by showing the power and hedonic consequences of intrinsic desire to resolve curiosity.

### The Experience Matters More Than You Think: Weighting Intrinsic Incentives More Inside Than Outside of an Activity

#### EXTENDED ABSTRACT

People rely on their present evaluation of future actions when making decisions that influence these actions. For example, people make travel plans or evaluate products based on what they value in the future at the moment of choice. We examine whether people differ in what they value when choosing and pursuing actions, predicting people give greater weight to intrinsic incentives during pursuit than outside pursuit of an activity.

Whereas incentive theory traditionally explores extrinsic incentives, the positive outcomes outside an activity that result from pursuing it, we focus on intrinsic incentives, which are internal to the activity and cannot be separated from it (e.g., the positive experience delivered as part of pursuing an activity; Fishbach and Choi 2012; Laran and Janiszewski 2011; Ryan and Deci 2000). For example, jobs provide salaries (extrinsic incentives) and can be challenging and interesting (intrinsic incentives).

Across six studies, we examine whether people care more for intrinsic incentives inside pursuit of an activity than outside pursuit. We predict this shift occurs because outside pursuit, people are in a cold state and do not experience intrinsic incentives as much (Loewenstein and Schkade 1999; Metcalfe and Mischel 1999; Van Boven

and Loewenstein 2003; Van Boven et al. 2012), and therefore weight them less heavily. Further, self-control research predicts immediately experienced incentives (intrinsic ones) are most salient when they are available (inside pursuit) than from a distance (outside pursuit; Ainslie 2001; Rachlin 2000).

Study 1, surveyed gym goers on the importance of intrinsic incentives (e.g., having a fun workout) and extrinsic incentives (e.g., staying in shape) during and before a workout. We find intrinsic incentives were more important during pursuit of a current workout than outside pursuit ( $M_{\text{inside}} = 4.37$ ;  $M_{\text{outside}} = 4.08$ ),  $t(53) = 2.47$ ,  $p = .017$ , while there was no difference in importance of extrinsic incentives.

Study 2 again demonstrates intrinsic incentives are more important in the present than the future, and also finds they are more important in the present than the past. Employees rated the importance of intrinsic (e.g., being treated well at work) and extrinsic incentives (e.g., compensation) for a current, previous, or future job. Intrinsic incentives mattered more in the present ( $M = 4.92$ ) than in the past ( $M = 4.56$ ),  $t(118) = 2.02$ ,  $p = .046$ , and in the future ( $M = 4.38$ ),  $t(118) = 2.95$ ,  $p = .004$ . However, extrinsic incentives were rated similarly in the present compared with the past or future.

Study 3 documented a shift in weighting intrinsic incentives in a more controlled experimental task. Participants completed a reading task comprised of 30 trials that they could stop at any time, but were paid based on the total trials completed. We asked about the importance of intrinsic incentives (having fun) and extrinsic incentives (getting paid) either during (inside pursuit) or before the task started (outside pursuit). Intrinsic incentives mattered more during pursuit ( $M = 4.00$ ) than outside pursuit ( $M = 2.76$ ),  $t(100) = 3.11$ ,  $p = .002$ , with no difference in importance of extrinsic incentives.

Using the paradigm from Study 3, Study 4 examined whether intrinsic incentives increase task persistence for pursuers inside pursuit, in contrast with predictors' expected persistence outside pursuit. Assigned tasks were either high or low on intrinsic incentives (reading jokes vs. an instruction manual) and high or low on extrinsic incentives (paying more or less for each trial). While predictors did not anticipate intrinsic incentives would influence persistence, pursuers persisted longer on a high (vs. low) intrinsic incentive task, completing more trials,  $F(1,195) = 21.41$ ,  $p < .001$ , and spending more time on the task,  $F(1,195) = 13.67$ ,  $p < .001$ . There was no effect of extrinsic incentives on pursuers' persistence.

Study 5 provides evidence for the process underlying the impact of intrinsic incentives on persistence. Participants completed the task from Study 4, pursuing either a task high versus low on intrinsic incentives and high versus low on extrinsic incentives. Those pursuing a high intrinsic incentive task had a more positive experience ( $M = 3.90$ ) than those pursuing a low intrinsic incentive task ( $M = 1.78$ ),  $F(1,195) = 98.38$ ,  $p < .001$ , with no effect of extrinsic incentives. Meditational analyses revealed increased persistence on an intrinsic task was driven by increased positive experience ( $\beta$  indirect =  $1.77$ ,  $SE = .61$ ; 95% C.I. = (.67, 3.07).

Study 6 examined an affective marker of the shift in weighting intrinsic incentives. We predicted those outside pursuit choosing to forgo intrinsic incentives would regret this decision later, inside pursuit. We created a choice dilemma with tasks trading-off incentives (fun, low-paying task vs. boring, high-paying task). Some participants made a free choice between tasks, while others were randomly assigned a task using a forced-choice paradigm persuading them to choose one over the other. While the majority (73.33%) with free-choice opted for the extrinsic task, forgoing intrinsic incentives, those persuaded to choose this extrinsic task had a worse experience,  $t(56) = 3.49$ ,  $p < .001$ , and regretted their choice more than those

choosing the intrinsic task,  $t(56) = 2.52, p = .015$ . A meditational analysis highlighted the role of positive experience; those persuaded to choose the intrinsic (vs. extrinsic) task had a better experience and regretted their choice less ( $\beta$  indirect =  $-.62, SE = .24; 95\% \text{ C.I.} = (-1.21, -.25)$ ).

Six studies support our theory that people value intrinsic incentives more inside than outside pursuit, and that this pattern influences evaluation, behavior and choice regret. One implication is for people to pay more attention to intrinsic incentives when making decisions outside pursuit. For example, when choosing a workout regimen, aspiring athletes should realize the positive experience of the workout will seem more important inside pursuit than outside, and can influence how long they actually persist on their workout. To increase persistence, they should choose a workout activity they will enjoy pursuing. Similarly, dieters should realize that while taste may not matter before initiating a diet, to actually persist on a diet they should choose to have a fulfilling and enjoyable (though low-calorie) eating experience.

### The Cost of Quantification: Measurement Undermines Intrinsic Enjoyment

#### EXTENDED ABSTRACT

The era of the quantified self is upon us. From sleep, reading, sex, and energy use to devices that track exercise and monitor health, people have access to more information about their behavior than ever before. The value of personal quantification seems clear. By better understanding our behavior, we can make the necessary changes to live happier, healthier lives. But might measurement undermine how much activities are enjoyed?

By helping people see how they are doing, measurement can facilitate performance (Amir and Ariely 2008). People value being productive (Hsee, Yang, and Wang 2010; Keinan and Kivetz 2011; Reis et al. 2000) and tend to maximize measured dimensions of behavior (e.g., the number of miles earned in a frequent-flyer program; Hsee et al. 2003). Consequently, feedback on how much of something one has done (i.e., "measurement") can increase output (Hsee et al. 2013). Knowing how many steps one has accumulated during the day, for example, can encourage people to walk more.

In contrast, we argue that measurement can decrease enjoyment by transforming intrinsically valuable activities into vehicles for achievement. People often engage in activities like exercising, walking, or reading a book because they are fun to do (Fishbach and Choi 2012). These activities are pleasurable in and of themselves, so people do them for their own sake.

But because measurement provides feedback on performance, we argue that it can undermine enjoyment. Providing external rewards can reduce an activity's intrinsic value (DeCharms 1968; Deci 1971; Higgins et al. 1995). Classic research on overjustification (Lepper, Green, and Nisbett 1973), for example, found that giving children awards for coloring decreased how much they colored in the future. Even in the absence of explicit rewards, measurement *itself* may have similar effects. Focusing on what an activity achieves (i.e., its instrumentality) can make the activity less enjoyable (Fishbach and Choi 2012). By giving people feedback on how much they have done, measurement should have an analogous impact, highlighting what an activity achieves and making it seem more instrumental.

Importantly, rather than being instrumental to the specific benefits of the activity, measurement should make activities instrumental to achievement itself. Walking can be instrumental to health, for example, but it can also be instrumental to achievement more generally (i.e., how many steps can one take in a day). Merely measuring

output should transform activities once pursued for their own sake into vehicles for achievement. As a result, while measurement may encourage people to walk further or read more, it may decrease the enjoyment of engaging in those activities.

Three experiments test our predictions. Experiment 1 explored how measurement impacts enjoyment of coloring, an intrinsically rewarding activity (Lepper et al. 1973). Participants spent 10 minutes coloring simple figures, and half were assigned to receive information about how many shapes they had colored. After 10 minutes had elapsed, we measured how much participants enjoyed coloring (five items: enjoyable, boring (reverse-scored), interesting, a waste of time (reverse-scored), fun; 1 = *Not at all* to 7 = *Very much*;  $\alpha = .89$ ). As expected, compared to those who were not measured, measured participants colored more shapes ( $F(1, 103) = 6.87, p = .010$ ). However, at the same time, measured participants enjoyed coloring less ( $F(1, 103) = 3.55, p = .062$ ).

Experiment 2 tested measurement's impact in the field. We gave participants pedometers to wear for a day and assigned them to either look at how many steps they walked or simply wear the pedometer (the lid was taped). To see whether the effects persist even when measurement is optional, a third group was told that they could look at the number of steps taken, but it was not a necessary part of the study. At the end of the day, we measured enjoyment ( $\alpha = .81$ ) using the measures from Experiment 1. In addition, to test the proposed underlying process, participants indicated whether they perceived walking as instrumental (1 = *Definitely work* to 7 = *Definitely fun*). As expected, measured participants walked more than those in the control ( $F(1, 97) = 11.74, p = .001$ ), and the same effect emerged when attending to measurement was optional ( $F(1, 97) = 7.24, p = .008$ ). However, measured participants enjoyed walking less ( $F(1, 97) = 11.01, p = .001$ ), even when attending to measurement was optional ( $F(1, 97) = 8.73, p = .004$ ). Further, as predicted, perceived instrumentality drove the effect on enjoyment ( $ab = -.43, 95\% \text{ CI} [-.77 \text{ to } -.16]$ ), such that measurement reduced enjoyment by making walking more instrumental (i.e., like work). People thus voluntarily access measurement information when it is available, even though it makes the activity less intrinsically enjoyable.

Experiment 3 examined reading. Participants read an excerpt from a book, and half were assigned to view the number of pages completed. To further explore the underlying process, we manipulated how the reading task was framed. Participants either read that "reading is a useful and educational activity" (instrumental frame), "reading is a fun and relaxing activity" (enjoyable frame), or received no additional information (control). If measurement reduces enjoyment by making activities seem more instrumental, then making an activity seem instrumental to begin with should attenuate the effect. Supporting our theory, in the control condition, measured participants enjoyed reading less ( $F(1, 304) = 8.89, p = .003$ ), and this same effect emerged when reading was framed as enjoyable ( $F(1, 304) = 5.33, p = .022$ ). When reading was framed as instrumental, however, this effect was attenuated ( $F(1, 304) = 1.59, p = .208$ ). Thus it is not measurement per se that makes activities less enjoyable; rather, measurement undermines the enjoyment of previously intrinsically valuable activities by making them seem instrumental.

Measurement is a powerful tool. But in addition to influencing output, it also impacts how we see and relate to various activities. Does this mean we should stop measuring our behavior? No, but it does highlight the importance of considering why people engage in a behavior before deciding whether to measure it. For intrinsically valuable activities, it's better not to know.

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