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Everyday Temptations: An Experience Sampling Study of Desire, Conflict, and Self-Control

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How often and how strongly do people experience desires, to what extent do their desires conflict with other goals, and how often and successfully do people exercise self-control to resist their desires? To investigate desire and attempts to control desire in everyday life, we conducted a large-scale experience sampling study based on a conceptual framework integrating desire strength, conflict, resistance (use of self-control), and behavior enactment. A sample of 205 adults wore beepers for a week. They furnished 7,827 reports of desire episodes and completed personality measures of behavioral inhibition system/behavior activation system (BIS/BAS) sensitivity, trait self-control, perfectionism, and narcissistic entitlement. Results suggest that desires are frequent, variable in intensity, and largely unproblematic. Those urges that do conflict with other goals tend to elicit resistance, with uneven success. Desire strength, conflict, resistance, and self-regulatory success were moderated in multiple ways by personality variables as well as by situational and interpersonal factors such as alcohol consumption, the mere presence of others, and the presence of others who already had enacted the desire in question. Whereas personality generally had a stronger impact on the dimensions of desire that emerged early in its course (desire strength and conflict), situational factors showed relatively more influence on components later in the process (resistance and behavior enactment). In total, these findings offer a novel and detailed perspective on the nature of everyday desires and associated self-regulatory successes and failures.

Keywords: self-regulation, desire, temptation, goal conflict, trait self-control

Motivation holds a prominent place in the science of behavior, because motivation sets in motion many of the processes that produce behavior. Motivation drives people (and other animals) to pursue life-sustaining activities and avoid life-shortening ones, to set goals and pursue them, to form likes and dislikes, and to think and feel in advantageous ways. Subjectively, motivation takes the form of desire, defined as a feeling of wanting. Despite the central importance of motivation and desire, basic facts about them remain unexplored, including the prevalence and frequency of desire in everyday life, the proportion of desires that encounter conflict and resistance, and the major factors that dictate which desires are enacted. The present investigation used experience sampling methods to illuminate the phenomenology of desire in everyday life.

The Importance of Motivation

If all psychological phenomena can be analyzed in terms of cognition and motivation (emotion and behavior are seen as based on cognition and motivation), then the current state of psychological theory is somewhat unbalanced: The so-called Cognitive Revolution of recent decades (e.g., Gardner, 1987) produced great

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advances in understanding cognitive processes, while motivation theory has languished to some extent. Yet motivation is arguably more fundamental than cognition, because motivation originates in the basic drives to sustain life. Cognition (and emotion) likely evolved to help organisms get what they need and desire—thus, to serve motivation. Despite its fundamental importance, basic facts about motivation remain unknown, even in terms of how frequently human beings experience various desires and what proportion of desires are enacted. It is not even known whether desire is typical for most of waking life or instead only an occasional phenomenon.

Motivations can be understood as directing behavior toward obtaining satisfaction. However, not all desires can be enacted. Sometimes satisfaction is not available because of the environment, such as when plans are rejected or rained out. Extensive constraints attend social and cultural animals such as humankind. The requirements of living with others according to rules often include using self-control to restrain or redirect desires (e.g., Baumeister & Exline, 1999; Freud, 1930; Hofmann, Friese, & Strack, 2009; Mischel, Cantor, & Feldman, 1996; Vohs & Ciarocco, 2004), especially insofar as rules shape how, when, and where individuals may satisfy various desires. The self-regulation of motivated behavior has been studied extensively in laboratories (e.g., Vohs & Baumeister, 2011), but relatively little is known about the frequency and effectiveness with which people successfully resist their desires in everyday life. The present investigation was undertaken in part to provide such basic information. Specifically, we used experience sampling methods to investigate how often and strongly desires are felt, how often they evoke conflict and resistance, and how often they are enacted versus inhibited. A special focus of the present research was to illuminate how key personality traits (behavior activation and inhibition, self-control, perfectionism, and narcissistic entitlement) and situational factors (e.g., alcohol consumption, presence of others) would produce differences in how strongly people experience desire and conflict and whether they would resist or enact those desires.

Conceptual Framework

Our strategy was based on the development of a four-step model of motivated behavior. The framework integrates the components of desire, conflict, resistance (use of self-control), and enactment. We define desire as an "affectively charged cognitive event in which an object or activity that is associated with pleasure or relief of discomfort is in focal attention" (Kavanagh, Andrade, & May, 2005, p. 447). In plain terms, desire means wanting to have or do something. We assume that desires emerge from the interplay of triggering conditions in the environment and need states residing within the person (Baumeister & Heatherton, 1996; Finkel et al., 2011; Hofmann et al., 2009; Metcalfe & Mischel, 1999). Desires vary in strength and therefore in their potential to motivate behavior.

Second, desires may or may not conflict with the person's values and goals. Conflict is the perception that there is some reason not to enact the desire and thus serves to distinguish unproblematic desires from problematic desires (i.e., temptations). In the case of unproblematic desires, enactment of the behavior is generally what people will strive for unless impeded by external constraints such as lack of opportunity. However, at times desires collide with other goals and standards, such as when one desires pie when on a diet or a nap during a tedious meeting. In accordance with cybernetic and neural models of self-regulation, we assume that the detection of a conflict is an important triggering mechanism for the third step of the framework, a person's active efforts at resisting desire (Botvinick, Braver, Carter, Barch, & Cohen, 2001; Carver & Scheier, 1982).

Resistance, which we equate with the use of self-control, involves efforts to prevent oneself from enacting the desire. We assume that the likelihood of resistance depends on the degree of conflict experienced. The idea is that conflict is a signal that there is a discrepancy or incompatibility between the person's present desire and other higher order goals that needs to be resolved. Classic accounts of self-control posit that some sort of effortful intervention (self-control, effortful control) is necessary in order to solve such conflicts in the direction of goal-directed behavior. Hence the connection between conflict and enactment is best conceptualized as mediated through the recruitment of self-control (resistance).[1]

We hypothesized that whether the person enacts the desired behavior will be affected by the prior three steps: High desire strength should increase the probability of behavior enactment. Conflict should be independent from desire strength and depend on people's commitment to self-regulatory goals (i.e., goal importance). Where there is conflict, there often will be attempts to resist the desire (Botvinick et al., 2001; Carver & Scheier, 1982). Resistance attempts should reduce the likelihood that the behavior will occur (Figure 1).

Although most of these predictions may seem straightforward, the complexity of everyday life means at least that the size and prevalence of such effects would be open to question. We assumed, for example, that some behaviors may fail to be enacted despite strong desire, low conflict, and low resistance; conversely, other desires may be enacted despite conflict and resistance, indicating self-regulatory failure (Baumeister & Heatherton, 1996).

Self-regulation researchers usually do not measure strength of desire directly (for criticisms, see Hofmann et al., 2009; Hofmann, Gschwendner, Friese, Wiers, & Schmitt, 2008; Rawn & Vohs, 2011). The present study assessed desire strength directly, which therefore allowed us to explore the interaction between desire strength and resistance. We entertained two competing hypotheses about this interplay. One was that resistance, in addition to having an inhibiting main effect on enactment, would weaken the relationship between desire strength and enactment because the top-down act of resisting a desire may make people less susceptible to its motivational power. This hypothesis would imply a negative interaction term between desire strength and resistance. The other possibility was that desire strength would weaken the inhibiting main effect of resistance on enactment because strong desires may be harder to resist than weak ones—similar to the way in which taming a wild horse may be more difficult than taming a calmer

[1] In this article, we restricted our analysis to active, effortful, intentional, and mostly conscious forms of self-regulation, but we acknowledge that self-regulatory processes may also be triggered in the absence of a conscious intention and be carried out in a less effortful manner (Fishbach, Friedman, & Kruglanski, 2003).

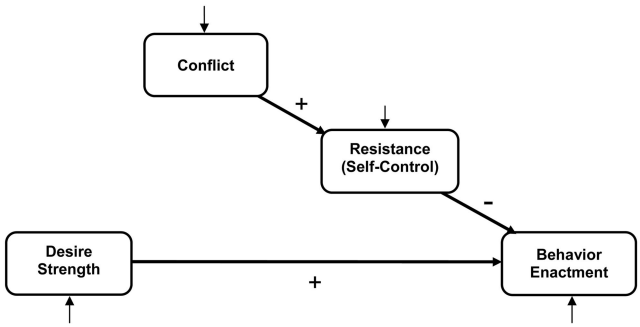

Figure 1. Our four-step conceptual model of motivated behavior. The core of the model integrates desire strength, conflict, resistance (use of self-control), and enactment. The lower pathway represents the basic assumption that desire strength instigates behavior enactment. The upper pathway represents the inhibiting influence of self-control, triggered by the experience of conflict between a current desire and important other goals. External arrows indicate that each step in the model may be moderated by personality and situational factors.

one (see James, 1890/1950). This hypothesis would imply a positive interaction term between desire strength and resistance.

One strength of our conceptual framework is that it can assess how exactly a particular personality or situational factor affects self-regulation. For example, a variable might increase conflict as a direct effect, which might then be passed along through resistance to enactment. In addition to pinpointing such main effects, the model also allowed us to test whether a certain variable affects the relationship between different steps in the model. We were particularly interested in identifying variables that moderate self-regulatory success, that is, the strength of connection between people's attempts to resist a given desire and their enactment of the desire-related behavior. In sum, one of the framework's advantages was that it allowed for a fine-grained analysis of how various personality and situational factors influence the self-regulation of motivated behavior.

From Inner to Outer

Foreshadowing modern self-regulation theory, Freud (1933/1949) famously described the ego as the servant of two masters, namely, inner desires and external reality. The present investigation took seriously the view that motivated behavior is subject to influence from both inner and outer sources. The inner ones included personality traits. Relevant external factors included alcohol use, the presence of others (who make the situation social and thereby introduce considerations such as norms, self-presentational concerns, and accountability), and in particular the presence of others who are doing what one desires to do.

How each of these influences affects the self-regulation of desire may differ in accord with our conceptual framework. We hypothesized that inner traits would be most influential in terms of housing the motivation and thus giving rise to desire. Of course, desire can and does arise from external forces (indeed, the prevalence and presumptive success of advertising is based on stimulating desires). But whether and in what manner an external stimulus evokes desire or conflict likely will be affected by the person's internal traits, such as lacking self-control or feeling entitled to special treatment. Hence we predicted that the personality trait effects would be prominent in the early stages of the sequence, namely, by affecting desire and conflict.

In contrast, external factors, such as mere presence of others and especially the presence of people who are already indulging, would be prominent in influencing resistance and enactment (the later stages). Thus, personality would play a key role in initiating the urge and responses to it, and social circumstances might come into play later to thwart or facilitate the behavior implied by the urge. To be sure, two of the traits we studied (trait self-control and behavioral inhibition) could be seen as more relevant to resistance and enactment than desire and conflict, so we expected that there would be shades of gray. Still, the general pattern we predicted was that the strongest influences would shift from inner to outer ones as one moved through the sequence from desire to conflict to resistance to enactment.

Personality and Self-Control

Behavioral Activation and Inhibition Systems

We now turn to developing hypotheses concerning the specific personality traits we studied. Individual differences in acting on one's desires are supposedly based on having a strong behavioral approach or behavioral activation system (BAS), relative to the person's behavioral inhibition system (BIS; Gray, 1987, 1982). Metaphorically, the BAS can be compared to the engine of behavior, whereas the BIS is akin to the brakes. Carver and White (1994) developed scales to measure these separately.

In terms of our model, we assumed that the BAS would exert influence at an earlier stage than the BIS. People with a stronger and more active BAS should exhibit stronger desires than others, and this should carry through to greater enactment of impulses. In contrast, we expected people with a stronger and more active BIS to enact their desires less frequently than others, an effect we assumed would be brought about by more frequent and more effective resistance among high BIS individuals.

Trait Self-Control

Because trait self-control is generally understood as the capacity to resist desire, we assumed that individual differences in self-control would moderate some of the patterns of desire, but we entertained two competing sets of hypotheses. The first and most obvious prediction was that people low in trait self-control would enact more conflicted desires than people high in trait self-control. Low self-control presumably reflects either low motivation or low ability to restrain oneself (or both), and so when faced with a conflicted desire, people low in self-control should be more likely than others to act it out. The effect might occur because of lower rates of resistance following conflict, which would mean that people with low self-control simply do not try to restrain themselves when they have a conflicting desire. Alternatively, or additionally, behavior enactment might occur despite resistance, which would mean that people with low self-control try to restrain themselves but ultimately fail to do so. Thus, the first main prediction was that low self-control would result in a weaker inhibitory pathway from conflict to enactment (via resistance). Whether this stems from low motivation or low ability to control

oneself would be reflected in the specific stage at which the trait operates.

Recent work has, however, suggested a second, alternative view, and indeed a sweeping reconceptualization of how trait self-control may operate in real life. A meta-analysis by de Ridder and colleagues (de Ridder, Lensvelt-Mulders, Finkenauer, Stok, & Baumeister, 2011) concluded that trait self-control may operate more by way of establishing effective habits and routines than by resisting single temptations. In other words, people with good self-control may avoid temptations rather than resisting them. This view implies quite different predictions from what we suggested in the preceding paragraph: It may be the people with high rather than low self-control who find themselves not spending time and effort resisting temptations. Whether high self-control improves behavior because of frequent and effective resistance to temptation or instead because of avoiding temptations (which consequently yields low rates of conflict and resistance) was thus a crucial focus of this work. The answers would point to dramatically different models for how this trait ultimately influences everyday behavior.

Perfectionism

Whereas trait self-control has been shown to have largely adaptive and beneficial effects, indicating its function as a generally helpful trait, perfectionism can be regarded as a maladaptive tendency to misuse and thereby squander self-regulatory capabilities. Perfectionists are defined by setting and clinging rigidly to unrealistically high standards and unattainable goals (e.g., Frost, Marten, Lahart, & Rosenblate, 1990; Shafran & Mansell, 2001; Vohs et al., 2001). Perfectionism should therefore increase conflict for the many desires that do not mesh with one's standards. Higher conflict in turn should engender greater resistance and possibly lesser enactment as carryover effects.

Narcissistic Entitlement

The concept of narcissism originated as a clinical diagnosis but has become a focus of personality research, stimulated in part by a scale for measuring narcissism in nonclinical populations (Raskin & Terry, 1988) and the development of a scale specifically focused on narcissistic entitlement (Campbell, Bonacci, Shelton, Exline, & Bushman, 2004). Narcissistic entitlement reflects an attitude that one ought to have what one wants, presumably linked to the sense that one is a special, superior person. Campbell et al. (2004) defined narcissistic entitlement as "a stable and pervasive sense that one deserves more and is entitled to more than others" (p. 31). Hence, we predicted that people high in narcissistic entitlement would be more likely than others to enact their desires. There was no reason to expect that they would have stronger desires. We assumed, however, that they should be less likely than others to feel conflicted about their desires. This is because people high in entitlement may think that their own wishes are sufficient reason to act on them, and therefore they disregard potential objections and problems (stemming from conflict with other goals or with external situational constraints). Reduced awareness of potential conflicts in the here and now may lead to less resistance and, ultimately, more enactment.

State and Situational Factors

Alcohol Intoxication

We assessed level of alcohol intoxication, which can be seen as a psychological state that is a blend of inner and situational influences. Competing hypotheses were entertained as to whether alcohol would influence desire earlier or later in the sequence. With respect to the enactment of desire (i.e., whether the person does what was desired), the basis for expecting intoxication to exert an effect was clear and strong: Alcohol consumption has been found to impair the power of self-control to inhibit inappropriate action tendencies (e.g., Fillmore & Vogel-Sprott, 1999; Hofmann & Friese, 2008; Steele & Southwick, 1985).

As to whether alcohol might affect the strength of desire, the basis for making predictions is less clear. A review by Steele and Southwick (1985), for instance, concluded that alcohol does not create or stimulate desires but rather merely weakens the inhibitors. On that basis, one would predict no effect of alcohol on desire per se. Nonetheless, it is conceivable that alcohol renders desires to be felt more strongly than they would be otherwise. For example, ample evidence indicates that alcohol intoxication increases the level of aggressive response to provocation but does not cause aggression in the absence of provocation (Bushman & Cooper, 1990). These findings could indicate that the effect of alcohol is limited to whether the person inhibits aggressive impulses, but they could also be interpreted as showing that intoxicated people become more upset and angry than sober ones in response to identical provocations. The assessment of desire strength in this study allows for us to test these two possible mechanisms.

Social Factors: Presence of Other People and Presence of Enactment Models

Whether the presence of others has an inhibiting or facilitating effect on enactment of desire may depend on whether other people are merely present or whether other people are actively engaging in the desire-related behavior themselves, thus serving as *enactment models.* (Note that the term *models* is used here to denote performing behaviors that others might copy, à la Bandura, 1977, rather than statistical or mathematical modeling.)

Regarding the presence of others, we speculated that other people in one's environment would generally constrain the perceived or actual options for action, thereby hindering the enactment of many desires. In addition, the presence of others may increase self-awareness (Duval & Wicklund, 1972) and thereby make the actor more aware of his or her standards, leading to more resistance—particularly resistance to behaviors that conflict with other goals.

We reasoned that the presence of enactment models would constitute a special case that produces effects quite different from the mere presence of other people: Seeing others doing what one desires to do may act as a basis for justification and may promote indulgence through processes of motivated reasoning (Kivetz & Zheng, 2006; Kunda, 1990). Thus, enactment models should reduce resistance, possibly through a reduction of conflict. Furthermore, enactment models may serve as a particularly strong prime of behavioral action schemas in memory (e.g., Chartrand & Bargh, 1999; Strack & Deutsch, 2004). Recent research suggests that

nonconscious perception–behavior priming may be particularly impactful when people are motivationally prepared for action (Cesario, Plaks, & Higgins, 2006). Therefore, we expected that enactment models would lead to less resistance than would be otherwise and might also have a direct priming effect on enactment that is unmediated by a decrease in resistance.

Other Situational Factors

We also assessed the general location at which people had experienced their desire (e.g., home, work, public places). We expected that, on average, work and public settings would constitute more restraining environments than people's homes; hence resistance—and perhaps experienced conflict, too—may be higher in those settings, and these effects should feed into lower rates of enactment. In contrast, there was no reason to expect location to affect desire strength.

The Present Research

Experience sampling is an expensive and labor-intensive method that allows researchers to learn about what people are doing, thinking, and feeling at moments in their lives (e.g., Barrett & Barrett, 2001; Csikszentmihalyi & Larsen, 1987; Hektner, Schmidt, & Csikszentmihalyi, 2006). The present study recruited an assorted sample of adults in a medium-sized European city (Würzburg, Germany) to wear beepers for a week. Each time the beeper went off, they were asked to pause at what they were doing and report on what desires they felt at the moment and within the past half hour. If they were having a desire, they reported on what it was for, its strength, whether they felt conflict about it, whether they resisted it, and whether they enacted the desired behavior. In a randomly selected subset of responses, participants also reported on assorted facts relevant to the situation, such as whether others were present (and if so whether they were engaging in the desired activity), participants' location, and whether they had consumed alcohol. As with all experience sampling studies, ours struggled with the tradeoff between wanting a large amount of information on each episode and yet wanting the task not to be so onerous that compliance would dwindle. The high compliance rates (below) and high quantity of good quality data suggested that our procedures struck a reasonable balance. To our knowledge, this study is the first one that has used experience sampling methods to map the course of desire and self-control in everyday life.

Method

Participants

The sample included 208 participants (66% female) from the city of Würzburg, Germany, and its surroundings. Participants were aged 18 to 55 ($M = 25.24$, $SD = 6.32$), and 73% were university students. The student part of the sample was heterogeneous, involving 49 different fields of study (e.g., $n = 13$ were psychology students). The remaining 27% of participants were either full- or part-time employed (13.9%), currently doing an apprenticeship (3.4%), high-school students (1.9%), unemployed (1.4%), on maternity leave (1%), retirees (1%), or engaged in another role (4.3%). Participants were recruited via newspaper ads and a large participant pool mailing list. Experience sampling data from three participants were lost due to technical problems. Hence, the final sample consisted of 205 participants.

Procedure

Participants were provided with Blackberry pocket personal data assistants (PDAs) during an orientation meeting. During the meeting they were informed about the general purpose of the study, received both oral and written instructions on how to use the PDA, and provided informed consent. Furthermore, they were informed about confidentiality as well as how their participation would be compensated. On the PDAs, a customized Java ME application controlled the assessment schedule, questionnaire presentation, and data saving.

Participants carried the PDAs with them during the experience sampling period of seven consecutive days. Each day, seven signals were distributed throughout a time window of 14 hr. For each day, participants could personalize the beginning of the schedule to either 8 a.m., 9 a.m., or 10 a.m. Following recommendations of Hektner et al. (2009), this time window was divided into seven blocks of 2 hr; within each block, an exact signal time was randomly selected with the condition that two consecutive signals be at least 30 min apart. If the PDA was turned off at the time of the signal, the program rescheduled the signal at a later point in the present or next time block; but if the PDA was off until the next time block ended, the response was recorded as missing. If the PDA was on but participants did not respond or stopped responding during assessment, the program closed after 15 min and recorded only the collected data. Furthermore, to ensure a sufficient number of questionnaires per participant, the schedule was extended by (a maximum of) 1 additional day if participants responded to only fewer than five signals on any 1 day. In that case (17% of participants), a message popped up at the end of the day, kindly asking participants to carry the device for 1 more day. All participants complied with this request.

Participants were reimbursed with €20 initially (approximately $28). As additional incentives, if they completed more than 80% of signals they received movie passes worth €15 ($21) and participated in a raffle for one of two iPod Touch music players. On average, participants responded to and completed 92.2% of signals. A small fraction (0.3%) of signals was only partially completed. The remaining 7.5% of signals were not responded to at all.

Experience Sampling Data

The experience sampling protocol consisted of two parts. The first part asked about the main aspects of the desire episode as part of our general framework. The second part asked about situational circumstances and emotional consequences. At the onset of each signal, participants first indicated whether they were currently experiencing a desire or whether they had just been experiencing a desire within the last 30 min. If they indicated no desire, the assessment period was over.

If they indicated a desire, they next indicated the content of the desire. We provided participants with a list of 15 domains (food, nonalcoholic drinks, alcohol, coffee, tobacco, other substances,

sex, media, spending, work, social, leisure, sleep, hygiene-related, other) that further branched into a total of 76 subdomains, drawn from the self-regulation literature and based on pretesting.[2] Next participants indicated the strength of the desire on a scale from 0 (*no desire at all*) to 7 (*irresistible*) and the duration they had been experiencing the desire on a 10-point scale (0–5 min, 6–10 min, 11–15 min, 16–20 min, 21–30 min, 31–60 min, 1–2 hr, 2–3 hr, 3–5 hr, >5 hr).

At this point, participants indicated whether they had attempted to resist the desire (*yes* vs. *no*). They then indicated (*yes* vs. *no*) whether they had enacted the behavior suggested by the desire (even at least to some extent; e.g., eating some of a chocolate bar without eating the entire bar would count). Finally, participants rated the degree to which the given desire conflicted with one or more personal goal(s) on a scale from 0 (*no conflict at all*) to 4 (*very high conflict*). In case of goal conflict, they indicated the nature of the conflicting goal (from a list of 20 options) and the importance of the goal(s) on a scale from 0 (*not important at all*) to 4 (*very important*).

The second part of the questionnaire was activated on a random basis in 60% of those cases in which participants indicated a desire. This step was taken to assure that the part of the questionnaire that was consistently answered when participants felt a desire did not take longer than several minutes to complete (in fact, average duration was 2.3 min), so as to maximize participants' willingness to indicate the desire(s) they were experiencing. In the second part, participants provided more information on their current location (i.e., home, work, other people's homes, in public buildings and places, outdoors/nature), whether other people were present (*presence of others*), and whether other people in their environment were already performing the behavior implied by the desire (*presence of enactment models*). For instance, in the case of a desire to smoke a cigarette, the latter question assessed whether other people in the environment had been or currently were smoking. The instructions stated that enactment models may be either physically present or present in some other medium (e.g., people in advertisements or on TV). Participants also indicated their level of arousal and to what degree they were currently under the influence of alcohol on 5-point scales from 1 (*not at all*) to 5 (*very much*). For the categorical variables of desire content, goal content, and location, participants could also provide a self-generated response using the alphabet keys on the PDA.

After one course of the protocol was completed, participants were asked whether they wished to report another desire at this time. Up to three questionnaires could be completed at a given measurement occasion. On average, participants completed 46.2 questionnaires in total during the experience sampling period ($SD = 2.8$).

Approximately 2 to 4 days after the experience sampling phase, participants returned their PDAs and provided data on a variety of demographic indicators (e.g., sex, age, occupation) and dispositional variables. They were then debriefed and paid for their participation.

Coding of Participant-Generated Answers

Participant-generated answers to categorical response options were coded by two independent coders as to whether the response either could be assigned to one of the existing response options (and if yes, to which) or would remain in the category "other." Regarding desire domain, of the total of 255 responses generated under the option "other," 109 could be successfully reassigned to existing domains. The remaining desires were desires to read ($n = 26$), listen to music ($n = 17$), prepare a meal (rather than eating it; $n = 8$), aggress ($n = 8$), cool down from the heat ($n = 13$), and play ($n = 7$). As none of these were frequent enough to warrant the creation of additional categories, these desires, along with the low-frequency category of "other substances" ($n = 24$), were combined to form the final category "other" ($n = 146$; 1.9% of desires). Interrater agreement for the above domain codings was high ($\kappa = .95$). Regarding location, all but 13 of 195 participant-generated responses could be assigned to preexisting categories (the reassigned locations were mostly public places such as libraries or shops; $\kappa = .95$).

Additional Problem Index

In order to also have an external validation criterion of how generally problematic the various types of desires in our database are perceived to be, we conducted an Internet study. We asked 69 independent participants (65% female; M age = 26.8 years) to rate how problematic it is for the average person to experience a desire for each of the subdomains from our study ("problematic desires" were described as desires likely to conflict with other goals such that people have good reasons to attempt to resist those desires). Participants rated the problematic nature of each desire from the list of 79 subdomains (excluding the category "other") on a scale from 1 (*not at all*) to 5 (*very much*).

We matched the average problem score from these external ratings to the desires reported in the experience sampling data set and computed an *average problem index* for each participant. This average problem index was used to substantiate our conclusions about whether certain personality traits may lead people to experience more or less problematic desires as they navigate their everyday lives. It thus served to evaluate how well participants' subjectively reported conflict experiences correspond to perceptions from these outside observers of how conflictual various desires would likely be.

Demographic and Personality Measures

The following personality scales were the focus of the present research: *BIS* and *BAS* activity were measured with the Carver and White (1994) inventory; *trait self-control* was assessed with the brief scale developed by Tangney, Baumeister, and Boone (2004); *perfectionism* was measured with the (domain-independent) Perfectionism subscale of the Eating Disorder Inventory (Garner, Olmstead, & Polivy, 1983); and *narcissistic entitlement* was assessed with the scale proposed by Campbell et al. (2004). Table 1 displays the means, standard deviations, reliabilities, and intercorrelations of the trait measures.

Analytic Procedures and Strategy

Because experience sampling data are nested (observations within persons), all analyses—except descriptive raw data calcu-

[2] A complete list of categories and subordinate categories can be obtained from the first author.

Table 1
Descriptive Statistics, Reliability, and Intercorrelations for Trait Measures

Variable	*M*	*SD*	Range	α	1	2	3	4	5
1. BAS	4.16	0.48	1–5	.78	—				
2. BIS	2.93	0.84	1–5	.91	−.10	—			
3. Trait self-control	3.06	0.59	1–5	.80	.17	−.28	—		
4. Perfectionism	3.05	1.03	1–6	.82	−.05	.29	−.01	—	
5. Entitlement	3.30	1.11	1–7	.88	.08	.01	.01	.26	—

Note. $N = 205$. Absolute correlation coefficients larger than .12 are significant at $p < .05$. α = Cronbach's alpha; BAS = behavioral activation system; BIS = behavioral inhibition system.

lations—were conducted using the multilevel software HLM (Raudenbush, Bryk, Cheong, & Congdon, 2004). For these multilevel analyses, dependent variables were left in their original metric. Because resistance and enactment were binary variables, logistic multilevel regression analysis was applied using the Bernoulli model provided by HLM (Raudenbush et al., 2004). For ease of presentation, estimated log-odds were transformed into probabilities for graphical illustrations, whereas the tables contain the original log-odds estimates.

Independent variables were treated in the following manner: All Level 1 components of the conceptual framework were person-mean centered when used as predictors in order to estimate the unbiased strength of relationships at Level 1 (Enders & Tofighi, 2007). Domain, location, presence of others, and presence of models were effects-coded in order to allow for a statistical comparison of each category with the grand mean average; in the case of three or more categories (domain and location), the category "other" was chosen as the base group of least interest for which comparisons with the grand mean cannot be directly computed (Cohen, Cohen, West, & Aiken, 2003). Effects coding for these variables was chosen (over dummy coding) because it allows estimating the effects of one predictor across the average effect (the "zero" point) of the other predictors in the model. There was one exception to this rule: Alcohol consumption was so heavily skewed—somewhat reassuringly, participants were sober around 92% of the time—that it was treated as a dummy-coded categorical variable. Specifically, no alcohol consumption was treated as the reference category (against which the regression intercept and effects of other predictors were estimated). The first dummy variable represented very little consumption, the second dummy variable moderate consumption, and the third dummy variable high consumption (a combination of the scale responses 4 and 5 on the 5-point scale). Level 2 continuous predictors were grand-mean centered, and the Level 2 categorical predictor gender was weighted effects-coded in order to estimate the average effect across both sexes (Cohen et al., 2003).

We first performed a number of descriptive analyses on the raw data. We then tested the basic assumptions of our conceptual framework using multilevel regression analyses. Finally, we treated each component of the model—desire strength, conflict, resistance, and enactment—as a dependent outcome in order to investigate the effect of personality, situational, and control variables.

In focusing on each of these components of the model, we included the respective predictor variable(s) from the conceptual model established above as base predictors. For instance, when predicting resistance, conflict was included as a base predictor and additional predictors were added on top of this base; similarly, when predicting enactment, desire strength, resistance, and the interaction between desire strength and resistance were included as base predictors (but conflict was left out due to the full mediation effect via resistance; see below).

In addition, we controlled for possible content differences in all analyses by including content domain as a set of effects-coded variables.[3] We also modeled the main effects of personality (at Level 2 of the model) and situational variables (at Level 1) on the dependent variable by jointly including these variables in order to assess the distinct contribution of each predictor. Because situational variables were assessed on 60% of occasions only, we built two models with an increasing number of joint predictors: The first model ("full data set") included all personality measures and control variables but excluded the situational variables; this model thus allowed for the most powerful analysis in terms of number of Level 1 occasions ($N = 7{,}827$ desires). The second model ("restricted data set") included all situational variables in addition to the other variables in the first model and was thus lower in the number of Level 1 occasions ($N = 4{,}731$ desires).

In addition, we tested whether a given Level 1 predictor effect should best be treated as fixed (indicating that the effect is constant across persons) or as random (indicating that there are individual differences in the strength of the relationship). If random variance components were significant, these effects were kept as random in the model; otherwise they were treated as fixed (Hox, 2010). All three pathways in the base model depicted in Figure 1 (i.e., the link between strength and enactment, the link between conflict and resistance, and the link between resistance and enactment) were judged to be random ($p < .001$). To test whether Level 2 personality variables moderated these random Level 1 effects, we added one personality predictor at a time in order to keep the computational complexity low and retained only those Level 2 moderators in the final model that predicted significant variation in these random slopes (Hox, 2010). Similarly, to test for interactions between situational factors and base predictors (strength, conflict, resistance) in these models, we retained only those terms that proved significant using this stepwise procedure.

[3] Because our focus is on underlying psychological processes, a detailed description of content differences is beyond the scope of this article. Content-related analyses are reported in Hofmann, Vohs, Förster, and Baumeister (2011).

Results

Descriptive Findings

Participants indicated at least one current desire on half (49.9%) of the occasions at which they were beeped and responded (N = 10,558), reported at least one recent desire on 26.7% of occasions, and reported neither a current nor recent desire on 27.6% of occasions. The most frequent desires among the total of 7,827 desire reports were those rooted in basic bodily needs: desires to eat (28.1%), sleep (10.3%), and drink (8.6%); followed by desires for media use (8.1%), leisure (7.2%), social contact (7.1%), hygiene-related activities (5.9%), tobacco use (4.8%), sex (4.6%), work (3.0%), coffee (2.9%), alcohol (2.7%), engagement in sports (2.6%), and spending (2.2%; category "other": 1.9%). The absolute frequency with which desires were reported was not correlated with any of the five personality traits (all ps $> .15$, average absolute $r = .04$). Neither was the percentage of desires relative to the total number of furnished reports (i.e., desires plus no-desires) correlated with personality (all ps $> .21$, average absolute $r = .07$).

Average desire strength (measured from 0 to 7) was moderate (M = 4.08), with 6.3% of desires receiving the highest possible rating of "irresistible." The median experienced desire duration was 16–20 min. Average level of conflict was M = 1.08 (on a 0–4 scale), with 53.2% of desires rated as not conflicting at all, 14.7% as mildly conflicting, 12.4% as somewhat conflicting, 10.9% as quite conflicting, and 8.8% as highly conflicting. On average, desires were actively resisted on 42% of occasions and enacted on 48% of occasions.

Test of Conceptual Framework

We next tested our hypotheses about the general relation between desire strength, conflict, resistance, and enactment by building a series of multilevel models. The purpose of these analyses was to establish the general model around which specific analyses would be built. The results of these model analyses are summarized in Figure 2.

Test of core model. Corroborating the basic premise that desire is a motivating force, desire strength (all else being equal) was positively related to behavior enactment (B_{log} = 0.08, $p < .001$). Desire strength, however, was completely unrelated to conflict (B = 0.0002, p = .98, r = .0003) and did not reliably predict resistance (B_{log} = –0.031, p = .17). The absence of a relationship between desire strength and conflict is in line with the above conjecture that both unproblematic and conflicting desires can be equally high or low in strength. The absence of a relationship between desire strength and resistance indicates that strong desires were no more likely to engage resistance than weak desires.[4]

Next, increasing conflict predicted a higher likelihood of resistance (B_{log} = 0.53, $p < .001$) and a lower likelihood of behavior enactment (B_{log} = –0.25, $p < .001$). In other words, the more that a given desire conflicted with another goal, the more likely people were to inhibit the desire-related behavior. Mediation analyses (Baron & Kenny, 1986) confirmed that this effect was due to the use of self-control: Resistance had a large direct negative effect on enactment (B_{log} = –2.40, $p < .001$) and, when included in a simultaneous regression model, reduced the effect of conflict on enactment to near zero (B_{log} = –0.01, p = .553). Additional analyses established that conflict and resistance did not interact in predicting behavior enactment (B_{log} = –0.02, p = .639), further corroborating a simple mediation pathway from conflict to enactment via resistance.

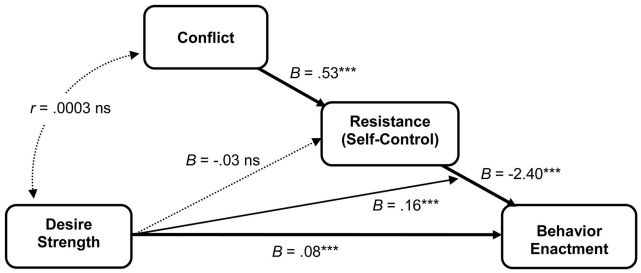

Figure 2. Test of conceptual framework: Summary of regression analyses predicting behavior enactment from desire strength, conflict, and resistance. All Bs are unstandardized logistic regression coefficients. The figure also shows that desire strength and conflict were entirely unrelated, that strength was not reliably associated with resistance, and that the strong inhibitory link between resistance and enactment was weakened with increasing desire strength. *** $p < .001$.

Translating the logistic regression coefficient of resistance on enactment to probabilities indicated that when participants did not attempt to resist, the desire-related behavior was enacted 69.6% of the time on average. Presumably, the remainder failed because of external factors, such as lack of opportunity. When participants attempted to resist, however, behavior enactment was reduced to 17.4% on average. Hence, self-control reduced the enactment of desire-related behavior from 70% to 17%.

Last, we investigated the possible interplay of desire strength and resistance by testing whether their interaction predicted behavior enactment. This analysis revealed a highly significant positive interaction (B_{log} = 0.16, $p < .001$). To illustrate this interaction, we transformed the predicted log-odds derived from the linear logistic regression into probabilities (e.g., Jaccard, 2001). As shown in Figure 3, when people attempted to resist their desires, they were more likely to enact strong rather than weak ones. Specifically, people were 2.4 times more likely to enact a resisted desire with a strength rating of 7 (estimated enactment rate: 25.8%) than to enact a resisted desire with a strength rating of 1 (10.8%). When people did not use self-control, in contrast, desire strength had no effect on actual behavior enactment. A simple slope analysis showed that resistance still significantly reduced the rate of

[4] This finding also does not support the idea that resistance may lead to a down-regulation of desire strength via reappraisal. However, future research, perhaps employing a more dynamical assessment of desire strength, should investigate the possibility that the absence of a relationship may mask an interaction such that some contextual factors may moderate whether self-control leads to a down-regulation versus up-regulation (i.e., intensification) of desire.

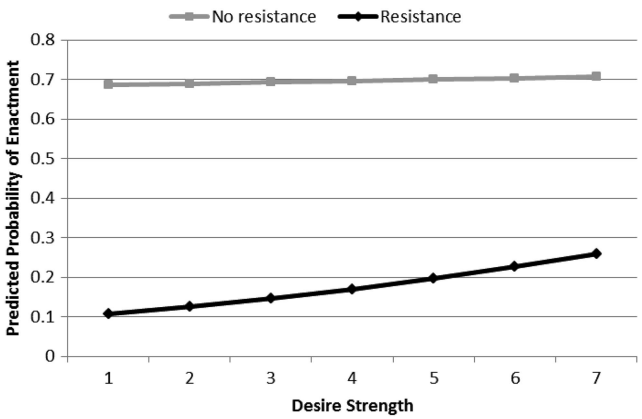

Figure 3. Interaction effect of desire strength and resistance on the probability of behavior enactment. Predicted log-odds from the logistic regression were transformed into probabilities for ease of interpretation.

enactment at the highest level (7; "irresistible") of the desire strength scale, $t(204) = 12.58$, $p < .001$.[5]

Ancillary analyses. Ancillary analyses showed that desire strength was predicted by the duration of the desire, such that longer desire durations were associated with more intense desires ($B = 0.18$, $p < .001$). We also investigated whether the degree of conflict experienced was predicted by the number of goals that were mentioned as conflicting and from the importance that was ascribed to these goals. For this analysis, both the number of conflicting goals and goal importance were set to zero for those cases where participants did not indicate conflict. We found that both number of goals ($B = 0.07$, $p < .001$) and goal importance ($B = 0.70$, $p < .001$) contributed independently to goal conflict when jointly added as predictors.

Trait-Level Variables

Tables 2, 3, and 4 provide detailed analyses of the four main components of the model as dependent outcomes as a function of personality, state, and situational variables, controlling for desire content, gender, and age. Before entering the trait and demographic variables into the model, we checked for multicollinearity among predictors. Correlations generally were quite low (Table 1), with the highest correlations between BIS and perfectionism ($r = .29$, $p < .001$), BIS and trait self-control ($r = -.28$, $p < .001$),[6] and perfectionism and entitlement ($r = .26$, $p < .001$). Thus, multicollinearity was not an issue for the present analyses.

BIS/BAS. As predicted, analyses using the full data set showed that BAS had a selective influence on desire strength but did not predict conflict, resistance, and enactment. The unstandardized regression coefficient in Table 2 ($B = 0.37$) indicates that a 1-point increase on the BAS scale was associated with a 0.37 increase in desire strength. The effect replicated when the restricted data set was analyzed. Thus, the estimated mean desire strength for participants 1 *SD* above versus 1 *SD* below the mean of the BAS scale is $M = 4.22$ versus $M = 3.87$, respectively. BIS activity, in contrast, had a specifically negative effect on behavior enactment, indicating that individuals low in BIS sensitivity tended to enact desire-related behavior more often than those high in BIS sensitivity (transformed into probabilities: $M_{+1SD} = .55$; $M_{-1SD} = .47$). However, this effect reached only conventional levels of significance in the restricted data set (Table 4). Also, BIS did not influence the likelihood of resistance. Hence, the inhibiting effect of BIS on enactment did not reflect a greater likelihood of high BIS individuals to resist their desires.

Trait self-control and perfectionism. Both trait self-control and perfectionism affected three of the four components of our model directly, but in opposite ways. High trait self-control was associated with lower average desire strength ($M_{+1SD} = 3.88$; $M_{-1SD} = 4.20$), less conflict ($M_{+1SD} = 1.21$; $M_{-1SD} = 1.02$) and less resistance when controlling for conflict as a base predictor ($M_{+1SD} = 0.35$; $M_{-1SD} = 0.42$; see Tables 2 and 3). Trait self-control did not have a direct effect on enactment, and it moderated neither the pathway between conflict and resistance nor the pathway between resistance and enactment. This pattern of findings is clearly at odds with the traditional view of high trait self-control reflecting a high inclination to resist conflicted desires; however, it is consistent with the recent view of trait self-control as a "proactive" trait that helps people to actively shape and select their desire environments in a beneficial way. We return to a discussion of this notion later.

As predicted and in contrast to trait self-control, high perfectionism was linked to higher levels of conflict than low perfectionism ($M_{+1SD} = 1.22$; $M_{-1SD} = 1.01$). Perfectionism predicted the likelihood of resistance ($M_{+1SD} = 0.43$; $M_{-1SD} = 0.34$). Unexpectedly, high perfectionism was also associated with greater desire strength ($M_{+1SD} = 4.15$; $M_{-1SD} = 3.93$).

Narcissistic entitlement. High narcissistic entitlement predicted lower levels of experienced conflict ($M_{+1SD} = 1.04$, $M_{-1SD} = 1.18$). Furthermore, high entitlement was marginally significantly associated with lower resistance, but this effect was reduced to nonsignificance for the restricted data set (Table 3).

Further findings. None of the dispositional variables significantly moderated the relationship between strength and enactment or the relationship between conflict and resistance. Both demographic control variables accounted for variation in conflict (Table 2), such that conflict was somewhat higher for women ($M = 1.15$) than men ($M = 1.08$) and conflict decreased with increasing age ($M_{+1SD} = 1.07$; $M_{-1SD} = 1.16$).

We also tested whether any of the five trait predictors was reliably related to the problem index derived from our additional external validation sample in order to explore whether certain types of people may on average encounter more or fewer problematic desires as judged by independent raters. Trait self-control was the only trait that was significantly (i.e., $p < .05$) correlated with the problem index ($r = -.20$, $p < .01$). This finding suggests that high trait self-control individuals appear to encounter less

[5] Furthermore, resistance again acted as a full mediator of a similar interaction between desire strength and conflict on enactment ($B_{log} = 0.04$, $p < .01$), which was reduced to near zero ($B_{log} = -0.01$, $p = .25$) when we included resistance and its interaction with desire strength.

[6] The low negative correlation between BIS and trait self-control appears odd at first sight. We believe this negative relationship is driven by the fact that both scales contain some items related to perseverance under difficulties (e.g., being easily frustrated). Low perseverance is regarded as indicative of high BIS and low trait self-control, respectively.

Table 2
Prediction of Desire Strength and Conflict by Domain, Level 2 Trait Predictors, and Situational Variables

	Desire strength				Conflict			
	Full data set		Restricted data set		Full data set		Restricted data set	
Predictor	*B* (or χ^2)	*p*	*B* (or χ^2)	*p*	*B* (or χ^2)	*p*	*B* (or χ^2)	*p*
Base predictors (Level 1)								
Intercept	4.04	<.001	4.11	<.001	1.11	<.001	1.15	<.001
Domain	$\chi^2(14) = 353.16$	<.001	$\chi^2(14) = 170.14$	<.001	$\chi^2(14) = 961.09$	<.001	$\chi^2(14) = 605.87$	<.001
Trait predictors (Level 2)	0.00	<.001	0.00	<.001	0.00	<.001	0.00	<.001
BAS	0.37	<.001	0.36	<.001	0.05	.142	0.04	.342
BIS	−0.01	.776	0.01	.848	0.03	.215	−0.01	.703
Trait self-control	−0.27	<.001	−0.23	<.001	−0.16	<.001	−0.14	<.001
Perfectionism	0.11	<.001	0.12	<.001	0.10	<.001	0.10	<.001
Entitlement	−0.02	.193	−0.02	.443	−0.06	<.001	−0.06	.001
Gender	0.00	.683	−0.01	.700	−0.04	<.001	−0.05	<.001
Age	0.00	.101	0.00	.762	−0.01	.003	−0.01	<.001
Situational variables (Level 1)								
Presence of others			0.00	.944			0.00	.919
Presence of models			0.03	.280			0.00	.952
Location			$\chi^2(5) = 2.13$	.831			$\chi^2(5) = 56.82$	<.001
Alcohol intoxication			$\chi^2(3) = 17.3$	<.001			$\chi^2(3) = 10.6$	.014

Note. Desire strength was measured on a scale from 0 to 7. Conflict was measured on a scale from 0 to 4. *B*s indicate unstandardized regression coefficients. Chi-square tests evaluate the increase in model fit due to the inclusion of categorical variables. Full data set: $N = 7{,}827$ observations; restricted data set: $N = 4{,}731$ observations; number of Level 2 units (persons): $N = 205$; BAS = behavioral activation system; BIS = behavioral inhibition system.

problematic desires in their daily lives compared to their low trait self-control counterparts (rather than merely experiencing objectively equally problematic desires as less problematic).

Analyses also showed that highly entitled participants encountered marginally significantly more problematic desires, as judged by independent raters ($r = .14$, $p = .051$). Furthermore, gender was significantly positively related to the problem index ($r = .17$, $p = .01$), indicating that women appeared to encounter fewer problematic desires than men, as judged by independent raters. The latter two findings are particularly interesting because they contrast with the above results showing that, in subjective terms, people high in entitlement reported less conflict than those low in

Table 3
Multilevel Logistic Regression of Resistance on Domain, Level 2 Trait Predictors, and Situational Variables

	Resistance (self-control)			
	Full data set		Restricted data set	
Predictor	B_{log} (or χ^2)	*p*	B_{log} (or χ^2)	*p*
Base predictors (Level 1)				
Intercept	−0.48	<.001	−0.72	<.001
Conflict	0.49	<.001	0.49	<.001
Domain	$\chi^2(14) = 372.25$	<.001	$\chi^2(14) = 217.2$	<.001
Trait predictors (Level 2)				
BAS	0.13	.363	0.123	.416
BIS	0.02	.785	0.077	.397
Trait self-control	−0.23	.045	−0.314	.012
Perfectionism	0.19	.006	0.193	.007
Entitlement	−0.11	.077	−0.097	.138
Gender	−0.05	.493	−0.051	.507
Age	0.01	.419	0.015	.170
Situational variables (Level 1)				
Presence of others			0.00	.973
Presence of Others × Conflict			0.09	.005
Presence of models			−0.24	<.001
Location			$\chi^2(5) = 47.08$	<.001
Alcohol intake			$\chi^2(3) = 4.48$	.214

Note. BAS = behavioral activation system; BIS = behavioral inhibition system.

Table 4
Multilevel Logistic Regression of Behavior Enactment on Domain, Level 2 Trait Predictors, and Situational Variables

	Behavior enactment			
	Full data set		Restricted data set	
Predictor	B_{log} (or χ^2)	p	B_{log} (or χ^2)	p
Base predictors				
Intercept	0.05	.436	0.48	.005
Strength	0.12	<.001	0.09	.002
Resistance	−2.43	<.001	−2.55	<.001
Strength × Resistance	0.14	.004	0.13	.045
Domain	$\chi^2(14) = 265.63$	<.001	$\chi^2(14) = 125.41$	<.001
Domain × Resistance	$\chi^2(14) = 29.07$	.010	$\chi^2(14) = 30.38$	.007
Trait predictors (Level 2)				
BAS	0.09	.510	0.08	.517
BIS	−0.11	.184	−0.18	.025
Trait self-control	0.14	.193	0.09	.379
Perfectionism	−0.02	.787	0.02	.732
Entitlement	0.09	.111	0.05	.368
Gender	−0.04	.378	0.04	.231
Age	0.00	.951	0.00	.903
Situational variables (Level 1)				
Presence of others			−0.26	<.001
Presence of models			0.55	<.001
Presence of Models × Resistance			−0.34	.001
Location			$\chi^2(5) = 13.98$	.016
Alcohol intake			$\chi^2(3) = 2.47$	.480
Alcohol Intake × Resistance			$\chi^2(3) = 8.51$	.037

Note. BAS = behavioral activation system; BIS = behavioral inhibition system.

entitlement, and women reported more experienced conflict than men.

State and Situational Variables

Alcohol intoxication. As expected, alcohol affected participants' capacity to inhibit desires they wanted to resist. Alcohol intoxication significantly moderated the effect of resistance on enactment (Table 4), $\chi^2(3) = 8.51$, $p = .037$. An inspection of the pattern of results suggested that the most notable combination was the interaction of the highest alcohol level dummy category and resistance ($B_{log} = 2.11$, $p = .002$). As shown in Figure 4, resistance attempts were much less successful in inhibiting behavior under high intoxication levels compared to all other levels. The average resistance effect in this study—a reduction in the likelihood of behavior enactment by about 50 percentage points—was reduced to a mere 11 points (from 66% to 55%) when people drank more than they apparently could master.

Contrary to the idea that a state of alcohol intoxication only impairs the inhibition of behavior (Steele & Southwick, 1985), alcohol intoxication also predicted desire strength (Table 2). The estimated means for the different levels of alcohol consumption showed that desire strength was not significantly different among conditions of no alcohol intake ($M = 4.11$), little intake ($M = 4.14$), and moderate intake ($M = 3.89$); however, desire strength for high/very high levels of intake ($M = 4.85$) was significantly elevated compared to the other three categories. This effect also held when removing from analyses those occasions where the content of the desire was to consume more alcohol, $\chi^2 = 15.14$, $p = .002$. Surprisingly, intoxication also elevated rather than diminished experienced conflict (see Table 2), as conflict was lower for no intake ($M = 1.11$), little intake ($M = 1.02$), and moderate levels of intake ($M = 1.09$), when compared to high/very high levels of intake ($M = 1.77$).

Social factors. In line with the inner to outer framework, neither desire strength nor conflict was influenced by the general presence of others and the presence of enactment models in particular.

However, social factors influenced enactment and resistance. The presence of others had two separable effects on our frame-

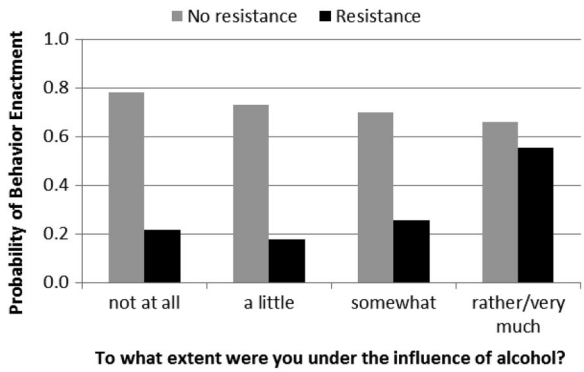

Figure 4. Alcohol moderates the relationship between resistance and behavior enactment. The likelihood of enactment given resistance or no resistance is plotted for four progressive levels of alcohol intoxication.

work. First, the presence of others moderated the effect of conflict on resistance such that conflict was more likely to be translated into resistance when other people were present rather than absent ($B_{log} = 0.09$, $p = .005$; Figure 5). Second, the presence of others had a general inhibiting effect on behavior enactment ($B_{log} = -0.26$, $p < .001$; Table 4). That is, resisted desires were less likely to be enacted when other people were present ($M = 0.18$) compared to absent ($M = 0.26$), and the same was true for unresisted desires ($M_{present} = 0.73$; $M_{absent} = 0.82$).

In contrast, the presence of enactment models had a strong influence on people's likelihood to resist desire (Table 3), such that resistance was less likely when enactment models were present ($M = 0.28$) compared to absent ($M = 0.38$). Over and above this effect on resistance, the presence of enactment models also had a direct facilitating effect on enactment (Table 4). People were more likely to carry out a given desire-related behavior when enactment models were present rather than absent ($B_{log} = 0.55$, $p < .001$). This main effect was qualified by an interaction between presence of enactment models and resistance (see Table 4). An examination of this interaction showed that the effect of enactment models was somewhat smaller (but still significant at $p < .001$) when participants actively tried to resist a given desire compared to when they did not attempt to resist (Figure 6).

Further findings. Location had significant effects on conflict, resistance, and enactment that were not accounted for by any of the other variables: Conflict was significantly ($p < .05$) above average at work settings ($M = 1.58$) and below average when in other people's homes ($M = 0.87$). Being in one's own home yielded about average conflict strength ($M = 1.12$), as did public ($M = 1.24$) and outdoor ($M = 1.08$) settings. Resistance was above average at work settings ($M = 0.47$) and in public spaces ($M = 0.42$) but did not differ from average at home ($M = 0.31$), other people's homes ($M = 0.37$), and outdoor settings ($M = 0.31$). Although location explained a significant amount of variance in enactment according to the chi-square test, none of the individual contrasts was significantly different from average ($ps > .12$).

Discussion

Motivation is a fundamental aspect of human nature and one of psychology's most central topics, yet many basic questions about it have remained unanswered. To our knowledge, this investigation is the first systematic attempt to provide empirical evidence about such basic questions as the prevalence of desire and conflict in everyday life and the frequency and effectiveness of self-control efforts to resist desire. Our findings suggest that desire is a common, recurrent theme in daily life. Frequent inner struggle to manage desire is another theme. Our investigation has also provided new evidence of the importance of personality traits as well as situational factors in shaping the course and outcome of everyday desires.

Figure 5. Presence of others as a moderator of the relationship between conflict experience and resistance. The probability of resistance is plotted across the full range of the conflict score.

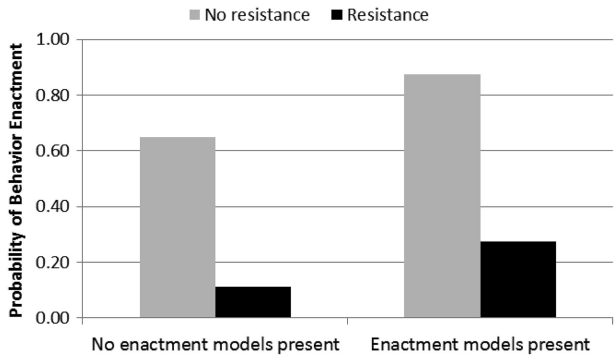

Figure 6. Behavior enactment as a function of whether people attempted to resist a given desire and whether enactment models (i.e., people who already engaged in the desire-related behavior) were present.

Desire in Daily Life

Desire pervades everyday life. The most conservative estimate from our data indicates that people feel some desire about half the time they are awake. Almost half of those desires (47%) were described as conflicting at least somewhat with the person's other goals, values, or motivations. Thus, inner conflict is a frequent feature of daily life. The other half or slight majority constitutes unproblematic desires that are generally enacted, though not invariably. Even without resistance, people sometimes fail to do what they want to do. Opportunity constraints may be one contributing factor. Moreover, frequency of desire was remarkably consistent across persons: None of our personality or situational variables predicted higher or lower total frequency of desire.

Self-regulation can be understood as the inner mechanism for resolving goal conflicts (Kruglanski et al., 2002). On that basis, the present findings suggest that self-regulation is needed many times in a typical day, because goal conflicts are frequent. An additional analysis revealed that goal conflict itself could be traced back to the overall number of conflicting goals and to the degree of commitment to these goals. People who are committed to many conflicting goals may have the greatest need for frequent self-regulation.

Self-control often is used to resist desires, and the use of self-control (termed resistance here) was strongly predicted by the degree of conflict experienced: The more conflict, the more resistance. About 40% of desires were actively resisted, which comprised about 20% of all sampling occasions. Moreover, self-regulation is often effective, in the sense that people often manage to stop themselves from doing things they desire. Without resis-

tance, people enacted 70% of their desires, but resistance lowered enactment to 17%. The difference was not due to differential strength of desire, because desire strength did not differ between the resisted and unresisted desires. Taken together, these findings suggest that self-control in the form of resisting desire is common and largely effective. Meanwhile, though, the 17% rate of enacting desires despite resistance indicates a nontrivial amount of self-control failure in everyday life. Our participants reported failing to resist a desire on about 3% of the occasions at which they were signaled. The true failure rate may be slightly higher, insofar as some participants may have succumbed after they made their report.

The basic predictions from our conceptual framework were confirmed: On average, stronger desires were more likely to be enacted than weaker ones. Conflict triggered resistance, and resistance strongly reduced the likelihood of enactment. Desire strength and conflict were essentially orthogonal. Our findings also confirmed the sequential framework starting with desire and then followed in turn by conflict, resistance, and enactment. Desire strength was unrelated to resistance, and the effect of conflict on enactment was mediated by resistance.

Many approaches to self-control tend to neglect desire strength as a constituting factor, treating variation in desire strength as error variance (for a discussion, see Hofmann et al., 2009; Rawn & Vohs, 2011). Yet, our findings revealed a clear interaction between desire strength and resistance in determining behavior enactment. As desire strength increased, resistance became less effective at preventing enactment. When resistance was absent, desire strength made little difference, but when people did resist, their success or failure depended substantially on how strong the desire was (among other factors). These findings from the field provide evidence of the importance of considering both impelling (i.e., desire strength) and restraining factors (i.e., active resistance) in order to predict and understand motivated behavior (Finkel et al., 2011; Hofmann et al., 2009).

It is also instructive to examine the strongest desires, defined as those receiving the maximum strength rating of 7 (which was labeled as "irresistible"). When not resisted, these were enacted at a 71% rate. With resistance, enactment dropped to an estimated 26% (Figure 3), indicating that not only did people often resist so-called irresistible desires, but they were surprisingly successful when they did. Claims of irresistible desires have been used to explain addiction (Charland, 2002; Leshner, 1997) and other impulsive behaviors, but the present results suggest that truly irresistible motivations are quite uncommon. Human behavior cannot be explained as ineluctably driven by powerful desires alone. Instead, motivations compete with each other and with various inner processes and external realities to drive behavior. The path from human desire to behavior is apparently rarely a simple and straight one.

Our findings were broadly consistent with the movement from inner factors to external ones (Figure 7). Personality traits were prominent and significant predictors of desire strength and conflict, but personality's effects on enactment were relatively rare and weak. In contrast, situational factors such as the mere presence of others and the presence of enactment models had no discernible main effects on desire strength and conflict, while they did have significant impact on whether people actually did what they wanted to do. It is quite possible that some desires were triggered by external factors such as cues and even advertisements, and our measures failed to detect these. Still, among the many variables we did study, there was a clear progression, with personality traits having their effects on emergence of desire, and broad aspects of social situation structure coming into play later in the sequence.

Personality and the Course of Desire

Several specific personality traits were shown to influence desire and its regulation (Figure 7). The various traits had some common patterns and some distinctive ones.

BIS and BAS. People who scored high on BAS reported generally stronger desires, compared to people low on BAS. These findings fit Gray's (1987) characterization of the behavioral activation system as a potent source of appetitive impulses to approach anticipated rewards. Perhaps surprisingly, the effects of BAS ended there, at the first step in our sequence, as BAS did not relate to any of the later steps in the model (conflict, resistance, and enactment). BAS also had no effect on how many desires were reported. Thus, the trait of behavioral activation had its effects on motivational strength rather than motivational frequency. Put another way, high BAS meant wanting things more rather than wanting more things.

Behavioral inhibition (BIS), in contrast, had its effect only with regard to the final component of our model, behavior enactment, and that effect reached significance in only the restricted sample. It may seem intuitively obvious that people with a strong behavioral inhibition system would be less likely than other people to act out their desires. That is what we found. However, the lack of other effects contradicts some simple explanations for this result. People high on BIS did not have weaker desires, nor did they resist their desires more, nor were they more effective than others at inhibiting resisted desires.

Thus, the BIS scale predicts a rather general tendency to inhibit motivated behavior. The BIS trait may consist of a fairly automatic and unconscious pattern of response inhibition, which would be consistent with its theoretical roots in animal behavior (Gray, 1987, 1982). A high threshold for enacting one's wants and needs could be a defensive maneuver, possibly designed to avoid risk, insofar as doing nothing is often less risky than doing something. In any case, people high in BIS may miss out on a considerable number of nonguilty pleasures in their everyday lives (along with a few guilty ones).

Trait self-control. We articulated two sets of competing hypotheses about how trait self-control would influence the course of desire. The simpler and traditional theory predicted that high self-control would lead to more resistance to temptations than low self-control, and perhaps more effective resistance. This was not found. Trait self-control moderated neither the conflict–resistance link nor the resistance–enactment link. The present results instead favored the alternative theory, which predicted that high self-control operates more by avoiding temptations in the first place than by resisting them. This conclusion suggests a reconsideration of how this trait operates.

Most centrally, high trait self-control was associated with less motivational conflict compared to low trait self-control. Our validation study, in which an independent sample of participants rated desires for their propensity to raise problems, revealed that trait self-control was the only trait we measured that correlated signif-

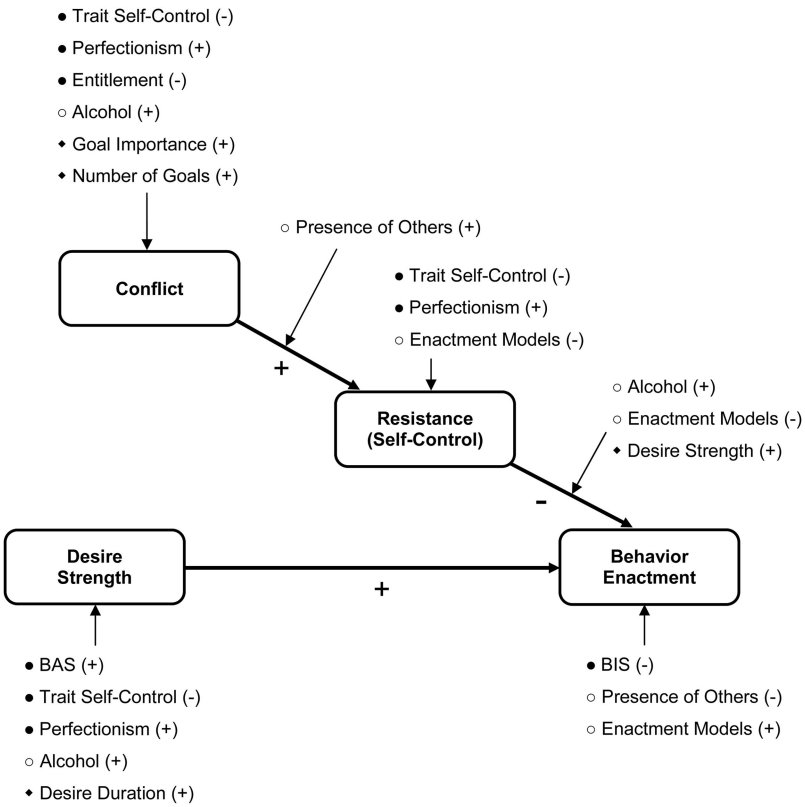

Figure 7. Summary of conceptual framework and entry points for the main personality traits (filled circles), situational factors (empty circles), and further variables (diamonds). Plus and minus signs indicate positive and negative relationships, respectively. Positive (+) moderator effects on the resistance-enactment pathway indicate that the strong negative relationship between resistance and enactment becomes weaker (i.e., more positive) for high rather than low values on the moderator variable, whereas negative (−) moderator effects indicate that the negative relationship becomes stronger (i.e., more negative). BAS = behavioral activation system; BIS = behavioral inhibition system.

icantly with the problem index. That is, people with high trait self-control seem to be less likely than other people to encounter the sorts of desires that are generally regarded as problematic (by others). Hence, the external validation data rule out the alternative interpretation that those high in trait self-control had the same desires as those low in self-control but merely perceived them as free from conflict.

Two additional findings are also compatible with the view that people with high trait self-control seem to avoid dangerous temptations in the first place: First, people with high self-control reported weaker desires overall, suggesting that they are more successful than their low trait self-control counterparts at avoiding strong desires. Second, those high in trait self-control reported lower rates of resistance, suggesting that they did not have to use self-control as often as those low in trait self-control.

Viewed in concert, all of these results fit well with the alternative view of trait self-control as operating via adaptive habits and anticipatory coping. By avoiding tempting situations, motivational conflicts, and problematic desires, people with good self-control apparently manage to avoid having to resist strong desires that conflict with their goals and values. Hence they go through life (as sampled here) not having to resist their desires as often as other people do. This perspective offers some answers to the question of why people with high trait self-control enact their desires as often as do other people. By avoiding dangerous temptations and problematic desires, they avoid having to struggle and resist. The result is not a desire-free life. Au contraire, the result appears to be that they mainly have desires that they can satisfy. Their avoidance of problematic desires and overall relative weakness of desire were perhaps offset by lower rates of conflict and resistance, so that they ended up acting out the desires they did have at roughly the same rate as people with low self-control.

Perfectionism. Perfectionism is sometimes considered a variant of high trait self-control, but in the present data the two traits had radically different effects. Whereas high trait self-control predicted low desire strength, low conflict, and low resistance, high perfectionism predicted the opposite: strong desires, high conflict, and frequent resistance. The view of perfectionists as prone to squander self-regulatory resources by pursuing unrealistic standards and suffering greater motivational conflict is clearly compatible with these results, but perhaps it should be tempered with some sympathy given that their desires are inherently harder to control (stronger and more conflicted) than those of other people. Perfectionists thus emerge from these findings not as

simply misguided idealists but rather as highly motivated persons (a.k.a. tortured souls) who experience powerful impulses that frequently clash with their other goals and values. They certainly seemed to lack the highly self-controlled person's knack for avoiding problematic desires.

Narcissistic entitlement. The effects of narcissistic entitlement were found mainly in connection with conflict. People with a high sense of entitlement did not report stronger or weaker desires, but they reported less conflict about these desires than other people did. This fits the theoretical assumptions about narcissism that formed the basis of our predictions: Highly entitled persons apparently regard the fact that they want something as ample and often sufficient reason to do it, and they are relatively unlikely to recognize reasons to hold back. Our external validation data showed a marginally significant trend that their desires were perceived by others as being more problematic than those of low entitlement individuals, and yet high entitlement individuals perceived fewer reasons to refrain from doing what they wanted in the here and now. Not surprisingly, these persons were also less likely than others to resist their desires (though this effect was only marginal and fell to nonsignificance in the restricted sample). Taken together, these findings indicate that a strong sense of entitlement may put people at risk of wanting more than may be good for them. It also suggests one more reason that people with a high sense of narcissistic entitlement may be difficult for others to get along with (Back, Schmukle, & Egloff, 2010; Colvin, Funder, & Block, 1995; Vazire & Funder, 2006): They place high priority on acting out their desires, including ones that other people would regard as problematic.

State and Situational Influences

Alcohol intoxication. We noted alcohol's reputation for impairing self-regulation in many different domains. The present data offer little to dispel that reputation. In particular, resistance to desires was substantially weaker at high levels of alcohol intoxication, in the sense that people who had consumed fairly large amounts of alcohol were exceptionally prone to enact their desires after initial resistance. When people had not imbibed large quantities of alcohol, resistance reduced the rate of enactment by about 50 percentage points—but that margin shrank to only 10 points among the highly intoxicated. These data from everyday life clearly support accounts that relate alcohol to reduced inhibitory control (Fillmore & Vogel-Sprott, 1999; Steele & Southwick, 1985).

Yet we also found effects of alcohol at earlier steps in the model. Intoxicated persons reported their desires as being felt more strongly than the desires of sober persons. As on enactment, this effect of alcohol on desire strength was found mainly among the persons who had consumed relatively high amounts. The effect was not due to alcohol fostering a desire for more drinking: It remained significant even after eliminating those cases. In parallel, high levels of alcohol intoxication raised the reported level of conflict felt about all sorts of desires.

Thus, small or moderate doses of alcohol had little effect on the course of desire, but high levels of intoxication dramatically changed the course of desire in multiple ways. Inebriated persons felt all manner of desires more strongly than sober persons, and they also felt more conflict about these desires. People may drink to relax, but the present findings suggest that heavy drinking can sharply raise levels of inner turmoil, as people both want things more intensely than usual and also sense their desires as being more conflictual than when they are less intoxicated. High intoxication also made people less able to successfully resist their desires. Hence the higher rate of conflict did not translate into lower enactment.

Social factors. Our findings corroborate the importance of interpersonal context for shaping self-regulation (e.g., Fitzsimons & Finkel, 2010; Vohs & Finkel, 2006). We had two main measures, namely, the presence versus absence of other people in the immediate situation and the presence versus absence of other people doing what the participant wanted to do (enactment models). Neither variable had a significant effect on desire strength or conflict, which again supports our general hypothesis that these aspects of desire emerge largely from the person's inner traits and processes. But the social situation did have effects on the later steps of resistance and enactment.

The presence of other people had two notable effects. First, other people in the environment acted as a catalyst to translate the experience of goal conflict into the decision to resist the current desire. A plot of the interaction revealed that when people are around others, as opposed to being alone, they are more likely to resist desires that are high rather than low in conflict (see Figure 5). One possible interpretation is that strong conflict meant that there were good reasons to refrain from indulging, and the potential disapproval of an audience may make those reasons even more compelling than they seem when no one is looking. Another possibility is that highly conflictual desires may prompt people to seek out others to support or approve their efforts to resist temptation (Fitzsimons & Finkel, 2011; Vohs, Finkenauer, & Baumeister, 2011).

Second, the presence of others *generally* inhibited enactment of all sorts of desires, not just resisted ones. When people were in the presence of others, they showed a substantially decreased likelihood of doing the things they desired (compared to when alone). The presence of others did not reduce the strength or frequency of desires, but it reduced enactment. The presence of others may reduce opportunities to do what one wants and may trigger automatic inhibition processes that curtail action. People thus do adjust their behavior according to social demands, and many of these adjustments may be automatic and unconscious, so that people end up refraining from acting out their desires.

Taken together, both findings suggest the profound and ongoing impact of the requirements of human social life. Freud (1930) proposed that people must make substantial psychological adjustments in terms of curbing their motivations in order to live with other people, and many subsequent thinkers have theorized that self-regulation is an important ingredient in the ongoing struggle to live effectively among others. The present findings confirm that social life increases people's willingness to resist conflicting desires and, even more generally, curtails people's tendency to do what they want.

Being around people who are already doing what one wants to do had entirely different effects, however. The presence of enactment models lowered people's resistance and increased their own enactment. A growing literature on self-justification processes (e.g., Kivetz & Zheng, 2006) suggests that people find reasons to do what they want. One such reason may be that other people are

doing it. In other words, it is plausible that seeing other people do something can make people feel better about doing it themselves. Our findings indicate that the presence of enactment models did not reduce conflict directly but rather operated at the level of an individual deciding whether to resist a given desire or not. For instance, a dieter who sees others eating with gusto or an abstaining smoker who spies others lighting up does not immediately gain relief from inner objections to indulging. But such seductive role models do seem to reduce resistance and thereby increase the willingness to yield to temptation. Hence self-justification may well operate, as people argue with themselves about whether to give in or hold fast.

An additional direct effect of enactment models on behavior enactment was found even after controlling for the decrease in resistance. One possible mechanism for this additional effect may be found in research on behavioral mimicry (Chartrand & Bargh, 1999). That is, the perception of enactment models may activate behavioral motor schemas that are congruent with one's present desire, thus lowering the threshold for behavior enactment (Norman & Shallice, 1986; Strack & Deutsch, 2004). Hence, the present data suggest that enactment models may exert their influence via two separable mechanisms: a more deliberate self-justification process by which the willingness to engage in self-control is lowered and a more automatic process of behavior priming that increases the likelihood of behavior enactment. Note that when participants indicated that they had actively attempted to resist they were still influenced by the presence of enactment models of indulgence, albeit to a lesser extent, as indicated by the significant interaction between resistance and enactment models. Thus, engaging in self-control may render people somewhat less vulnerable to the assumed automatic behavior priming effects.

Location. Location was another aspect of the situation that operated above and beyond the interpersonal context. The main finding was that being at work presents obstacles for many desires, compared to being at home or elsewhere. While at work, people experienced much more conflict over their desires and were more prone to resist them, compared to all other locales. As a simple example, among the strongest and most conflicted desires in our sample were the desires for sleep and leisure. But hardly any employers tolerate sleeping or relaxing on the job, so people struggled to resist those desires when they were at work, unlike while being at home. The broader implication is that workplace demands are highly influential in constraining the course of everyday human desire.

Concluding Remarks

Our findings suggest that desire is a common, recurrent theme in the daily lives of modern citizens. Many desires present no problem and can be quickly enacted. Many other desires, however, encounter inner conflict or external obstacles. Frequent inner struggle to manage one's desires, particularly when one is at work and complying with the demands of that environment, is apparently another fact of modern life. The struggle to restrain one's desires meets with uneven success and is influenced by a broad range of both internal and external factors. The link between motivation and behavior is vitally important but far from simple or straightforward.

Personality emerged as being especially important at the source of desires and at the origin of conflicts about those desires, setting in motion the stream of events that eventually leads to behavior being enacted or inhibited. In contrast, the situational and social environment seemed to primarily constrain or unleash the motivational impetus at later stages much like channels, banks, and floodgates affect the downstream flow of a river. Although we cannot prove that personality causally shapes desire and conflict, that conclusion seems the most plausible explanation and is broadly assumed in other work. With regard to desire, at least, everyday life may be an ongoing drama in which inner factors set the stage for motivation and conflict, while external factors contribute to how well people manage to resist and enact their current wants and longings.

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