

Regrets of the Typical American : Findings From a Nationally Representative Sample

Mike Morrison and Neal J. Roese

Social Psychological and Personality Science 2011 2: 576 originally published online 14 March 2011

DOI: 10.1177/1948550611401756

The online version of this article can be found at:

<http://spp.sagepub.com/content/2/6/576>

Published by:



<http://www.sagepublications.com>

On behalf of:

Society for Personality and Social Psychology



Association for Research in Personality

ASSOCIATION FOR
RESEARCH IN PERSONALITY

European Association of Social Psychology



European Association
of Social Psychology

Society of Experimental and Social Psychology



Additional services and information for *Social Psychological and Personality Science* can be found at:

Email Alerts: <http://spp.sagepub.com/cgi/alerts>

Subscriptions: <http://spp.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.com/journalsPermissions.nav>

Citations: <http://spp.sagepub.com/content/2/6/576.refs.html>

>> [Version of Record](#) - Oct 31, 2011

[Proof](#) - Mar 14, 2011

[What is This?](#)

Regrets of the Typical American: Findings From a Nationally Representative Sample

Social Psychological and
Personality Science
2(6) 576-583
© The Author(s) 2011
Reprints and permission:
sagepub.com/journalsPermissions.nav
DOI: 10.1177/1948550611401756
http://spps.sagepub.com



Mike Morrison¹ and Neal J. Roese²

Abstract

In this study of regret among a representative sample of Americans, the authors examined hypotheses derived from regret regulation theory, which asserts that regrets motivate a range of ameliorative cognitive consequences. Using a random-digit telephone survey, respondents reported a salient regret, then answered questions about that regret. Results showed inaction regrets lasted longer than action regrets, and that greater loss severity corresponded to more inaction regrets. Regrets more often focused on nonfixable than fixable situations. Women more than men reported love rather than work regrets and, overall, regrets more often focused on romance than on other life domains. Objective life circumstances (referenced by demographic variables) predicted regret in patterns consistent with regret regulation theory. These results complement laboratory findings while suggesting new refinements to existing theory.

Keywords

regret, judgment, affect, representative sample, opportunity, inaction, regulation

Regret is a negative emotion predicated on the realization that a different past decision might have brought a better outcome than what actually transpired (Gilovich & Medvec, 1995; Zeelenberg & Pieters, 2007). For example, one can regret getting into a marriage that failed, lament not pursuing further educational opportunities, or wish simply to have ordered coffee instead of tea. Regret is a commonly experienced emotion with multifaceted effects on inferences, decisions, and mental health (Inman, Dyer, & Jia, 1997; Monroe, Skowronski, MacDonald, & Wood, 2005; Reb, 2008; Roese et al., 2009; Zeelenberg & Pieters, 2007).

As a negative emotional experience, regret is subject to regulatory mechanisms that serve to limit its sting but also to direct behavior toward fixing what evoked the regret (Epstude & Roese, 2008). The theory of regret regulation (Zeelenberg & Pieters, 2007) provides a specification of various such regulatory mechanisms. For example, a man who initially regrets getting a tattoo can undo the regret behaviorally by having it removed, or cognitively by shifting current beliefs toward the conclusion that the tattoo has improved his appearance. Echoing the ideas of cognitive dissonance theory (Festinger, 1957), the greater the personal importance of the negative event (or the more severe the loss), the greater the regret and hence the greater the impetus to engage in regulatory activity. Zeelenberg and Pieters also theorized that regret motivates corrective action most when the regretted decision or action is reversible.

Zeelenberg and Pieters (2007) reviewed numerous studies that supported regret regulation theory. Nearly all such prior research has been based, however, on college student samples.

Although these samples provide fertile ground for testing new insights, they nevertheless limit the generality of conclusions regarding regret experiences (cf. Fischhoff, 1996; Henry, 2008; Sears, 1986). Regret may be more intense and motivating to the extent that it hinges on important life decisions (e.g., marriage or career), but college students may not yet have confronted such decisions. Moreover, college students are selected on the basis of cognitive skill, likely a necessary ingredient for the counterfactual inferences that underlie regrets. As a result, college students may be more regret-prone relative to other subpopulations within American society. A key question for current theory is whether key findings involving regret generalize beyond college students. The present research addressed this question via a representative sample of Americans, yet also pressed further into new theoretical territory. We capitalized on the wider range of life circumstances inherent in a representative sample to examine the extent to which regret is related to individuals' subjective construal of their recent past and objectively defined demographic factors, such as education level and relationship status.¹

¹ Department of Psychology, University of Illinois at Urbana-Champaign, USA
² Kellogg School of Management, Northwestern University, Evanston, IL, USA

Corresponding Author:

Mike Morrison, Department of Psychology, University of Illinois at Urbana-Champaign, Champaign, IL 61820, USA
Email: mmorris8@cyrus.psych.uiuc.edu

From the vantage point of regret regulation theory, we next review five prominent regret effects, and consider the role of demographic factors. In each case, we develop hypotheses to test in the representative survey.

Action Effect

An action regret centers on the mental deletion of a factual action (e.g., “If only I had not dropped out of school”), whereas an inaction regret centers on the mental addition of an action that was not actually performed (e.g., “If only I had stayed in school”). A wealth of research has demonstrated an action effect, such that regrets focusing on action are more common (or more intense) than regrets focusing on inaction (Kahneman & Tversky, 1982; Landman, 1987; Zeelenberg, Van Dijk, & Manstead, 1998, 2000). Although much theorizing has attempted to account for the action effect and its documented reversals (e.g., Bonnefon & Zhang, 2008; Feldman, Miyamoto, & Loftus, 1999; Sanna & Turley, 1996; Seta, McElroy, & Seta, 2001), regret regulation theory suggests that regret is actively regulated (i.e., suppressed or diminished) to the extent that individuals can justify the past decision or behavior that resulted in a regretted outcome. An action is harder to justify than doing nothing, as a general rule, and, as a result, actions that go wrong tend to evoke greater regret than inactions that go awry. The action effect is highly variable, however, and research has documented two moderators tied directly to regulatory activity: the passage of time and loss severity.

Time Moderates the Action Effect

The passage of time moderates the action effect, such that action regrets diminish quickly whereas inaction regrets persist longer (Gilovich & Medvec, 1994, 1995; Rajagopal, Raju, & Unnava, 2006; Zeelenberg, van der Pligt, & Manstead, 1998). According to regret regulation theory, regulatory mechanisms may differentially impact action versus inaction regrets. For example, cognitive dissonance reduction, which serves to reduce regret intensity, is more active for action than inaction regrets in the short term (Gilovich, Medvec, & Chen, 1995). Relatively untouched by dissonance reduction, inaction regrets tend to persist over longer periods of time. The long history of converging evidence of dissonance reduction (e.g., Cooper, 2007; Harmon-Jones & Mills, 1999) suggests that the time-moderation effect on regret would replicate in our representative sample.

Loss Severity Moderates the Action Effect

Loss severity has also been found to moderate the action effect. Avni-Babad (2003) found that greater loss severity predicted more frequent inaction than action regrets, a pattern independent of the moderating role of time course. This finding is somewhat at odds with regret regulation theory, which would predict that outcome importance (i.e., loss severity) heightens any regret, but would do so particularly for less justifiable

regrets (i.e., action regrets rather than inaction regrets). The present representative sample provided the means to test these competing predictions.

Opportunity Effect

According to regret regulation theory (Pieters & Zeelenberg, 2007), people take direct corrective action to the extent that a problematic decision is clearly reversible (Gilbert & Ebert, 2002). That is, when a regretted decision is reversible (i.e., there remains opportunity for corrective action), regret is more intense, and serves to motivate the individual toward new corrective behavior. In this view, regret looms largest in situations for which there is still the opportunity to fix things (Roesse & Summerville, 2005). When past events are concluded and closed to further modification, dissonance reduction is activated and regrets are minimized (Gilbert & Ebert, 2002; Roesse & Olson, 2007). Based on these ideas, we expected that, in our representative sample, regrets would more commonly center on outcomes with opportunity for future corrective action.

Life's Biggest Regrets Focus on Education

The previously reviewed regret effects focused on structural aspects of regrets, but just as important are the contents of regret, that is, which particular facets of life people tend to wish had been different. Several studies have catalogued the domains of life that are most regrettable, and in a meta-analytic summary, education turned out to be the domain of life that was most commonly regretted (Roesse & Summerville, 2005). For example, people regretted not studying harder, not pursuing a different major, and not staying in school longer. Listed in descending frequency, regrets also focused on career, romance, parenting, and self-improvement (see Figure 1). That life's biggest regrets focus on education is compatible with regret regulation theory, particularly the roles of opportunity and reversible decisions. That is, people may be likely to have education regrets because many opportunities exist in American society for new education. We tested whether this finding replicates in a representative sample of Americans.

Demographic Characteristics and Regrets

Only a small number of studies have assessed regret in light of demographic variables, such as sex, age, education, and relationship status. In one, Roesse et al. (2006) reported some domain-specific sex differences, but no overall sex difference was found. Yet, in looking at prior research that has demonstrated that women place greater importance than men on maintaining strong social relationships (Cross & Madson, 1997; Maccoby, 1990), and given the regret regulation theory tenet that regrets are stronger for more personally important outcomes, we expected that women would be more likely than men to have regrets focused on social relationships (e.g., romance and family). Wrosch, Bauer, and Scheier (2005) found that older compared to younger respondents reported fewer

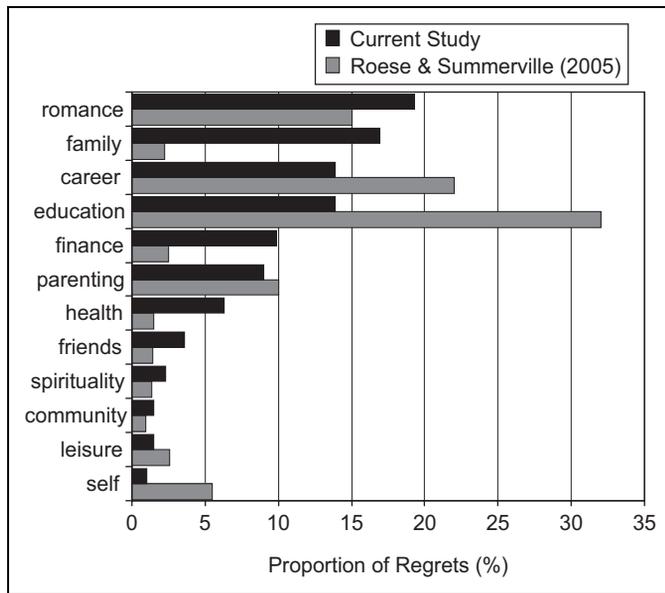


Figure 1. Life domains of regrets: Current study versus Roese & Summerville (2005)

regrets involving future opportunities, connecting to the observation that age corresponds with diminished life opportunities (Carstensen, Isaacowitz, & Charles, 1999). Also, Wrosch et al. (2005) found no age differences for the action effect. We expected to replicate these findings.

By examining a more diverse sample of Americans, the present research also tested whether education level and relationship status predict regret content. Because regrets are stronger for more personally important and reversible outcomes, we hypothesized that those individuals with lower education levels and those not currently in a romantic relationship might be more likely to have regrets centering on these domains.

Demographic factors that encapsulate people's objective life circumstances, such as education level and relationship status, offer a different theoretical window into the genesis of regret than has previously been possible. Prior theory (Epstude & Roese, 2008; Kahneman & Miller, 1986; Zeelenberg & Pieters, 2007) has emphasized framing and construal as determinants of regret. That is, one person may construe the glass as half empty while another construes it as half full, and the subjective difference in construal evokes meaningful psychological differences in affect and behavior. Yet, such effects may be magnified in college student samples, in which variation in objective circumstances is relatively minimal. The present representative sample provided a new window into the relation between objective life circumstances and regrets.

To summarize, regret regulation theory was used as an organizing framework to specify hypotheses about regret experiences that may or may not generalize to the broader American population. If regret feeds into behavior regulation, which is ultimately beneficial for individuals, a key question is whether the above affects are restricted to cognitively adept college students or generalize to the typical American.

Our study also provides the most in-depth examination of how these effects are moderated by demographic characteristics.

Method

Sample

A total of 370 adult Americans (207 were women) completed a survey via telephone (in exchange for \$5; mailed). The response rate (i.e., the proportion of eligible respondents who completed the interview) was 20.5% and the refusal rate (i.e., the proportion of eligible respondents who refused the interview or broke it off after starting) was 49.1% (as defined by the criteria of the American Association for Public Opinion Research [AAPOR] Standard Definitions, 2008).

Procedure

The survey, undertaken by the Survey Research Laboratory (an independent research unit affiliated with the University of Illinois at Urbana-Champaign), used a simple random sample identified by telephone. To identify a representative sample of the adult U.S. population, three widely accepted techniques (Fowler, 2002) were used: random-digit dialing, within-household sampling (using the Trolldahl-Carter-Bryant method), and sample weighting (by sex, race, and age) according to the 2000 U.S. Census. Interviews lasted 21 min on average. Interviews were conducted using Computer Assisted Survey Execution System (CASES) software. Interviewers entered participants' responses into a notebook computer as each question was answered and reported no problems with collecting respondents' answers.

Measures

Participants were asked to report one salient regret in detail, and then to provide further information about the nature of the regret. Participants next answered single questions reflecting variables of interest (listed below); two other variables were coded from participants' responses.

Action effect. "Does the regret focus on something you should have done, or something you should NOT have done?"

Time. "When did the event happen that made you feel regret?" Participants responded in days, weeks, months, or years. We derived a time variable (number of days) that was natural log transformed to enhance the normality of the distribution.

Loss severity. Two independent raters coded the open-ended regret using a 3-point scale: mild loss (e.g., an argument with a spouse; a bad day at work); moderate loss (e.g., financial setback; more general dissatisfaction with one's job); and severe loss (e.g., divorce; death in the family). Interrater agreement was satisfactory ($\kappa = .79$); discrepancies were resolved by the first author.² Most regrets involved either moderate (51.9%) or severe (31.5%) loss; mean loss severity was moderate ($M = 2.15$, $SE = .04$).

Table 1. Relations Among Action Effect, Opportunity Effect, Demographic Variables, and Loss Severity

	Sex	Age	Education	Relationship Status	Loss Severity
Action effect	-.66* (.27)	-.002 (.007)	-.16 (.12)	-.24 (.31)	.52* (.21)
Opportunity effect	-.15 (.25)	-.02** (.007)	-.31** (.05)	.29 (.29)	-.28 (.19)

Note: Each row corresponds to a regression model in which the column variables were entered as simultaneous predictors. Values in the table are β s (standard errors in parentheses). Every one-unit increase in a predictor corresponds to an increase or decrease in the log-odds of the dependent variable equivalent to the β . Action effect refers to the difference between action and inaction regrets (0 = inaction, 1 = action). Opportunity effect refers to the difference between low versus high opportunity regrets (0 = low, 1 = high). Sex: 0 = men and 1 = women. Age was a continuous variable. Education had five levels: some high school or less, high school degree, some college, bachelor's, and master's or higher. Relationship status: 0 = not in a romantic relationship, 1 = in a relationship. Loss severity: 3-point scale.

* $p < .05$. ** $p < .01$.

Table 2. Relations Among Life Domains, Demographic Variables, and Loss Severity

	Sex	Age	Education	Relationship Status	Loss Severity
Romance	.84* (.35)	-.01 (.01)	.13 (.07)	-.81* (.36)	1.15** (.29)
Family	.54 (.32)	.003 (.008)	-.05 (.14)	-.16 (.34)	.04 (.23)
Career	-1.03** (.38)	.01 (.01)	.32* (.16)	-.21 (.44)	-.56* (.28)
Education	-.62 (.35)	-.01 (.01)	-.44* (.16)	.60 (.42)	.03 (.26)

Note: Each life domain was a dummy variable (e.g., 1 = romance regret; 0 = nonromance regret, etc.).

* $p < .05$. ** $p < .01$.

Opportunity effect. Participants were asked: "Does the regret focus on a problem that can still be fixed, or is it a problem that cannot be fixed?" Thus, each regret was categorized by participants as either high or low opportunity.

Life domain. Two independent raters assigned regrets to one of 12 life domains (from Roesse & Summerville, 2005): education, romance, career, family, parenting, leisure, spirituality, finances, community, health, friends, and self-improvement. Interrater agreement was satisfactory ($\kappa = .81$); discrepancies were resolved by the first author.

Demographic variables. Participants provided their sex, age, education, and relationship status (see Table 1).³

Results

We assessed whether previously published regret findings replicated in our nationally representative survey, and how the findings were related to demographic characteristics. Tables 1 and 2 give the results of entering these demographic variables as simultaneous logistic regression predictors of the action effect, the opportunity effect, and the four most frequent life domains.

Action effect. There was a nearly even split between action regrets (47.5%) and inaction regrets (52.5%), $\chi^2(1) = 2.54$, $p = .11$. Thus, we found no evidence for an action effect. Age did not moderate the action effect (replicating Wrosch et al., 2005), nor did education or relationship status (see Table 1). However, the action effect was more prevalent among men than women ($\beta = -.66$, $SE = .27$, $p = .01$).

Time and the action effect. Time elapsed since the regret-evoking event moderated the action effect in the predicted

direction ($\beta = -.20$, $SE = .06$, $p = .001$). That is, inaction regrets involved greater elapsed time than did action regrets ($M_s = 7.29$ vs. 6.44; $SE_s = .16$ vs. .20), $F(1, 272) = 11.4$, $p < .01$, $d = 0.41$, replicating Gilovich and Medvec (1994) and others.

Loss severity and the action effect. Loss severity predicted a preponderance of action regrets as opposed to inaction regrets ($\beta = .52$, $SE = .02$, $p = .01$). This pattern was not moderated by time, although time did independently predict loss severity ($\beta = .06$, $SE = .02$, $p < .001$). This pattern is consistent with regret regulation theory, while failing to replicate Avni-Babad (2003).

Opportunity. Low-opportunity regrets outnumbered high-opportunity regrets (62% vs. 38%), $\chi^2(1) = 27.6$, $p < .001$, failing to replicate Roesse and Summerville (2005). However, some demographic variables predicted the opportunity effect. Older respondents were more likely than younger ones to report low-opportunity regrets ($\beta = -.02$, $SE = .01$, $p < .01$), replicating Wrosch et al. (2005). Among the oldest respondents (age 60 and over), low-opportunity regrets were more common (75.5%) than high opportunity regrets (24.5%). In the younger age groups, the effect was diminished: 53.1% vs. 46.9% for those of age 18 to 34; 52.5% vs. 47.5% for those of age 35 to 49; 56.1% vs. 43.9% for those age 50 to 59, $\chi^2(3) = 14.7$, $p < .01$.

Education level also moderated the opportunity effect ($\beta = -.31$, $SE = .11$, $p < .01$), such that those with less education (some high school or less) were more likely to have high- than low-opportunity regrets: 72.2% vs. 27.8%. For all other education levels, regrets were less likely to have high opportunity, 31.5% vs. 68.5% for high school grads, 33.6% vs. 66.4% for those with some college, 38.0% vs. 62.0% for

Table 3. Results Summary

Effect	Hypothesis	Hypothesis Supported?
Action effect	Action regrets more frequent than inaction regrets	No—action and inaction regrets equivalent
	No age differences in the action effect	Yes
Time and the action effect	Inaction regrets more frequent over long term	Yes
Loss severity and the action effect	Action regrets more frequent after severe loss	Yes
Opportunity	High-opportunity regrets more frequent than low-opportunity regrets	No—low-opportunity regrets most frequent
	Older adults likely to have low-opportunity regrets	Yes
	Individuals with low levels of education more likely to have high-opportunity regrets	Yes
Life domain	Education regrets most frequent	No—romance regrets most frequent
	Women more likely to have regrets of love (romance, family) than men	Yes
	Individuals with low levels of education most likely to have education regrets	Yes
	Individuals not in a relationship most likely to have romance regrets	Yes

those with a bachelor's degree, and 32.6% vs. 67.4% for those with a master's degree or higher, $\chi^2(4) = 20.7$, $p < .001$.

Life domain. Regrets involving romance were most frequently cited (19.3%), followed by those involving family (16.9%), education (14.0%), career (13.8%), finance (9.9%), and parenting (9.0%). Figure 1 summarizes the present results alongside those of Roese and Summerville (2005). A particularly striking pattern involves love (romance, family) versus work (education, career). Love outcomes were regretted more than work outcomes in the present survey (36.3% vs. 27.8%), whereas work outcomes were regretted more than love outcomes in the Roese-Summerville meta-analysis (54.5% vs. 17.0%), $\chi^2(1) = 116.2$, $p < .001$.

Table 2 shows the demographic predictors of the top four regretted life domains (romance, family, career, and education). Women were more likely than men to have romance regrets ($\beta = .84$, $SE = .35$, $p = .02$); those not currently in a romantic relationship were more likely to have romance regrets ($\beta = -.81$, $SE = .36$, $p = .02$). For family-focused regrets, none of the demographic predictors were significant. For career, men were more likely than women to have career-oriented regrets ($\beta = -1.03$, $SE = .38$, $p < .01$), as were better-educated respondents ($\beta = .32$, $SE = .16$, $p = .05$). Further, education regrets were more likely to be reported by those with relatively less education ($\beta = -.44$, $SE = .16$, $p < .01$).

Focusing further on sex differences, the first column of Table 2 reveals a striking pattern in which women are more likely to mention love regrets, whereas men are more likely to mention work regrets, $\chi^2(1) = 17.5$, $p < .001$ (see Figure 2).

Discussion

College student samples are quick and cheap, but whether effects gleaned from such samples generalize to the wider population remains a key challenge for psychological theory. If the opposite effects are found in college students than among the

elderly, for example, then theory should account for the discrepancy. In this examination of regret effects using a nationally representative sample, our findings largely supported regret regulation theory (see Table 3). At the same time, intriguing new patterns invite refinement of current theory.

A key principle of regret regulation theory is that regrets are more intense for more personally important and reversible outcomes (Zeelenberg & Pieters, 2007). We found several examples of this pattern among the regrets of the typical American. Women, who tend to value social relationships more than men (Cross & Madson, 1997), have more regrets of love (romance, family) compared to men (see Figure 2). Conversely, men were more likely to have work-related (career, education) regrets. Those who lack either higher education or a romantic relationship hold the most regrets in precisely these areas. Americans with high levels of education had the most career-related regrets. Apparently, the more education obtained, the more acute may be the sensitivity to aspiration and fulfillment. Moreover, the youngest and least-educated people in our sample, who most likely possess the greatest capability of fixing their regrets, were indeed the most likely to provide fixable regrets (cf. Wrosch et al., 2005). Each of these findings supports regret regulation theory, such that regrets seem to fuel new corrective action within valued life domains.

Some results were less consistent with regret regulation theory at first glance, yet upon closer examination revealed a more complex instantiation of the theory's core principles. For example, we failed to replicate an action effect (e.g., Kahneman & Tversky, 1982); rather, regrets of action versus inaction occurred equivalently in the typical American. This pattern held across age (cf. Wrosch et al., 2005), which is consistent with the view that although elderly individuals are less able to fix inaction regrets than younger people, they possess superior powers of positive reappraisal to balance out the picture (Wrosch & Heckhausen, 2002). The equal balance between action and inaction regrets suggests also that other variables are more pertinent to the genesis of regret. For

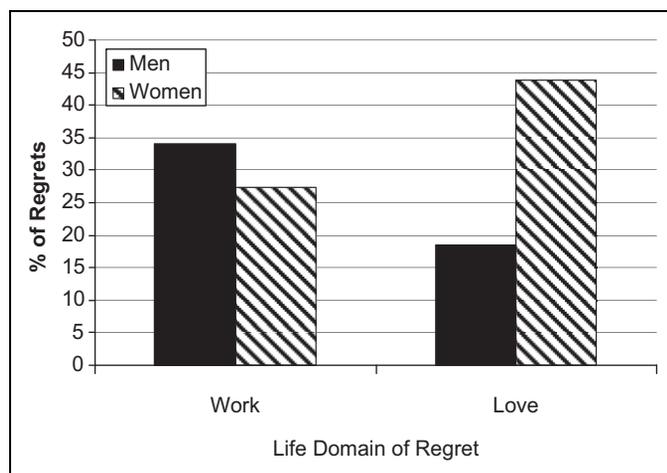


Figure 2. Love and work regrets for women and men

instance, Zeelenberg and Pieters (2007) argued that regrets can be based on either action or inaction, but their frequency and psychological consequences depend more closely on the justification for the decision preceding the regretted outcome. We did not measure justification directly, but regret regulation theory predicts that more justifiable decisions (whether framed as action or inaction) reduce regret.

However, we found that time moderates the action effect, such that inaction regrets were more likely to be centered on events of longer ago than action regrets (Gilovich & Medvec, 1994). This pattern has been widely replicated, and is consistent with regret regulation theory in that regulatory processes (i.e., dissonance reduction) differentially mitigate the sting of action rather than inaction regrets, leaving the latter to fester longer. We also found that loss severity moderates the action effect, such that severe loss was associated with more frequent action than inaction regrets. This finding fails to replicate Avni-Babad (2003), yet it is consistent with regret regulation theory. Specifically, regret regulation theory suggests that outcome importance (i.e., loss severity) heightens any regret, but should do so particularly for less justifiable regrets (which are generally action regrets rather than inaction regrets). Overall, then, action effect findings in the present research provided new and nuanced support for regret regulation theory.

More generally, the summary of present findings in Table 3 underscores a pattern of regret effects within the typical American that in most cases replicated previous research conducted with college students. Accordingly, the present results buttress regret regulation theory in revealing its broad generalizability to a diverse range of individuals, including young and old, rich and poor, educated and less educated.

The present results do necessitate, however, a reappraisal of the relation between opportunity and regret. Roesse and Summerville (2005) argued that regrets are more likely to stem from recognition of high- rather than low-future opportunity to fix them. Instead, we found that regrets centered more on low rather than high opportunity. This finding is compatible with research by Beike, Markman, and Karadogan (2009), who

found that individuals regret *lost* opportunities the most. In their view, the feeling of closure (taking a more “distanced” perspective on a past event) minimizes regrets, but past (rather than future) action that remains cognitively open (i.e., absence of closure) exacerbates regret. Within the context of regret regulation theory, regrets involving lost opportunity may connect to outcome maximization. For example, a doctor who loses a patient on the operating table due to fatigue might always regret the experience and cannot reverse the outcome. Nevertheless, valuable lessons might be gleaned, perhaps lowering the chances of future similar mishaps. In this way, insights obtained from lost opportunities may in time lead to closure. Importantly, achieving closure is a form of psychological repair work (i.e., dissonance reduction) noted by Zeelenberg and Pieters (2007) that exemplifies regret regulation.

Regarding the contents of regret, the present findings modify previous conclusions of what Americans regret most. Roesse and Summerville’s (2005) meta-analysis revealed that regrets centered on education were most common. By contrast, we found that the typical American regrets romance the most. Lost loves and unfulfilling relationships turned out to be the most common regrets (cf. Dijkstra & Barelds, 2008). Family was the second most regretted life domain (see Figure 1). Of key importance, the Roesse-Summerville meta-analysis included 11 publications using mainly college samples. The present findings, by contrast, present the first truly representative portrait of where in life the typical American has their biggest regrets. That life’s biggest regrets center on romance and family echoes theory positioning the need to belong as a core motive (Baumeister & Leary, 1995). People crave strong, stable social relationships and are unhappy when they lack them; regret embodies this principle.⁴

A representative sample offers a unique window into the psychology of regret, but the present research is not without limitations. For one, respondents may have engaged in greater self-censorship in telephone interviews than in anonymous paper-and-pencil surveys. Moreover, it is more difficult to establish rapport with participants over the phone than in-person. Therefore, the regrets provided may not necessarily be the most salient, but simply what participants felt most comfortable talking about. Further, to increase clarity across a wide range of respondents, simplified question wordings were used, which may have diluted the theoretical meaning of some constructs. Measures such as opportunity were dichotomous rather than scale ratings, which reduces sensitivity. Despite these limitations, we believe the present results provide an essential complement to laboratory tests of regret regulation theory.

On a broader level, the present findings suggest that one’s objective life circumstances—accomplishments, shortcomings, station in life—inject considerable fuel into the fires of regret. Prior theory, by contrast, emphasized framing and construal—such as whether a given action is framed by similar or dissimilar prior actions—in explaining the genesis of regret. The present survey raises the issue of whether construal processes may have gained illegitimate theoretical priority due to widespread reliance on college student samples, in which variability of

objective life circumstances is flattened. By examining a fuller range of life circumstances, the present research initiates the journey toward a more nuanced theoretical portrait of regret in particular (and judgment and decision processes in general), one that confers priority both to objective life circumstances as well to construal processes.

Conclusion

As regret may shape judgment, behavior, and mental health, it is essential to understand how regret connects to life circumstances among Americans of all walks of life. Although regrets can sometimes have deleterious effects on mental health, when they are excessively repetitive (Roese et al., 2009), a large body of research highlights how regret may motivate regulatory activity, and ultimately betterment of life circumstances (Reb, 2008; Saffrey, Summerville, & Roese, 2008; Zeelenberg & Pieters, 2007). In a representative survey of Americans' regrets, we found broad support for regret regulation theory. We also found that objective life circumstances, such as education and relationship status, are related to regret effects to an extent invisible to research based on college students. At the same time, our findings regarding the action effect, the opportunity effect, and the most regretted life domains suggest refinements of existing theory and open the door to further research. In all, our research solidifies the view that while regret is painful, it constitutes an essential component of the human experience.

Acknowledgments

The present research was part of a larger investigation, some of the results of which have already appeared (Roese et al., 2009). Importantly, the findings reported here involve variables and relations not included in that previous publication. We report only brief methodological information; for fuller details see Roese et al. (2009). We thank Amy Summerville for her comments on an earlier draft of this article. Kai Epstude, Florian Fessel, Rachel Smallman, and Amy Summerville provided input into the survey design. Paige Deckert assisted in coding of data.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interests with respect to the authorship and/or publication of this article.

Financial Disclosure/Funding

The author(s) disclosed receipt of the following financial support for the research and/or authorship of this article: National Institute of Mental Health grant R01-MH055578, awarded to Neal Roese.

Notes

1. We also administered measures of self-esteem, subjective well-being, need for control, and approach/avoidance tendencies. However, these were not related to the main variables of interest and hence are not discussed further.
2. Ideally, participants would provide such ratings themselves. However, the high cost of each item within a representative telephone survey severely constrained the measures to be included. The

coders used demographic information for each participant to place participants' loss in context.

3. Household income was also measured. It was highly correlated with education level ($r = .52, p < .001$), but did not moderate regret effects and is therefore not discussed further.
4. It is possible that regrets were most likely to fall in the domains of romance and family because individuals may simply experience more such events than those falling in other domains. As such, our results reveal only the relative frequency of regrets from different life domains, not whether specific life domains have the capacity to evoke regrets with greater frequency or intensity.

References

- The American Association for Public Opinion Research. (2008). *Standard definitions: Final dispositions of case codes and outcome rates for surveys*. (5th ed.). Lenexa, KS: Author.
- Avni-Babad, D. (2003). Action/inaction regret as a function of severity of loss. *Applied Cognitive Psychology, 17*, 225-235.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497-529.
- Beike, D. R., Markman, K. D., & Karadogan, F. (2009). What we regret most are lost opportunities: A theory of regret intensity. *Personality and Social Psychology Bulletin, 35*, 385-397.
- Bonnefon, J., & Zhang, J. (2008). The intensity of recent and distant life regrets: An integrated model and a large scale survey. *Applied Cognitive Psychology, 22*, 653-662.
- Carstensen, L. L., Isaacowitz, D. M., & Charles, S. T. (1999). Taking time seriously: A theory of socioemotional selectivity. *American Psychologist, 54*, 165-181.
- Cooper, J. M. (2007). *Cognitive dissonance: Fifty years of a classic theory*. Thousand Oaks, CA: Sage.
- Cross, S. E., & Madson, L. (1997). Models of the self: Self-construals and gender. *Psychological Bulletin, 122*, 5-37.
- Dijkstra, P., & Barelds, D. P. H. (2008). What Dutch women of different ages regret most. *Journal of Research in Personality, 42*, 1663-1667.
- Epstude, K., & Roese, N. J. (2008). The functional theory of counterfactual thinking. *Personality and Social Psychology Review, 12*, 168-192.
- Feldman, J., Miyamoto, J., & Loftus, E. F. (1999). Are actions regretted more than inactions? *Organizational Behavior and Human Decision Processes, 78*, 232-255.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Fischhoff, B. (1996). The real world: What good is it? *Organizational Behavior and Human Decision Processes, 65*, 232-248.
- Fowler, F. J. (2002). *Survey research methods*. (3rd ed.). Thousand Oaks, CA: Sage.
- Gilbert, D. T., & Ebert, J. E. J. (2002). Decisions and revisions: The affective forecasting of changeable outcomes. *Journal of Personality and Social Psychology, 82*, 503-514.
- Gilovich, T., & Medvec, V. H. (1994). The temporal pattern to the experience of regret. *Journal of Personality and Social Psychology, 67*, 357-365.

- Gilovich, T., & Medvec, V. H. (1995). The experience of regret: What, when, and why. *Psychological Review, 102*, 379-395.
- Gilovich, T., Medvec, V. H., & Chen, S. (1995). Omission, commission, and dissonance reduction: Overcoming regret in the Monty Hall problem. *Personality and Social Psychology Bulletin, 21*, 182-190.
- Harmon-Jones, E., & Mills, J. (Eds.). (1999). *Cognitive dissonance: Progress on a pivotal theory in social psychology*. Washington, DC: American Psychological Association.
- Henry, P. J. (2008). College sophomores in the laboratory redux: Influences of narrow data base on social psychology's view of the nature of prejudice. *Psychological Inquiry, 19*, 49-71.
- Inman, J. J., Dyer, J. S., & Jia, J. (1997). A generalized utility model of disappointment and regret effects on post-choice valuation. *Marketing Science, 16*, 97-111.
- Kahneman, D., & Miller, D. T. (1986). Norm theory: Comparing reality to its alternatives. *Psychological Review, 93*, 136-153.
- Kahneman, D., & Tversky, A. (1982). The simulation heuristic. In D. Kahneman, P. Slovic, & A. Tversky (Eds.), *Judgment under uncertainty: Heuristics and biases* (pp. 201-208). New York, NY: Cambridge University Press.
- Landman, J. (1987). Regret and elation following action and inaction: Affective responses to positive versus negative outcomes. *Personality and Social Psychology Bulletin, 13*, 524-536.
- Maccoby, E. E. (1990). Gender and relationships: A developmental account. *American Psychologist, 45*, 513-520.
- Monroe, M. R., Skowronski, J. J., MacDonald, W., & Wood, S. E. (2005). The mildly depressed experience more post-decisional regret than the non-depressed. *Journal of Social and Clinical Psychology, 24*, 665-690.
- Pieters, R., & Zeelenberg, M. (2007). A theory of regret regulation 1.1. *Journal of Consumer Psychology, 17*, 29-35.
- Rajagopal, P., Raju, S., & Unnava, H. R. (2006). Differences in the cognitive accessibility of action and inaction regrets. *Journal of Experimental Social Psychology, 42*, 302-313.
- Reb, J. (2008). Regret aversion and decision process quality: Effects of regret salience on decision process carefulness. *Organizational Behavior and Human Decision Processes, 105*, 169-182.
- Roese, N. J., Epstude, K., Fessel, F., Morrison, M., Smallman, R., Summerville, A., & . . . Segerstrom, S. (2009). Repetitive regret, depression, and anxiety: Findings from a nationally representative survey. *Journal of Social and Clinical Psychology, 21*, 671-688.
- Roese, N. J., & Olson, J. M. (2007). Better, stronger, faster: Self-serving judgment, affect regulation, and the optimal vigilance hypothesis. *Perspectives on Psychological Science, 2*, 124-141.
- Roese, N. J., Pennington, G., Coleman, J., Janicki, M., Li, N., & Kenrick, D. T. (2006). Sex differences in regret: All for love or some for lust? *Personality and Social Psychology Bulletin, 32*, 770-780.
- Roese, N. J., & Summerville, A. (2005). What we regret most . . . and why. *Personality and Social Psychology Bulletin, 31*, 1273-1285.
- Saffrey, C., Summerville, A., & Roese, N. J. (2008). Praise for regret: People value regret above other negative emotions. *Motivation and Emotion, 32*, 46-54.
- Sanna, L. J., & Turley, K. J. (1996). Antecedents to spontaneous counterfactual thinking: Effects of expectancy violation and outcome valence. *Personality and Social Psychology Bulletin, 22*, 906-919.
- Sears, D. O. (1986). College sophomores in the laboratory: Influences of a narrow data base on social psychology's view of human nature. *Journal of Personality and Social Psychology, 51*, 515-530.
- Seta, J. J., McElroy, T., & Seta, C. (2001). To do or not to do: Desirability and consistency mediate judgments of regret. *Journal of Personality and Social Psychology, 80*, 861-870.
- Wrosch, C., Bauer, I., & Scheier, M. F. (2005). Regret and quality of life across the adult life span: The influence of disengagement and available future goals. *Psychology and Aging, 20*, 657-670.
- Wrosch, C., & Heckhausen, J. (2002). Perceived control of life regrets: Good for young and bad for old adults. *Psychology and Aging, 17*, 340-350.
- Zeelenberg, M., & Pieters, R. (2007). A theory of regret regulation 1.0. *Journal of Consumer Psychology, 17*, 3-18.
- Zeelenberg, M., van der Pligt, J., & Manstead, A. S. R. (1998). Undoing regret on Dutch television: Apologizing for interpersonal regrets involving actions or inactions. *Personality and Social Psychology Bulletin, 24*, 114-1120.
- Zeelenberg, M., van Dijk, W., & Manstead, A. S. R. (1998). Reconsidering the relation between regret and responsibility. *Organizational Behavior and Human Decision Processes, 74*, 254-272.
- Zeelenberg, M., van Dijk, W., & Manstead, A. S. R. (2000). Regret and responsibility resolved? Evaluating Ordóñez and Connolly's (2000) conclusions. *Organizational Behavior and Human Decision Processes, 81*, 143-154.

Bios

Mike Morrison is a doctoral student in the Department of Psychology at the University of Illinois at Urbana-Champaign. His research focuses on emotions and social cognition, with a specific emphasis on subjective well-being, counterfactual thinking, and hindsight bias.

Neal J. Roese is professor of marketing at the Kellogg School of Management at Northwestern University. He is the author of over 70 scholarly papers focusing on emotion and judgment, with a particular emphasis on regret, counterfactual thinking, and hindsight bias.