

Decision Science, Risk Perception, and Infidelity

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Abstract

Decision scientists have revealed and described, through empirical study, the ways in which we tend to make decisions, and in particular, the ways we make decisions under conditions of uncertainty and that involve risk. The findings from these studies demonstrate the heuristics we use in making judgments and ways in which we process information compared with subject matter experts and logical and statistical principles. These findings have been applied to public policy issues and environmental safety, among other areas of social and political import, but have largely not been applied to our understanding of important personal decisions that are also made under uncertainty and risk and which have important personal and sometimes social consequences. This article aims to consider extra-marital affairs as an example of a personal decision that is made under uncertainty and with risk, and to apply decision science models to the decision-making that occurs in these cases. The hope is that decision scientists, psychologists, and clinicians who treat instances of infidelity, as well as the public, can benefit from what is known about how these decisions are made, which so often lead to regret. Theoretical implications for other personal decisions made under uncertainty with risk will be discussed.

Keywords

decision-making, infidelity, affair, extra-marital sex, extra-marital affair, judgment, choice, intentionality, decision, risk, risk assessment, uncertainty, heuristic, bias

Introduction

Decision science models of judgment and decision-making have contributed immensely to our understanding of the ways we tend to make decisions, and in particular, the ways in which we tend to perceive and respond to decisions under conditions of risk and uncertainty. These models suggest that we are generally biased, compared with models that risk analysis experts or statistical understandings of risk and reward might offer (Kahneman & Tversky, 1972; Simon, 1956). Instead of making calculated risk and reward trade-offs or using statistical principles, logic, and historical data to predict risk, accounting for the uncertainty and potential for error, we often make decisions influenced by a host of other factors and sometimes utilizing a series of heuristics or mental shortcuts (Finucane, Alhakami, Slovic, & Johnson, 2000; Kahneman & Tversky, 1972, 1973; Tversky & Kahneman, 1974). The factors that influence our decision-making relate to the framing of the decision scenario itself and include perceived time pressure, anchoring effects, and framing effects, among others (Kahneman, Slovic, & Tversky, 1982; McNeil, Pauker, Sox, & Tversky, 1982). In addition, models of decision-making have demonstrated the heuristics we use, which allow us to quickly synthesize our experiences integrating affect, intuition, and experiential

information (Finucane et al., 2000) in our judgments. These findings have implications for communications and decision-making on a great number of social and public policy issues such as environmental and technological risks, public health and safety issues, and other large scale hazards, accidents, and mishaps, and have been studied widely with these applications in mind. The findings, however, have largely not been applied to personal decisions involving risk and regret that are made under conditions of uncertainty. This article aims to apply a decision science perspective to important personal decisions under uncertainty and will use extra-marital affairs as a context for consideration.

Extra-Marital Affairs

Extra-marital affairs have largely been studied from psychological, sociological, legal, and public health perspectives, each with its own concerns. The usual interest in studying

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extra-marital affairs from a psychological perspective has been in theorizing marriage and relationship dynamics and to ultimately help couples' therapists and families to approach these complex and challenging situations, which rank among the most difficult to treat clinically (Piercy, Hertlein, & Wetchler, 2005). The central issue of how it is that one partner promises monogamy and then betrays that promise is often the focus of couples counseling discussions when couples face the aftermath of infidelity (Zapfen, 2016). This particular issue can be framed as a decision or choice that is problematic, not only because it is a betrayal and is often hurtful to the spouse who has been betrayed but also because it is so often regretted in hindsight (Lammers, Stoker, Jordan, Pollman, & Stapel, 2011). It is for this reason that extra-marital affairs represent an important context for consideration of judgment and decision-making.

What constitutes an extra-marital affair or an instance of infidelity is not agreed upon in the literature and is challenging to concretely define (Atwood, 2005; Guitar et al., 2016; Hertlein & Piercy, 2008). According to Glass, a frequently cited authority on the matter, the definition requires only that one party has the *subjective sense of having been betrayed*, which may vary from person to person or over time (Glass, 2003, emphasis added). An extra-marital affair does not require sex, per se, and may include various forms of betrayal that do not even require physical touch or meeting face to face.

The studies of extra-marital affairs from a psychological perspective generally use one of three types of methods: quantitative studies of hypothetical infidelity situations with the aim of developing predictive descriptive quantitative models of the drivers of extra-marital affairs (Allen & Atkins, 2012; Atkins, Baucom, & Jacobson, 2001), surveys of retrospective accounts of actual infidelities (Campbell & Wright, 2010), and qualitative case studies of infidelity demonstrating applied clinical skills for use by psychotherapists and psychologists (Piercy et al., 2005). Each has important methodological limitations that make projectability or transferability problematic. Representative samples evaluating hypothetical scenarios cannot be taken to be equivalent to samples of those who have engaged in affairs reporting on actual behavior. The responses in these hypothetical scenarios are vulnerable to social desirability bias, for example, and it is imaginable that there may be underlying differences in the sample populations between these two groups. For surveys of retrospective accounts of actual affairs, the projectability of the findings are also limited, due to participation biases associated with surveys on sexuality and stigmatizing topics such as extra-marital sex (EMS) and extra-marital affairs (Farkas, Sine, & Evans, 1978; Plaud, Gaither, Hegstad, Rowan, & Devitt, 1999; Marcus & Schutz, 2005). The clinical case studies on the issue are interesting and provide a contextualized understanding of extra-marital affairs among those who have engaged in affairs (Parker, Berger, & Campbell, 2010); however, these cases can be criticized

because they tend to embrace a particular psychological perspective or theoretical orientation in their interpretation of the events and this remains largely unquestioned or could be interpreted in varied ways (Atwood, 2005; Duba, Kindsvatter, & Lara, 2008; Hertlein & Piercy, 2008; Piercy, Hertlein, & Wetcher, 2006). Dupree, White, Olsen, and Lafleur (2007) in response to the lack of systematic understanding of infidelity and the problems with attaining representative samples and addressing social desirability biases suggest that systematic understanding of practice-based case studies is warranted that preserve the contextual details but are not linked to particular clinical theoretical orientations in their interpretation of the findings.

Despite these issues, the literature on extra-marital affairs suggests that affairs are common. The prevalence of EMS, a subset of extra-marital affairs, has been estimated to occur in 20% to 55% of all marriages in the United States (Atkins et al., 2001; Campbell & Wright, 2010; Hurlbert, 1992). Eaves and Robertson-Smith (2007) reported the prevalence of EMS to be even greater—between 26% and 75%. These estimates span a wide range and likely reflect the participation biases and social desirability biases that have been found in research on sexual behavior and the wide range of definitions used for EMS in the literature (Dunne et al., 1997; Fenton, Johnson, McManus, & Erens, 2001). Regardless, even the most conservative estimate of 20% suggests that a large number of people are affected by EMS. Extra-marital affairs, which include EMS, are estimated to be even more prevalent.

Currently, there is an estimated increase in affairs generally, and in particular, an increase for women, closing in on the estimated rates of men (Atkins et al., 2001; Lammers et al., 2011). This is thought to be due to increased opportunity, in part due to the availability and ubiquitous use of technology, which can be used to discretely communicate with potential partners and shifts in economic parity between men and women; more independence and freedom compared with eras past for women; an increase in available knowledge about sexual health and pleasure; and advances in gynecology care and birth control (Coontz, 2006; Lammers et al., 2011; Young, 2008). This increase may also be due to the fact that the definition of extra-marital affairs has broadened to include email and online chatting, emotional affairs, and even viewing porn without one's spouse (Cossman, 2006; Douthat, 2008). There are some additional gender differences in affairs: Men who have affairs are more likely to use porn, to have one time meetings, and to have multiple different partners, and women who have affairs are more likely to have email or online chatting affairs, emotional feelings for the other, and fewer partners (Atkins et al., 2001; Hertlein & Piercy, 2008; Lammers et al., 2011; Young, 2008).

Extra-marital affairs correlate highly with marital dissatisfaction and subsequent divorce even if the affair remains secret (Allen & Atkins, 2012; Atkins et al., 2001; Kruger, Burrus, & Kressel, 2009; Zapfen, 2016). The opportunity to

have them, financially and structurally, is correlated with the likelihood of having affairs although it is unclear whether people set up their lives structurally and purposefully (consciously or otherwise) to have affairs or whether having opportunities leads to the impetus and experience (Lammers et al., 2011). In addition, more educated people, people who marry early in life, and those who are more extroverted are more likely to have affairs (Atkins et al., 2001). Those who are religious are less likely to have affairs (or to report them in research studies; Atkins et al., 2001; Barta & Kiene, 2005; Drigotas & Barta, 2001). All of these demographic and behavioral differences can ultimately be linked to socialization or may reflect social desirability biases in reporting, and thus are not particularly illustrative of the decision-making process that occurs as an affair begins.

In response to Dupree et al. (2007) and Dillon (1992), who urge clinicians to take responsibility for our biases in the treatment of sexuality issues, Zapfen (2016) conducted a descriptive phenomenological investigation (Giorgi, 2009) of the essential structure of the beginning of an extra-marital affair or the moment (subjectively understood) of decision to engage in an affair. This study was an attempt to describe the essential constituents that comprise the experience from a phenomenological perspective, rather than from the perspective of a particular clinical approach, or demographic descriptors, or moral judgments about the nature of affairs, to begin to bridge this gap in the literature. The findings were suggestive of a cohesive structure that includes the following constituents across participants: an unsatisfying marriage, hopelessness to change it and a giving up on striving, a view of the spouse as inherently less sexual than themselves, a preference for novelty and passion, feeling entitled to sexual satisfaction, a lack of interest or curiosity for the spouse's ongoing experience, and an unwillingness to consider divorce as an option for resolving the dilemma (Zapfen, 2016).

According to Giorgi (2009), "An important criterion . . . is whether the structure would collapse if a potential constituent were removed. If it does, the constituent is essential" (p. 199). With this particular structure, there is a logical dilemma that makes possible the affair. To both feel hopeless about ever having a satisfying sexual relationship with one's spouse again but at the same time feel entitled to one poses a particular tension. Adding to the tension is the reluctance to consider divorce, thus providing for very few logical courses of action to resolve the tension. Interestingly, the logical implications of these perceptions were not transparent to those who began affairs at the time (Zapfen, 2016). In fact, none of the participants in Zapfen's (2016) study were aware that they were engaging in events leading up to what they later came to understand was an affair. All the while, upon reflection with the benefit of hindsight, they could identify that they were flirting, fantasizing, and meeting clandestinely with the person with whom they eventually had the affair. They did not, however, have this recognition until a very

decisive line had been crossed (e.g., planning and preparing to have sex with the other; a kiss; going to a hotel; actively lying to the spouse). All of the participants in the study eventually divorced (Zapfen, 2016). The affairs were described as pleasant and exciting and wonderful in many ways, and they certainly facilitated the eventual resolution of the tension through divorce, but in retrospect, all of the participants regretted having had the affairs specifically (Zapfen, 2016).

To begin an extra-marital affair can be understood as an instance of a decision made under uncertainty and risk—risk of being discovered by the spouse, or children, if relevant, and the related risk of divorce; risk of stigma, shame, and judgment of others (Snyder, Balderrama-Durbin, & Fissette, 2012); and risk of contracting a sexually transmitted infection or risk of an unwanted or problematic pregnancy, if relevant. There is the uncertainty of how the affair will feel or what it might mean to the person experiencing it both as it is happening and later upon reflection. However, there are also risks to staying in a problematic marriage that are difficult to quantify. There is, however, plenty of heartache associated with couples who experience very little intimacy and feel stuck in the relationship (Kruger et al., 2009; Zapfen, 2016).

Decision-Making Under Risk and Uncertainty

Decision science research into decision-making, judgment, and choice has generally tended to use quantitative empirical approaches asking large numbers of participants to respond to a set of controlled hypothetical decision scenarios, labeling a priori, that there is a decision to be made (Coughlan & Connolly, 2008) and constraining the possible choices and time allowed to make a choice so that the experiment can proceed efficiently and in a controlled manner. These studies do not involve actual, contextual decisions that are inherently meaningful or personally relevant for the participants in that moment (Bateman, Dent, Peters, Slovic, & Starmer, 2007) and do not generally allow for the study of the ways people frame for themselves the possibilities and choices as we do in actual decision-making scenarios. Because the decisions are not real decisions made in context, they are also less likely to evoke a subjective sense of urgency and personal meaning that is brought organically to many actual decisions and which may differ between people and contexts. As a whole, however, studies that have included time pressure have noted that there is a decrease in cognitive deliberation and an increased reliance on affect, which affects how a decision is met under urgent conditions (Beach & Mitchell, 1978; Edland & Svenson, 1993; Svenson, Edland, & Slovic, 1990). In contrast, decisions that can be deferred are met differently and may lead to situations of avoiding decision or postponement of a decision (Stanley, Rhoades, & Markman, 2006). As pointed out by Cloonan (1971), the framing that there is a decision to be made or the time frame for that decision or the finite choices to be considered is usually not predetermined in real decision contexts. And yet, it is simply

impractical from a sampling perspective to study actual contextual decisions as they are occurring.

Among those studies that use actual authentic decision contexts for the participants, a great majority of them ask participants to recall their experiences of deciding after the fact. These studies ask participants to discuss their decision-making processes as they consciously recall them from the past. Hindsight bias is a critical issue in these studies (Fischhoff, 1975; Fischhoff & Beyth, 1975) in that a review of events that have already occurred tends to influence our belief that it was inevitable that they occurred in the particular way they did. At the same time, there is a tendency to assume that one had foresight that these events would occur as they did beforehand. Despite these methodological issues, these studies systematically controlled and varied specific decision-making tasks to reveal our preferences from among equivalent options worded differently or framed differently, thus exposing the underlying values or rules we use to make selections and contributed greatly to our modeling of human decision-making and judgment.

The early decision-making studies were designed with choices or forced trade-offs with the hypothesis that we would behave rationally, meaning that we would seek to maximize benefits and minimize risks in making choices from among relatively easily calculated utility values. This presupposed that we would recognize the expected utility or expected value of each option (e.g., Expected Utility of A = Probability that Event A occurs \times Value of Event A vs. Expected Utility of B = Probability that Event B occurs \times Value of Event B) and make a calculated trade-off. Although it was clear to decision theorists that there might be some differences in our abilities to make such calculations, they expected that the majority of participants in these studies would seek to maximize the utility as a strategy in making trade-offs. To the great surprise of early researchers, they found that not only do we largely not behave on the whole in this manner, but there are some very specific ways in which we diverge as a group from this risk/benefit utility trade-off approach, and these divergences are due to perceptions that influence our decision-making and creative ways we structure decision-making tasks that are usually not structured in expected utility frameworks.

Some of the ways people tend to diverge from what was hypothesized originally, comes in the form of framing effects, or how language is used to explain the tradeoff (e.g., a 50% likelihood of a loss or a 50% likely win are equivalent from a expected utility standpoint but are not perceived as equivalent). Framing effects have an impact on how we choose in that we tend to prefer language that highlights the possibility of reward (McNeil et al., 1982). Woelbert and Goebel (2013) extended these findings in testing exposure immediately to a reward or reward-predicting stimuli demonstrating that rewards influence behavior. Immediacy in time, certainty of reward, and physical possession or the means were found to increase likelihood

that one chooses or acts despite a prior commitment to another behavior (Woelbert & Goebel, 2013).

Anchoring effects also affect our ability to decide in that we have a great deal of difficulty considering the error associated with any estimation and adjusting accordingly. Kahneman et al. (1982) found that when asked to estimate, people tend to develop their own multi-step algorithm to use to approximate the answer. What we fail to do, however, is to understand the impact of error in our estimations at each step and instead carry that error onward to the next step in the algorithm. In the end, we have a very poor estimate that has been built on the anchor of the first and subsequent steps in the estimation process. Somehow, even if we acknowledge that there is error, we are swayed by the anchor in the first step, which is unassociated with the whole estimation task we are confronted with, making it more likely to guess an estimate closer to the anchor than might be expected if left up to chance (Lichtenstein & Slovic, 1973).

These early studies were largely focused on describing how we are biased and make errors relative to logical and statistical models of decision making. In subsequent systematic studies of how we approach decision making, decision scientists have sought to demonstrate how we use heuristics, or mental shortcuts, and assess risk from an appreciative perspective. Some of the heuristics that have been identified and well-studied include the following: the availability heuristic (Kahneman & Tversky, 1973), the representativeness heuristic (Kahneman & Tversky, 1972, 1973; Tversky & Kahneman, 1982), and the affect heuristic (Finucane et al., 2000). In the case of availability, Kahneman et al. (1982) found that we tend to use our ability to retrieve examples, particularly examples that loom large in our minds, because they are dreadful or novel of a category, to judge the likelihood of an event of a particular type or in a particular category. As an example, we might estimate the likelihood of an airplane crash to be greater than it actually is, statistically speaking, in the wake of media coverage of a similar plane crash recently, which is available to us as an example and is particularly dreadful. This is explained because the numerous safely landed planes are not in the media coverage to counterbalance this particular dreadful example of the crash, and the number of plane crashes relative to the number of safely landed planes is usually not sought out as we estimate risk.

The representativeness heuristic can be described as an excessive willingness to predict the occurrence of two unlikely events co-occurring because they seem to be related thematically to make a cohesive narrative that makes sense to us. For example, we are more prone to believe that someone is more likely to be both from Mexico and to speak Spanish rather than to default to the greater mathematical likelihood of either of the events happening independently without the other, the superset of all Mexicans and all languages that they might speak (Kahneman et al., 1982). We do not logically evaluate, or calculate, or consider set theory in

these cases. Instead, we evaluate based on the coherence of the narratives that are available to us and give more credence to stories that make sense as a totality in narrative format rather than in terms of actual likelihood of overlapping probabilities. We are furthermore unwilling to change our narratives even in the face of data to the contrary (Fox, Bizman, & Huberman, 2009).

The affect heuristic describes how we tend to be affected by our initial likes and dislikes or feelings of preference, and use them to justify judgments or the estimation that something will occur (Slovic, Peters, Finucane, & MacGregor, 2005). An example of how this was discovered includes many studies under time pressure, which effectively makes cognitive deliberative processes untenable as compared with the same tasks with more leisure. These studies revealed significant differences between the felt sense or affective feelings associated with each hazard, which are readily available to us and from which we do not diverge easily even when offered more detailed information.

For judgments or decisions when one believes that one will have to justify the decision to someone else in the future, or one in which one believes the decision has a moral or ethical component, the decision-making narrative is different, in that one looks for risk-defusing operators or ways one might explain one's thinking while deciding (Huber, Baer, & Huber, 2009). What is perceived as a moral decision often includes anticipated worry and regret (Krosch, Figner, & Weber, 2012). Moral decision-making is also strongly linked to feelings or negative emotions and the reliance on one making a convincing argument to oneself to proceed. Often ethical and moral decision-making is evoked when there is worry about the difficulty of making a choice among possible choices, none of which is deemed positive. Similarly, we frame moral and ethical obligation often in terms of blaming those who act in bad faith (Sartre, 1956) by not recognizing their role in choosing, or for those who do not act with foresight for the impact of their decisions on others or with respect to a moral or ethical code (Nelson-le Gall, 1985). Ethical decision-making includes evaluation of context, perceptions, relationships, emotions, empathy, and the affect heuristic (Rogerson, Gottlieb, Handlesman, Knapp, & Younggren, 2011).

Another potentially relevant aspect of decision-making to the issue of extra-marital affairs is the notion that not all decisions are met in a decisive gesture in a moment in time but instead are decided passively or through time. Sliding toward a decision (Gluth, Rieskamp, & Büchel, 2012; Stanley et al., 2006) or not recognizing the particular choice points and the risks in the stages of engaging in a larger process (Slovic, 2001; Zapfen, 2016) can occur with decisions that are not met in one particular decisive moment. An excellent example includes Slovic's (2001) work with teens who tended to accurately understand the risks of lung cancer by smoking and generally were clear that smoking tobacco is harmful to their health, yet they did not accurately estimate the power of addiction to nicotine in their

estimates of their risks of beginning to smoke. Slovic (2000) found that teens behave as if the decision to smoke any particular cigarette is equally within their power. As they decided to begin to smoke and felt that a few cigarettes would not add up to lung cancer, they also thought that they could decide anew whether to smoke or to quit with each subsequent cigarette. They failed to take into account that at some future point, they would likely feel differently (e.g., addicted) and would not be as able to stop so easily. They did not begin smoking with the decision to become a lifetime smoker. They saw the decision as the decision to smoke one cigarette at a time, demonstrating an optimism bias and a failure to understand the ways the decision may evolve or affect them afterward over time. Similarly, Stanley et al. (2006) found in the context of relationship decisions that inertia can be a factor leading to particular decisions such as marriage, commitment, divorce, or break-ups. In this case, the unwillingness to make a decisive decision or commitment leads to a sliding toward a fate of cohabitating, rather than deciding to break up or commit to marriage. Inertia maintains the lived experience or status quo and begets more sliding or postponement rather than active deciding in one of the more committed categories.

Although certainly not exhaustive nor in-depth, the review above represents many of the key findings in the literature on risk perception and decision-making under uncertainty that may be relevant or applicable to the decision to begin an extra-marital affair. There are numerous individual differences that could be considered but that fall outside the scope of this article. What follows is the theoretical application of each of those mentioned to the context of extra-marital affairs as a way to demonstrate how it is that these often regretted decisions occur so frequently.

Decision-Making, Choice, and Judgment in Cases of Extra-Marital Affairs

There are no available probabilities or mathematical models to assign to the potential benefits and risks associated with beginning an extra-marital affair that are concrete and measurable or universal for such a complex experience. It is possible to imagine that those who have affairs might be influenced, however, by statistics on the prevalence of affairs and their correlation with divorce or by statistics on sexually transmitted infections or pregnancy, which are widely available, if they are sought or known. It is also possible to imagine that Woelbert and Goebel's (2013) findings on rewards and in particular on the power of temptation when there is immediacy of a reward, such as a concrete opportunity to have an affair, might play a role in decision-making. This is consistent with Zapfen's (2016) and Lammers et al.'s (2011) findings that suggest that those who have more opportunities to have an affair (e.g., business travelers with extra discretionary income or those who spend time apart) are more likely to have one.

Heuristics may also play a role in the choice to begin affairs. For example, through the availability heuristic, any knowledge of similar situations (e.g., either dissatisfying marriages that feel hopeless or instances including media representations of affairs that have gone well or poorly), particularly recent accounts, may influence one's perceptions (Kahneman & Tversky, 1973). Examples, particularly those that are similar to the circumstances in which one finds oneself, are more impactful. Given that an estimated 20% to 75% (Campbell & Wright, 2010; Eaves & Robertson-Smith, 2007) of all marriages experience an affair at some point, it is likely that many of us have heard of some examples of these situations from among our friends, family, and acquaintances, in addition to any media coverage of the issue available to us.

The representativeness heuristic undoubtedly also plays a role in that the many representations of a marriage gone tepid, the tension of which is resolved in a passionate affair, which is so common in fictional tales and the media, may lead us to believe that these two experiences are associated as a cohesive narrative—that one necessitates the other. This is contrasted to the actual narrative that is more common in non-fictional accounts and academic research, but which often people do not share, which feature desire discrepancy, sexual dysfunction, lack of knowledge about intimacy and sex, and difficulties in marriage that are not solved through an affair, affairs that are not passionate or exciting at all (Piercy et al., 2005), or furthermore, the narrative that features the regret that is often the case with affairs (DiBlasio, 2000). The representativeness heuristic, coupled with the social prohibitions about talking to each other about the actualities of marital dissatisfaction and sexual desire discrepancies, makes it challenging to make sound judgments based on information that is not linked to narrative fallacies.

The affect heuristic will facilitate those who have affairs to confuse feelings (Billari & Liefbroer, 2016; Finucane et al., 2000) for sound judgment enabling one to craft a rationale to have an affair with an attractive and compelling other in a period of dissatisfaction with the spouse. This is consistent with Zapien's (2016) findings in that those who had affairs believed themselves to be good partners, having tried to make the marriage work and believed their spouses to be inherently less sexual and less passionate—bad spouses. These feelings of passion and aliveness evoked by the other, against the backdrop of the perceived withholding or deficient spouse, entitled them to have affairs, they rationalized (Zapien, 2016).

Having an affair can also be understood as having to choose between two bad choices, the outcome of which is uncertain and affects others. The two choices are to stay in an unsatisfying and perceived-to-be-hopeless marriage and remain loyal to the original commitment, or have an affair and betray the commitment but hope to find satisfaction elsewhere (Zapien, 2016). Interestingly, other possible choices to address the dilemma are usually not considered. Some of the

possibilities might include couples counseling to support the marriage, divorce, or opening up the marriage, among many other ideas. Perel (2007) discussed this very dilemma as arising as a natural consequence of increasing intimacy and familiarity such as occurs in monogamous marriages, and suggested that couples intentionally are to create dynamism and distance within monogamous structures to be able to sustain the interest and passion. These dynamics are not necessarily widely understood, however, by couples themselves.

Because all of the choices outlined above are difficult, and are related to a promise and an important other (one's spouse), these decisions and dilemmas often evoke moral reasoning and theories of morality (Kohlberg, 1973). In this case, there may be the additional dimension of considering how the choice will be viewed and judged by outside others (both the spouse and the person with whom the affair is to begin as well as society) and a consideration of principles. Zapien (2016) noted that participants did not consider their spouses because they had already decided that the spouses lacked interest in passion and a lack of willingness to attend to it. Although participants were aware that they would be judged poorly, they did not, in the beginning of the affair, see the perspective of the spouse as equally important. Some degree of compartmentalization appears to be at play, as found by Jeanfreau, Jurich, and Mong (2014) who noted that participants who had affairs tended to create a compartmentalized story of the infidelity as separate and distinct from the story of their marriage by telling themselves they are not worthy of loyalty, rationalizing their entitlement to passion, and telling themselves they were thus guilt-free.

The ways the decision to begin an affair occurs is also important. In the cases examined in the literature, rarely were people deciding at a moment in time a priori to have an affair and then striving to do so. Instead, they found themselves in the situation with some level of opportunity and may have not even recognized this situation as a potential opportunity for an affair as it was unfolding (Lammers et al., 2011; Zapien, 2016). Gluth et al. (2012) found that sometimes we choose and other times we are presented with a choice or decision but postpone or decide not to choose actively, neither acting nor deferring consciously and instead allowing the choice or options to remain available indefinitely. Although there is a definitive moment in time when those engaging in an affair cross the line from monogamy into betrayal, (subjectively understood), prior to this, there is perhaps flirting, fantasizing, and contact that leads up to and builds the connection that makes possible the affair. These initial activities can be seen to lead up to and facilitate the development of the feelings fueling the affair, but each act of flirting, fantasizing, and meeting is not understood by those engaging in them to be "decisions to engage in actions leading up to an affair" (Zapien, 2016). This is particularly interesting for the experience of beginning an affair, in that there may be a notion of suspension in time of the decision, allowing the option to remain open or available over time, as

compared with deciding. In the deferral of the decision, the affair develops (e.g., flirtations, fantasies), and this deferred inaction may allow for the actor to slide toward a potential future without examining the ways in which there is active or passive engagement with the choice (Stanley et al., 2006). This was exactly the finding from a recent phenomenological investigation (Zapien, 2016) and parallels a finding from an investigation on smoking and risk perception undertaken by Slovic (2000) discussed above. There are some decisions that are influenced by the preceding activities that lead up to the decision, and we are not always good at understanding that we are sliding toward a decision in these cases or in estimating the cumulative impact of engaging in the early more innocuous stages of the experience.

Discussion

There is much to be gained by studying the decision-making processes of those who begin extra-marital affairs, an experience that often causes pain for those involved and is frequently regretted. In many of the clinical approaches to treatment, a description of which is outside the scope of this article, healing for the couple or the individual is grounded in the assumption that the person who strayed is to blame and must both make amends and must receive forgiveness for there to be forward movement (DiBlasio, 2000). Those who begin affairs, however, are largely not aware that they are deciding to have an affair even as the acts they engage unfold and build the context that makes possible the affair (Zapien, 2016). They are sliding toward the affair, deferring the decision, but engaging in acts that develop the connection and fuel interest with another outside the marriage. The backdrop of this whole process is a series of rigid perceptions including a dissatisfying marriage that feels hopeless, some beliefs about the self being inherently more passionate than the spouse, and ideas that divorce is objectionable (Zapien, 2016). This set of views also helps to support the entire structure of the affair in that through the representativeness heuristic, it becomes difficult to imagine another alternative (e.g., that things can change, that passion is contextual, that divorce is not the worst idea always). Many of the biases in our judgment found in other decision-making scenarios and applied to extra-marital affairs such as the availability heuristic, the representativeness heuristic, and the affect heuristic among other forces likely conspire to facilitate extra-marital affairs seeming like a good idea. The relative passivity or tendency to defer choosing all the while taking part in activities that fuel the development of the affair until there is an opportunity to definitively cross the line is part of the process. This parallels Slovic's (2000) account of smoking addiction and teen risk perceptions. While an extra-marital affair is not necessarily to be likened to addiction per se, although Pittman and Wagers (2005) make this argument, the structure of the process is the same. We do not appear to judge the risk of several activities that add up to an affair

accurately and instead slide toward a fate that is often later regretted and that has significant consequences for others.

This has several implications. First, providing accurate information to the public about the nature of marital difficulties and how to address them is warranted. Pre-marital counseling would be beneficial and could include information on the issues likely to arise and difficulties in judgment during these phases. Once married, there are many highly effective couples counseling approaches to marital dissatisfaction and extra-marital affairs or the dilemmas that precede them (Gottman & Silver, 2015; Johnson, 2008; Perel, 2007; Piercy et al., 2005), and yet these treatments are not sought out or sustained as often as they might be (Bischoff & Sprenkle, 1993). Particular attention to developing a productive public discourse about the nature of desire discrepancy and sexual problems would also be helpful as these aspects of marriage are not always addressed in couples counseling and couples counselors are sorely lacking in training about sexuality issues (American Association of Sex Educators, Counselors and Therapists, 2016). Additional training in sex therapy for couples' counselors is warranted.

Directions for Future Study

Future directions for research on the topic of infidelity and decision-making includes the need to replicate and expand Zapien's (2016) findings, which are taken from small samples, and which indicate that there is a deferral of deciding or a sliding toward an affair, which is generally later regrettable. It would be particularly beneficial to understand more deeply the mechanisms of this process through empirical study. It remains unclear whether moral and ethical decision-making is the frame for those who begin affairs, facilitating the risk-diffusing explanations and justification of the steps taken leading up to the affair; whether the affect heuristic is largely facilitating those who begin affairs conflating feelings with sound judgment; or whether the availability and representativeness heuristic are being used primarily or in combination, among other possibilities. Further research to understand the impact of each or use of other strategies, is warranted. In addition, focusing on cases where decision-making processes are unique such as when people decide to have an affair and then seek an opportunity to have one deliberately rather than sliding into one, or cases when both spouses have affairs, or affairs that are not regretted, is an area for future research. In these cases, perhaps there is a different decision-making process and set of risks to be considered.

In addition, other personal decisions involving risk and uncertainty such as getting married, having children, divorce, adoption, medication compliance, coming out as lesbian, gay, bisexual, and transgender (LGBT), choosing a career, choosing a university or school, euthanasia, using a substance, elective surgeries, where to live, and individual protest of social issues, among many others, could also benefit

from deeper analysis from a decision-sciences perspective to highlight how it is that we approach them and whether there are ways in which we are passively sliding toward a fate that we ultimately regret.

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