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Reflections on Envy

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We are honored and pleased to offer these final comments on what is clearly the broadest and most intriguing collection of scholarly research focused on envy published to date. In these remarks, we reflect primarily on themes that reoccur across many of the chapters and conclude with a few directions for future investigation. Twenty-five years ago, a research psychologist might need to justify to colleagues why serious empirical attention should be devoted to a topic as ephemeral and "soft" as envy. Thankfully, in the present century, envy represents an opportunity to investigate a powerful psychological phenomenon that, in fact, has profound implications for the emotional lives of individuals, the success and failure of social relationships, and the design of societal structures to regulate it. The study of envy, in a way, is an opportunity for collaboration among the human sciences in developing a synthetic understanding of it and its consequences.

What is Envy?

Essential Ingredients

Although most people, on some intuitive level, believe that they know what envy is, a precise definition of envy is difficult to formulate. All of the authors in this volume seem to agree that envy is an unpleasant emotional experience that arises in a social situation in which one desires what another possesses. However, some contend that such a general description may actually encompass two different states. For example, Smith and colleagues (Powell, Smith, & Schurtz, chap. 9, this volume; Smith & Kim, 2007) argue for a need to differentiate between "benign" and "malicious" envy (of which only the second, in their view, constitutes "envy proper"). The key difference is that malicious envy includes some form of anger, hostility, or ill will. In a similar vein, D'Arms and Kerr (chap. 3, this volume) argue that there is no such thing as benign envy, which is more aptly described as either desire or longing. According to these writers, longing

may be painful, but it is only envy if one not only experiences an unpleasant emotion due to the rival having something one desires—but furthermore desires that he or she lose it (or lose status in some other way). Taking a motivational stance, they argue that even when an individual does not act to undo the rival's advantage, the desire or motivational tendency to do so is still there.

Another defining aspect of envy, agreed on by many in this volume, is its "dual focus"—on self and on the envied other (see also Sabini & Silver, 1982). Metaphorically, one might think of envy as akin to a two-headed monster. One head focuses outward and desires not only to seize what another has but perhaps also to diminish the other for having possessed the envied thing. It perceives the inherent inequality in the situation as unjust and seethes with "subjective" resentment (Smith, 1991). Meanwhile, the second head slowly devours the self. It interprets what is lacking as a reflection of its own failure and gnaws away at itself, eroding self-worth and self-esteem. Perverse comparisons to what it does not have sap all the joy from what it does possess.

There are some notable exceptions to such agreed-on definitions. Compared to most other authors in this volume, Leach (chap. 6) argues for a narrower definition of envy. He contends that envy is a type of anger that arises when one has a frustrated desire for something another possesses, which one feels one should and could have. Where Leach parts company with others is in proposing that envy need not include either any sense of inferiority nor any malicious ill will. Instead, he suggests that malicious ill will may occur as a consequence of envy. He argues that inequality can arouse three separate types of anger, only one of which is truly envy.

Another issue of some debate is the relationship between resentment, injustice, and envy. Smith and colleagues (Smith, Combs, & Thielke, chap. 16, this volume; Smith, 1991) differentiate "objective" from "subjective" resentment. In the former, others would agree that there is an injustice, whereas in the latter, the enviers are likely not to find social support for their sense of grievance, which is more aptly termed envy (see also Feather & Sherman, 2002; Rawls, 1971). Although such perceptions can clearly influence the label we give to a state, it is possible that both still reflect the same underlying emotion. What is legitimate or fair is rarely well defined as evidenced by the need for courts of law and the political debate that attends the creation of law (see also Leach, chap. 6, this volume). Thus, it is quite possible that one's anticipation of others' reactions affects how one acts on envy, but not necessarily how the emotion is initially elicited. Others, however, have contended that injustice, subjective or otherwise, need not play a key role in envy (D'Arms & Kerr, chap. 3, this volume; Miceli & Castelfranchi, 2007). With the exception of one study by Smith, Parrott, Ozer, and Moniz (1994), little research exists on this topic.

Getting a tight grasp on the essential ingredients of envy and on the process by which it emerges is particularly difficult because it often covaries with other emotional states. One question that arises is whether envy is indeed its own distinct emotional state or whether it might be a label for a social situation that involves a variety of cognitive appraisals and different emotional reactions. It is not clear that the field has agreed-on criteria for resolving this kind of issue (Ortony & Turner, 1990), which also plagues

research on other social emotions such as jealousy. It may be that these questions will ultimately be resolved on the basis of considerations such as parsimony but only when the empirical phenomena are more thoroughly charted than they are presently.

Is Envy a Specific Emotion?

Although not always explicitly stated, a specific emotions approach (Ekman 1992; Frijda, 1986) to envy seems to be consistent with many of the writings in this volume (D'Arms & Kerr, chap. 3; Hill & Buss, chap. 4). From this perspective, emotions are assumed to be categorically distinct states. Several assumptions are usually incorporated within specific emotions accounts. One is the tenet that emotions are motivational states that have been shaped by evolutionary pressures. They function to motivate the organism to engage in certain actions that it might otherwise not engage in—actions that have, over phylogenetic history, tended to confer some adaptive advantage in this class of circumstances (Ekman, 1992; Frijda, 1986; Keltner & Haidt, 1999).[1] Each emotional state is presumed to have its own distinct motivational tendencies (or as Fridja puts it, "urges") that are activated by a specific set of appraisals. Fear is a relatively straightforward example. It is induced by the appraisal of threat, which need not be conscious, and motivates escape from or avoidance of the dangerous stimuli. Specific emotions often have their own distinct facial expressions and some may at times—although need not always—have somewhat unique patterns of physiological arousal (Ekman & Friesen, 1971, Harris, 2001; Levenson, 1992).[2]

As seen throughout this volume, if envy is a specific emotion, then one challenge is to determine the unique features that differentiate it from other emotions. A similar issue confronts researchers who study other social emotions. For example, in the related case of jealousy, Harris (2003) proposed that the underlying functional state tends to motivate behaviors that break up, either psychologically or physically, the threatening liaison that one perceives between a loved one and a rival. Importantly, this motivational state would not be created automatically by other emotions that are frequently offered as the more essential emotional components of jealousy—such as anger (motivation to fight) or fear (motivation to flee). If envy is a specific emotion, then one would expect it, too, to have both specific triggering appraisals and specific behavioral motivations that distinguish it from other emotions. We discuss possible directions for future research on this topic in a later section.

If envy is a categorical emotion, then one might envision two primary paths by which other affective states come to covary with it. One possibility is that the types of situations that elicit envy also tend to trigger other types of cognitions and their resulting emotions. For example, negative social comparisons may elicit, in addition to envy, also shame or sadness. Another path is that envy may tend, over time, to be transformed into other emotions through modifications in the appraisals. Emotions, particularly social emotions, are rarely punctate. Instead, emotional responding is an ongoing process, bringing in its wake efforts to understand the emotion and cope with it (Lazarus, 1991). On this view, many of the emotions and cognitions associated with envy occur as people

try to regulate and deal with an envious state and react to it. This kind of analysis would fit with Leach's suggestion that malicious ill will, although not essential to envy, can be a consequence of it, and with several authors' observation that shame is frequently a reaction to one's envy (Sabini & Silver, 1982; Smith et al., chap. 16, this volume). Similarly, *schadenfreude*, the pleasure at another's pain, has been linked to envious reactions (Powell et al., chap. 9, this volume); although, this is controversial (see Leach, chap. 6, this volume for an alternative view and data; Miceli & Castelfranchi, 2007).

Envy as a Situational Label, Blended Emotion, or Cultural Construction

It is also possible to argue that envy is not a specific emotion with its own unique underlying central nervous system program. Instead, the label *envy* may be applied to experiences composed of a blend of different, more basic, emotional components, depending on the specific appraisals and outcome of the meaning of the appraisals for oneself. Analogous issues have sparked debate in the study of jealousy. For example, researchers such as White and Mullen (1989) have proposed that jealousy should not be viewed as a distinct emotion or even as a blend of emotions but rather as a label for a complex interpersonal situation that elicits various negative emotional reactions. Based on reviews of emotion research and clinical literature, they suggest that, depending on the degree and extent of appraisals, any or all of six affective elements may be evoked in a jealousy-provoking situation (anger, fear, sadness, envy, sexual arousal, and guilt). Similarly, Hupka (1984), using hypothetical jealousy scenarios, found that the subjects offered different emotional labels depending on what aspect of the situation was high-lighted (e.g., loss versus sexual betrayal). In discussing jealousy as a blended emotion, Sharpsteen (1991) notes that such a blend may arise due to changing reappraisals that elicit different emotions over the course of a single episode of jealous feelings or as a result of a person experiencing several emotions at once.

Envy faces similar issues. Based on analyses of descriptive experiences of envy, Parrott (1991) has proposed six different emotional reactions that can be part of an envious episode. For example, it may be that when upward social comparisons lead to lowered self-esteem, the emotions most directly produced might be sadness or anxiety. However, the occurrence of cognitive appraisals of injustice might elicit anger (see Smith & Kim, 2007, for similar discussion). Thus, it is possible to argue that the term *envy* actually encompasses a diverse set of cognitions and affective reactions that tend to arise in situations when one desires something that another possesses. It also is possible that envy is a blended emotion that subsumes some set of other specific emotions.

A very different view of emotions is proposed by many anthropologists, namely, that emotions are culturally constructed entities. If envy is a basic emotion, then it should be found, at least in some form, in all cultures. Lindholm (chap. 13, this volume) cautions that it may be premature to conclude that envy exists around the globe. Although the culture he has studied in depth, the Swat of Pakistan, show intense envy, Lindholm argues that more cross-cultural evidence is needed before the conclusion that envy is

universal is warranted. In making this point, he also argues against Hill and Buss' claim that fairness is a universal expectation (chap. 4, this volume) and cites the Swat as one example where people do not expect fairness. However, it is worth noting that there is some evidence that capuchin monkeys display behaviors that suggest some rudimentary sense of fairness (Brosnan & de Waal, 2003). In one experiment, monkeys were trained to exchange a token for a reward. Once trained, the monkeys performed this task readily either for a high reward (a grape) or a low reward (cucumber), doing so for more than 95% of the trials. However, the monkeys were significantly less likely to perform the task if they witnessed a conspecific obtain the more attractive reward for equal effort, an effect amplified if the partner received such a reward without any effort at all. So perhaps fairness is a fate universally desired, even if not always expected, at least when one is on the unfair end of the deal. One must, however, heartedly endorse Lindholm's call for more cross-cultural studies, particularly with rapidly vanishing preliterate societies. Such work could provide a wealth of knowledge and potentially provide key insights about the core nature of envy.

It may turn out that a precise, unanimously accepted definition of envy will always prove elusive, given the complexity of the human mind and social interaction. If so, the field is likely to have unresolved disagreements for a great many years. However, regardless of the specific definition on which one settles, it should be possible to tease apart something of the underlying processes connecting specific appraisals to emotions, urges, and social behaviors in contexts that are likely to elicit what we intuitively call envy. This is clearly a worthwhile and important pursuit even if we cannot at the moment be certain how to determine whether a particular ingredient is essential for envy or a product of it. The work in this volume attests to the rich variety of studies that are shedding intriguing new light on this problematic human emotion.

Factors That Arouse Envy

As described in the preceding section, envy is inherently a social emotion often generated by comparisons with others. However, it does not occur equally across all relationships or situations. A number of the authors describe factors that have been shown to affect envy as well as other factors that have been proposed but await empirical investigations.

Similarity

One point on which there seems to be a resounding agreement is that people tend to envy those that are similar to them. This has been noted across cultures and time. For example, people tend to envy others who are the same age and same gender (Harris, 2007b; van Dijk, Ouwerkerk, Goslinga, Nieweg, & Gallucci, 2006). Tesser (1988) has suggested that a primary reason for this is that those who are most similar generate the greatest esteem-threatening comparisons. The challenge is in determining what factors

most contribute to people's perception of similarity. Given the broadness of such a category, many of the variables discussed below may have their effects, at least partially, by contributing to appraisals of similarity.

Domain Relevance

Domains that are particularly important to a person and most relevant to his or her self-definition are the ones that are most ripe for envy (Salovey & Rodin, 1984; although see Leach, chap. 6, this volume). This domain relevance hypothesis has found support in several studies (Salovey & Rodin, 1984, 1991). For example, in one study, participants were more likely to derogate another person when they believed this other person received higher scores on an aptitude test than they did. However, this consequence of envy was only observed when the other person was described as having the same career aspirations as the participant and the aptitude test results were in this same domain (Salovey & Rodin, 1984).

Alicke and Zell (chap. 5, this volume) make an intriguing suggestion that after having lost a social competition, people may sometimes focus on and feel the greatest envy over dimensions that do not logically seem relevant or central to the competition—factors the authors refer to as having "peripheral similarity." They theorize that losing competitions to others sometimes is not based on the things that one has in common with the victor, but due to variables on which one differs. Therefore, the features that on first blush may seem irrelevant can sometimes highlight the weaknesses that have cost one. (See also Miceli and Castelfranchi, 1997, for other intriguing suggestions of how peripheral factors can become self-relevant.)

Change in Status

A change is status is another event that has been predicted to have particularly strong effects on envy (Smith, 1991). When one is outdone by another who previously has been less successful, it seems hard to take. If such a reversal is unexpected, envy may be particularly strong (Alicke & Zell, chap. 5, this volume). These concepts are nicely illustrated in Schimmel's retelling of the story of Moses (chap. 2, this volume). Moses, purported to be the most humble man on earth, became ravaged with envy over his disciple, Joshua, when it was time for Joshua to replace him. One can see similar dynamics among faculty members in university departments!

Relationship Closeness

Another recurring theme is the importance that relationship closeness plays in envy. Closeness in relationships seems generally to exacerbate the propensity toward envious reactions. This proposition is consistent with several lines of evidence. For example, when recalling envious experiences, people most often report that friends or relatives were the ones they envied (Harris, 2007b; Hill & Buss, 2006). Similarly, people report that when they themselves were envied, it was often by close others (Harris, 2007b;

Parrott & Rodriquez Mosquera, chap. 7, this volume). Early experimental manipulations of competition among male friends found that subjects were more prone to sabotage their friends than strangers (Tesser & Smith, 1980). However, Tesser's self-evaluation mainte-nance model offers exceptions to this rule (see also Alicke & Zell, chap. 5, this volume). The importance of relationship closeness is further noted by Smith et al. (chap. 16, this volume), who suggest that the type of emotional reaction to another's advantage may be at least partially mediated by "perceived distance between the agent and the object." They suggest that awe is more likely to be elicited than envy when the distance is great (e.g., in terms of status or living at different times). An interesting avenue for further investigation is to reconcile this view with Clark and Finkel's (2004) analysis of rela-tionship types in which the closest interdependent or communal relationships are not as likely to generate emotions such as envy as those more distant ones that are based on social exchange principles. Dependence is another relationship feature that is hypoth-esized to affect envy. In discussing psychoanalytical approaches, Vidaillet (chap. 15, this volume) notes that both Melanie Klein and Jacques Lacan argued that dependence on another makes one especially vulnerable to envy, although these two psychoanalysts differed in their focus of which relationships present the greatest dependence.

Physical Presence

Generalizing from their research on the social comparison literature, Alicke and Zell (chap. 5, this volume) suggest that physical presence should affect envy. These authors found that participants' subjective reactions to their own performance were influenced far more by the performance of someone else who was doing the task at the same time than by the knowledge of the average performance of a much larger sample. They note that this tendency toward "local" versus "general" comparisons makes sense evolution-arily. Humans likely evolved in small groups and therefore their successes or failures relative to a few close others would be most critical.

Specific Hard-wired Triggers

As seen above, most authors assume that the triggers of envy are relatively general pro-cesses that may weight different factors in a somewhat idiosyncratic way. For example, what is considered domain relevant and similar might be quite different for two individ-uals. Such flexibility is consistent with William James' (1890/1983) comments on his own emotional reactions: "I, who for the time have staked my all on being a psycholo-gist, am mortified if others know much more psychology than I. But I am contented to wallow in the grossest ignorance of Greek. My deficiencies there give me no sense of personal humiliation at all. Had I 'pretentions' to be a linguist, it would have been just the reverse" (p. 296). His self-reflections are consistent with the idea that processes such as desires to exceed, comparisons to others, and negative reactions to upward social comparisons may be similar across individuals, whereas the specific domain in which these processes are most active will vary.

A different view of the specificity of envy triggers is suggested by Hill and Buss (chap. 4, this volume). These authors argue that other researchers "have been less clear about how self-relevance is determined" and that "an evolutionary framework makes clear predictions about the domains that should have high self-relevance." They propose that domains that were important for reproductive success in humans' ancestral past will be the ones that are most prone to eliciting envy and that there will be some sex differentiation due to men and women having faced "qualitatively different adaptive problems." Our discussion focuses on two issues raised by this claim: (a) the notion of an "evolutionary framework," and (b) the degree to which the specificity in Hill and Buss's hypothesis provides greater predictive power relative to other views of envy.

First, an evolutionary approach per se does not in and of itself dictate the form that psychological mechanisms and processes take. In the case of envy, a functional or evolutionary view implies merely that the emotion evolved because it conferred some fitness advantage for an organism, and the view invites certain speculations about how it might have done that (e.g., by motivating competitive striving). This does not necessarily mean that the mechanism itself comes prewired with highly specific triggers. (Analogously, memory undoubtedly evolved because it provided payoffs in Darwinian fitness, and yet a man may use his memory to retain any sort of information whatsoever—including things that decrease his inclusive fitness, such as when and where to go for his vasectomy appointment.)

Many contemporary evolutionary psychologists, however, tend to favor the view that evolution has shaped the human mind to have many domain-specific mechanisms (or modules) that are activated by fairly specific hard-wired triggers (e.g., men are hypothesized to be hard-wired for attraction to women with a particular hip-to-waist ratio). The Hill and Buss chapter approaches envy in this spirit. Although this sort of account deserves consideration, other accounts are similarly consistent with evolutionary theory: Natural selection may instead have created psychological tendencies and structures that apply in broad domains, even mechanisms as general as those proposed by learning theorists or by cultural anthropologists. Alternatively, evolution may have shaped mechanisms intermediate in specificity or may have shaped less sexually dimorphic mechanisms (Caporael, 2000; Eagly & Wood, 1999; Harris, 2003; Miller & Fishkin, 1997). As mentioned earlier in this chapter, a variety of researchers have proposed functional accounts of emotions without assuming the specificity suggested by Hill and Buss. Thus, the account of evolutionary psychologists such as Hill and Buss is best interpreted as one among many possible evolutionary analyses—but not *the* evolutionary analysis.

Second, it is unclear to what degree Hill and Buss's predictions are unique from others (e.g., Salovey & Rodin, 1991). For example, Hill and Buss suggest that their view uniquely predicts that women will be particularly envious over a rival's attractiveness. Yet, many of the other views in this tome would make the same prediction. Indeed, in support of their domain relevance hypothesis, Salovey and Rodin (1991) found that people who thought attractiveness was important reported the greatest envy in this domain. Thus, if women, more than men, believe that attractiveness is important in obtaining

a mate, then from this broader, domain-general approach, it would be expected that women should be more envious of attractive others. Furthermore, a variety of views also would be consistent with the prediction that the domains that are envied change over the life span, in parallel with changes in what people find to be most important and self-defining at different points in their lives. For example, Harris (2007b) finds that although attractiveness is a domain envied more by women than men in their twenties, this gender difference disappears in older adults. As noted earlier, obtaining more precise predictions of when envy is likely to be elicited is clearly needed. Although we raise some criticisms, we also want to emphasize the endeavor to do so is likely to be most fruitful when a variety of disciplinary and theoretical approaches pursue it.

Social Context

Most discussions of envy focus on it as a social emotion involving two people, the envied and the envier. Vidaillet (chap. 15, this volume) makes the intriguing point regarding the importance of a third party (the Other), which can be an individual or a social group. She argues that by the very act of envying, the envier implicitly accepts the value system of the other(s) (see also Sabini & Silver, 1982). The importance of third parties looms particularly large when one considers that what is envied rarely is objectively good or bad. As Alicke and Zell note (chap. 5), the value of many social characteristics is quite subjective and variable across individuals and cultures. Fashion provides numerous examples of this (e.g., hair colors, styles, clothing), these are domains in which people experience a great deal of envy. For example, people spend great effort trying to change their hair by means of stylists, perms, curling irons, straightening irons, coloring products, transplants, and so forth. Yet even these individuals themselves would often acknowledge that the goal they seek is only desirable within a very limited social milieu.

Two questions, that for the most part, remain open is whether the processes proposed in this section play equally important roles in envy in other cultures, and whether the same factors lead to envy between cultures or groups. Lindholm's chapter (13) offers some insight into the first question. His research suggests that the Swat people are particularly prone to envy. Based on Lindholm's analysis, several features of Swat culture contribute to this: (1) great competition over land, which is a limited resource; (2) the tendency to interpret another's gain as one's loss across a wide range of things, including honor; and (3) the belief that all men are created equal and therefore that success or failure is attributed to one's character, despite the fact that land is inherited (it cannot be bought and can only be gained by usurping another's land) and alternatives for success are few. The target of envy frequently is close relatives, particularly one's father's brother's son, so much so that the name for him means enemy. Many of the factors proposed by Lindholm are consistent with those proposed by other authors in this volume who have worked with Western populations.

One important area that researchers have just begun to explore empirically is envy between groups. Alicke and Zell (chap. 5, this volume) propose some ways in which

group envy may follow the same principles as inter-individual envy (e.g., domain relevance). L. Harris, Cikana, and Fiske (chap. 8, this volume) also offer some intriguing thoughts as well as some new data on intergroup envy. Using two basic dimensions of person perception, their stereotype content model proposes that envied groups are those that are viewed as low on warmth but high on competence. The authors' work offers some support for this idea and also suggests that groups that are proposed to be envy inducing are rated higher on similarity than targets that are hypothesized to induce pity or disgust. However, it remains unclear if, or how, similarity contributes to envy between groups. The stereotype content model proposes that envy is the emotion arising toward high-status out-groups. Yet similarity is a recurring theme within work that focuses on envy at the individual level (and presumably people feel more similar to in-group than out-groups members). Future research that directly compares envy of out-groups to that of in-groups might help shed light on this issue (see also Joseph, Powell, Johnson, & Kedia, chap. 14, this volume, for further discussion of possible group versus individual differences in envy.) Another issue that emerges in this work is whether envy is indeed the emotion being studied. In attempting to get around self-report bias, L. Harris et al. (chap. 8) asked participants to respond according to how they thought that "society" would view the targets. Unfortunately, this leaves it uncertain whether envy was the emotion involved (as opposed to indignation or anger). Furthermore, it is unclear how accurately judgments of an emotion actually map onto an individual's real experiences of emotion. These authors also make the intriguing prediction that under unstable social circumstances, envy is likely to elicit attack but under stable situations, resentment mixed with desire to associate with the target of envy. Zizzo's work (chap. 11, this volume) in economics has also begun uncovering factors that affect group categorization and discrimination.

Summary

Several factors have been proposed that are likely to make the soil in which envy grows quite fertile. Some of these have obtained good empirical support, whereas many others are plausible speculations in need of empirical testing. Some, such as similarity, have been noted in the earliest of writings and it is hard to imagine a time when they will not be viewed as key modulators of envy. However, as cultures change, one may also expect to see at least some changes in the specific processes involved in triggering envy. For example, one cultural change—the great expansion of mass media—may already have begun having a profound impact on whom people are choosing to compare themselves to (Alicke & Zell, chap. 5, this volume; Belk, chap. 12, this volume). Undoubtedly people are more often being exposed to a wide range of potentially enviable social images of success, attractiveness, and wealth. As Belk points out, one ramification of such exposure is that people are increasingly comparing themselves not to real and specific individuals, but rather to idealized but unrealistic images of "most people"—images that may correspond to very few others.

Can Envy Ever be Beneficial?

One interesting question that emerges from this volume is whether envy is always unequivocally bad or does it ever have a positive side? The answer to such a question seems to vary greatly and depends not only on one's definition of envy but also on one's definition of bad (e.g., harmful to whom?). Focusing just on the individual, one can ask about the effects of envy on a person's achievement of his goals, health, moral behavior, and Darwinian fitness. Authors in this book have not only focused on the level of the individual, but they have also pondered the effect of envy on dyadic relationships and broader social structures such as businesses and societies. It turns out that the effect of envy at all of these levels of analysis is a question with interesting and subtle aspects.

Evolutionary and Functional Accounts

If envy is indeed an emotion shaped by natural selection, then it must at least for some period of time have had a beneficial effect on the inclusive fitness of our ancestors (i.e., led them to produce more viable offspring or surviving kin). Naturally, the "interests" of evolution pertain not to the emotional states as experienced by individuals per se, but rather to the behaviors that these emotions elicit and the effects of those behaviors on the individual's Darwinian fitness. Thus, there is no reason to assume that adaptation should mean that emotions would be experienced in a positive way or that they would even promote an individual's personal happiness. However, behaviors and goals that serve inclusive fitness presumably tend usually to lead to pleasure or some type of psychological reward, precisely because that makes the behaviors more likely to be repeated.

So what is the adaptive role of envy? Several of the authors in this volume take the intuitively plausible view that envy can be a motivating emotion that leads people to bettering their lot in competitive arenas. For example, D'Arms and Kerr's *Competitive Function* account argues that it motivates "agents in ways that benefit their standing in various kinds of status hierarchies, by improving their comparative positions." Hill and Buss's approach (chap. 4, this volume) also clearly champions this view.

Economics, Organizations, and Consumer Behavior

A unique perspective on the positive side of envy is provided by the chapters in this volume that address envy from the perspective of economics (Zizzo, chap. 11), marketing (Belk, chap. 12), and organizational life (Duffy, Shaw, & Schaubroeck, chap. 10). These authors note that although envy can have harmful ramifications, it also can have positive effects in these arenas (see also D'Arms & Kerr, chap. 3, this volume). Zizzo perhaps puts it most starkly in his arguments that from an economic view, envy is neither intrinsically good nor bad. Its value is "based on the outcome it produces, and these differ depending on the context and how the economic situation is perceived by the economic agents." For example, Zizzo points out paths by which envy can promote innovation,

savings, and capital formation, all of which are economically useful. The motivational properties of envy are also noted by Duffy et al. in their discussion of some research findings on envy in the workplace. What social psychologists call "upward comparison processes" appear to sometimes afford people the opportunity to learn important information about themselves, and motivate them to set and strive for higher goals. The authors further note that such situations may provide role models or ways of emulating success. Jewish literature also discusses envy as a motivator to excel but cautions against "improper behavior" such as deliberately provoking envy by bragging (Schimmel, chap. 2, this volume).

What affects whether envy serves beneficial or destructive purposes? One frequently discussed factor is whether a situation is a "zero-sum game," meaning a situation in which the gain of one participant necessitates a corresponding loss for another. In their chapters, Belk; Zizzo; and Duffy et al. suggest that non–zero-sum situations are those in which envy is most likely to result in positive effects for the individual and organization. Of interest, several authors note that people's perceptions of whether a situation is zero-sum do not always track objective reality in this regard (Parrott & Rodriquez Mosquera, chap. 7; Zizzo, chap. 11, both this volume). Another variable that is likely to contribute greatly to whether envy is productive or counterproductive is the individual's level of control over the situation. Greater control is presumed to engender more positive effects. Duffy et al. (chap. 10) note a third factor, task interdependence. These authors suggest that greater group productivity is likely to occur when interindividual competition occurs in tasks that are not highly interdependent, although they note that findings on this topic sometimes appear contradictory. Perhaps the relationship between competition and productivity is curvilinear.

One question is whether the factors that lead to positive effects on an individual or group level do so only because they produce benign envy (as defined by Smith, 1991) that lacks hostility or anger. Is Smith's "envy proper" always counter-productive? There is no doubt that hostility can have a host of negative personal and interpersonal effects (Smith et al., chap. 16, this volume). However, it is possible that, under some circumstances, malicious envy may serve as the driving force that produces positive changes (see Zizzo, chap. 11, this volume). One of the functions proposed for anger is that it motivates one to overcome a blocked goal (particularly when frustration is involved). An example of research that is consistent with this proposition comes from developmental work (Lewis, Alessandri, & Sullivan, 1990). Infants first were taught to pull a string to turn on music, which seemed to produce enjoyment (e.g., smiling), but then were thwarted (the string was detached). In the final phase of the experiment, the string was reattached so that infants could again turn on the music. Infants, who expressed angry facial expressions during the thwarted phase, relearned the task more quickly than those who expressed sad facial expressions. It remains an open question whether the element of anger in envy is ever associated with beneficial effects.

Another seemingly important issue in determining the benefit of envy centers on the timing of appraisals of injustice and the direction of causality. Does the sense of injustice occur before the emotion or is it an attempt to justify the emotion? If envy is

a reaction to an actual injustice, it may motivate positive societal change (e.g., movement toward greater equity). The problem from the standpoint of a researcher is that it is difficult to assess when such factors are the motivator of the emotion or justification of the emotion after the fact.

There are some provocative propositions regarding politics and envy. Belk (chap. 12, this volume, see also Marling, 1994, as cited by Belk) discusses the intriguing possibility that exposure to American luxuries during a 1959 debate between the Soviet Premier and the U. S. President may have elicited such large-scale envy among Soviets that it eventually may have turned them against Communism. Another interesting linkage between envy and politics can be seen in the influential recent political analysis by Frank (2005) entitled *What's the Matter with Kansas?*. The author laments the fact that people in the heartland seem to have none of the emotional reactions he thinks they ought to have to economic policies that (in Frank's view) have largely served the interests of people much wealthier than themselves. Westen (2007) also makes this point, arguing that the Democratic party's unwillingness to instill or tap into these emotions accounts for its lack of success in many Presidential elections in recent decades. Of interest, despite the frequent use of the term, *politics of envy*, recent research has failed to find evidence for an association between political party affiliation and dispositional envy. In a sample of 420, the correlation was 0.005, with a 95% confidence interval ranging from -0.09 to $+0.10$, indicating that any relationship, if one exists, is probably trivial in magnitude (Harris, 2007a).

Although envy may sometimes lead to benefits for the individual or society, it appears far more often to lead to negative effects that can have serious and far reaching consequences as evidenced in the chapters of this volume. Thus, we now turn to a discussion of possible coping mechanisms.

Coping With Envy

Long before the emergence of the field of psychology, the world's major religions faced the problem of how to help their members deal with negative social emotions. Schimmel (chap. 2, this volume) describes several practical guidelines offered by Judaism to counter envy. One recommended tactic is to try to not compare one's own achievements to those of others but to aim to be the best one can be. Another is to focus not on the envied person but rather on the quality he or she possesses and to channel one's energy toward one's own attempts to achieve it. The third is the suggestion to accept what God has given, along with the hope that things will be different in the afterlife. As we will see below, these themes are also familiar in modern times. Despite the fact that the destructive elements of envy have been recognized for millennia, little empirical research has assessed the effectiveness of different coping strategies. However, several authors in this volume offer intriguing hypotheses, many of which are consistent with and build on the wisdom of the ancients. (See also Salovey & Rodin, 1988, who suggest that bolstering the sense of one's achievements in alternative domains can dampen the effect of

negative comparisons in the envied domain; and Vecchio, 1997.) We have loosely categorized these into four types of coping strategies: cognitive, emotional, interpersonal, and cultural.

Cognitive Strategies

The majority of the recommendations for coping with envy, including several of the suggestions from the Judaic tradition described above, take the form of cognitive strategies that basically seek to alter the cognitive appraisals underlying envy. Examples include reappraising the situation or seeking to change the value one places on the envied dimension. Drawing on various literatures, Exline and Zell (chap. 17) offer an abundance of antidotes that may prove effective in preventing and alleviating envy. They do so from a perspective that assumes that envy informs one about one's desires, deficiencies, and damaged relationships. Many of their suggestions focus on ways that an individual can attempt to reframe envy-provoking situations. Reassessing desires, beliefs, and goals may help people realize that the envied item is not so important or may help them determine how to achieve goals in the future. Alicke and Zell (chap. 5) offer other cognitive strategies to minimize envy, including ones that focus on "temporal aspects." For example, they suggest rather than dwelling on the present circumstances, one might attempt to increase one's focus on past successes or cultivate beliefs that one can do as well as the other in the future. Alicke and Zell also make the paradoxical suggestion that exaggerating the rival's ability might actually circumvent envy, because once the disparity is perceived to be too extreme, the other ceases to be a relevant comparison group. In a somewhat related vein, Vidaillet (chap. 15) proposes that envy may be avoided by idealizing the envied individual.

Emotional Strategies

Another possible approach to coping with envy is for the individual to cultivate positive emotions that presumably mitigate envious feelings. Exline and Zell (chap. 17, this volume) suggest that nourishment of qualities such as humility, self-compassion, and gratitude, as well as focusing on positive aspects of life, may help to prevent or reduce envy, particularly in cases in which a change in the underlying envy-provoking situation is not possible.

Smith et al. (chap. 16, this volume) offer some intriguing new ideas and findings on the relationship between positive emotions and envy. They note that one cost of envy is that it reduces the benefits that can come from social relationships, including those derived from receiving help from others. A common reaction to such situations is gratitude, which has been empirically associated with a wide range of personal benefits. They suggest that gratitude is likely incompatible with envy. This is clearly true at least at the level of long-term dispositions: dispositional gratitude and dispositional envy have been found to be negatively correlated (McCullough, Emmons, & Tsang, 2002). Smith, Combs, and Thielke (chap. 16) point out that when receiving help from

others, the envious person likely focuses on how this reflects on his or her own inferiority, whereas the grateful person chiefly focuses on the benefits obtained. These authors propose possible ways in which gratitude and envy may influence each other, noting that (1) the same information may be processed by one or the other psychological mechanism, which then either gives rise to positive or negative affect, and (2) envy may decrease gratitude or vice versa. We suggest one additional path. Gratitude and envy may typically occur at different time points. Perhaps gratitude dominates when the person initially receives help, but when the flow of resources remains chronically unidirectional, basic principles of social exchange and equity are violated, creating a psychological tension. This may lead to an erosion of the receiver's self-esteem and self-efficacy, especially under circumstances where there is no possible path of reciprocity and when some sense of similar status is tacitly assumed. In such cases, envy and resentment may come to supplant gratitude.

Empirical research directly testing many of these suggestions awaits future investigators (see Smith et al., chap. 16, this volume, for possible directions). However, it is interesting that, as Lindholm discusses (chap. 13), the Swat culture is very high in envy, and is low in or lacking elements such as gratitude and compliments, many of the very features that have been hypothesized to be mitigators of envy. How and when positive emotions affect envy is a rich area for study. We also suggest that one potentially ripe avenue for research is to examine the relationship of these states as they unfold over time. One encouraging new finding is that envy appears to decrease with age, although the mechanisms for this remain to be explored (Harris, 2007b).

Interpersonal Strategies: Reducing Others'
Envy of Oneself

Several of the authors in this volume hypothesize about how targets of envy might reduce others' envy toward them (Alicke & Zell, chap. 5; Exline & Zell, chap. 17; Parrott & Rodriquez Mosquera, chap. 7; Schimmel, chap. 2). Three common themes emerge from Jewish folklore, cross-cultural research, and social psychology. The first theme concerns self-presentation. To prevent envy, one should be modest rather than ostentatious, including attempting to minimize the value of the envied trait, lest one tempt the "evil eye." The second theme is to invest in the relationship with the potential envier, perhaps by doing something nice for that person or by attempting to become more emotionally close. The third theme consists of attempts to change perceptions of the situation such as downplaying inequity or fairness.

Evidence that these strategies are used by people is seen in cross-cultural studies by Parrott and Rodriquez Mosquera and colleagues (chap. 7, this volume). For example, these researchers found that reports of having engaged in modesty and downplaying the enviable trait/activity were especially common in the United States and the Netherlands, whereas investing in the relationship by doing something nice or saying something encouraging was particularly common in Spain. Other strategies included trying to reduce perceptions of unfairness as well as focusing on something else at which the envier

was better. Further evidence that people engage in these types of strategies comes from an ingenious laboratory study conducted by these researchers. Participants appeared to perform better than a confederate, who was located in a separate room. Next, the two interacted via the Internet, during which the confederate expressed envy in one of four different ways: showing hostility toward the experimenter, evidencing depression, expressing admiration toward the subject, or showing resignation. Participants attempted to fend off envy by showing modesty and downplaying the significance of the advantage. This held regardless of the type of reaction shown by the confederate.

The coping strategies offered in this text are intuitively plausible and, as shown by Parrott and Rodriquez Mosquera (chap. 7), appear to be commonly utilized by people concerned about provoking another's envy. However, what remains to be assessed is the efficacy of these strategies. Perhaps not surprisingly, given the complexity of social emotions, determining the interpersonal coping strategies that are likely to be effective may be far from straightforward. Thus, a strategy that might sound like it would be beneficial may fail to work in some cases and can even backfire. For example, intuitively it seems that being kind or complimenting another person would be an effective strategy in mitigating another's envy toward oneself. Such acts, assuming they were sincere, would in some ways resemble appeasement gestures (e.g., apologizing to an angry person, acting in a prosocial manner after embarrassment, showering attention on one's jealous lover). However, this can go wrong, producing additional envy on some occasions. This possibility is nicely illustrated in another example from Schimmel (chap. 2, this volume): in the biblical story, David's benevolence fueled Saul's hostility rather than mitigating it. In one of the few related empirical studies, Zell & Exline (2006; cited in Exline & Zell, chap. 17, this volume) found that generosity decreased hostility toward a successful person but also made the less successful people feel worse about themselves. Thus, even when strategies have some positive effects, they may not do so unequivocally.

Interpersonal emotion regulation is clearly a ripe and important area for further study. What is likely to emerge from further research is not the finding that a particular strategy "works" or "doesn't work" in general—but rather a characterization of when it is most likely to be effective, and when it is likely to be counterproductive. Perhaps different strategies are effective with different relationships (loved ones versus office mates) or at different time points (early envy versus chronic).

Cultural Strategies

Given the potentially destructive social consequence of envy, it is perhaps not surprising that many societies and cultures have ways to attempt to regulate envy or at least mechanisms that help balance it out from a social perspective.

One such concept is that of the "evil eye," referred to earlier, which can bring destruction on the prosperous even if it is not the envier's intention. The belief in the evil eye is culturally widespread and dates at least as far back as 4000 BC, as noted by Lindholm (chap. 13, this volume). One intriguing hypothesis is that the evil eye belief

developed as a balancing mechanism within cultures by providing a way to potentially offset the effects of inequity (Lindholm, chap. 13, this volume; Miceli & Castelfranchi, 2007; Parrott & Rodriquez Mosquera, chap. 7, this volume; Smith & Kim, 2007). It might do so by giving the envier a sense of power (and perhaps decreases depression over having less) and by causing the envied to fear loss. These authors note several cultural practices that seem consistent with this theory, such as taboos on eating in public and requirements to share food with others if one does, and hiding of pregnancy (see also Foster, 1972).

Parrott and Rodriquez Mosquera describe several additional cultural effects on envy. One is through imposing rules regarding its expression. Other ways are by influencing people's interpretation of events, including their appraisals that trigger envy (e.g., personal responsibility for one's fate), whether a situation is seen as a zero-sum game, and how social status is viewed (e.g., vertical versus individualistic). These authors also note that honor is another factor that is affected by culture and proposed to play a role in envy. They suggest that "honor cultures" (Nisbett & Cohen, 1996), in particular, promote ideas of the evil eye to offset the effect that honor has on increasing the desire to be envied.

Lindholm raises some intriguing predictions regarding cultural differences. He notes Garrison and Arensberg's (1976) argument that evil eye is particularly likely to exist in midlevel, "part societies" (i.e., those whose structure is between simple societies such as hunter and gathers and complex societies). In building on this, Lindholm proposes that fear of being envied and envy are likely to recede in complex societies, such as those of the United States, which have extensive government and judicial systems, growing economies, and impersonal distribution of resources (e.g., in contrast to the personal sharing that takes place in hunter-gatherer societies).

Some of the predictions and findings in cross-cultural work on envy appear inconsistent on first glance. For example, the United States is a culture that some contend should be relatively immune to envy (Lindholm, chap. 13, this volume). However, Parrott and Rodriquez Mosquera (chap. 7, this volume) find that Americans predict greater envy as well as greater fear of "becoming the target of hostile ill will" as compared with the Dutch or Spanish, when given the same types of scenarios. The latter comparison is particularly interesting given that Spain is historically regarded as an honor culture, and that honor is sometimes associated with greater envy (see Lindholm, chap. 13, this volume). However, such inconsistencies may not be as extreme as they appear. For one, the number of studies that directly compare cultures is fairly small (for exceptions, see chapters by Lindholm and by Parrott and Rodriquez Mosquera). Furthermore, those cultures that are compared to one another are often quite similar in many ways. Thus, discussions of relative envy are "relative" because the full gamut of existing cultures is not being compared (e.g., the Netherlands, the United States, and Spain are all relatively complex societies by Lindholm's definition). Furthermore, factors such as honor may be viewed in very different ways (e.g., as zero-sum games or not) and have very different connotations (e.g., see descriptions of honor of the Swat versus the Spanish) and thus may effect envy differently. Additional study of envy from cross-cultural

perspectives is certain to prove exciting. However, it will be rather disconcerting if the United States proves to be one of the less envious cultures, given that a majority of research discussed in this volume has focused on U. S. samples and has argued for its often intensely negative effects.

Envy, and the difficulty regulating it by individuals and societies, is an area ripe for further investigation. The consequences of the negative emotions associated with envy are widely known: poorer physical health for individuals (see Smith et al., chap. 16, this volume), violence among dyads, and criminal behavior (such as white-collar crime and theft) among societies. Grand social experiments designed, in part, to regulate envy—socialism in Russia and China, and the Israeli kibbutz come to mind—have not succeeded on a large scale and have negative side effects of their own. The question remains: What combination of self-regulatory strategies, cultural practices, and societal belief systems effectively reduces invidious social comparison?

Final Comments and Future Directions

Several contributors discuss the emergence of intriguing new directions for envy research. We discuss these as well as make suggestions of possible paths for future work, but we are under no illusions that such future steps will not be fraught with conceptual and methodological challenges.

To date, there has been little or no work on whether envy is associated with distinct facial displays, let alone patterns of central or peripheral nervous system responses. Such research could potentially offer evidence that might help uncover the underlying nature of envy, and whether it is a distinct emotion that differs from other emotions. Of note, Darwin did not think that envy had a distinct expression:

> A man may . . . be corroded with envy or jealousy, but as these feelings do not at once lead to action, and as they commonly last for some time, they are not shown by any outward sign, excepting that a man in this state assuredly does not appear cheerful or good-tempered. If indeed these feelings break out into overt acts, rage takes their place, and will be plainly exhibited. Painters can hardly portray suspicion, jealousy, envy, &c., except by the aid of accessories which tell the tale; and poets use such vague and fanciful expressions as "green-eyed jealousy." (*The Expression of the Emotions in Man and Animals*, p. 79)

It is of interest, however, that envy, across many cultures is associated with the notion of the evil eye—an envious person's gaze can bring about a fortunate person's ruin. Perhaps careful examination of the expressions made during envy might reveal that people have picked up on something in another's expression. Even if envy does not have its own unique facial expression, it might be that facial analysis will reveal some distinctive elements not present in anger, sadness, or other emotions triggered by unfavorable social comparisons. Such work might also provide an avenue for predicting when envy will motivate socially destructive behaviors given the link between envy and hostility, as well as Darwin's observation noted above.

The present volume includes two chapters that reflect growing interest in the application of neuroscience approaches to the study of emotion. One tool that has particularly caught the attention of psychologists is functional magnetic resonance imaging (fMRI). It is exciting to see that several of the authors in this volume have begun exploring the use of such methods in the study of envy (Joseph et al., chap. 14, this volume; Harris, Cikara, & Fiske, chap. 8, this volume). This has the potential to illuminate the phenomenon of envy from a very different level of analysis. Joseph et al. provide a particularly helpful overview of various structures that may be involved with emotions and social processing. They use existing research on other psychological states to generate novel hypotheses regarding how various brain structures may be involved with envy, which await empirical investigation. In discussing their recent research, L. Harris et al. argue that social neuroscience "supports the ambivalent nature of the affective response to envied groups."

Despite our enthusiasm, we would be remiss if we did not note that interpretations of fMRI data are difficult and can be controversial. A group of prominent neuroscientists recently cautioned against making the unwarranted assumption that greater activation in a particular area, such as the amygdala, necessarily means greater experience of a particular affective state (see Aron et al. letter to *New York Times* and Editorial in *Nature*). One limiting factor is the spatial resolution of fMRI. An area that "lights up" can reflect any of a variety of relatively independent neural systems, which can have very different associations with behavior (and presumably emotion). For example, non-human animal research has found that the amygdala consists of several different neural populations, including ones that can be associated with aggressive, affiliative, or fearful behaviors (Choi et al., 2005; Swanson, 2003). Similarly, work in rats suggests that adjoining areas of the nucleus accumbens are associated with fearful behaviors and with appetitive behaviors (Reynolds & Berridge, 2001). One interesting aspect of this latter work is that there appears to be no "neutral area"; instead, stimulation of the overlapping regions of the nucleus accumbens elicits ambivalent behaviors. Unfortunately, such studies cannot be performed with humans, and no good animal model of envy exists that could potentially speak to hypotheses regarding ambivalence in envy.

In short, while it seems likely that fMRI will shed interesting new light on our understanding of envy, it, like other measures, has its own limitations. Thus, caution is warranted in assuming that it will prove a more accurate indicator, relative say to self-report, of a person's envy. Moreover, greater activity in a region during an emotional state does not at all imply that this area is "crucial" for the cognitive/emotional task being examined (Coltheart, 2006). Efforts to draw brain-behavior linkages relating to envy might also be advanced by the study of patients with focal brain lesion that have resulted in specific social and emotional deficits (Damasio, 1998). Although extremely difficult to obtain, dissociations in the effects of brain damage provide a stronger evidence than neuroimaging can provide for the necessity of particular neural systems for a given psychological process or state.

The contributors to this volume include some of the most creative and sound investigators in the area of human emotional experience and social relations. We suspect

that many of the issues raised in this final section of our chapter will be among those addressed in the future research efforts of this group. Envy represents a pervasive and common emotion with important consequences for the individual and society, and we hope that other investigators with varying disciplinary approaches will join the effort to understand this complex human experience.

Notes

1. An appraisal perspective is another popular approach to basic emotions (Scherer, 2001; Smith & Ellsworth, 1985), which focuses on the specific appraisal components (e.g., degree of certainty, of control) that lead to distinct emotions. Although the appraisal and motivational approaches can be viewed as distinct, they are generally complimentary and in practice often tend to differ only in a matter of which aspect of an emotional episode is emphasized (Lerner & Tiedens, 2006).

2. A basic emotions perspective can be contrasted with a dimension approach (Barrett, 2006; Russell, 1980) that views emotional experiences as representing different points in a multidimensional space. What one labels as a specific emotion is the result of particular points on some set of dimensions, such as arousal and valence. It is possible that a dimensional theory could account for envy, although empirical work specifically focusing on envy using such an approach is lacking.

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