

Freudian Defense Mechanisms and Empirical Findings in Modern Social Psychology: Reaction Formation, Projection, Displacement, Undoing, Isolation, Sublimation, and Denial

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ABSTRACT Recent studies in social psychology are reviewed for evidence relevant to seven Freudian defense mechanisms. This work emphasizes normal populations, moderate rather than extreme forms of defense, and protection of self-esteem against threat. Reaction formation, isolation, and denial have been amply shown in studies, and they do seem to serve defensive functions. Undoing, in the sense of counterfactual thinking, is also well documented but does not serve to defend against the threat. Projection is evident, but the projection itself may be a by-product of defense rather than part of the defensive response itself. Displacement is not well supported in any meaningful sense, although emotions and physical arousal states do carry over from one situation to the next. No evidence of sublimation was found.

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Nearly all adults hold preferred views of themselves. In most cases, these are favorable views of self—indeed, somewhat more favorable than the objective facts would entirely warrant, as nearly all writers on the self have observed. A recurrent problem of human functioning, therefore, is how to sustain these favorable views of self. Patterns of self-deception can help create these inflated self-perceptions (for reviews, see Baumeister, 1998; Gilovich, 1991; Taylor, 1989). Yet a particular crisis in self-perception may arise when an internal or external event occurs that clearly violates the preferred view of self. In such cases, it is necessary for the self to have some mechanism or process to defend itself against the threatening implications of this event. Such processes are commonly called *defense mechanisms* (e.g., Cramer, 1991; A. Freud, 1936).

Sigmund Freud proposed a set of defense mechanisms, in a body of work that has long been influential (e.g., S. Freud, 1915/1961a, 1923/1961c, 1926/1961d). His work focused on how the ego defended itself against internal events, specifically, impulses that were regarded by the ego as unacceptable. He emphasized sexual or aggressive desires that would violate the ego's internalized standards, such as if those desires were directed toward one's parents. In his view, the efforts by the self to avoid recognizing its own sexual and aggressive desires were systematically important in shaping the personality.

Modern personality and social psychology has not generally accepted the view that personality is heavily based on efforts to disguise one's sexual and aggressive impulses. Nonetheless, the need for defense mechanisms remains quite strong. A revisionist idea, proposed by Fenichel (1945), is that defense mechanisms are actually designed to protect self-esteem. This reformulation is far more in keeping with current work in social and personality psychology than Freud's original view was. One can search long and hard through today's research journals without finding much evidence about how human behavior reflects attempts to ward off sexual and violent feelings, but evidence about efforts to protect self-esteem is abundant.

Ultimately, the view that defense mechanisms are oriented toward protecting self-esteem may not contradict Freud's views so much as it merely changes his emphasis. Acknowledging that one possessed socially unacceptable impulses of sex or violence may have constituted a self-esteem threat for the Victorian middle-class adults he studied. Today's adults are presumably less afraid of having sexual or violent feelings, and indeed the absence of sexual interest may constitute an

esteem threat to some modern citizens—in which case their defense mechanisms would ironically try to increase the self-perceived frequency or power of sexual impulses, contrary to the Freudian pattern.

Most researchers in personality and social psychology today would readily acknowledge that people defend their self-concepts against esteem threats. Yet relatively few researchers have made explicit efforts to relate their findings about defensive processes to the general theory of defense mechanisms. The purpose of the present article is to review research findings from personality and social psychology that can be interpreted as reflecting the major defense mechanisms that Freud proposed. In a sense, then, this review will ask how Freud's list of insights stacks up against today's experimental work.

How much should one expect? Obviously, any accuracy at all would be impressive. Few researchers today would feel confident about having dozens of their theoretical hypotheses tested many decades into the future by empirical techniques that they today could not even imagine.

To anticipate the conclusion, we found substantial support for many (but not all) of the processes of defense Freud outlined. There are also some aspects to the causal process that Freud does not appear to have anticipated, as one would naturally expect. We shall describe a series of the major defense mechanisms and conclude that some of his ideas were correct, some require minor or major revision, and others have found little support. All in all, this amounts to a rather impressive positive testimony to Freud's seminal theorizing.

Plan and Task

If Freud had furnished a definitive list of defense mechanisms, the organization of the present article would be straightforward: We would proceed through each of the mechanisms in turn, evaluating how current research findings fit, alter, or contradict it. Unfortunately, Freud does not appear to have ever furnished either a comprehensive list of defense mechanisms or an integrative theory of defenses (see Laplanche & Pontalis, 1973). Anna Freud (1936) did attempt a systematic taxonomy of defense mechanisms, but her list is too long and too oriented toward psychopathology for our purposes.

Our inelegant solution is therefore to focus on seven defense mechanisms that Freud described and that have been relevant and influential to subsequent work. Our selection of these has also been shaped by the

intention of reviewing current research in personality and social psychology, as opposed to studying abnormal populations and pathological processes, so we have chosen to emphasize defenses that are arguably most relevant to normal (as opposed to clinical) human functioning. The list is as follows: reaction formation, projection, displacement, undoing, isolation, sublimation, and denial.

With each defense mechanism, we shall first ask whether research evidence shows that it actually occurs. The strength and generality of this evidence must also be considered. If the defense mechanism is supported in some sense, then we must ask what the cognitive, affective, and behavioral processes are. A related question is whether there is evidence of defensive motivation, as opposed to evidence of some merely cognitive error or bias. To qualify as a full-fledged defense, it must do more than merely make people feel better: It must actually ward off some threat to the self.

Purely conscious maneuvers are not generally considered full-fledged defense mechanisms. Like self-deception generally, defense mechanisms must involve some motivated strategy that is not consciously recognized, resulting in a desirable conclusion or favorable view of self that is conscious.

Review of Findings

In this section, we shall examine seven major defense mechanisms in turn. The review will try to ascertain how well each defense mechanism is supported in modern research in personality and social psychology and what theoretical adjustments may be required to make the theory fit modern findings.

Repression is missing from this list (although denial, which is conceptually similar, is included), and this omission deserves comment, especially insofar as other treatments of psychological defenses have emphasized repression almost to the exclusion of all other defenses—as possibly encouraged by Freud himself. In some interpretations of Freudian theory, repression is simply one of the defense mechanisms, and in others it is an aspect of all of them. Our approach, however, regards repression in a way that more complex interpretations of Freud have done. Specifically, repression is not a defense mechanism per se, and indeed defense mechanisms are called into being because of the inefficacy of repression. In this view, repression is simply the blotting of

threatening material out of the conscious mind, and if that could succeed, then there would be no need for defense mechanisms.

Relevant evidence on this point was provided by Wegner and his colleagues (Wegner, 1989, 1994; Wegner, Schneider, Carter, & White, 1987). Although they have used the term “suppression” rather than “repression,” the theme of forcibly ejecting unwanted thoughts from the conscious mind is common to both. Wegner et al. showed that people can indeed be partly successful at suppressing such thoughts, but then later these thoughts increase in frequency. Wegner et al. dubbed this subsequent increase the “rebound effect,” but it closely parallels Freud’s (1915/1961b) concept of the “return of the repressed.” The point of this effect (regardless of the term) is that simply shutting undesired thoughts out of the mind is not viable as a long-term solution. Hence the need for defense mechanisms that can be more successful.

Reaction Formation

Concept. The concept of reaction formation involves converting a socially unacceptable impulse into its opposite. To apply this notion to esteem protection, one may propose the following: People respond to the implication that they have some unacceptable trait by behaving in a way that would show them to have the opposite trait. Insinuations of hostility or intolerance might, for example, be countered with exaggerated efforts to prove oneself a peace-loving or tolerant person.

Evidence. The original ideas about reaction formation pertained to aggressive and sexual impulses, and these are still plausible places for finding defenses, provided that acknowledging those impulses or feelings would damage self-esteem. With sex, there are undoubtedly still cases in which people regard their own potential sexual responses as unacceptable.

One such finding was provided by Morokoff (1985), who exposed female subjects to erotic stimuli after assessing sex guilt. Women high in sex guilt would presumably regard erotica as unacceptable, and consistent with this attitude they reported lower levels of arousal in response to those stimuli. Physiological measures suggested, however, that these women actually had higher sexual arousal than other participants. The contradiction between the genital response and the self-report findings suggests

that these women subjectively repudiated their physical sexual arousal and insisted that they were not aroused.

A comparable finding with male subjects was recently reported by Adams, Wright, and Lohr (1996). They assessed homophobia and then exposed participants to videotapes depicting homosexual intercourse. Homophobic men reported low levels of sexual arousal, but physiological measures indicated higher levels of sexual response than were found among other participants. Thus, again, the subjective response reported by these participants was the opposite of what their bodies actually indicated. This finding also fits the view that homophobia may itself be a reaction formation against homosexual tendencies, insofar as the men who were most aroused by homosexuality were the ones who expressed the most negative attitudes toward it.

Prejudice would provide the most relevant form of unacceptable aggressive impulse, because American society has widely endorsed strong norms condemning prejudice. If people are led to believe that they may hold unacceptably prejudiced beliefs (or even that others perceive them as being prejudiced), they may respond with exaggerated displays of not being prejudiced.

An early and convincing demonstration of reaction formation (although it was not called that) against prejudice was provided by Dutton and Lake (1973; see also Dutton, 1976). Nonprejudiced, egalitarian, White individuals were provided with false physiological feedback allegedly indicating that they held racist prejudices against Blacks. In one study, for example, they were shown slides of interracial couples, and the experimenter commented that the subject's skin response indicated severe intolerance of interracial romance, which was tantamount to racism. After the procedure was ostensibly completed, the participant left the building and was accosted by either a Black or a White panhandler. People who had been implicitly accused of racism gave significantly more money to the Black panhandler than people who had not been threatened in that way. Donations to the White panhandler were unaffected by the racism feedback. The implication was that people became generous toward the Black individual as a way of counteracting the insinuation that they were prejudiced against Blacks.

A parallel finding with gender prejudice was reported by Sherman and Garkin (1980). Participants were pretested on attitudes toward feminist issues and categorized as high or low in feminism. They were then randomly assigned to solve a sex-role logic problem, another reasoning

problem of comparable difficulty, or no problem. The sex-role problem was actually a trick problem designed to play on stereotypes, with the result that participants who failed to solve it ended up feeling implicitly accused of sexist bias. All participants then read an abbreviated version of a sex discrimination case in which a university chose to offer a faculty position to a man instead of a woman. Participants who had been exposed to the threatening implication of sexism gave significantly harsher verdicts compared to those in the control conditions, and there was a similar effect on subjective ratings of the university's decision. Thus, when people were tricked into implicitly accusing themselves of sexism, they responded by asserting views that were the extreme opposite of sexism. Moreover, this reaction formation was most pronounced when nonsexist attitudes were particularly central to the self-concept.

There is a related set of findings in which White subjects show preferential favorability toward Black stimulus persons without any threat. One might argue that White people often feel threatened by the possibility of seeming racist when interacting with Black people. Rogers and Prentice-Dunn (1981) found that White subjects playing the role of teacher administered fewer shocks to a Black than to a White confederate in the role of learner, although the effect was reversed if the learner had previously insulted them. Johnson, Whitestone, Jackson, and Gatto (1995) showed that White subjects as simulated jurors gave lighter sentences to Black than to White defendants, although this effect was reversed when a more severe sentence to the Black man could be defended on nonracial grounds. Shaffer and Case (1982) found that heterosexual simulated jurors gave lighter sentences to a homosexual defendant than to a heterosexual one, although this effect was found only among people who scored low in dogmatism.

Whether these effects constitute reaction formation is not entirely clear. Biernat, Manis, and Nelson (1991) provided evidence that people may use different standards when judging minority targets as opposed to judging members of the majority category. For example, a Black candidate for law school might be judged more favorably than a White candidate with identical credentials if the judges use more lenient criteria for Blacks. (Then again, the use of more lenient criteria might itself qualify as a reaction formation, insofar as it is a strategy to defend against one's own prejudice.)

Another interpretive issue is whether these apparent reaction formations reflect intrapsychic defensive responses or self-presentational

plays. The antiprejudice norms that now dominate White American society may, after all, motivate people to avoid being perceived by others as prejudiced, but it is conceivable that many people care only about the *appearance* of prejudice and might privately hold strongly prejudiced views.

The concept of reaction formation could be applied to Devine's (1989) theory of prejudice. In her view, prejudiced and nonprejudiced people hold similar stereotypes and experience similar activation of these stereotypes when an appropriate target is present. Prejudicial stereotyping is thus an automatic response. The difference is that nonprejudiced people override this automatic stereotyping response with a controlled process that replaces prejudicial thoughts with egalitarian, tolerant ones. This mechanism is thus an intrapsychic response that rejects unacceptable thoughts and instead asserts the opposite, socially acceptable view.

This form of self-regulatory response to prejudice was demonstrated by Monteith (1993), who found that low prejudiced people inhibited prejudicial responses to jokes about gays as a consequence of activation of prejudice-related discrepancies. Likewise, Klein and Kunda (1992) found that people who expected to interact with members of a stigmatized group (and therefore were motivated to see them favorably) expressed more positive stereotypes of this group, as compared with people who did not expect such an interaction. It is, however, not entirely clear whether these findings indicate that the reaction is sufficiently unconscious to qualify as a defense mechanism and whether the socially undesirable views are shielded from the person's own conscious recognition.

Reaction formation may also be involved when self-appraisals paradoxically rise in response to negative feedback. McFarlin and Blascovich (1981) showed that people with high self-esteem made more optimistic predictions for future performance following initial failure than following initial success. Baumeister, Heatherton, and Tice (1993) showed this confidence to be irrational and unwarranted, and also showed it to be sufficiently powerful to motivate costly monetary bets. These responses do appear defensive and irrational, for there is no obvious reason that confidence should be increased by an initial failure experience.

Last, some evidence suggests a loose pattern of increasing favorable self-ratings in response to receiving bad (instead of good) personality feedback. Baumeister and Jones (1978) found enhanced self-ratings in response to bad feedback that was seen by other people, although the

increased favorability was found only on items unrelated to the content of the feedback, indicating a compensatory mechanism rather than a pure reaction formation. Baumeister (1982b) provided evidence that people with high self-esteem were mainly responsible for the effect. Greenberg and Pyszczynski (1985) showed that this inflation of self-ratings occurred even on private ratings, although again mainly in response to public feedback. They pointed out that public bad feedback constitutes a stronger threat than private feedback. Their finding that private self-ratings also showed the reaction formation pattern of increased favorability is apparently an intrapsychic response rather than a purely self-presentational strategy.

Conclusion. Plenty of research findings conform to the broad pattern of reaction formation, defined loosely as a means of defending against esteem threat by exhibiting an exaggerated or extreme reaction in the opposite direction. Although the mechanism underlying reaction formation may not conform precisely to Freud's model, the human phenomena he characterized with that term do appear to be real. In particular, when people are publicly or implicitly accused of having socially undesirable sexual feelings, prejudiced attitudes, or failures of competence, some respond by asserting the opposite (and attempting to prove it) to an exceptionally high degree.

The consistency of these results across seemingly quite different spheres of esteem threat suggests that reaction formation deserves acceptance in social and personality psychology. Apparently it is one of the more prominent and common responses to esteem threat.

Still, the causal process underlying reaction formation remains to be elaborated. Many of the findings may be merely self-presentational strategies designed to correct another person's misperception rather than a genuinely intrapsychic defense mechanism. Moreover, if reaction formation can be firmly established as an intrapsychic response, it would be desirable to know how it operates. How, for example, does someone manage to feel sexually turned off when his or her body is exhibiting a strong positive arousal? How do people come to convince themselves that the money they give to a Black panhandler reflects a genuine attitude of racial tolerance rather than a response to the specific accusation of racism they recently received—especially when, as the researchers can show, those people would not have given nearly as much money to the same panhandler if they had not been accused of racism?

Projection

Concept. Projection is a popular concept in everyday discourse as well as in psychological thought. In its simplest form, it refers to seeing one's own traits in other people. A more rigorous understanding involves perceiving others as having traits that one inaccurately believes oneself not to have. As a broad form of influence of self-concept on person perception, projection may be regarded as more a cognitive bias than a defense mechanism. Nonetheless, projection *can* be seen as defensive if perceiving the threatening trait in others helps the individual in some way to avoid recognizing it in himself or herself, and indeed this is how Freud (e.g., 1915/1961a) conceptualized projection. Thus, there are multiple ways of understanding projection, and they vary mainly along the dimension of how effectively the undesirable trait or motive is repudiated as part of the self.

Evidence. The simpler, more loosely defined version of projection is fairly well documented. The *false consensus effect*, first described by Ross, Greene, and House (1977), is probably the best-known form of this, insofar as it is a broad tendency to assume that others are similar to oneself. The false consensus effect is defined as overestimating the percentage of other people who share one's traits, opinions, preferences, or motivations. This effect has both cognitive and motivational influences (Krueger & Clement, 1994; Marks, Graham, & Hansen, 1992; Sherman, Presson, & Chassin, 1984); is found if anything more with positive, desirable traits than with bad traits (Davis, Conklin, Smith, & Luch, 1996; Halpern & Goldschmitt, 1976; Lambert & Wedell, 1991; Paulhus & Reynolds, 1995); has been especially shown with competitiveness (Kelley & Stahelski, 1970a, 1970b) and jealousy (Pines & Aronson, 1983); and is linked to higher self-esteem and lower depression (Campbell, 1986; Crocker, Alloy, & Kayne, 1988). Some contrary patterns have been found, especially insofar as people wish to regard their good traits and abilities as unusual (Dunning & Cohen, 1992; Suls & Wan, 1987). In general, these findings show that people like to see themselves as similar to others, but the evidence does not show this to be a defense mechanism that helps people avoid recognizing their own bad traits.

It could be argued that the false consensus effect achieves a kind of defensive success insofar as it reduces the distinctiveness of one's bad traits. To be the only person who cheats on taxes or breaks the speed limit

would imply that one is uniquely immoral, even evil—but if everyone else is likewise breaking those laws, one's own actions can hardly be condemned with great force. Consistent with this, Sherwood (1981) concluded that attributing one's undesirable traits to targets who are perceived favorably can reduce stress. This explanation could also fit Bramel's (1962, 1963) demonstration that males who were told they had homosexual tendencies were later more likely to interpret other males' behavior as having similar tendencies. Likewise, it may explain the findings of Agostinelli, Sherman, Presson, and Chassin (1992): Receiving bogus failure feedback on a problem-solving task made people (except depressed people) more likely to predict that others would fail too.

None of these findings links seeing the trait in others to denying it in oneself, and so they fall short of the more rigorous definition of projection. Given the failure to show that projective responses can function to conceal one's own bad traits, Holmes (1968, 1978, 1981) concluded that defensive projection should be regarded as a myth. In retrospect, it was never clear how seeing another person as dishonest (for example) would enable the individual to avoid recognizing his or her own dishonesty. The notion that projection would effectively mask one's own bad traits was perhaps incoherent.

Recognizing the implausibility in the classical concept of projection, Newman, Duff, and Baumeister (1997) proposed a new model of defensive projection. In this view, people try to suppress thoughts of their undesirable traits, and these efforts make those trait categories highly accessible—so that they are then used all the more often when forming impressions of others (see Wegner, 1994; Wegner & Erber, 1992). In a series of studies, Newman et al. showed that repressors (as defined by Weinberger, Schwartz, & Davidson, 1979) were more likely than others to deny having certain bad traits, even though their acquaintances said they did have those bad traits. Repressors were then also more likely to interpret the ambiguous behaviors of others as reflecting those bad traits. Thus, they both denied their own faults and overinterpreted other people as having those faults.

The view that suppressing thoughts about one's undesirable traits leads to projection was then tested experimentally by Newman et al. (1997). Participants were given bogus feedback based on a personality test, to the effect that they had both good and bad traits. They were then instructed to avoid thinking about one dimension on which they had

received (bad) feedback. Next, they observed a videotape of a stimulus person and rated that person on all the dimensions on which they had received feedback. Participants rated the stimulus person about the same on all dimensions, except that they rated her higher on the trait for which they had received bad feedback and been instructed to suppress. They did not rate the stimulus person higher on traits for which they had received bad feedback without trying to suppress it. Thus, projection results from trying to suppress thoughts about some bad trait in oneself.

Conclusion. Considerable evidence indicates that people's conceptions of themselves shape their perceptions of other people. The tendency to see others as having one's own traits has limitations and is found with good traits along with bad ones. The view that people defensively project specific bad traits of their own onto others as a means of denying that they have them is not well supported. The concept of projection thus needs to be revised in order to fit modern research findings.

The view of projection as a defense mechanism is best supported by the findings of Newman et al. (1997), but even these deviate from the classic psychodynamic theory of projection. Newman et al. found that efforts to suppress thoughts about a particular bad trait made this trait into a highly accessible category that thereafter shaped the perception of others. In this view, the projecting of the trait onto other people is a by-product of the defense, rather than being central to the defensive strategy. To put this another way: In the original Freudian view, seeing the bad trait in another person is the essential means of avoiding seeing it in oneself. In Newman et al.'s view, however, the defense is simply a matter of trying not to recognize one's bad trait, and the success of that effort is not related to whether a suitable target for projection presents himself or herself.

This mechanism could well account for the observations that might have led Freud to postulate the defense mechanism of projection in the first place. After all, the person does refuse at some level to accept some fault in himself or herself and does, as a result, end up seeing other people as having that same fault. The Freudian view implied the transfer of the schema from one's self-concept directly into the impression of the other person. It may, however, be more accurate to see the effect on impression formation as simply a consequence of heightened accessibility resulting from efforts at suppression.

Displacement

Concept. Displacement refers to altering the target of an impulse. For example, an unacceptable violent impulse toward one's father might be transformed into a hostile attitude toward policemen or other authority figures. The targets of the actual aggression would be related by meaningful associations to the target of the original, inhibited impulse.

Evidence. Several studies have directly examined displacement of aggression. In a study by Hokanson, Burgess, and Cohen (1963), subjects were frustrated (or not) by the experimenter and then given an opportunity to aggress against the experimenter, the experimenter's assistant, a psychology student, or no one. The experiment yielded a marginal main effect for frustration, insofar as frustrated subjects were more aggressive than others, but the target made no difference. Measurements of systolic blood pressure did, however, suggest that tension levels among frustrated subjects dropped most when they aggressed against the experimenter, followed by the assistant, followed by the psychology major. Thus, the level of aggression remained the same whether it was aimed at the original target, at a relevant displaced target, or at an irrelevant target, but there was some physiological evidence suggesting that aggressing against the original target (or a closely linked one) was most satisfying.

The possibility of displaced aggression was also investigated by Fenigstein and Buss (1974). In this study, the instigator was not the experimenter, thereby removing alternative explanations based on the experimenter–subject relationship. Angered and nonangered subjects were given an opportunity to aggress either toward the instigator directly or toward a friend of his. As in the Hokanson et al. (1963) study, anger produced a main effect on aggression, but there were no differences in aggressive behavior as a function of target.

These findings can be interpreted in various ways. One might point to them as evidence for the high efficacy of displacement, given that people are equally aggressive toward other people as toward the person who has provoked them—suggesting, in other words, that the full amount of aggression can be displaced readily.

On the other hand, they could be interpreted as mere mood or arousal effects: People who are angry are more aggressive in general. Indeed, Miller (1948) showed similar effects with rats (e.g., attacking a dummy doll when the original enemy, another rat, is absent), and it is difficult to

assert that rats have defense mechanisms. Meanwhile, there is ample evidence that arousal can carry over from one situation to another. Research by Zillman and his colleagues has shown *excitation transfer* effects, in which arousal from one situation can carry over into another and influence aggressive behavior. Riding a stationary bicycle boosts arousal while not being either especially pleasant or unpleasant, but people who ride a bicycle are then subsequently more aggressive in response to a provocation than people who have not just exercised (Zillman, Katcher, & Milavsky, 1972), and indeed highly aroused subjects will ignore mitigating circumstances when someone provokes them, unlike moderately aroused people who will tone down their aggressive responses when they learn of the same mitigating facts (Zillman, Bryant, Cantor, & Day, 1975). Arousal that is caused by watching exciting films can likewise increase aggressive responses to provocation, even though the arousal itself has no relation to the provocation (Cantor, Zillmann, & Einsiedel, 1978; Ramirez, Bryant, & Zillman, 1982; Zillman, 1971).

To complicate matters further, recent work has not confirmed displacement. Bushman and Baumeister (1998) studied aggressive responses to an ego threat as a function of narcissism. Narcissists became more aggressive toward someone who had insulted them, but neither narcissists nor nonnarcissists showed any increased aggression toward a third person. This study was specifically designed to examine displaced aggression and failed to find any sign of it.

Scapegoating has been regarded as one instance of displaced aggression. In this view, people may become angry or hostile toward one target but are required for whatever reasons to avoid aggressing, and so they redirect their aggression toward a safer target. A classic paper by Hovland and Sears (1939) showed that the frequency of lynchings in the American South was negatively correlated with cotton prices. When prices dropped, according to the scapegoat interpretation, farmers suffered material deprivation, frustration, and hostility, and they redirected their hostility toward relatively safe targets in the form of Black men accused of crimes. Hepworth and West (1988) reexamined those data with more modern statistical techniques and confirmed the relationship.

Such evidence of scapegoating does not, however, embody a pure instance of displacement. The original hostility may not have had a specific target; rather, the cotton farmers may have been generally distraught. Recent work by Esses and Zanna (1995) offered an alternative

explanation in terms of mood-congruent stereotypes. They showed that bad moods induced by musical stimuli (hence having no esteem threat) caused negative stereotypes to become more accessible. This accessibility might explain the southern farmers' willingness to react violently to alleged misdeeds by Black citizens, without postulating that the violence was borrowed from another source or impulse.

In principle, unacceptable sexual or other impulses should also be amenable to displacement. Mann, Berkowitz, Sidman, Starr, and West (1974) exposed long-married couples to pornographic movies and found that this exposure led to an increased likelihood of marital intercourse on that same evening. This could be interpreted as displacement of sexual desire from the inaccessible movie star onto the socially acceptable target of one's mate. Unfortunately, however, this effect is likewise amenable to alternative explanations based simply on a generalized arousal response.

Conclusion. Despite the intuitive appeal of the concept of displacement, research has not provided much in the way of clear evidence for it. The handful of findings that do suggest displacement are susceptible to alternative explanations such as general tendencies for arousal or bad moods to facilitate aggression.

Some might contend that the arousal or mood effects should not be considered alternative explanations but rather can be subsumed under a looser conception of displacement. If Harry gets angry at his boss for criticizing him, and because of this anger Harry later gets into a fight with a stranger whom he normally might have ignored, should this qualify as displacement? It is, however, in no sense the same impulse that is displaced onto a new target. Whether he had inhibited his anger against his boss or expressed it might make no difference. Given that artificial mood or arousal inductions, even including the arousal from riding a bicycle, can produce the same readiness to respond aggressively to a new provocation, it seems misleading to speak of such an effect as displacement.

More to the point, there is no evidence that such arousal or mood effects serve a defensive function. Displacement would only qualify as a defense mechanism if the original, unacceptable impulse were prevented from causing some damage to self-esteem (or having some similar effect, such as stimulating anxiety). There is no evidence of any such effect.