



Reactance Theory

6

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Introduction

In summer 2016, a debate over Muslim women’s beachwear, known as burkini – a swimwear with body and head coverings – popped up in France. As a result, three cities restricted women to wear a burkini at the beach. The restriction of these women’s freedom to wear a burkini caused mixed reactions, but one was the “wear what you want” initiative which also spread on social media picturing Muslim and non-Muslim women with and without burkinis and holding up signs with “wear what you want” (see Fig. 6.1).

This example illustrates how people often react to threats to their own or another person’s freedom. They fight against it urging the threatening agents – in this case the politicians – to remove the threat and, thus, restore freedom. The impulse to fight back to freedom restrictions results from the experience of a motivational state called psychological **reactance**. It is characterized by a strong desire to restore and secure the threatened freedom and actual attempts to do so (Brehm, 1966; Brehm & Brehm, 1981).

However, reactance does not emerge in every freedom-threatening situation. Importantly, only when people view themselves as possessing certain free behaviors and when they perceive a threat to those behaviors, reactance emerges. Moreover, people’s free behaviors are not only associated with certain expectation but often are

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Fig. 6.1 “Wear what you want” demonstration in London. (Photography by T. Akmen, Anadolu Agency, Getty Images; retrieved from <https://www.vox.com/2016/8/25/12644846/burkini-ban-sexism-women-clothing-illustration-muslim-france>)

also connected to own values and attitudes. Thus, free behaviors constitute aspects of people’s self. Reactance aims at restoring freedom by shedding light on those aspects. The experience of reactance therefore leads people to reflect on who they are and what is important to them. Being able to act in accordance with one’s self, for example, by expressing one’s own opinion, is related to people’s identity. It makes them aware of what is important to them, that they are the origin of their actions, and that they are able to act in accordance with their self. Thereby, people experience a sense of autonomy (Deci & Ryan, 1985; Deci & Ryan, 2000; see also Roth, Ch. 3 this volume).

Considering that reactance is not just a simple resistance against social influence attempts helps us to understand why the burkini example triggers reactions that go beyond the simple question of what clothes are allowed to wear. Freedom threats do not only lead to resistance but also to questions about oneself, one’s group, and society,

about who we are, and whether one can live in accordance with own values and attitudes.

The current chapter summarizes psychological reactance theory (Brehm, 1966) which can explain why people sometimes “fight back,” meaning that they do the opposite of what they are supposed to do or resist the social influence of others. Most importantly, it elaborates on the value of reactance by explaining how reactance connects to the self and own important values.

Definition Box

Reactance: Reactance results from a (perceived) threat to freedom. It is “a motivational state directed toward the re-establishment of the threatened or eliminated freedom, and it should manifest itself in increased desire to engage in the relevant behavior and actual attempts to engage in it” (Brehm, 1966, p. 15f).

Reactance Theory

Freedom and Threat to Freedom

Reactance theory (Brehm, 1966; Brehm & Brehm, 1981; for an overview, see Miron & Brehm, 2006; Steindl, Jonas, Sittenthaler, Traut-Mattausch, & Greenberg, 2015) describes what is happening within individuals when they perceive a threat to their freedom. For Brehm, freedom meant "...an individual's belief that he or she can engage in a particular behavior. The freedom can pertain to what one does, how one does it, or when one does it..." (Brehm & Brehm, 1981, p. 358). We all expect that we possess certain freedoms, meaning that we can choose between performing and not performing a certain behavior (Brehm & Brehm, 1981). Yet, in many situations in our lives, where we initially believed to be free, we suddenly experience that we are not free. For instance, citizens believe to be free in voting for the political party they prefer, but politicians try to manipulate them to vote for their platform; employees believe to be free in wearing what they want at work, but the company requires them to show up in business look; children believe to be free in choosing their field of study, but parents pressure them to study medicine; or women believe to be free in wearing what they want at public beaches, but a new law forbids them to wear a burkini. We perceive these situations as threats to our freedom when we cannot act as desired, when we feel that "some event has increased the difficulty of exercising the freedom in question" (Brehm & Brehm, 1981, p. 35). Consequently, something inside us generates the impulse to fight back. This "something" is what we call psychological reactance. Reactance is a motivational state which serves as a motivator to restore or secure the threatened freedom (Brehm, 1966; Brehm & Brehm, 1981). It is a theoretical construct manifested in an increased subjective desire to exercise the threatened freedom – *reactance motivation* – and actual behavioral attempts to do so, *reactance striving* (Brehm, 1966; Brehm & Brehm, 1981; Wright, Agatarap, & Mlynski, 2015). Thus, the term "reactance" means both, the subjective and behavioral reactions.

Reactance Motivation

Reactance is always accompanied by subjective responses, such as the experience of emotion. People feel uncomfortable, hostile, aggressive, and angry (Berkowitz, 1973; Brehm, 1966; Brehm & Brehm, 1981; Dillard & Shen, 2005; Rains, 2013). Another subjective reaction is a change in the attractiveness of the threatened or imposed outcome. People upgrade the restricted option or downgrade the imposed option (e.g., Bijvank, Konijn, Bushman, & Roelofsma, 2009; Brehm, 1966; Brehm & Brehm, 1981; Bushman & Stack, 1996; Dillard & Shen, 2005). In a classic experiment by Brehm, Stires, Sensenig, and Shaban (1966), participants listened to four records and rated how well they liked each of them. They were made to believe that they could choose one of the records as a gift but then learned that one of the records was unavailable. Results revealed that in a second rating, this record increased in its attractiveness. Brehm also mentions that people who are threatened in their freedom become aware of what they really want. They know their desires and goals and feel that they are their own director of behavior (increased self-direction; Brehm, 1966; Brehm & Brehm, 1981). Thus, banning the burkini from beaches would lead some women to feel angry, to upgrade the burkini in its attractiveness, and to realize that the freedom to wear what they want is indeed highly important to them.

Reactance Striving

Reactance striving can be manifested in exercising the threatened freedom (direct restoration), exercising a related behavior or observing others exercising the threatened freedom (indirect restoration), aggressively forcing the threatening agent to remove the threat, or just letting off steam by reacting in an aggressive way (aggression) (Brehm, 1966; Brehm & Brehm, 1981). For example, forbidding teenagers to go out can lead to the exact opposite behavior (i.e., going out in secret). This is also known as the *boomerang effect* and is the direct restoration of freedom

(Brehm, 1966). Not going out but performing a related and also forbidden behavior (e.g., smoking) would be the indirect restoration of freedom, and shouting at and insulting their parents to get what they want would be the aggressive form of reactance striving. Thus, reactance striving is the visible reaction to freedom threats. But what exactly is reactance motivation itself, can we “see” it, and how can it be assessed?

Box 6.1 Questions for Elaboration

Think about examples in your life where you believed that you are free but then were restricted in this freedom. Did you experience reactance? How did you react? What were your subjective and behavioral reactions?

What Is Reactance Motivation: Catching the State

Although Brehm stated that reactance is “an intervening, hypothetical variable” that cannot be measured directly (Brehm & Brehm, 1981, p. 37), studies tried to catch reactance motivation with different instruments such as self-report measures and physiological or neuropsychological measures.

Self-Report Measures

Some studies have investigated reactance in the context of persuasion (Dillard & Shen, 2005; Kim, Levine, & Allen, 2013; Rains, 2013), as persuasive messages often pose freedom threats to people. Here, reactance has been conceptualized as a composite of self-reported anger (e.g., irritated, annoyed) and negative cognition in the form of counterarguments. For example, in Dillard and Shen’s study (2005), a persuasive message, such as “Flossing: It’s easy. Do it because you have to!” (p. 152), led to a negative

attitude toward flossing. This relationship could be explained via people’s experienced reactance which consisted of anger and negative cognitions. The negative attitude further predicted people’s behavioral intention not to floss.

Beyond the context of persuasion, studies view people’s reactance consisting of their self-reported experience of reactance (e.g., perception of freedom threat), their aggressive behavioral intentions toward the threatening agent (e.g., ruin his/her reputation), and their negative evaluations of the threatening agent (e.g., believing that he/she takes advantage of other people) (Salzburg State Reactance Scale; SSR Scale; Sittenthaler, Traut-Mattausch, Steindl, & Jonas, 2015). In these studies, people’s experience of reactance is conceptualized as a combination of a perceived threat to their freedom (e.g., “How restricted would you feel in your freedom of choice?”) and their emotional experience (e.g., “How irritated would you feel?”). This conceptualization has been used in reactance studies investigating change situations such as political reforms, culture, and vicarious reactance and has been shown to explain why people react with resistance or with a negative attitude to restrictions (Sittenthaler & Jonas, 2012; Sittenthaler, Traut-Mattausch, & Jonas, 2015; Traut-Mattausch, Guter, Zanna, Jonas, & Frey, 2011; Traut-Mattausch, Jonas, Förg, Frey, & Heinemann, 2008).

Physiological and Neuropsychological Measures

Guided by Brehm (1966), who noted that reactance should be accompanied by physiological arousal, research assessed people’s heart rate following a freedom threat. Results depicted that when people experienced a freedom threat by imagining being restricted from renting a flat, their heart rate increased immediately (Sittenthaler, Jonas, & Traut-Mattausch, 2016, see Box 6.2; Sittenthaler, Steindl, & Jonas, 2015).

Research has also considered neuropsychological parameters to directly measure reactance

motivation. By using electroencephalography (EEG), Mühlberger, Klackl, Sittenthaler, and Jonas (2018) tried to more accurately capture the specific kind of motivation that reactance stimulates. They looked at a specific indicator of motivation, namely, left frontal cortical activity. This parameter has been found to relate to approach motivation (e.g., Harmon-Jones, 2003, 2004; Harmon-Jones & Allen, 1998) – a motivation where people are energized to move toward something (Harmon-Jones, Harmon-Jones, & Price, 2013; see also Sassenberg & Vliek, Chap. 4 this volume). In this research, inducing reactance in various ways (e.g., imagining being restricted from renting an apartment, remembering own experienced past restrictions, being commanded to draw specific shapes) stimulated immediate relative left frontal activity. This finding underlines Brehm's original definition of reactance as a highly motivational construct by which people are highly motivated to approach the reestablishment of their freedom. Moreover, the neural processes depict that this motivation arises immediately after the threat.

In summary, reactance motivation can be captured by using self-report measures and more directly by physiological and neuropsychological measures. Those measures found that it is a state consisting of a person's experienced threat, his or her emotional experience (e.g., anger), cognitive processes (e.g., negative attitude), and changes in physiological arousal and brain activity.

The Determinants of Reactance

Expectation of Freedom, Importance of Freedom, and Extent of Threat

Reactance does not always emerge when people's free behaviors are threatened. Its emergence depends on people's *initial expectation* to possess the freedom in question. Thus, reactance emerges only when people believe they possess a specific freedom, i.e., they know they have the freedom to do something and feel they are capable of enacting

the behavior. Reactance also varies in its magnitude which depends on the *subjective importance* of the freedom (the more important the free behavior, the more reactance will be aroused) and the *perceived extent* of the threat (the more freedoms threatened, the more reactance will be aroused) (Brehm, 1966; Brehm & Brehm, 1981; Wright et al., 2015). In our example, if women are confident to possess the freedom to wear whatever they want at the beach, if the freedom to wear what they want is in general very important to them, and if they perceived the restriction as highly threatening, reactance motivation would be very strong.

Belief in Ability to Restore Freedom

Once reactance has been aroused, it provides people with the motivation to fight against the threat and restore their freedom. As such it is an adaptive reaction to freedom threats because when people experience reactance, they feel that they are able to fight for their freedom. Without it, they would accept the restriction. Thus, it is the opposite of learned helplessness (Seligman, 1975) where people do not believe in their ability to alter the unpleasant situation. Helpless people are rather passive, accept the situation as it is, or even withdraw from it (Mikulincer, 1988; Pittman & Pittman, 1979; Seligman, 1975; Wortman & Brehm, 1975). When people experience reactance, they feel capable of altering the situation and restoring their freedom (Brehm & Self, 1989; Wortman & Brehm, 1975; Wright et al., 2015; Wright & Brehm, 1989). Despite the unpleasant situation, they feel in charge of the situation, and they are highly motivated to do something about it. This becomes obvious in a study by Kray, Reb, Galinsky, and Thompson (2004). They hypothesized that reactance also emerges when people perceive a limitation to their ability to perform well in a task. In their study, they threatened women's ability to perform by making them aware of the stereotype that men are better at negotiating than women. As a result, women reacted against this stereotype by achieving better negotiating outcomes than men.

However, this so-called stereotype reactance only occurred for women when they possessed sufficient power to act against the stereotype. When they did not have sufficient power, they followed the stereotype by performing worse than men. This is in accordance with the assumption that reactance only emerges when people feel capable of altering the current situation.

Vicarious Reactance and the Self

How people respond to freedom threats strongly depends on whether the threat affects important aspects of their self. This becomes apparent in research on vicarious reactance (i.e., reactance in response to freedom threats experienced by others). We can also experience reactance when others' freedom is challenged. For instance, people who observed or read about a freedom threat happening to another person also indicated strong reactance (Andreoli, Worchel, & Folger, 1974; Sittenthaler et al., 2016; Sittenthaler & Jonas, 2012; Sittenthaler, Traut-Mattausch, & Jonas, 2015). Think of the burkini example. Although the ban affected only women who usually wear a burkini, women all over the world wearing or not wearing a burkini at the beach engaged in the “wear what you want” discussion. Research has shown that both kinds of freedom threats (self-experienced and vicarious) lead people to experience reactance, but whether people react more to a self-experienced or to a vicariously experienced threat depends on how they define their self and whether the threat affects important aspects of their self.

A factor shaping people's self is their cultural background. People from individualistic cultures, such as America and Western Europe, define their self by emphasizing their individuality and independence from others (Markus & Kitayama, 1991). People from collectivistic cultures, such as Asia,

Africa, Latin America, or Southern Europe, define their self in relationships and commonalities with others (Markus & Kitayama, 1991). A number of studies (Jonas et al., 2009; Sittenthaler & Jonas, 2012; Sittenthaler, Traut-Mattausch, & Jonas, 2015; Steindl & Jonas, 2012) found that people with an independent self-concept experienced more reactance when their individual, personal freedom was threatened, while people with an interdependent self-concept experienced more reactance when a collective freedom or another person was threatened. Thus, compared to people with an independent self-concept, people with an interdependent self-construal experience more vicarious reactance.

People experience both self-experienced and vicarious reactance, but the processes underlying them differ – a freedom threat happening to oneself seems to evoke reactions that are more impulsive in nature, and a freedom threat happening to another person seems to evoke reactions that are more reflective in nature. This becomes apparent in people's physiological and emotional-cognitive responses: while people who were restricted themselves showed an immediate change in heart rate and more emotional thoughts (e.g., annoyed, excited), people who were vicariously restricted showed a delayed change in heart rate and more cognitive thoughts (e.g., reasons for freedom restriction; Sittenthaler et al., 2016; for details see Box 6.2).

In summary, reactance emerges when people believe they possess the freedom that is threatened, when this freedom is important to them, when the perceived extent of the freedom threat is high, and when they feel capable of restoring their freedom. Whether reactance emerges or not also depends on people's self, which contains important values, interests, and goals. This can explain why observing another person being threatened in his or her freedom can also elicit reactance.

Box 6.2 Zooming In: Study on Vicarious Reactance

Sittenthaler et al. (2016) proposed a process model to explain the mechanisms underlying self- and vicarious reactance. They hypothesized that a freedom threat affecting a person directly (self-restriction) should result in a spontaneous physiological reaction. In contrast, observing another person being threatened (vicarious restriction) should result in a delayed physiological reaction because people first need to reflect on the situation as they do not experience it themselves. They tested this idea in a study on 129 students (Study 2) who came to the laboratory and were attached sensors to measure skin conductance (SC) and heart rate (HR). First, there was a 3-minute baseline measure. Next, participants read a scenario in which a student attempted to rent an apartment. For 3 minutes, they either imagined a self-restriction, a vicarious restriction, or a neutral situation. In the self-restriction, the student called the landlord about an appointment for viewing the apartment. When the landlord learned that he was talking to a student, he said “No, you are a student, you won’t get this apartment” and broke off the call. In the vicarious restriction, participants were asked to think about a former classmate who experienced the situation. Participants in the

control condition were asked to imagine that they could rent the apartment. Finally, participants answered items assessing their reactance (e.g., “To what extent do you perceive the reaction of the landlord as a restriction of freedom?”). These items revealed that participants in the self- as well as the vicarious restriction condition showed higher values than participants in the control condition, indicating that the mere observance of a person being restricted resulted in self-reported reactance. However, the main dependent variable was the differences between participants’ HR during imagining the scenario and during the baseline (immediate response), and their HR during answering the reactance items and during the baseline (delayed response) served as the main dependent variables. Importantly, the physiological results revealed that compared to the vicarious and the control condition, participants in the self-restriction showed the highest HR for the immediate response. The vicarious restriction condition showed a higher HR for the delayed than for the immediate response. These findings suggest that different processes underlie self-experienced vs. vicarious restrictions: self-restrictions result in an immediate physiological arousal and, thus, a more impulsive process, whereas vicarious restrictions result in a delayed physiological arousal and, thus, a more reflective process (Fig. 6.2).

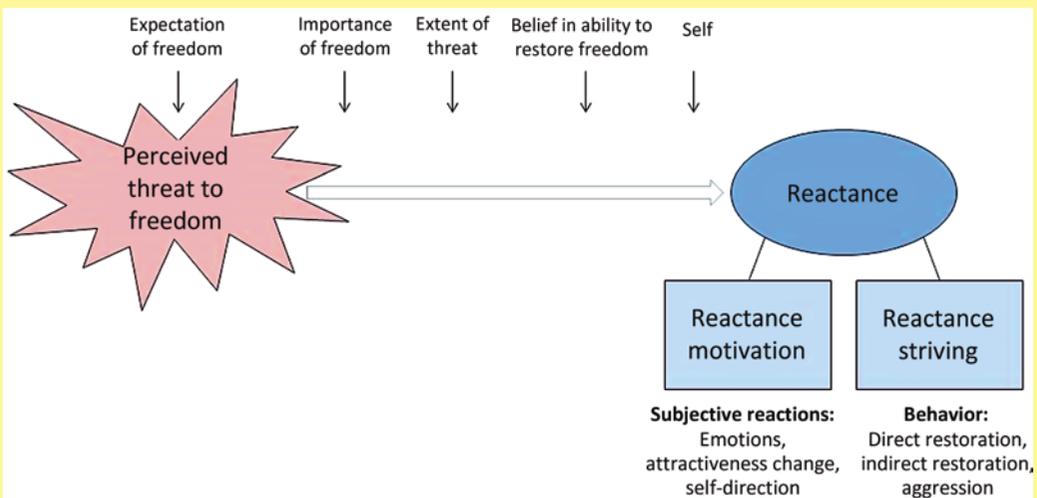


Fig. 6.2 Summary of central antecedents and consequences of psychological reactance

Reactance, What for?: Applications

Building on the inception of reactance theory where Brehm emphasized that reactance is a highly motivational construct, with this section, we aim to demonstrate the value of reactance. Brehm noted that “reactance is defined not simply as an unpleasant tension [...] but rather a motivational state with a specific direction, namely, the recovery of freedom” (Brehm, 1966, p. 11). With its “energizing and behavior-directing properties” (Brehm & Brehm, 1981, p. 98), reactance gives people the energy to resist what they do not want and turn to what they indeed want. Thereby people resist social influence when it is too strong. According to Dickenberger and Gniech (1982), social influence attempts at first result in conformity motivation (i.e., people adjust to the influence). As the social influence attempt gets stronger, conformity increases up to the point where the person perceives the influence attempt as freedom-threatening. Then a second motivation emerges – reactance – which is manifested in resistance to the influence attempt. The more freedom-threatening the person experiences the influence, the more reactance people experience. A field study by Heilman (1976) shows that people’s resistance increases with an increased intensity of the influence attempt (see detailed description of the study below). Such resistance behavior also becomes evident in a large body of research on *persuasion* as persuasive attempts often elicit some reactance.

Persuasion Research

Non-smoking messages, clinical advice, dietary restrictions, or mandatory policies to mitigate environmental problems stimulate reactance and increase the non-desired behavior. For example, a study by Ungar, Sieverding, Schweizer, and Stadnitski (2015) showed that people who were given an intervention to eat five portions of fruit and vegetables per day showed high reactance immediately after and still 1 week after the intervention. This reactance negatively influenced

people’s attitude toward eating five portions of fruit and vegetables which predicted a lower consumption of fruit and vegetables even 4 months later. Similarly, forcing people to give up smoking can have the opposite effect (Erceg-Hurn & Steed, 2011; Grandpre, Alvaro, Burgoon, Miller, & Hall, 2003; Shoham, Trost, & Rohrbaugh, 2004). These studies show that even small interventions can evoke reactance and consequently miss their well-intentioned recommendations.

Persuasion attempts also lead to the opposite effects in relationships. Prohibiting the partner to drink or smoke can trigger reactance and consequently be counterproductive (Shoham et al., 2004). Similarly, preventing one’s partner from attending to attractive alternative partners can make those alternatives even more attractive. DeWall, Maner, Deckman, and Rouby (2011) showed that implicitly limiting participants’ attention to attractive pictures of the other sex results in lower satisfaction with and commitment to their actual relationship and an increased positive attitude toward infidelity. Thus, the communication and behavior in romantic relationships can benefit from studies on relationship reactance.

Reduction of Reactance

In the above examples, reactance is something undesirable that people who design interventions or try to persuade others strive to reduce. Thus, research has tested methods to reduce or eliminate reactance. For example, taking the perspective of the threatening agent to think about reasons for the threat (Steindl & Jonas, 2012), helping people realize that they are free to decide for themselves (Bessarabova, Fink, & Turner, 2013; Miller et al., 2007), or forewarning them of a potential freedom threat (Richards & Banas, 2015) can reduce or prevent reactance.

A method to achieve public acceptance of mandatory actions was tested in a study by Uhl-Hädicke, Klackl, Mühlberger, and Jonas (2018). In this study, reactance was evoked by informing students that they were obligated to participate in mandatory actions to improve the university,

most aimed at protecting the environment (e.g., collecting plastic bottles at the university). When they watched a movie about the pollution of the sea by plastic garbage, participants evaluated the mandatory actions to help in protecting the environment more positively when they imagined themselves in the position of an individual suffering from the situation than when they imagined the individual suffering from the situation.

Box 6.3 Questions for Elaboration

Imagine that you are a politician trying to convince people of a new highway regulation that forces drivers to adhere to a speed limit of 80 km/h although it has always been 100 km/h. How would you handle it? What could you do to prevent reactance?

For people who try to convince others, reactance is undesirable. However, for those who experience reactance, it might be something desirable. The arising reactance can support people in fighting for their values and desires (i.e., for their identity). As such, reactance can not only be dismissed as something negative but rather as a construct possessing a massive motivational force which makes people become clear about important aspects of their *self* and which provides them with energy to fight for those aspects. In the next section, we elaborate on these ideas.

The Motivational Force of Reactance: Self-Direction

For recommendations that aim at increasing people's health, most would agree that reactance is something undesirable that should be prevented. However, there are situations where reactance is considered something desirable and is even made use of. In paradoxical interventions, behavior change is attempted by using directives that discourage from it (for an overview, see Miron & Brehm, 2006). For instance, in a study attempting to reduce procrastination (Shoham-Salomon,

Avner, & Neeman, 1989), students were told to concentrate on producing procrastination (e.g., sitting in front of the study material but resist studying). Those students high on initial reactance increased their effective study time more than those low on initial reactance. Thus, encouraging reactance arousal may sometimes lead to the opposite effect. Looking at the findings in a different light, the emerging reactance might have supported students in returning to what they actually wanted, namely, studying. Brehm calls that increased *self-direction* (Brehm, 1966; Brehm & Brehm, 1981). A person experiencing reactance “will feel that he can do what he wants, that he does not have to do what he doesn't want, and that at least in regard to the freedom in question, he is the sole director of his own behavior” (Brehm, 1966, p. 9). It makes people realize what they want; they become aware of their priorities.

This increased self-direction was also demonstrated in a study by De Lemus, Bukowski, Spears, and Telga (2015). They found that women who were confronted with stereotypes contradicting their social identity seemed to be threatened in their freedom and consequently showed reactant responses – traditional women supported a gender-specific system even more when they were confronted with examples of less traditional (counter-stereotypic) women than when they were confronted with examples of traditional (stereotypic) women. In this example, reactance may have provided those women with the motivation to defend their self containing own important values, attitudes, and interests. Moreover, think back of the burkini example in the beginning. Here, reactance might have provided women with the motivation to fight against the ban. Without reactance, they might have given up and accepted the situation as it is. In line with that, reactance is associated not just with negative affect, such as feeling angry or uncomfortable, but even with activating positive affect, such as feeling strong and determined (Sittenthaler, Steindl et al., 2015). The consequences of such positive affect have been shown in research on reactance and information search (for a summary, see Mühlberger, Jonas, & Sittenthaler, 2017). In two studies, restricted participants who felt

strong and determined behaved in a more open-minded way – they did not further stick to the restricted freedom but were interested in alternatives serving their overarching goal which had been blocked by the threat.

Autonomy

Becoming aware of one's self and acting in accordance with it resembles the concept of autonomy as defined within Self-Determination Theory (SDT; Deci & Ryan, 1985; Ryan & Deci, 2000; see Roth, Chap. 3 this volume). Autonomy is a basic psychological need and best described as a person's desire to be self-governed. People are considered autonomous when they experience themselves as the origin of their actions and behave in accordance with their self (Deci & Ryan, 1985; Deci & Ryan, 2000). This description of autonomy has been called *reflective autonomy* (Koestner & Losier, 1996). Researchers differentiate it from *reactive autonomy* where people resist coercion just to be independent and free from others and which has been equated with reactance (Koestner & Losier, 1996). Although freedom threats trigger reactance in the form of a reactive autonomy, following Brehm's (Brehm & Brehm, 1981) statement that through reactance it becomes clear what we want, some freedom threats may also trigger reflective autonomy. People desire to be autonomous – they want to be their own director of behavior and to behave in accordance with their self. To follow this desire, behaving freely is important. When freedom threats block the desire to be autonomous, it becomes even more important for us to know who we are, what we want, and what we do not want.

Leander et al. (2016) follow this idea and note that reactance is not just a reflex but rather an opportunity to enhance one's autonomy by having the freedom to choose between engaging and not engaging in the prohibited behavior. They showed that individuals did not simply react against every influence but reacted against influence when they could infer that they thereby received autonomy. The authors conclude that the

superordinate goal served by reactance is autonomy and not just any kind of freedom restoration. Therefore, some freedom threats may stimulate autonomy, especially those threatening important aspects of one's self. Evidence that people only show reactance to self-relevant threats comes from Laurin, Kay, and Fitzsimons (2012). They investigated under which conditions people accept a freedom restriction and under which they resist it. They hypothesized that when a restriction is absolute, people attach less importance to the freedom and, thus, rationalize it. In contrast, when the restriction is not absolute but there is a chance that it will not come into effect, people attach more importance to the freedom and, thus, show reactance. Moreover, rationalization and reactance should only emerge when people view the restriction as self-relevant. They argued that people "should feel no motivation to protect rights that they do not exercise, nor to adapt to new restrictions that do not affect them" (Laurin et al., 2012, p. 206). In two studies, participants read about dangerous riding situations (high speed in cities, cell phone use while driving). In addition, some participants read about a new law that would restrict people in their driving habits (reduced speed limits, cell phone ban while driving). This law was described as definite (absolute condition) or as coming into effect only if enough government officials agreed (non-absolute condition). A control group did not receive any information on implementing the law. Results indicated that people who read about an absolute restriction reported a more positive attitude toward the new law than the control group (rationalization) and those who read about a non-absolute restriction reported a less positive attitude toward the new law than the control group (reactance). Both effects were strongest when the restriction was self-relevant, for example, when people were frequent drivers.

Summarized, people do not reflexively show reactance to any kind of freedom threat but only to self-relevant threats and thereby may receive autonomy. Whether autonomy is indeed the superordinate goal of reactance is an open question that remains to be tested.

Box 6.4 Question for Elaboration

Think of examples where reactance may be something desirable. Did you experience such situations yourself?

Despite a host of studies, reactance has often been investigated in the laboratory where people had to imagine freedom-threatening situations and had to self-report their experienced reactance and intended behavior. Only a few studies explored reactance beyond the laboratory. One example for a field study is presented in the next section.

The Effect of the Intensity of the Social Influence Attempt on People's Reactance Striving: A Field Study

A field study by Heilman (1976) investigated the behavioral dynamics of reactance and predicted that people's resistance to an influence attempt (reactance striving) increases with the intensity of the influence attempt. Moreover, the author predicted that under certain conditions, i.e., when the threatening agent has the power to implement retaliation for noncompliance, resistance behavior is reduced. These hypotheses were tested in two experiments in which pedestrians were intercepted in front of a supermarket in New York City. The experimenter explained that she was collecting signatures for a petition advocating price controls for meats and vegetables. She showed pedestrians a clipboard with the petition and an index card which contained the experimental induction. The card contained either a

low-pressure influence attempt ("Raymond T. Finster... has spoken out against this resolution and claims that it would endanger the economy"), a high-pressure influence attempt (adding that Mr. Finster "...has said that people absolutely should not be allowed to distribute or sign such petitions"), or an additional retaliation threat added to the high-pressure influence attempt ("He also said that careful note will be taken of all who do sign"). In Experiment 1 ($N = 360$), Mr. Finster was either described as a local official (low-power authority) or a top-level federal official (high-power authority). Thus, Experiment 1 was based on a 3 (low pressure vs. high pressure vs. high pressure and retaliation) \times 2 (low power vs. high power) between-subjects design with 60 participants for each of the 6 experimental conditions. Participants were randomly assigned to one condition. Based on reactance theory, the author predicted that an increase in pressure not to sign the petition results in an increased signing. When the agent threatens people by retaliation for signing, signing should increase but only when the agent is presented as possessing low power. When the agent is presented as possessing high power and, thus, is able to implement retaliation, signing should decrease.

In line with the hypotheses, the higher the pressure not to sign the petition, the more participants signed it. However, these results occurred only when participants were reading statements from a low-power authority. When they were reading statements from a high-power authority, more participants signed the petition in the high- than in the low-pressure condition, but fewer participants signed the petition in the retaliation than in the low- or high-pressure condition (Table 6.1).

In Experiment 1, the agent's capability to retaliate was manipulated by presenting him as

Table 6.1 Percentage of people signing the petition in Experiment 1 (also see Heilman, 1976)

Power of authority	Influence attempt				
	Low pressure		High pressure		High pressure and retaliation
	Percentage	Percentage	<i>p</i>	Percentage	<i>p</i>
Low power	52	72	<0.05	88	<0.05
High power	57	77	<0.05	18	<0.05

Note: *p* is the significance indicator for comparing the respective condition with the low-pressure condition

Table 6.2 Percentage of people signing the petition in Experiment 2 (also see Heilman, 1976)

Anonymity of participant	Influence attempt				
	Low pressure		High pressure		High pressure and retaliation
	Percentage	Percentage	<i>p</i>	Percentage	<i>p</i>
Nonanonymous	62	84	<0.05	30	<0.05
Anonymous	78	84	>0.05	88	>0.05

Note: *p* is the significance indicator for comparing the respective condition with the low-pressure condition

possessing high power. In Experiment 2 ($N = 300$), the author predicted that the agent would be perceived as being capable to retaliate only when the participant's identity was known. Thus, Experiment 2 was based on a 3 (low pressure vs. high pressure vs. high pressure and retaliation) \times 2 (non-anonymous vs. anonymous) between-subjects design with 50 participants for each of the 6 experimental conditions. Participants received the index card containing the low-pressure, high-pressure, or high-pressure and retaliation information, but Mr. Finster was always described as a top-level federal official (high power). As a second condition, the author varied whether participants could remain anonymous. One half of the participants was required to sign the petition (non-anonymous; same condition as "high power" in Experiment 1), and the other half was told that their signature was not necessary but that they should vaguely indicate where they lived (anonymous). Participants were randomly assigned to one condition.

The results showed the same pattern as Experiment 1 for the non-anonymous condition – more participants signed the petition when the social influence attempt increased from low to high pressure. When there was a retaliation threat, fewer participants signed. When people could remain anonymous, people's signing rate was high in all three conditions (Table 6.2).

The findings by Heilman (1976) provide support for the hypothesis that reactance striving plays a key role when people are externally pressured to refrain from doing something. They seem to do the opposite of what they are told, which is also known as the boomerang effect. The two experiments are carefully conducted field studies with a well-structured procedure and the measure of actual behavior. Furthermore, in a pilot work, an issue which was important and

believable for the population of New York City was selected, and randomizing the materials beforehand made the experimenter blind to the experimental condition. Although field experiments are able to observe real behavior, they often cannot explore the underlying mechanisms for the behavior. Consequently, we do not know whether reactance motivation, i.e., the increased desire to engage in the relevant behavior, is indeed the underlying mechanism leading to the boomerang effect. For testing such mediating variables, a self-report measure assessing, for example, anger and counterarguments (Dillard & Shen, 2005) or experience of reactance (SSR Scale; Sittenthaler, Traut-Mattausch, Steindl et al., 2015) could have been handed to participants after signing the petition.

Summarized, the findings of the study indicate important implications for real-life situations. They underline that social influence attempts and especially the way in which we communicate can lead to the opposite of what we aimed at. This is supported by a number of reactance studies (e.g., Dillard & Shen, 2005; Erceg-Hurn & Steed, 2011; Grandpre et al., 2003; Shoham et al., 2004; Ungar et al., 2015) which also report actual or intended boomerang effects. At the same time, the study points at boundary conditions of reactance. An agent's power to implement retaliation for noncompliance seems to counteract reactance motivation and leads to increased compliance but only when a person cannot remain anonymous.

The Value of Reactance

Finally, why is it important to know that there is a construct named reactance? Reactance is a common and natural reaction to threats present in everyone's life. We need to understand reactance

not just as something undesirable that needs to be prevented or reduced. Rather, building on Brehm's emphasis on the motivational side of reactance, reactance can be beneficial: it plays a key role in forming one's identity. It makes individuals understand their self-containing principles – what they want and what they do not want – and at the same time delivers the energy to fight for those principles.

Summary

- People believe they possess certain freedoms. When these freedoms are threatened, they can experience psychological reactance, a motivational state characterized by the strong desire to restore freedom and actual behavioral attempts to do so.
- Reactance is manifested in reactance motivation and reactance striving.
- Attempts to measure reactance have found that it consists of an experience of threat, an emotional experience, cognitive processes, and changes in physiological arousal and brain activity.
- The emergence of reactance depends on the importance of the threatened freedom, the perceived extent of the freedom threat, and people's experienced ability of restoring the freedom.
- People can also experience reactance on behalf of another person (vicarious reactance).
- Reactance is not negative per se but makes people aware of their self and supports them in fighting for what they want.

Recommended Reading

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Guiding Answers to Questions in the Chapter

1. Q (With Box 6.1): Think about examples in your life where you believed that you are free but then were restricted in this freedom. Did you experience reactance? How did you react? What were your subjective and behavioral reactions?

A: With subjective reactions, we mean what emotions you felt and whether you liked the restricted freedom more because of the restriction (attractiveness change). With behavioral reactions, we mean what you did in order to restore the threatened freedom.

2. Q (With Box 6.3): Imagine that you are a politician trying to convince people of a new highway regulation that forces drivers to adhere to a speed limit of 80 km/h although it has always been 100 km/h. How would you handle it? What could you do to prevent reactance?

A: To prevent reactance, research has tested different methods such as perspective taking, forewarning of a threat, or helping people realize that they are free to decide for themselves. Try to use those methods in your attempt to convince people of the new regulation.

3. Q (With Box 6.4): Think of examples where reactance may be something desirable. Did you experience such situations yourself?

A: With desirable we mean that resisting a freedom threat had a positive outcome for you (as in paradoxical interventions) or reactance made you feel strong and determined or made you feel aware of important priorities in your life.

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