

How Negative Bias Shapes Our Perception

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Abstract

Learning the function of negative bias provides us a more in-depth understanding of how it affects our physiological, psychological, and emotional wellbeing. By discerning how interpersonal relationships, memory, social interaction, and information processing are affected, we discover the multiple facets of negative bias, and become more adept at recognizing how negative bias affects perception.

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Defining Negative Bias

To find how negative bias affects perception, we must first understand what it is and from where it originated. Researchers Ito, Larsen, Smith, & Cacioppo, 1998, define negative bias as “a tendency for negative events to result in a greater mobilization of an organism's physiological, cognitive, emotional, and social responses” (p.887). Rozin and Ryzman (2001) provide an alternate explanation. “Negative events are more salient, potent, dominant in combinations, and generally efficacious than positive events” (p.297). In layman's terms, when faced with positive and negative stimuli of equal strength, we are innately predisposed to focus on the negative, an essential aspect of maintaining our safety and stability. (Baumeister, Finkenauer, Vohs, & Bratslavsky, 2001) For example, a clan is out foraging for food in the forest, enjoying a beautiful day, each other's company, and trading stories until one of them hears an unknown sound. A quick “shush” and the clan falls silent as their focus quickly shifts to locating the possible threat. The positive interactions are forgotten until the source of the sound is identified. Fear of the unknown dominates the thought process; this is negative bias.

Now that we've defined negative bias, we will explore its origin, function, and impact; thereby discovering how perception is affected.

The Origin and Evolution of Negative Bias

From the time we were primitive hunter-gatherers, negative bias has played a crucial role in our survival and evolution as a species. Our earliest ancestors either learned to identify threats and deal with them appropriately or perished (Rozin & Royzman, 2001). Baumeister et al. (2001) state,

From our perspective, it is evolutionarily adaptive for bad to be stronger than good. We believe that throughout our evolutionary history, organisms that were better attuned to

bad things would have been more likely to survive threats and, consequently, would have increased probability of passing along their genes (p.3).

Our ability to quickly recognize threats became the cornerstone of our continued existence.

As we evolved into an agricultural society and began settling in larger groups, our primary focus shifted inward, towards interpersonal interactions, logistics, group cohesion, and maintaining harmony, rather than external threat recognition. In today's age of technology, we are in a continual state of information overload. While our devices keep us up to date on events happening throughout the world, social media viscerally binds us to each other. Every thought, activity, event, or emotion shared invites a response drastically changing our social structure. Throughout our entire evolution, negative bias adapted to maintain our homeostatic state, (defined as "an optimal level of environmental, interpersonal, and psychological stimulation.") (APA, 2019)

Negative Bias is Involuntary

Rozin and Royzman (2001) declare, "Given the adaptive advantage of particular vigilance with respect to negative events, it is quite reasonable to suppose that the negative bias is a built-in predisposition. Its presence in animals lends support to this idea" (p.314). Our survival depends on our ability to recognize and address possible threats; therefore, physiologically, negative bias is given priority over all other stimuli. (Doty, 2018) A negative experience produces stress, triggering a biological response which Harvard Medical School, (n.d.) describes as:

The amygdala, an area of the brain responsible for emotions, survival instincts, and memory interprets environmental stimuli. When our senses perceive danger, the amygdala instantly sends a distress signal to the hypothalamus. The hypothalamus is responsible for activating the

autonomic nervous system (ANS), which controls such involuntary body functions as breathing, blood pressure, heartbeat, and the dilation or constriction of crucial blood vessels and small airways in the lungs. The ANS consists of two main parts: the sympathetic nervous system (SNS) and the parasympathetic nervous system (PNS). The former is our fight-flight-or-freeze response, the latter its opposite, often referred to as our “rest and digest” system.

When our SNS is activated, various hormones enter the bloodstream. As these hormones circulate through the body, the heart beats faster, sending more blood to the muscles, heart, and other vital organs. Breathing quickens as small airways in the lungs open wide, allowing the lungs to take in as much oxygen as possible with each breath. The extra oxygen is sent to the brain, increasing alertness making our senses sharper. Glucose and fats are released from storage sites and flood into the bloodstream, supplying energy to all parts of the body. This action can happen before the brain's visual centers have had a chance to fully process what is happening. (Partridge, 2019)

The SNS is activated whenever we feel threatened. An argument, a broken heart, or the fear of dying will all trigger the process in varying degrees (Partridge, 2019), which is why our negative bias is always vigilant.

Negative Bias in Learning.

Negative bias significantly affects how and what we learn. Kinzle, Baltazara, and Shutts (2012) conducted three experiments investigating the effects of negative bias on preschool-age children. Their findings suggest that children remember the details of negative social actions over positive social actions, which may help children anticipate potentially threatening situations in the future. This memory bias applies to various aspects of our lives, as explained by Baumeister et al.(2001) “The greater power of bad events over good ones is found in everyday

events, major life events (e.g., trauma), close relationship outcomes, social network patterns, interpersonal interactions, and learning processes”(p.1).

Negative bias in memory.

We all have experience recalling a particular negative event in vivid detail. “Studies have shown that people are better at recalling negative events rather than positive ones.” (Doty, 2018, p. 1) For example, an insult or beating is remembered more readily and for a longer duration than a compliment or embrace. (Vinokur & Van Ryn, 1992) This process plays a role in our overall development. In any given situation, we adapt by learning what works and what doesn’t. Our focus on what doesn’t work is the catalyst for change. As (Doty, 2018) confirms, “Despite their relative infrequency, negative interactions shape the way in which people behave as they are an indicator that something they had done did not result in the desired outcome”(p.2).

Negative bias shapes self-concepts.

Self-concept is, “An idea of the self, constructed from the beliefs one holds about oneself and the responses of others.” (In Oxford English Dictionary (2nd ed), 2019) Negative bias concerning the responses of others plays a significant part in the construction of our self-concept. An unwanted or unwelcomed response from those closest to us has a much more pronounced effect than acceptance or approval. (Baumeister, Finkenauer, Vohs, & Bratslavsky, 2001). Negative bias also affects how we evaluate our self-concept. Comparing the real self to the undesired self, rather than the ideal self, is more beneficial as Daniel Ogilvie (1987) demonstrates,

We know what misery is like because, at least to some degree, we have already tasted it.

In comparison with the ideal self and its often times hazy, “maybe someday” quality, the

undesired self can be accessed by way of memory traces of emotionally charged, upsetting events. (p.565)

Self-concept is the basis for every interaction with our environment, and evidence suggests that we are much more motivated to avoid bad views than to accept good views of ourselves.

(Baumeister, Finkenauer, Vohs, & Bratslavsky, 2001)

Negative bias in social interactions and interpersonal relationships.

We form negative impressions and stereotypes quicker than positive ones and are more resistant to changing our minds regarding the negative perceptions. (Baumeister, Finkenauer, Vohs, & Bratslavsky, 2001) Our social framework is such that we tend to separate ourselves into two groups: the ingroup are those we feel a kinship with or some form of connection, the outgroup are those we view as objectionable, flawed, or simply not one of us. (Calhoun, 2019) Upon first meeting a stranger, negative bias is in effect, searching for any characteristics of the outgroup. A prominent example of negative bias is racism. A less obvious example is shunning an ostracized peer, fearing our exclusion from the ingroup. Regardless of the situation, negative bias prominently affects our social interactions.

Negative bias also affects how we view social support and social conflict. A study by Vinokur & Van Ryn (1992) showed,

Positive social interactions in the form of social support had only a weak effect on mental health, and only at first, whereas social conflict continued to have a strong (and, if anything, an increasing) effect on mental health throughout the period of study. (p.339)

Interpersonal relationships can be beneficial and satisfying for years, but one act of betrayal can cause irreparable damage; this is another prime example of how negative bias

operates. While we may eventually weigh the good versus the bad, the initial reaction is to focus on the pain. As Ito et al. (1998) affirm, “Negative information tends to influence evaluations more strongly than comparably extreme positive information.” (p.1)

In personal interactions, we’ve all experienced how someone in continual crisis mode or someone that is always complaining activates negative bias in their social circle. On social media, an offensive post engages our negative bias, sending ripples of outrage across the internet. Kramera, Guillory, & Hancock (2014) find, “Emotional states can be transferred to others via emotional contagion, leading people to experience the same emotions without their awareness. Emotional contagion is well established in laboratory experiments, with people transferring positive and negative emotions to others.” (p.1) This finding implies that negative bias can be learned or transferred through interpersonal relationships and interactions.

Negative Bias Demands Attention

Negative bias occurs as early as the assessment phase of emotional value associated with a stimulus. (Ito, Larsen, Smith, & Cacioppo, 1998) In simpler terms, we evaluate all incoming information for any perceived threat to our physical, psychological, or emotional wellbeing. Baumeister et al. (2001) reveal,

A person who ignores the possibility of a positive outcome may later experience significant regret at having missed an opportunity for pleasure or advancement, but nothing directly terrible is likely to result. In contrast, a person who ignores danger (the possibility of a bad outcome) even once may end up maimed or dead. (p.325)

In our previous example of the foraging clan, the noise that caught their attention could be many things: a fleeing prey could be a source of food., an approaching predator could be

devastating. When assessing environmental stimuli, it is only logical to attend to any possible adverse outcomes first.

Conclusion

While negative bias being beneficial may sound counterintuitive, it is one of the mechanisms that allows us to maintain our homeostatic state, by notifying us of anything that may jeopardize that state. Mental Health professionals agree we all see the world from different perspectives, creating a personal version of reality, comprised of self-concept, experience (through memory), morals, values, opinions, beliefs, and social and interpersonal relationships. As we gain new knowledge and experience, our reality shifts accordingly.

Because our brain attends to any perceived negativity, real or imagined, until resolved to our satisfaction, our perception is most assuredly affected. To what degree heavily depends on our ability to recognize when it occurs and whether it is beneficial or detrimental.

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