

# Classical Conditioning

A technique used to associate a stimulus with an unconscious physical or emotional response.

Classical conditioning was the first type of learning to be studied by behavioral psychologists. Lab workers discovered the technique when they noticed that dogs in the laboratory began salivating as soon as they entered the room. Because the lab workers feed the dogs, their presence (neutral stimulus) had become associated with food (trigger stimulus), and, therefore, elicited the same response as the food itself (salivation). Similar behaviors are seen in fish when they surface at the sight of an approaching person, or in cats when they come running at the sound of a can opener.<sup>1</sup>

Classical conditioning is commonly used in animal training (e.g., associating chemical traces of TNT with sugar water to train bees to detect bombs), behavior modification in people (e.g., associating smoking with aversive images or tastes), and marketing and advertising (i.e., associating products or services with attractive images or feelings). For example, television and magazine advertising firms use classical conditioning frequently to associate products and services with specific thoughts and feelings. Images of attractive people stimulate reward centers in the brain, and condition positive associations with products, services, and behaviors. Conversely, disturbing images of extreme violence or injury stimulate pain centers in the brain, and condition negative associations with products, services, and behaviors. Human emotions condition quickly and easily in this way, particularly when the association is negative. In a classic experiment, a young child was exposed to a white rat accompanied by a loud noise. The child not only grew to fear the white rat (which he did not fear previously), but other furry things as well (e.g., fur coats). Many phobias are caused by this type of association. For example, many children become anxious when visiting the dentist because previous experiences have been painful—dentists often give children treats in an attempt to reverse this association.<sup>2</sup>

Use classical conditioning to influence the appeal of a design or influence specific kinds of behaviors. Repeated pairings of a design with a trigger stimulus will condition an association over time. Examples of positive trigger stimuli include anything that causes pleasure or evokes a positive emotional response—a picture of food, the sound of a drink being poured, images of attractive people. Examples of negative trigger stimuli include anything that causes pain or evokes a negative emotional response—physical pain of a vaccination, an embarrassing experience, or images of extreme pain and violence.

See also Exposure Effect, Operant Conditioning, Shaping, and Veblen Effect.

<sup>1</sup> The seminal work in classical conditioning is *Conditioned Reflexes: An Investigation of the Physiological Activity of the Cerebral Cortex* by Ivan Pavlov, 1927 (translated and edited by G. V. Anrep, Dover Publications, 1984).

<sup>2</sup> See “Conditioned Emotional Reactions” by John B. Watson and Rosalie Rayner, *Journal of Experimental Psychology*, 1920, vol. 3(1), p. 1–14; and “Reward Value of Attractiveness and Gaze” by Knut K. W. Kampe, Chris D. Frith, Raymond J. Dolan, and Uta Frith, *Nature*, 2001, v. 413, p. 589.

# Not everyone who gets hit by a drunk driver dies.



Jacqueline Saburido was 20 years old when the car she was riding in was hit by a drunk driver. Today, at 23, she is still working to put her life back together.

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This poster features before and after images of Jacqueline Saburido, a 20-year old college student who was hit by a drunk driver. It effectively associates the strong negative

emotional reaction evoked by Jacqueline's injuries with the behavior that caused them.