

Stereotypy

Stereotypy	
<i>Classification and external resources</i>	
ICD-9	307.3 ^[1]

A **stereotypy** (pronounced /'stɛrɪ.ə'taɪpi/) is a repetitive or ritualistic movement, posture, or utterance, found in people with mental retardation, autism spectrum disorders, tardive dyskinesia and stereotypic movement disorder. Stereotypies may be simple movements such as body rocking, or complex, such as self-caressing, crossing and uncrossing of legs, and marching in place.^[2] Frontotemporal dementia is also a common neurological cause of repetitive behaviors and stereotypies.^[3] Several causes have been hypothesized for stereotypy, and several treatment options are available.^[4]

Stereotypy is sometimes called *stimming* in autism, under the hypothesis that it self-stimulates one or more senses.^[5] Related terms include *punding* and *tweaking* to describe repetitive behavior that is a side effect of some drugs.^[6]

Distinction from tics

Like tics, stereotypies are patterned and periodic, and are made worse by fatigue, stress, and anxiety. Unlike tics, stereotypies usually begin before the age of three, involve more of the body, are more rhythmic and less random, and are associated more with engrossment in another activity rather than premonitory urges. Examples of early tics are things like blinking and throat clearing, while arm flapping is a more common stereotypy. Stereotypies do not have the ever-changing, waxing and waning nature of tics, and can remain constant for years. Tics are usually suppressible for brief periods; in contrast, children rarely consciously attempt to control a stereotypy, although they can be distracted from one.^[7]

Proposed causes

There are several possible explanations for stereotypy, and different stereotyped behaviors may have different explanations. A popular explanation is *stimming*, which hypothesizes that a particular stereotyped behavior has a function related to sensory input. Other explanations include hypotheses that stereotypy discharges tension or expresses frustration, that it communicates a need for attention or reinforcement or sensory stimulation, that it is learned or neuropathological or some combination of the two, or that it is normal behavior with no particular explanation needed.^[5]

Associated terms

Punding is a term that was coined originally to describe complex prolonged, purposeless, and stereotyped behavior in chronic amphetamine users;^[6] it was later described in Parkinson's disease.^[8] Punding activity is characterized by compulsive fascination with and performance of repetitive, mechanical tasks, such as assembling and disassembling, collecting, or sorting household objects.^[9] Punding may occur in individuals with Parkinson's disease treated with dopaminergic agents such as L-dopa.^{[10] [11]}

Tweaking is a slang term for compulsive or repetitive behavior; it refers to someone exhibiting pronounced symptoms of methamphetamine or amphetamine use.^{[12] [13]}

In animals

Stereotypies also occur in non-human animals. It is considered an abnormal behavior and is sometimes seen in captive animals, particularly those held in small enclosures with little opportunity to engage in more normal behaviors. These behaviors may be maladaptive, involving self-injury or reduced reproductive success.^[14]

They can be induced by confinement; for example, cats pace in zoo cages.^[15] Pregnant sows whose feed is restricted bite at their stalls' bars and chew without anything in their mouths.^[16] In laboratory rats and mice, grooming is the most common activity other than sleep, and grooming stereotypies have been used to investigate several animal models of anxiety and depression.^[17] Examples of stereotypical behaviors include pacing, rocking, swimming in circles, excessive sleeping, self-mutilation (including feather picking and excessive grooming), and mouthing cage bars. Stereotypies are seen in many species, including primates, birds, and carnivores. Up to 40% of elephants in zoos display stereotypical behaviors.^[18] Stereotypic behaviour in giraffes is also common; they resort to excessive tongue use on inanimate objects, due to a subconscious response to suckle milk from their mother, which many human-reared giraffes and other captive animals do not experience.^[19]

Stereotypical behaviors are thought to be caused ultimately by artificial environments that do not allow animals to satisfy their normal behavioral needs. Rather than refer to the behavior as abnormal, it has been suggested that it be described as "behavior indicative of an abnormal environment."^[20] Stereotypies are correlated with altered behavioral response selection in the basal ganglia.^[14]

Stereotypical behavior in laboratory animals can confound behavioral research.^[14] It is also seen as a sign of psychological distress in animals, and therefore is an animal welfare issue.

Stereotypical behavior can sometimes be reduced or eliminated by environmental enrichment, including larger and more stimulating enclosures, training, and introductions of stimuli (such as objects, sounds, or scents) to the animal's environment. The enrichment must be varied to remain effective for any length of time. Housing social animals such as primates with other members of their species is also helpful. But once the behavior is established, it is sometimes impossible to eliminate due to alterations in the brain.^[20]

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External links

- Chinthapalli V. M.; Singer H. S. Stereotypies of infancy and childhood. (<http://emedicine.medscape.com/article/1493013-overview>), April 19, 2010. Retrieved on November 30, 2010.
- Photo & video library of stereotypic behavior in captive animals (<http://www.aps.uoguelph.ca/~gmason/StereotypicAnimalBehaviour/library.shtml>)

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