**How Stereotypes Take Shape**

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New research from Scotland finds they’re an unfortunate product of the way we process and share information.

Unfair and offensive as they may be, stereotypes are ubiquitous. Logic tells us it’s ludicrous to label all, or most, members of a particular ethnic group as lazy, or untrustworthy, or unusually smart, but such shorthand thinking remains remarkably resilient.

Why do we do it? How do such stereotypes develop? In a [fascinating new paper](http://pss.sagepub.com/content/early/2014/07/22/0956797614541129.abstract), a team of researchers led by University of Aberdeen psychologist [Douglas Martin](http://www.abdn.ac.uk/psychology/people/profiles/doug.martin) provides evidence that they are an unfortunate result of the way we process and communicate knowledge.

“The process of repeatedly passing social information from person to person can result in the unintentional and spontaneous formation of cultural stereotypes,” the researchers write in the journal *Psychological Science.*

In essence, they write, our minds are hard-wired to categorize information and create mental shortcuts (attribute A is associated with behavior B). This helps us retain knowledge using minimal mental effort, and provides a needed sense of structure to an otherwise chaotic universe.

**We take complex webs of information and, in the process of sharing what we’ve learned, create “a progressively simplified, highly structured, and easily learnable system” of stereotypes.**

In doing so, however, nuances and complications tend to be discarded.

Often, the researchers write, stereotypes begin with a “kernel of truth” that subsequently gets inflated into a widely held truism regarding a group of people. But other times, they can spring up seemingly from nowhere.

Martin and his colleagues provide evidence of the latter process in an experiment in which fictional creatures—specifically, space aliens—were provided with random sets of attributes. As it turned out, it didn’t take long for stereotypes about them to form.

Each alien was created by a simple line drawing combining features from three dimensions: shape (each was either a circle, square, or rectangle); color (blue, green, or red); and movement (bouncing, diagonal, or horizontal).

These combinations led to 27 unique aliens, each of which was randomly given a set of personality traits. For instance, square green aliens that walked with a bounce were labeled as private, curious, tidy, arrogant, serious, and excitable. (Isn’t that just like them?)

The experiment featured 168 University of Aberdeen undergraduates who formed a series of “chains” in which information on the aliens was passed down from one “generation” to the next.

“During an initial training phase, the first participant in a chain was shown 13 of the 27 aliens and attempted to learn their associated attributes,” the researchers write. “During the subsequent test phase, participants were shown all 27 aliens—both the 13 they had encountered during training and the 14 that had remained unseen—and were asked to identify the attributes associated with each alien.

“The attributes the participant selected were used as the training materials for the next participant in the chain,” who repeated the process. And so it went through seven generations.

The result was a sort of telephone game in which the initial information got muddled, but in very specific ways.

“Over multiple generations, a systematic relationship developed,” Martin and his colleagues report. Certain aliens became “strongly associated with the possession of specific attributes.” For example, “by the end of one chain, blue aliens were predominantly ‘sensible’ and ‘successful,’ whereas green aliens were ‘vulgar.’”

How did this happen? “From the beginning of the chains, participants overestimated the within-category similarity of aliens, and tended to think that aliens who shared features also shared (personality) attributes,” they write. “Cumulatively, these overestimations led to the development of a categorical structure, with some attributes becoming associated with some alien features.”

This process occurred, the researchers add, without “volition or intent.” It just reflects the way our minds work. We take complex webs of information and, in the process of sharing what we’ve learned, create “a progressively simplified, highly structured, and easily learnable system” of stereotypes.

Of course, this model was created by Scots, and we all know that they’re (fill in your favorite stereotype).