Mechanism and function of humor identified by new evolutionary theory

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A new publication answers centuries' old questions regarding the mechanism and function of humour, identifying the reason humour is common to all human societies, its fundamental role in the evolution of homo sapiens and its continuing importance in the cognitive development of infants.

Alastair Clarke explains: "The theory is an evolutionary and cognitive explanation of how and why any individual finds anything funny. Effectively it explains that humour occurs when the brain recognizes a pattern that surprises it, and that recognition of this sort is rewarded with the experience of the humorous response, an element of which is broadcast as laughter.

"By removing stipulations of content we have been forced to study the structures underlying any instance of humour, and it has become clear that it is not the content of the stimulus but the patterns underlying it that provide the potential for sources of humour. For patterns to exist it is necessary to have some form of content, but once that content exists, it is the level of the pattern at which humour operates and for which it delivers its rewards."

Previous theories have only ever applied to a small proportion of all instances of humour, many of them stipulating necessary content or social conditions either in the humour itself or around the individual experiencing it. But this doesn't explain why an individual can laugh at something when no one else around them does, nor why two people can

laugh at the same stimulus for different reasons.

The theory further identifies the importance of pattern recognition in human evolution as Clarke explains: "An ability to recognize patterns instantly and unconsciously has proved a fundamental weapon in the cognitive arsenal of human beings. The humorous reward has encouraged the development of such faculties, leading to the unique perceptual and intellectual abilities of our species."

Clarke's new theory of humour could also provide the basis for an increased understanding of human cognitive functions: "The development of pattern recognition as displayed in humour could also form the basis of humankind's instinctive linguistic ability. Syntax and grammar function in fundamental patterns for which a child has an innate facility. All that differs from one individual to the next is the content of those patterns in terms of vocabulary."

Pattern Recognition Theory also identifies a correlation between the development of humour and the development of cognitive ability in infants. "Amusing childish games such as peek-a-boo, clap hands and tower block demolition all exhibit the precise mechanism of humour as it appears in any adult form, but whether these instances of infantile humour actively contribute to the cognitive development of the child or are simply a record of the evolution of the species played out in the individual, is as yet unclear.

"Peek-a-boo can elicit a humorous response in infants as young as four months, and is, effectively, a simple process of surprise repetition, forming a clear, basic pattern. As the infant develops, the patterns in childish humour become more complex and compounded and attain spatial as well as temporal elements until, finally, the child begins to grapple with the patterns involved in linguistic humour."

Alastair Clarke identifies the implications of pattern recognition theory beyond anthropology. "Understanding the basic function and mechanism of humour as it begins in infants will benefit the ongoing research into the presence of humour in primates and other mammals." He goes on to propose possible technological developments: "Now that we understand the mechanism of humour the possibility of creating an artificial intelligence being that could develop its own sense of humour becomes very real. This would, for the first time, create an AI capable of exhibiting one of the defining characteristics that make us human, making it seem significantly less robotic as a result."

Alastair Clarke offers two brief illustrations of the theory in instances of humour: "The application of the theory is unique in every instance and for every individual but the following two examples illustrate its basic structure. A common form of humour is the juxtaposition of two pictures, normally of people, in whom we recognize a similarity. What we are witnessing here is spatial repetition, a simple two-term pattern featuring the outline or the features of the first repeated in those of the second. If the pattern is sufficiently convincing (as in the degree to which we perceive repetition), and we are surprised by recognizing it, we will find the stimulus amusing.

"As a second example, related to the first but in a different medium, stand-up comedy regularly features what we might call the It's so true form of humour. As with the first example, the brain recognizes a two-term pattern of repetition between the comedian's depiction and its retained mental image, and if the recognition is surprising, it will be found amusing. The individual may be surprised to hear such things being talked about in public, perhaps because they are taboo, or because the individual has never heard them being articulated before. The only difference between the two examples is that in the first the pattern is recognized between one photograph and the next, and in the second it occurs between the comedian's depiction and the mental image retained

by the individual of the matter being portrayed.

"Both of these examples use simple patterns of exact repetition, even if the fidelity of that repetition is poor (for example if the photographs are only vaguely similar). But pattern types can be surprisingly varied, including reflection, reversal, minification and magnification and so on. Sarcasm, for example, functions around a basic pattern of reversal, otherwise known as repetition in opposites. Patterns can also contain many stages, whereas the ones depicted here feature only two terms."

Clarke concludes: "Pattern Recognition answers how and why we find things funny, but it can not say categorically what is funny since no content can be inherently more or less funny than any other. The individual is of paramount importance in determining what they find amusing, bringing memories, associations, meta-meaning, disposition, their tendency to recognize patterns and their comprehension of similarity to the equation. But the theory does offer a vital answer as to why humour exists in every human society."

Source: Pyrrhic House