Belief in God and in strong government as accidental cognitive by-products

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Abstract: Von Hippel & Trivers (VH&T) interpret belief in God and belief in strong government as the outcome of an active process of self-deception on a worldwide scale. We propose, instead, that these beliefs might simply be a passive spin-off of efficient cognitive processes.

Von Hippel & Trivers (VH&T) define self-deception as a collection of biases that prioritize welcome over unwelcome information. They argue that self-deception is an active process (biased information searching, misinterpreting, misremembering, rationalizing, convincing oneself that a lie is true) that is related to individual motivations and goals and serves to facilitate deception of others. They further claim that differences between countries in both belief in God and belief in strong government suggest “self-deception on a worldwide scale.” We propose that rather than reflecting motivations and goals, these beliefs may ensue automatically from efficient memory, attentional, and cognitive processes.

Subjects attempting to produce random sequences avoid repetitions too much. The reason is that repetitions look meaningful and thus unlikely to arise by chance. It is difficult to see why people should deceive themselves in a task so simple and so unrelated to their specific interests. Yet, repetition avoidance turns out to predict belief in extrasensory perception (Bressan 2002; Brugger et al. 1995).

We have presented a theory that such a “meaningfulness belief”, rather than resulting from self-deception, can emerge as a side effect of schema-based processing of the stimulus (Bressan et al. 2008). A schema is an abstract memory representation built up by concrete past experience (Bartlett 1932; Rumelhart 1984). Schemata include constants for those characteristics of the stimulus that do not change over time, variables for those that do, and constraints that encode regularities of changes. The better a stimulus fits an existing schema, the more it activates this schema. When a schema is activated, those aspects of the stimulus that tend to remain constant are simply retrieved from memory, leaving more resources available to process the aspects that vary. Schemata, thus, speed up the processing of stimuli and render it more efficient (Bartlett 1932; Minsky 1975; Shank & Abelson 1977).

If a stimulus fits a schema in many but not all respects, then the schema is activated but also violated. In this case, the stimulus captures attention and does so in proportion to the schema’s strength (Horstmann 2002; Meyer et al. 1991). Schemata can be seen as expectations or beliefs. Whereas each of us can entertain both strong, unchangeable beliefs and weak, flexible ones, different individuals are likely to be differently inclined to maintain strong or weak beliefs. As a measure of schema strength, attentional capture may thus predict the degree of a tendency to maintain either strong or weak beliefs in general.

To test this hypothesis, we performed (Bressan et al. 2008) one of the simple reaction-time experiments of Niepel et al. (1994). Our subjects were to press, as fast as possible, one key if a dot
appeared above two words and another if the dot appeared below them. After 32 similar trials, known to establish a strong schema, the 33rd trial presented one of the words in black on white, rather than in the usual white on black. This schema-violating event captured attention, and we found that the attentional capture correlated with the belief that coincidences have meaning. In other words, schema strength (as measured by attentional capture) correlated with meaningfulness belief.

Schemata provide order and, by relating present to past events, also meaning. Schemata that are too strong provide too much order and meaning, to the point that even coincidences can be considered nonaccidental. Belief in a controlling God provides meaning where it might be lacking, too. Consistent with this idea, we found that meaningfulness belief was indeed highly correlated with religious belief. Thus, belief in God and belief in extrasensory perception might be incidental products of efficient memory and attentional processes and need not result from self-deception.

VH&T cite evidence that people led to feel low levels of control are more likely to see illusory patterns in random configurations and to endorse conspiracy theories than people who are self-affirmed. We contend that, rather than implicating self-deception among the former group, the illusions and conspiracy beliefs could simply result from reduced motivation to perform an accurate analysis of the true state of affairs. Those who are likely to gain control over a situation may benefit from efforts to assess that situation well. Those who are unlikely to gain that control may be better off saving themselves the trouble. Because the employment of schemata saves effort at the expense of accuracy, the illusions and conspiracy beliefs could be a by-product of activated schemata and need not result from self-deception.

Like religious belief, political preferences associated with belief in strong government can be predicted on the basis of performance in a simple discrimination experiment. Amodio et al. (2007) asked subjects to respond, as fast as possible, upon seeing an M and withhold their response upon seeing a W, a task that – we believe – is unlikely to involve self-deception. The M was presented much more frequently than the W. The strength of the expectation (the schema) that, after many Ms, the next trial would also show an M differed from person to person. Amodio et al. found that this variation was systematic and that liberals were better able to withhold their response to a W than conservatives. As conservatives tend to believe in strong government, the latter belief too appears to be related to the efficient processing of stimuli via schemata and need not result from self-deception.

The likely evolution of self-deception is, indeed, at odds with the naïve, conventional view that “natural selection favors nervous systems which produce ever more accurate images of the world.” Also at odds with this view is the even more likely evolution of an adaptive system that creates and maintains cognitive schemata, whose by-product is the inclination to ascribe order and meaning to the world even when it has neither. To explain belief in God and belief in strong government, it may not be necessary to assume that self-deception is involved; assuming mental efficiency via the use of schemata might, by itself, be enough.

References


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