

Remembered events are unexpected

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Abstract :

We remember a small proportion of our experiences as events. Are these events selected because they are useful and can be proven true, or rather because they are unexpected?

Remembered events are universally and massively recounted during spontaneous human conversation. Despite early studies (*e.g.* Tannen, 1984), the importance of the phenomenon has long been ignored: it only occurs among people who are already acquainted and it is absent from most corpora recorded in the lab (Norrick, 2000). According to some figures, telling past events may represent up to 40% of conversational time (Eggin & Slade 1997, p. 265). Measures I made through a sampling method on a corpus of family conversation (about 18h recorded during three years) resulted in the following estimates: 27% of conversational topics consisted in narratives about past events, while another 12% were about current events (Dessalles, 2017). Though these proportions are expected to vary significantly depending on the corpus, they indicate that talking about events constitutes one of the main human activities. Is the prevalence of this form of communication consistent with M&C claims about the role of episodic memory?

If the main function of episodic memory is communication, as M&C propose and as I myself submitted (Dessalles, 2007b), episodes get stored in memory just to be used during future conversations. This comes with a significant cost, if we consider that the large size of the brain sustained by humans is in part due to the need of making detailed retrieval of events possible (Suddendorf & Corballis 2007, p. 303). The benefit must be substantial to match this cost. What does this benefit consist in?

According to M&C, communicating about events gives senders an opportunity to induce “in their audience a representation of the past that is to their benefit”. My study of spontaneous conversations does not support this schema. I have been unable to detect clear self-promotion in the narratives of my corpus or in other corpora. On many occasions, the converse is to be observed (Rimé 2005). People do not hesitate to tell events in which they performed inappropriate actions. In Norrick’s corpus for instance, a narrator explains that she was hired at Burger King (name of a fast food restaurant chain) for her first job. She was trained during one week and then, as she was about to take her very first order from a client, she said into the microphone “Welcome to McDonald’s!” (Norrick 2000, pp. 30-31).

Another advantage of storing events, in M&C's view, is that past events can be used as justification during debates and are themselves designed to resist epistemic attacks. Indeed, narratives may be used as arguments during discussions and conversely, inconsistencies may be pointed when a narrative is told. But these phenomena remain marginal. In the above mentioned analysis (Dessalles, 2017), only 16% of the narratives have a logical connection with the previous topic, and only 5% of the discussions are triggered by a narrative. Most narratives are connected to a preceding narrative topic through close analogy (42%) or through mere association (26%). The mention of a past event tends to prompt another, related narrative. This phenomenon has been named *story rounds* (Tannen 1984, p. 100). Narratives have their own dynamics, distinct from debating. If past events surface so often in human conversation, it must be for some reason other than their epistemic value.

If remembered events were selected for their epistemic robustness, we would prefer events for which evidence is available and can be produced on demand. "I flew from Boston to Paris on June 13th, 2006" is such an event. But this episode together with the associated details is unlikely to be worth remembering or worth telling in most contexts, regardless of its epistemic solidity. In (Dessalles, 2007b), I suggested that *events that are memorable are exactly those that are narratable*. And we know what makes an event narratable: it has to be *unexpected*, *i.e.* it has to be causally complex but conceptually simple (complexity and simplicity here refer to minimal description length - see www.simplicitytheory.science). In the Burger King story, the mention of the competitor is both conceptually simple (it is the best-known competitor) and causally complex (it was the last thing to say). The Boston-Paris example would have been more unexpected with a simpler date: "I flew from Boston to Paris on September 11th, 2001" but less unexpected if the action was less complex to produce: "I had breakfast on September 11th, 2001". One can play with these two qualities: causal complexity and conceptual simplicity, to predict what will be remembered; their combined effect makes some events unforgettable for an entire life.

If events are remembered and told based on their unexpectedness, does it match the audience's interest? According to M&C, "receivers are interested in acquiring useful (*i.e.*, true) information". Narratives are, however, ill-designed to convey useful knowledge. Memorized events are selected to be unexpected, not to be consequential. Most conversational narratives are indeed about futile matters, such as oddities or coincidences. In the case of fiction, the audience accepts to give up truthfulness and even likelihood just to enjoy being surprised by unexpected events. Nevertheless, we may wonder why, as M&C observe, it is still important for a reported past event to be regarded as true. Is it because the audience wants to draw general lessons from it? There is a better explanation. Unexpectedness depends on causal complexity, and causal complexity crucially depends on the story being true. If I am lying about my Boston-Paris flight on the 9/11 day, the false event loses its causal complexity (since it did not really happen) and turns out to be devoid of interest.

Episodic memory is geared to supply human beings with unexpected events worth telling. In our species, producing unexpectedness is crucial to have a chance of attracting friends (Dessalles 2014). The question of reliability is subordinate to the criterion of unexpectedness. We select a tiny proportion of our experiences and we remember them, not because they are true, but because they are unexpected.

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