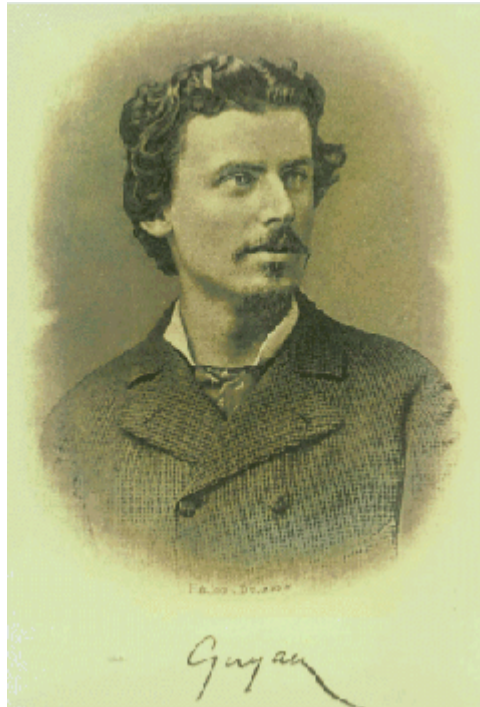


Adapted from 'Guyau, Jean-Marie (1854-1988)'
a lemma contributed by the author to
Macey, S. L. (Ed.) (1994). *Encyclopedia of time* (pp. 257-258).
New York: Garland, 1994.



Guyau on Time

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The French philosopher Jean-Marie Guyau (Laval 1854 - Menton 1888) is mostly remembered as a moral and social philosopher. His importance for the study of time resides entirely in *La genèse de l'idée de temps*, published posthumously in 1890, and his only digression into psychology. This essay is one of the most fundamental and interesting texts in all of the psychology of time. It bears comparison with the work of Guyau's better known contemporaries Henri Bergson and William James, and antedates if not inspired much of it.

Central to the argument of *La genèse* is the position that time is 'simply' an acquired organization of dynamic mental representations, enabling humans to store and remember past events. The cognitive functions that support this organization nearly always establish coherent episodes that are situated in concrete, spatially defined, contexts. Such a position is remarkably consistent with modern evolutionary and cognitive views about

memory and knowledge representation. Guyau illustrated his views with examples from the study of normal and pathological memory.

Why, Guyau asks, do we need a conceptual structure, an idea of time and how do we attain such an idea? It is not present at birth, and children (as well as animals) only gradually acquire cognitive strategies allowing them to represent temporal relations. Without such strategies we are not able to organize our experiences and expectations. To acquire the idea of time is therefore an important functional adaptation. It is the result of a long process of evolution in a social context. For the idea of time to develop, an organism must have sensory systems that can detect differences and produce symbolic representations of distinct events. In the second place it must be capable of perceiving the tension between its present state and its desired state or goal. In Guyau's own phrase, it must experience "the tension between the goblet and the lips."

These two conditions imply that representations of events must take the form of spatial imagery. Consequently, as a representational medium, space must precede time logically as well as psychologically. In Guyau's view memory is the dynamic temporal organization of our representations of (past) events.

In support of this rather general theoretical position, Guyau specifies five mechanisms which allow us to achieve such memory organization. In contemporary terms we refer to these mechanisms as: schema formation, matching, spatial analogy, chunking, and narrative closure:

- (a) *Schema formation.* The representations of events and episodes have a schematic or prototypical character. They possess more or less salient contextual features that influence the ease with which they are manipulated. Most of these contexts are culturally inspired. They are passed on from generation to generation.
- (b) *Matching.* The way in which schemata are functioning will depend on the principles of similarity and uniqueness: we may understand something to the extent that it matches some fact we already know, but we learn and remember something to the extent that it differs from this fact.
- (c) *Spatial analogy.* The representation of time is mediated by our representation of space and thus by the processes that operate on spatial relations. This influence is not an arbitrary one. After all, both spatial and temporal representations derive from intentional effort, from the juxtaposition of "what is and what is to be." The issue is to find out how we can get to an independent representation of time as the dimension past-present-future.
- (d) *Chunking.* Reference points -- temporal landmarks -- help to simplify the organization of memory. As a rule they are salient experiences that are called to mind more frequently and easily than other events. More importantly, however, they enable us to 'compile' our search rules: frequent use creates more compact temporal representations, so that ultimately only the first and last elements of a chain of retrieval operations are retained and all intermediate steps will be eliminated in a memory search.
- (e) *Narrative closure.* Representations of events and episodes remain plastic. Memories evolve slowly but constantly. They are embellished or deformed until they finally stabilize in ways that may bear little resemblance to their

initial form. This is an aesthetic process that answers the cognitive need for narrative closure. Memory must remain coherent and consistent with our present "acting and undergoing" if it is to be someone's memory, that is, the manifestation of a self.

The inputs to which the cognitive procedures that shape our notion of time are responsive may vary in a number of ways. The characteristics of what we may call temporal information influence our perception and retention of duration. According to Guyau these characteristics include the number and stochastic properties of event ensembles; the structural relations between events that specify the form or rhythm of event sequences; and the cognitive, emotional, and evaluative context in which the events take place. Each of these aspects will influence our experience of duration, our awareness of time-in-passing. In addition time estimates are based on the effort required to generate an adequate, episodically coherent, representation. When in early childhood or old age, or as a result of organic or mental disorders, the regular strategies for processing this temporal information are not yet or no longer available, certain characteristic distortions or illusions of time experience will occur.

Reference

Guyau, J.-M. (1890). *La genèse de l'idée de temps*. Paris: Félix Alcan.

A reprint of the French text of Guyau's essay, together with an English translation; a foreword by Paul Fraisse; an introductory chapter by John Michon, Viviane Pouthas and Janet Jackson; and invited chapters by Paul Ricoeur, John Michon, William Friedman, and Frederick Melges appeared in 1988 as a commemorative volume on the occasion of Guyau's death in 1888: J. A. Michon, V. Pouthas, & J. L. Jackson, J. L. (Eds.), *Guyau and the idea of time*. Amsterdam: KNAW Edita/North-Holland, 1988.

