CHAPTER 17

Remembering the Future

Michael Cole

Expectation refers to the future, and memory to the past. On the other hand the tension in an act belongs to the present: through it the future is transformed into the past. Hence an act may contain something that refers to what has not yet come to pass.

SAINT AUGUSTINE, Confessions

Yet all experience is an arch wherthrough /
Gleams that untraveled world whose margin fades /
Forever and forever when I move.

TENNYSON, Ulysses

We are all accustomed to the notion of remembering as the summoning up of past experiences in the process of dealing with the present. The study of memory, conventionally understood, has been one of psychology’s most productive growth industries since the 1960s. However, as both Augustine and Tennyson suggest, the relations between past, present, and future in human experience are a good deal more complicated than common wisdom leads us to believe. Twenty years ago, Gerald Edelman¹ opened his book with a quotation from Edwin Boring, professor of Psychology at Harvard in the first half of the twentieth Century, who began his career when introspection was still accorded a place in an increasingly behavioristic academic psychology.² Boring pointed out that our common sense ideas about events occurring in the present are really based on memory of the past.

To be aware of a conscious datum is to be sure that it has passed. The nearest actual approach to immediate introspection is early retrospection. The experience described, if there be any such, is always just past; the description is present. However, if I ask myself how I know the description is present, I find myself describing the processes that made up the description; the original describing is past: “Experience itself is at

the end of the introspective rainbow. The rainbow may have an end and the end may be somewhere; yet I seem never to get to it.”

Edelman summarized a vast array of evidence from the neurosciences to substantiate his theory about what sort of organism human beings must be if the phenomenal present is “really” the past. I am less concerned with the technical adequacy of Edelman’s neurological model than I am with the fact that remembering the present, if somewhat odd, is nonetheless a broadly recognized feature of human experience.

What, then, of memory for the future? Whether we look to the ideas of St. Augustine on the future as expectation, Miller, Galanter, and Pribram on plans,4 or the Russian physiologist, Nicolas Bernstein5 on the organization of living movement, one message repeats itself: The present is a dynamic evolving, trajectory that not only integrates current sensory input with prior experience, but also “calculates” an “imagined future” that then “feeds back” to complete a fundamental, transformational cognitive cycle characteristic of human thought. David Ingvar used the memorable phrase, “memory for the future” to highlight the complex ways in which what we normally think of time in relation to memory actually takes place in a distinctly non-linear fashion. He summarized a wide variety of evidence that plans, ambitions, and “sets” are normally remembered in great detail, just as memories of the past can be reconstructed. In addition, he summarized the neuropsychological evidence that memory for the future is selectively lost owing to lesions of the prefrontal and frontal cortices. Ingvar referred to these structures as the “neuronal substrate of the future.”

Of course, in one sense we all take for granted the existence of a “memory for the future.” I can speak coherently, for example, of my memory of what I will be doing (plan to do) this weekend. Research on the selective disturbance of planning functions as a result of prefrontal and frontal lobe lesions has been well known for a long time.7 Previously I did not think of such phenomena as memory for the future. It was only when I recently happened upon a reference to Ingvar’s article, while ruminating about cultural mechanisms of cognitive development, that the idea of future memory began to seem like a necessary property of human thought. To understand why memory for the future is a

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3 Ibid., p. 228.