ON TRACES AND ADDENDS: REFLECTIONS ON BENSUSAN'S *MEMORY ASSEMBLAGES*

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In the introduction to the 2005 special issue of *Cognitive Processes* entitled "Memory and the Extended Mind: Embodiment, Cognition, and Culture," John Sutton poses the following questions:

The fact that memory is studied in a daunting range of disciplines often leads to mutual suspicion. How could, say, neurobiologists and narrative theorists who happen to use the same term for their object of study really be addressing the same phenomena? What could possibly link computational investigations of memory with crosscultural psychology, or developmental studies with political theory?[1]

The question is, indeed, not an easy one to account for. The dichotomy between a naturalized, science-oriented notion of memory and a socially and historically constructed one turns out to be a false dilemma. As Sutton has emphasized throughout multiple works[2], it is only by blending ideas from a wide range of disciplines that memory —as a complex, dynamic, and multi-scale phenomenon— can be properly understood. This methodological turn, naturally, calls for multiple changes in the traditional characterization of memory, including a reconsideration of the concept of the "subject." The disciplines that Sutton enumerates in this quote —neurobiology, narrative theory, computational

1 John Sutton, "Memory and the Extended Mind: Embodiment, Cognition, and Culture", *Cognitive Processes*, 6, 2005, pp. 223–226

2 For instance: John Sutton and Kellie Williamson, "Embodied remembering" in L. Shapiro, (ed.) The Routledge Handbook of Embodied Cognition, London, Routledge, 2014, pp. 461-472, or John Sutton, "Remembering as public practice: Wittgenstein, memory, and distributed cognitive ecologiess in V. A. Munz, D. Moyal-Sharrock and A. Coliva, Mind, Language, and Action: proceedings of the 36th Wittgenstein symposium, 2015, pp. 409-444.

approaches, cross-cultural and developmental psychology, and political theory— share, despite their obvious differences, the idea that memory is a psychological faculty which, as such, is attributed to a subject. What counts as a subject is, however, a point where these fields can be at odds, which is why an alternative to overcome this difficulty is Gilbert's[3] (1989) idea of a "plural subject" of remembering.

Memory Assemblages[4] may appear to the reader as an attempt to stretch Sutton's concern to the point where it ceases to be a concern at all. It is not only neurobiology, psychology, or political theory that have their say, but so too do biology, geology, physics, and the arts — each illuminating memory from its own angle. As a result, the picture of memory Bensusan brings to the table might, someone could argue, be regarded as too broad: although the word "memory" opens the book's title, it is not memory that *Memory Assemblages* is about, as it is not concerned with memory as a psychological faculty. The reason for this suspicion is that understanding memory in Bensusan's terms demands a radical shift of perspective: an immersion into a world of resonances, where what is absent can always return, provided that the addends fall into place. Pan-mnemism, as an ontological thesis, goes beyond memory conceived as a psychological faculty. It explores not what memory is, but rather how it is that memory –and the physical mechanisms that support it– is possible. In Bensusan words, "memory is not a faculty because it overrides every faculty"[5]. *Memory Assemblages* is thus a book about time and its consequences, about the intricacies of the living and the non-living; a book that resonates with absence, speaking of tree rings, river sediments, and the faint traces of paint that linger on one's fingers.

In doing so, Bensusan's strategy unfolds as the inverse of Gilbert's: instead of broadening the notion of the subject so as to encompass multiple realities and levels of organisation, Bensusan's project interrogates the very possibility that memory might subsist without any subject at all. This gesture aligns the author with the poststructuralist tradition. Curiously, although there is no explicit reference to Foucault throughout the book, the inquiry into a memory without a

3 Margaret Gilbert, On social facts. London, Routledge, 1989

4 Hilan Bensusan, Memory Assemblages: Spectral Realism and the Logic of Addition, London, Bloomsbury, 2024

5 Bensusan, Memory Assemblages, p. 55

subject echoes the Foucauldian notion of a history without a locus of enunciation. There is no constitutive subject capable of unifying history; rather, there are fragmented narratives which nonetheless delineate the field of intelligibility of what can be understood, and even the conditions of emergence of the contemporary subject[67]. Similarly, pan-mnemism contends that it is not the subject who accounts for memory, but rather memory that provides the very condition for the emergence of the subject. Moreover, the subject's capacity to recall is possible only because the present itself is already structured as a memory assemblage. Yet, it is not Foucault's voice but Derrida's that reverberates in the recesses of these pages.

The idea of a memory without a subject is more deeply indebted to Derrida's thesis of a language without addressee and without referent, a language grounded in the very possibility of repetition, of drifting into a context utterly foreign to its origin through iterability[89]. Just like memory: the absolute possibility by which something is torn from its original context and brought forth, evoked, cast into another where it can only become something different. That the very condition of possibility for experience should be writing, and that writing should take the form of the grapheme, is nothing less than a brilliant metaphor for the way time leaves traces behind. After all, memory shares with writing the fact that it is, ultimately, nothing but a matter of traces. At this point, Derrida's grammatology and Bensusan's proposal may enter into dialogue with the analytic philosophy of memory, insofar as both conceive of memory as a question of traces.

In the remainder of this work, I would like to unravel the intricacies of this concept, where a certain agreement seems to reside among authors otherwise so disparate. I believe that taking the notion of "trace" as a point of departure for an encounter between Bensusan's work and the analytic philosophy of memory allows for a reinterpretation of *Memory Assemblages* through the conceptual framework of analytic philosophy. I consider that a dialogue of these

6 Michael Foucault, The Order of Things: An Archaeology of the Human Sciences, trans. A.M. Sheridan, New York, Pantheon Books, 1972

7 Michael Foucault, The Archaeology of Knowledge, trans. A.M. Sheridan, New York, Pantheon Books, 1970

8Jacques Derrida, Of Grammatology, trans. G. Chakravorty Spivak, Baltimore, Johns Hopkins University Press, 2016

9 Jacques Derrida, Margins of Philosophy, trans. B. Johnson, London, Athlone, 1981.

characteristics is valuable despite the differences in how each tradition delineates its object of study and the scope of its explanation. By shifting the focus from memory as a psychological faculty to memory as a primitive and foundational process, *Memory Assemblages* paves the way to a conception of memory as a gradual phenomenon —one that changes form a thousand times depending on the moment and the context of its manifestation. This is a complex and ambitious conception, in which, little by little and in the form of delicate filigrees, bridges are drawn between realities as disparate as an imprint on clay, the development of an embryo, the fragmented recollections of our childhood, and the sense of concepts as abstract and charged as justice or redemption. By emphasising this aspect of continuity —of progressive complexification among heterogeneous phenomena— Bensusan reminds us that what is paradigmatically understood as memory, the psychological faculty of a human organism, is framed within and cannot be understood apart from the phenomena that precede and make it possible.

The notion of memory assemblage aligns with the claim that remembering is a matter of traces, but it turns this claim upside down. Bensusan's project can be partly framed as an attempt to provide an account of memory that does not fall under the assumptions of the metaphysics of presence. What is thrilling about memory is precisely that it allows us to reach toward something that is absent. It is this intriguing access what theories of memory seek to explain by positing memory traces as entities that retain information across temporal gaps. In classical accounts within the analytic tradition –causal theories of memory–, the preservation of content in memory traces ensures the possibility of remembering the events to which this content refers. Thus, Bensusan's, but also Derrida's, criticism is simple: positing a content that remains present in some form and somewhere, always available for retrieval, is the easy solution to the problem of remembering —a solution that is, of course, trapped in the metaphysics of presence as the dominant metaphysics of Western thought.

Approaches in analytic philosophy have, however, begun to shift toward a different conception of memory traces —one that departs from the presentification view presupposed in classical causal theories. This contentless conception conceives of traces as "the dispositional property of a neural network

to reinstate the state it was in during encoding, at the time of retrieval"[10]. A conception that exhibits these features can still maintain the causal link between the original event and what is remembered through procedural causality[11] —the idea that the causal connection exists only at the level of the processes that generate a memory, rather than between contents supposedly stored somewhere in the brain. Moreover, debates surrounding the extended mind hypothesis have raised the question of what counts as a trace[12][13]. If external resources are themselves understood as taking constitutive part in cognitive processes, then we may wish to say that marks of the past that trigger retrieval should be considered memory traces, even if they are not located in the brain. The term "external resources" is generally used in a broad sense, encompassing social interactions and technological devices—both low- and high-tech alike. Some authors use the notion of "exogram"[14] to refer to those external entities or processes that transfer relevant information for memory reconstruction. Accordingly, the attention that the extended mind framework gives to the subject's surroundings points toward an anti-individualist stance on memory[15], one that conceives remembering as a dynamic and complex process of interaction between the subject and environmental as well as social resources.

In the course of developing his own philosophy, Bensusan also elaborates a reading of Derrida that presents him primarily as a philosopher of time and memory, insofar as *archi-writing* is constituted as a kind of primitive memory. As we noted earlier, very different philosophical traditions concur in holding that memory requires some form of support —that what has passed leaves behind traces. For Derrida, the articulation of traces according to a syntax conforms an archive, understood as something always open to the conditions of retrieval. The archive, therefore, is that record left behind by the past, which can be brought

10 Felipe De Brigard, "Simulationism and Memory Traces" in S. Aronowitz and L. Nadel (eds.), Memory, Space and Time, Oxford, Oxford University Press, 2025

11 Denis Perrin, "A Case for Procedural Causality in Episodic Recollection", in K. Michaelian, D. Debus and D. Perrin (eds.), New Directions in the Philosophy of Memory, New York, Routledge, pp. 13–32

12 Andy Clark and David Chalmers, The extended mind, A*nalysis* 58, no. 1, 1998, pp. 7-19.

13 Kourken Michaelian and John Sutton. Distributed cognition and memory research: History and current directions, Review of philosophy and psychology 4, no. 1, 2013, pp. 1-24.

14 Merlin Donald, *Origins of the modern mind*, Cambridge, Harvard UP, 1991

15 John Sutton and Carl Windhorst, Extended and Constructive Remembering: Two Notes on Martin and Deutscher, Crossroads, 4, 1, 2009, pp. 79–91.

back into the present insofar as it is fostered by the appropriate circumstances. An archive, like memory itself, is a consignation left to the contingency of addends. In Bensusan's framework, the *addends* are the reverse side of traces: traces persist, syntactically structured yet devoid of content, and become accessible only insofar as the present from which remembering takes place calls upon what was once consigned, transforming it into something other. Addends are necessary because retention is insufficient —because there is no content to be retrieved, but only traces that indicate, that structure an absent reality. In Bensusan words, "retention is as dependent on future recuperation as archives are dependent on addition"[16].

The fact that memory assemblages are ubiquitous, and can be manifested through such diverse phenomena as the layers of a glacier or neural networks, already points to a movement opposite to the one found in the analytic philosophy of memory. Pan-mnemism takes as its starting point the idea that traces are spread throughout the realm of the real. Neural traces are, therefore, a specific subclass within a broader and more encompassing phenomenon. By contrast, the general move from traditional theories of mind to the extended mind hypothesis—and the more specific move from engrams to exograms—reveals how, within analytic philosophy of memory, it was only by first positing an internal store of traces located somewhere in the brain that memory could later be conceived as extending beyond the skull. Thus, in Bensusan's theory of memory without a subject, traces are not something *extended*, for there is no point of reference from which they unfold; they are, rather, *extensive* in themselves. The present, woven as an assemblage where the past knots itself in the form of an exogram, makes possible the emergence of more intricate forms of trace —those that pulse within the brain, human or otherwise.

Bensusan's view of traces can be considered extensive in scope and contentless in nature. By endorsing the "difficult solution"—the acknowledgment that traces contain no inherent content—we are compelled to confront the question of the origin of memory content. It is only through the interplay with external addends that traces can generate memory and acquire meaningful content. Endorsing this view implies that, whatever the original context of the memory was, it holds no primacy relative to the circumstances yet to come. If what is held in retention owes

16 Bensusan, Memory Assemblages, p. 34

its meaning to the addends, this meaning cannot be sought independently in some supposed origin. The spectral realism that Bensusan puts forward in this book reminds us that the loss of a foundational origin is in some way related to the issue of causality and reference, insofar as a privileged beginning would stand as the first and traceable cause. Within analytic debates, post-causal theories of memory have challenged the traditional assumption that remembering requires an appropriate causal connection[17]: causal links cannot be fully tracked because memory is not a faithful reproduction of the past, but a reconstruction which draws on information from different and varied sources Bensusan's conception of memory advances this perspective, radicalizing its central claim: "If addition is crucial, the beginning is irrelevant; if the beginning matters, addition is either a mere follow-up or a mere epiphenomenon"[18]. What Bensusan critically highlights points out is that, if the origin were to matter, memory would be nothing more than an infinite return to that origin. Within such picture, the addends would merely function as triggers for a memory that, nonetheless, remains there —latent and complete. For the addends to become relevant within the operation, this origin must gradually be erased, assimilated as yet another addend. The causal chain, however, persists in an intermittent form, in which one origin refers to another, and nothing is ever given once and for all. For this reason, Bensusan prefers to replace the term "causal chain" with "mnemic chain", which itself depends on the assemblages[19].

However, *Memory Assemblages* does not simply examine the dimension of what is retained —in extensive and contentless traces— nor merely how it is retained —through mnemonic chains—but rather articulates a doctrine concerning the interplay between the past and the circumstances of the present. *Memory Assemblages* is not primarily a book about retention, but about retrieval and the conditions that render it possible. One lesson to be drawn from it is that the inquiry into what is retained is inseparable from the analysis of the circumstances of recall. Consequently, one of the most original aspects of Bensusan's proposal,

17 Kourken Michaelian and Sarah Robins, "Beyond the causal theory? Fifty years after Martin and Deutscher" in K. Michaelian, D. Debus, and D. Perrin (eds.), New Directions in the Philosophy of Memory, New York: Routledge. 2018, pp. 13-32.
18 Bensusan, Memory Assemblages, p. 34.
19 Bensusan, Memory Assemblages, p. 80

when considered as a philosophy of memory, lies in its insistence that recognizing the insufficiency of traces entails acknowledging that no theory of memory can be adequate without taking the present into account. As Bensusan notes, "There are no memories but remembered ones"[20], and we always remember from a specific situation, structured as a determinate epistemic position. In this sense, I believe that addends, insofar as they foster what is retained and integrate with it as part of an assemblage, can be understood not only as the conditions of possibility but also as the conditions of intelligibility of recall. At this point, insights from Gadamer's hermeneutics may further illuminate what it means for a subject to experience the past as a memory assemblage.

In Chapter 9 of *Truth and Method*[21], Gadamer argues that understanding the past requires the subject to situate themselves within the appropriate horizon of meaning. While Gadamer primarily frames this claim in terms of the experience of reading a text, I propose that it can be extended to the experience of remembering. The key idea is that the historical situation that a particular subject inhabits presents itself as a horizon of meaning. Different periods, then, would convey different horizons of meaning and, in turn, different hermeneutical resources. To comprehend a past period, whether in the broader context of history or in the more intimate context of one's own life, involves a constitutive tension between horizons of meaning. However, temporal distance is not something we should attempt to overcome; rather, it constitutes the very possibility of the act of understanding. I contend that the same applies to the personal past: temporal distance serves both as a limit and a necessary condition for remembering. Moreover, when remembering, the present offers itself as a horizon of meaning, that is, as a frame of intelligibility from which to access to the personal past. Importantly, this distance implies a swift of horizon of meaning, insofar as the person who experienced the remembered event is no longer the same as the person who is now remembering. Memory, then, involves a fusion of horizons: we do not remember events as they occurred, but rather as they are interpreted according to the information we currently possess and the person we are now. Thus, one's beliefs can evolve over time, generating distinct frames of intelligibility.

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20 Bensusan, Memory Assemblages, p. 80

21 Hans-Georg Gadamer, Truth and Method, trans. J. Weinsheimer and D.G. Marshall, New York, Continuum 1989

Beliefs are diachronic in the sense that they can shape how we remember past events, altering both the content of the memory and the affective stance we take toward it.

The experience of this fusion of horizons of meaning is, therefore, the experience of a memory assemblage. Recalling a past event always involves adding something to it —namely, all subsequent circumstances that have reshaped one's conception of what occurred. Nevertheless, what is added to memory does not need to be directly related to the recalled event. Practical interests, new priorities or commitments, and current expectations —all of these can influence the way a past event is remembered, insofar as they form the horizon of meaning that serves as a frame of intelligibility. While Gadamer's analysis is concerned with the phenomenological dimension of memory —the way in which the act of remembering is experienced by a subject— Bensusan's concept of memory assemblage operates at a more foundational level. The absence of the subject renders memory assemblages intrinsically organic, wherein the fusion occurs not between horizons of meaning, but among heterogeneous realities, shaped according to the nature of the elements being assembled. However, I believe that both conceptions resonate with one another insofar as, when memory is understood as the psychological faculty through which a subject relives their past, the assemblage of elements operating at the organic, biological, and ontological levels may perhaps be experienced by the subject as a fusion of horizons of meaning. This would imply that, even when a past event is successfully recalled, it presents itself as different, in accordance with the transformation of the subject's hermeneutical resources.

The fact that addends constitute both the conditions of possibility and the conditions of intelligibility of memory turns Bensusan's proposal into a radicalization of constructivist accounts of memory —yet, as previously noted, it may equally be read as a radicalization of post-causal theories. This should not come as a surprise, as within analytic philosophy, those who defend the constructive nature of memory at the level of phenomenological content often also advance a post-causal account at the referential level, one grounded in a specific understanding of memory traces. Constructivist theories of memory emphasize that remembering does not operate by reproducing a past event, but rather by reconstructing it through the blending of elements whose origins may be multiple

or varied. Some radical constructivist accounts, such as simulationism, maintain that as long as memory is generated by a properly functioning system, an instance of remembering may contain no information derived from the original experience at all[22]. These theories, therefore, endorse radical generationism —the claim that the content produced in remembering can be entirely new. The notion of memory assemblage exposes the idealization underlying classical theories, which conceived of memory as the preservation of content. It aligns itself with constructivist approaches, yet once again from a distinct position and angle —one that resists assimilation into the terms and debates of analytic philosophy. There is no retention without addition, for there are no memories other than those recalled from a particular present, itself already constructed as an assemblage. Memory is diachronic because it has the force to reinvent the past, to bring it back turned into something other. And yet, it is its very distortions that keep it from fading away. As Bensusan states "trusting something to memory means being in the air about the circumstances in which memory will be retrieved"[23].

In sum, drawing on notions familiar to the analytic philosophy of memory, Bensusan's proposal could be read as a post-causal conception, one in which traces are extensive and devoid of content, and remembering unfolds as an act of merge and reconstruction. Yet to assert this with precision would demand so many qualifications, of such varying kinds, that the statement would all but lose its meaning. What remains certain is that Bensusan's proposal exceeds the limits of analytic theories, for its concern is not merely memory itself but the very ground from which memory arises. It might be more fitting, then, to say that Bensusan is committed to the idea that the conditions making possible the emergence of memory as a psychological faculty reach beyond the human, and even beyond the living—where what is retained in traces holds no content, and where the past is reconstructed, rediscovered, and reinvented as many times as new addends appear; that is, as many times as there are presents upon the horizon.

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22 Kourken Michaelian, *Mental Time Travel: Episodic Memory and Our Knowledge of the Personal Past*, Cambridge, MIT Press, 2016.

23 Bensusan, Memory Assemblages, p. 32