

2 Narrative Configurations of Ageing and Time

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Abstract

Ageing and time are interconnected because ageing is basically living seen in a temporal perspective; especially as living after having already lived for a relatively long time. This makes “time” an important concept in trying to explain ageing. Usually, the connection between “ageing” and “time” is sought – or supposed to be found – in the concept of “age.” Unfortunately, “age” is used in confusingly different ways: “as we age,” “his age,” “the Stone Age,” “old age” or “weary with age.” “Time” does not offer much more clarity: “acceleration time,” “Caesar’s time,” “time will tell,” “time destroys all,” “time of birth” or “time since birth.” To clarify some of these confusions, different dimensions of “time” and ambiguities of “ageing” will be distinguished in this chapter. A major problem appears to be that *chronometric* time and *lived* time are both necessary to understand human ageing, but that these approaches tend to exclude or occlude each other. Narrative time is introduced as a way to interrelate these two temporal perspectives, to make it possible to develop and share meaningful accounts of our temporal human condition and to acknowledge the diversity of contexts in which human ageing takes place.

The Emergence of Chronometric Time from Cosmological Narratives

The articulation of “time” probably began with the experience of *change*; especially with regular, repetitive changes in the surrounding world that are not the result of human actions but stem from forces beyond human control. Examples include the basic rhythms of each day as it slowly becomes light, gets lighter and warmer during the day until the evening falls and night comes with its own rhythms. The seasons also follow a more or less regular local pattern making it possible to anticipate periods of dryness or cold. Finally, the year could be recognized as the completion of the full circle of the seasons, beginning anew when “the sun returns.” Such regularity implies that, even though it is not possible to influence these rhythms, you can *count on* them and use this knowledge to coordinate activities with these recurrent patterns.

Throughout history, these activities of anticipating and counting the regular changes in the world have gone together with attempts to interpret or explain them. Often these changes were

attributed to the activities of gods who would govern the world and one's life in it. Here, narratives play an important role in explaining and giving meaning to the basic rhythms of the world and human lives: explanation and meaning go together. In many cultures, we can find an interpretation of the universe as a harmonious and repetitive *cosmos* that is not only meaningfully connected with social formations such as families or social hierarchies, but also with rhythms of nature and the phases of a human life. This is the basic pattern of the many pre-modern narratives or theories of the world that presuppose a fundamental *Logos*, as Heraclitus or the Stoic philosophers would call it: a harmonious order underlying the repetitive movements of the cosmos as a natural, social and personal whole. In this context the human life cycle may be interpreted as deriving its meanings from the influence of the planets – as we see in the work of Ptolemy – or as representing the seasons.¹

Clock time as we know it, developed gradually as a mere measurement of time in the cosmologies of ancient civilizations – Egyptian, Babylonian, Chinese, Indian, Greek, Maya or Aztec – in which measurements were embedded in cosmological narratives.² Eventually, a day was not interpreted as the recurrent activity of gods but explained as the result of the earth's rotation around its axis; a month as the cycle of the moon around the earth and a year as a complete cycle of the earth around the sun. The term “chronological” time still suggests a connection between time and a basic *Logos*, although it merely simply refers to measurements of “time.” I will use therefore, the term “chronometric time” for clock time.

Concepts of time have been developed to order experiences of change in its many forms, and in this respect chronometric time has important advantages. By means of elementary distinctions such as “later than,” “earlier than” or “simultaneous with,” all events can be ordered in one organized whole. In a developed form, this provides a complete, continuous and linear ordering

that can be represented either numerically or as a straight line. The ordering is continuous in the sense that for any two distant instants, t_1 and t_2 , there exists a third instant lying between them – with some specific caveats concerning *Planck Time* that are not relevant for a discussion of human ageing. Hours, minutes and seconds, however, might have been arranged differently: it would also be possible to have 10 days in a week, 10 hours in a day or 100 minutes in an hour. This does not mean that the clock of physics is arbitrary, but that its scale is at least partly conventional.

Narrative Foundation of Chronometric Calendars

Although the atomic clocks that back up the world clock with its different time zones are much more precise than the movements in the solar system, they are still embedded in narratives insofar as they function as parts of cultural calendars. Throughout history, clocks and calendars have been reset to re-harmonize their scales with the basic clock of the solar system as this is experienced from the Earth. The 1582 transition from the Julian to the Gregorian calendar is a key example of such a reset that became necessary because Easter fell earlier and earlier in the year which led to an embarrassing disjunction between the cultural calendar of the Church and the seasons.

Years, months and days are determined by these movements but are counted in the contexts of narratively driven calendars. The years, for instance, can be counted only after the introduction of a zero point that is derived from a founding narrative such as the birth of Christ, the flight of Mohammed to Medina or some other extraordinary event that inaugurates the calendar of a specific culture. This zero point also represents a present that changed the meaning of history: a break with the past that changed the future. Such a present (as the birth of Christ) is typically remembered and relived every year by those who continue to believe in its fundamental

significance. The narrative-based calendar plays a major role in our lives: it makes it possible to arrange a meeting or date an event in time; it integrates social time – with its many aspects such as national festivities, birthdays or holidays – with the movements of the solar system that become manifest in seasons or circadian rhythms.³ And last but not least, the calendar makes it possible to position ourselves in history, offering a first orientation as we try to refine our understanding of historical trends, events or periods and their interrelations.

Ageing in Temporal and Functional Perspectives

Definitions of who is “old” and when “old age” would have arrived, have long been more dependent on the appearance and physical capacities of individuals than on chronological age.⁴ As I explained more extensively in *Aging and the Art of Living* (2012), Western societies have seen a bureaucratic reorganization of the life course during the nineteenth and twentieth centuries, in which *age* plays a crucial role in defining childhood, adulthood and old age. One of the results of this chronometric ordering supervision of human life, beginning with prenatal care and continuing through childhood with its age-related structuring of schools and curricula, has been a growing awareness of one’s own and other people’s age. After childhood, age begins again to play an important role in the labour market particularly as soon as people pass the age of 50 or even 40. Moreover, the ageing populations of Western societies have in recent decades led to intensive public debates about dependency ratios, health-care costs and life expectancies that would be related to “age.” Much research on older people or human ageing is intended to inform governments about the effects of age-related phenomena since these may have consequences for age- or duration-related legislation. This chronometrically oriented research on ageing is the primary subject of this critical analysis of ageing and time.

This does not imply that all research on human ageing is as strongly focused on age and duration as, for instance, demographic research. In addition to chronometric approaches to ageing, there are important functionally oriented paradigms of ageing in biology, psychology, geriatric medicine and psychiatry that may have their own conception of human ageing as a decline of functions that is more or less independent from chronometric age. A striking example of such relative independence can be found in teenagers who suffer from premature ageing syndromes (Progeria) and are in many functional respects “very old,” although they are still very young in a chronometric perspective. However, the fact that we are struck by such contrasts presupposes a chronometric conception of ageing, and it is hard to conceive of ageing as functional development or decline without presupposing a temporal perspective.

Although ageing cannot be understood without functionally oriented approaches, a perspective that focuses on the temporal dimensions of ageing has important advantages. These advantages flow from the different dimensions of time that allow us to contrast chronometrically oriented approaches with temporal approaches that focus on personal experiences of ageing, lived time, finitude or cultural narratives about ageing.

Some Limits of Chronometric Age in Understanding Ageing

The grand ambition of many overviews of ageing populations – ranging from those produced by supra-national institutions such as the WHO, IMF and the EU, to regional analyses of the needs for care – still appears to be to establish how “age” determines the characteristics of these populations. This would eventually result in a straightforward set of simple formulas in which scientific precision and practical use would be united. More than 50 years ago, this option was already stated with much self-assurance:

Chronological age is one of the most useful single items of information about an individual if not the *most* useful. From this knowledge alone, an amazingly large number of general statements or predictions can be made about his anatomy, physiology, psychology, and social behaviour.⁵

As we shall see, the author of these lines later expressed serious reservations about these claims, but many institutions and organizations that finance research on ageing and ask for straightforward data about “seniors” are still under their spell.

However, the impressive collection of data that has been accumulated about ageing defy the statement that “age” (as time since birth) is a reliable indicator of ageing. The following are some main points to illustrate this: (1) Biodemographic research informs us that life expectancies in affluent societies have almost doubled over the past 150 years.⁶ After the initial decline in infant mortality there has been a further boost: most of the additional years added to life since the past decades of the twentieth century were realized at older ages.⁷ This might already suffice leading to a questioning of the view that people’s “age” in itself would represent an adequate assessment of their potential, health or life expectancy. Moreover, information from the WHO shows that low life expectancies of a little over 50 years are still a reality in countries such as Sierra Leone and Angola.⁸ This underscores the fact that, in a broad sense, socio-cultural contexts play a major role in ageing. (2) These contexts are, however, crudely represented by national averages that hide important internal differences. One important differentiation of national populations in terms of ageing is *birth cohorts*: people who are born in the same year or cluster of years. Whereas it was assumed for a long time that intelligence would decline at a more or less fixed age, researchers such as Paul Baltes and Warner Schaie found in the 1970s important differences between people of the same age, depending on their birth cohort. Since

then, Schaie's *Seattle Longitudinal Study* has documented the ways in which cohort differences affect IQ scores of people of the same age that were born at different moments in history.⁹ (3) But even birth cohorts are far from homogeneous and are partly torn apart by socioeconomic inequalities in income and wealth, which appear to have major consequences for the ways in which people age and result in major differences in morbidity and mortality.¹⁰ So how can chronometric "age" (time since birth) be an adequate indicator of ageing processes? It just measures them.

So, there is reason to doubt whether age is really the "independent" or even "explanatory" variable that public discourse, or even considerable research on ageing, assumes it to be, leading to the question of whether and how the age-related definitions of these populations might make sense. Concepts used in the discussions of "ageing societies," such as "age structure," "birth cohorts," "age groups," "age norms," "age grading," "dependency ratio," "age-cost profile," and "age-associated diseases," have become so common in ageing studies from demography, economics, epidemiology, life course or life span paradigms that their specific meanings and assumptions are rarely questioned.¹¹

At this point, it is important to remember that the repetitive movements in the solar system that have been foundational for chronometric time are dictated by the gravitational movements of enormous bodies of *dead weight*. And insofar as these movements are not regular enough for present purposes, they are corrected by the rhythms of other *dead* materials: extremely frequent and stable atomic oscillations. Life is part of the solar system, but even if we would agree that living systems are also physical systems, this does not mean that all the theories that are needed to understand human life can be derived from the laws of physics.¹² Evolution, history or human biographies can be *dated* and *measured* but do not follow chronometric time; on the contrary,

time measurements only mark events or transitions that may have their own temporal dynamics. The question that arises from this critique of the adequacy of chronometric representations of ageing is whether human ageing might not follow regular changes of its own, that could be seen as a basic natural clock with its own formative rhythms over the human life span that might be counted or expressed in a time scale that would specifically and adequately assess ageing processes.

The Search for Intrinsic Clocks of Ageing

If chronometric time or age are so inadequate in explaining the dynamics of human ageing, would it not be better to base our assessment of the age of a person on clocks that are *intrinsic* to human ageing? This interesting question has been explored by several authors.¹³ Such an intrinsic clock might make it possible to assess a functional age that would indicate precisely the relative state or phase of the human organism on a scale that ranges from birth to death. Such an intrinsic measure of senescing would require – at least in a biological or, more generally, a functional perspective – the establishment of clear indicators of “normal” functioning for different dynamic stages or functional ages. These differently marked ages could then be located on a continuum as subsequent *phases* of a structured development towards a state of adult “normality,” followed by a declining movement away from it. This would have to go beyond biomarkers such as the aspartate racemization in the teeth, which is used in forensics¹⁴ to assess the age (as time since birth) of a body. Such biomarkers do not represent “age” as the functional state of the whole organism, so we still don’t understand why one person aged 60 dies within a year while another aged 82 lives for another 20 years.

Different theories from the natural sciences have been drawn upon to conceptualize intrinsic clocks of ageing, such as Quantum Mechanics.¹⁵ Usually, however, the Second Law of

Thermodynamics has been called upon to develop an intrinsic age in terms of the entropy production of a given system over time. The main problem with this approach is that open systems such as human organisms, that rely on interaction and exchange with pluriform contexts, do not fit well in the models of intrinsic dynamics or intrinsic times that presuppose that the system in question is sealed off from the environment.¹⁶ Moreover, the idea of a human organism interacting as an integrated whole with different contexts is much too simple. The reproduction of the human organism over time involves complex internal interrelations of cells, tissues and organs that are also relatively independent of each other. The intrinsic age of the human organism could dissolve into a multitude of intrinsic ages: lung capacity, maximum heart rate, hearing sensitivity – as many as there are organs and other identifiable subsystems in the body. From a functional perspective, the complicated processes of human senescing in cells, tissues, organs or different parts of the brain may each have specific dynamic properties, but these dynamic properties include an openness to the environments inside and outside the human body, extending from personal lifestyles to ecological or social contexts in a broad sense. Emerging research from ecological developmental biology¹⁷ on the social organization of genetic expression (*epigenesis*) demonstrates how complex these interactive processes are. They defy a general *Logos* and must be discovered in their *specificity*, and in the course of this discovery, chronometric time can only function as an instrument of measurement that should not be extended to represent human ageing.

The relative openness of intrinsic qualities and the formative influence of specific contexts are demonstrated in the major differences that exist between experiments with fruit flies, nematodes, mice, rats, birds and monkeys. Processes of functional degeneration and regeneration over time are manipulated in laboratory contexts to investigate how far they can be slowed down so that

these experimental populations reach higher ages, and in particular, how the results might apply to humans. Insofar as these experiments result in prolonging the life spans for these animals, they illustrate the *intrinsic malleability* of these processes.¹⁸ Such intrinsic openness is only possible within the limits of the species, but the whole point of these experiments is that we do not know what these limits are.

As humans grow up, the interactions of three factors result in an early decline of developmental regularities: (a) the formative influence of contexts in a broad sense (nourishment, care, family, education, ecological environment, material and immaterial resources), (b) specific genetic endowments and (c) personal agency. Developmental regularities are still strong in embryological phases, although even their contextual influences will have their impact. But in childhood and adult life, these regularities begin to decline rapidly. Comparative research on ageing identical twins has demonstrated that genes account for approximately 30% of developmental outcomes in old age; the remaining 70% is a playing field of contexts and personal agency.¹⁹ Occasionally, usually in connection with female fertility and menopause, the idea of a biological clock that would regulate these processes is raised. However, biological clocks have only been identified for circadian rhythms so far, although there have been attempts to apply the model of a biological clock to the human life span.²⁰ These attempts have been unsuccessful, because of the intrinsic openness of the human organism.

It is now evident why the changing rhythms that we see in living nature, as a result of the dynamic interaction of the living organism with its inner and outer contexts, could not be used as a basis for chronometric time. All these different emerging rhythms would jeopardize the stability and precision of its measurements. The earth or the moon are not known to engage in active explorations of their environments, or to explore the options they might have to improve

their situations. The rigidity of their movements and our inability to influence them make it possible to found chronometric time.

Confusing Causalities

Generalizations about people of a certain calendar age actually presuppose a *causal* concept of time: because time would have worked for a certain duration in them, certain inevitable effects should be reckoned with. Moreover, the effects are assumed to develop steadily and universally according to the rhythm of the clock. However, such a causal concept of time in ageing can never generate knowledge that could explain the *differences* that exist between human beings of the same age. Nor could it contribute to uncovering the many specific processes that remain hidden behind generalizing concepts that are based on average scores. While it is true that all causal relations are also temporal relations, or relations working “in time,” it would be wrong to identify causality with time or to reduce the process of ageing to “causal effects” of time. The same Jim Birren whose high expectations for the predictive power of chronometric age that was quoted earlier, later articulated a similar view:

By itself, the collection of large amounts of data showing relationships with chronological age does not help, because chronological age is not the cause of anything. Chronological age is only an index, and unrelated sets of data show correlations with chronological age that have no intrinsic or causal relationship with each other.²¹

Because ageing involves many different processes at different levels, these processes must be understood in terms of their specific temporal qualities: they evolve or take place in time, but not according to the rhythm of chronometric time. Although all *processes* can be measured in chronometric time, their specific properties and effects are not caused by time. To assume that

this is the case, leads away from an understanding of ageing, although it may produce neat distributions of average characteristics of persons of any given age.

Referring back to the formative influence of birth cohorts mentioned above, a causal explanation of certain characteristics of ageing persons as effects of age has to keep its explanation clear of cohort effects. The epistemological situation becomes even more complicated with the introduction of *period* effects: developments or events that influence all age groups, not only those in the “formative years” of their youth. Examples of such period effects are the introduction of radio, television, cell phones and the internet; and historical events such as 9/11, worldwide recessions or the popularity of junk food. With the acceleration of social and cultural change in late modern societies, however, it becomes increasingly difficult to disentangle cohort and period effects. For example, if a high proportion of people between the ages of 60 and 65 are found to be obese, it will be hard to determine whether this is caused by age, cohort or period effects. This conundrum of causalities has been called the *APC (Age Period, Cohort)-problem*. Several authors have tried to separate these different effects statistically,²² but scepticism prevails and, according to Glenn, these attempts have been futile, leading to “much pseudo-rigorous research and almost certainly to many incorrect conclusions.”²³ A major problem is that these effects are not additive but *interrelated*: age, period and cohort effects interact with the dependent variables that researchers on ageing such as sociologists and psychologists are interested in. Time does not work as a natural *decontextualized* cause.

It is evident, therefore, that narratives resurface behind the exact data of ages and durations because these precise measurements are not reliable as an indicator of ageing and need contextualizing that cannot be separated from narratives. However, because most attention focuses on the statistics of ages and their correlation with relevant characteristics, these

narratives tend to go unnoticed, leading to an uncritical acceptance of arbitrary constructions of chronometric age. These constructions fail to question the many forms of ageism that still frustrate a meaningful inclusion of older people in society.²⁴ In some cases, measurements of ages are associated with narratives or metaphors that are not only implicitly accepted as meaningful but even as universal and grounded in immutable rhythms of nature. Examples from gerontology are *Disengagement Theory*, which states that at a certain age, human beings would naturally feel the need to retire and this would harmonize with the needs of society²⁵; or the idea that a *Life Review* would be “a naturally occurring, universal mental process” as people pass a certain age.²⁶ In these theories “age” is still implicitly seen in light of a fundamental *Logos*: a harmonious unity of natural, social and personal factors, repeating itself in time through the generations.

This does not mean that ageing should be purified of metaphors and narratives. On the contrary, these should be made explicit and taken seriously. In (auto)biographical narratives, certain ages are often included as meaningful markers of a life.²⁷ But the point is that the meaning of such markers is derived from the narrative and not from the measurement. The question is whether “age” – as time since birth – can function as an *explanation* of ageing processes; not whether “age” can rightfully be used as a meaningful marker in (auto) biographical interpretations of ageing. Measurements of time since birth should not be seen as representing some inner logic of ageing, which produces certain age-related effects regardless of contexts or persons.

Ambiguities of “Ageing”

“Age” seems to offer a fruitful approach as it enables us to categorize persons according to the amount of time they have lived. This may have practical advantages but, if we want to understand and explain ageing, many questions arise. In addition to the difficulties that surround

“age” as an indicator of “ageing,” there is also the confusing usage of the latter term. At least three different temporal dimensions should be distinguished that usually remain implicit in the more general term “ageing”:

- (1) Reaching a higher chronometric *age*, which may imply entering another age category (50+, 60+, 85+, 100+), and being subjected not only to the professional risk profiles but also to the cultural prejudices that are associated with these categorizations.
- (2) “Ageing” as representing the complex processes in which degeneration outweighs the regeneration of biological or, in a broader sense, functional conditions. Sometimes the term “senescence” is used but biologists often use the term “ageing,” as in “ageing cells” or “ageing tissues” in the sense of functional decline. This understanding of ageing has emancipated itself, in principle, from the use of chronometric “age” as an indicator of ageing: when there is no functional decline there is no ageing.²⁸ Perhaps it would be better if biologists used a more specific term to distinguish this decline from the confusing age/ageing complex; preferably a dynamic term such as *senescing*, thereby avoiding the term “senescence” that suggests a static – but very long and slowly developing – “old age.”
- (3) Growing older as an agentic process affecting human beings, in which historical contexts, choices, preferences, attitudes, life plans and lifestyles play an important role, as has been broadly documented in the empirical research of recent decades.²⁹ Such processes are targeted in the various behavioural programmes that have recently been developed for the ageing populations of late modern society such as “productive,” “successful,” “active” or “healthy” ageing.³⁰

It is clear that chronometric measurements only grasp the achievement of a higher age and that most of these measurements aim at differentiating between young people and “normal” adults, on the one hand, and “old people,” on the other. However, the use of such age categorization to provide a clear overview of subjects such as potential productivity or need for care is becoming increasingly problematic. The many long and differentiated processes that are taking place between the contemporary 50+ threshold to “being aged,” and ages of 100 years and more, defy efforts to categorize ageing people according to static qualifications such as “old age,”

“senescence,” “old people” or “the elderly.” The contemporary combination of longer lives and accelerating contextual change will probably continue to generate differences between people of the same ages, which implies that age will become even less important as an indicator of ageing processes. Unless, of course, age is *made* important in the organization of the life course. Indeed, the main reason that age figures so predominantly in government reports and public debates appears to be that chronometric age can easily be used in calculations for policy and planning purposes.

Chronometric Time and Lived Time: An Apparent Dichotomy

After having discussed the dimensions that are assessed “objectively,” from the outside by scientific means, the third temporal dimension of human ageing (“ageing” as an agentic process) deserves more attention. Ageing cannot only be measured as time since birth; life’s changes and their temporal interpretations are also *lived*, and this internal dimension of time is equally important for human ageing. This difference has something to do with a distinction between, what Heidegger calls, factuality (*Tatsächlichkeit*) and facticity (*Faktizität*).³¹ *Factuality* refers to the many characteristics that people may have: they are born as situated bodies into historical contexts and have inevitably specific characteristics such as gender, weight, skin colour and age; and their lives take place against different backgrounds, including family, culture, education, socio-economic circumstances and access to health care. Such characteristics can be described, classified and analysed in empirical research on ageing: they belong to the domain of facts. *Facticity*, however, reminds us that these characteristics are empirical indicators of situations that are *lived* – they refer to ways of *being* and ways unique persons relate to characteristics and situations: what it *means* for them to be black, a woman, 70 years old, etc. The distinction between factuality and facticity implies that persons have their own meaningful experiences that

count, in addition to or beyond objectifying assessments; as such, this is one of the markers of a human world and a major focus for critique of some approaches to ageing. Whatever ageing persons experience or do can be measured in chronometric time, but they are also *living* time and relating to the ways in which their lives are organized and classified in time.

To acknowledge this, we need other temporal perspectives than chronometric time. I propose, therefore, the following distinctions between chronometric time and lived time.³² (1)

Chronometric time is embedded in *scientific paradigms*; lived time in *ways of living*. (2) Due to its definition as a clock, chronometric time has *one* rhythm; lived time has *different* rhythms. (3)

According to chronometric time, time is an infinite series of point-like *instants*, which can be counted and dated. However, establishing whether something happened earlier, later or simultaneously is not the same as interpreting it as *past*, *present* or *future*.³³ Moreover, major

changes or transitions such as retiring, becoming a grandparent or losing a partner transform not only the present but also the anticipated future and the relevance of the past. (4) In contrast to the time-indifference or even the *reversibility* of time in laws of physics, lived time is *irreversible*: for human beings there is an important difference between whether something has not yet or already taken place. Humans have to deal with a finite time in terms of the irreversible passing of a limited amount of time, whereas chronometric measurements can freely switch from nanoseconds to billions of years in the same continuum.³⁴ There is exactness but no sensitivity within chronometric perspectives for the specific dimensions of lived time. Such sensitivity has to be introduced through interpretations that offer a richer approach to time than would be possible from chronometric time.

That living and experiencing time is not the same as measuring it has been forcefully articulated by existentialist thinkers such as Kierkegaard and Heidegger. Thinking about the finitude of life

in Heidegger's influential early work remains within the perspective of lived time, forcefully juxtaposing this to the "vulgar time" of science. Heidegger even goes so far as to write that "Human life does not happen in time but rather is time itself."³⁵ However, we *are* not only time or just *living* time, we are also living *in* time in the sense of living within temporal (evolutionary or historical) dimensions that we cannot constitute from our own experiences.³⁶ We are also a mere glimpse of life, a small link in a chain of generations. Both temporal perspectives are interrelated: the present that we experience, the past that we have experienced or the future that we anticipate do not exclude historical dates and measurements of chronometric time.

It seems to be difficult to establish a proper account of the interrelatedness of chronometric time and experienced time: although time measurement cannot exist without somebody who experiences time, this experience of time takes place within temporal dimensions that surpass the range of direct experiences. From Aristotle to Heidegger – for more than two millennia – there has been a debate about the question of which is the most fundamental: scientific theories of time or lived time.³⁷ According to Ricœur, this situation reflects a basic *aporia* of time: chronometric time and lived time are irreducible to each other, they *presuppose* each other but also tend to *exclude* or *occlude* each other. Although a theoretical solution of this *aporia* may not be feasible, it would still be possible to articulate these different temporal perspectives, including their mutual tensions. In this context, Ricœur has pointed out the intermediary importance of narrative.

Narrative Configurations of Time and Ageing

The fact that Ricœur traces this intermediary role of narrative back to Aristotle's *Poetics* may sound strange, as temporal perspectives are neglected in this text. His concept of time is developed in *Physics*, the basic text about chronometric time until Newton but without any

consideration of lived time. In *Poetics*, temporal references surface only occasionally in such observations as “the middle is that which both comes after something else and has another thing following it.”³⁸ Aristotle privileged drama (tragic and comedy) and epic, and juxtaposed them not only to narrative poetry, but also to history. What interests Ricœur in Aristotle’s *Poetics*, however, is his concept of “*mythos*,” which has the meaning of representing actions (*mimesis praxeos*). After Plato, with his ambivalent attitude towards art or *mimesis* as delusion, Aristotle rehabilitates art as a way to shed light on the “world”: situations in which human beings may find themselves. The core of narrative as a general concept is formed by *mythos*, which stands for “the organization of the events”³⁹ not in the sense of a structure, but as the *activity* of emplotment. This emplotment is developed as an activity of configuration in which a plot is constructed out of a chaotic multitude of events and actions, so that it conveys a story that can be followed and somehow understood.

Ricœur criticizes a-temporal structuralist approaches to narrative by theorists such as Greimas and Propp,⁴⁰ as well as linguistic and literary approaches that treat texts as self-contained and any reference to the world outside the text as illusory. In Ricœur’s approach, the emphasis lies precisely on the temporal character of narratives and on their capacity to refer to a world outside themselves – both qualities that are highly relevant for human ageing. In elaborating this approach, the concept of configuration is joined by the concepts of pre-figuration and re-figuration.

Pre-figuration refers to actions and experiences that are, somehow, without any explanation, understood by the reader. Usually this understanding presupposes a shared context; for instance, we readily assume that we know what somebody is doing when he raises his hand. Depending on the context, we understand whether he is voting for a proposal, stopping a taxi, greeting a friend

or bidding at an auction. Much the same way, we recognize certain experiences as typically referring to ageing, such as seeing one's children becoming parents and looking back on the follies of youth or regretting their loss. Based on such shared experiences, we might interpret a text as referring to ageing, although it does not announce itself as such. According to Ricœur, this pre-figurative aspect was already captured by Aristotle in his remark that "Tragedy is an imitation of action" and "The imitation of action is the Plot."⁴¹ The composition of the plot is grounded in a pre-understanding of the world of action – its meaningful structures, symbolic resources and temporal character. Despite the "break" literature institutes, a narrative would be incomprehensible, according to Ricœur, if it did not provide a configuration of what is already prefigured in human action and suffering.

Configuration refers to the act of emplotment which provides the mediation Ricœur is looking for. One of the remarkable aspects of narratives is their ability to integrate in a loose but potentially meaningful way the most diverse events, actions and their evaluations. Through the plot, the *events* and *story* are connected reciprocally, so that the story changes when new events or interpretations are introduced and vice versa. This implies that the same events can be integrated into different narratives, where the elements are arranged differently with other emphases or from other points of view. Events that play an important role in people's lives are rarely unambiguous facts. On the contrary, they are usually complexly interrelated patterns made up of various situations, intentions, acts and experiences. The fact that there are different narratives of the same event cannot simply be attributed to a lack of precision; different narratives may very meticulously express the potential richness of situations, experiences and evaluations.

Here also, chronometric time will play a role, but only a modest one. If we were to ask somebody to describe a visit or a long period of work, it would be surprising (and boring) if this person were to provide a chronometrically detailed list of unrelated events. Chronometric measurements do not provide a clue as to *what* we should report, because we might measure anything. Just as scientific research requires *theories* to develop a relevant structure in the face of an immense universe of facts or observations, the lived world requires *narratives* to play this role of structuring and articulating meaning.

As soon as we have a plot, the chronometric dimension (where the emphasis falls on the timing and succession of events) can be included in the narrative along with personal experiences. In every story, there is a succession of events (we cannot become grandparents without having children first, or retire without having been active before), and sometimes the exact timing of events may be important, so narrative time does not exclude chronometric time. But what is emphasized and told in the story depends on its meaningful configuration: chronometric exactness is not important per se, but for reasons following from the plot. A narrative can run parallel to clock time, which may suddenly surface when the story reveals that a person came too late or too early, so the integrative capacity of narratives does not imply that it can replace chronometric time; the importance of chronometric time is not denied but only seen as relevant within the context of the story. But the narrative does not adhere to clock time. In everyday life there is day and night, and there are hours, minutes, and seconds, but it would be odd to assess them exactly for no apparent reason, unless the ticking of the clock has come to control life.

Chronometric measurement may become important in a story if somebody did not show up at the agreed time (for reasons which may be revealed subsequently), or to emphasize a certain characteristic of the person (“he is always late” or “she is always punctual”). In temporal respect,

the narrative plot integrates the chronometric dimension (succession of events) into the whole story. Composing a story is drawing a configuration out of a succession.⁴²

Eventually, the end of a story makes it possible to *retell* the story and understand more of its structure – the meaning of events in light of the whole story – which adds a new temporal dimension. Instead of following events from the past to the future, we can read the end in the beginning or discover other temporal interrelations. In this reflective turn, we encounter what Ricœur calls *Refiguration*, which refers to the act of reading or hearing the story and absorbing its meanings. According to Gadamer, this can be seen as a fusion of horizons; in particular a fusion of the world of the text – which opens a horizon of possible experience – and the world of the reader.⁴³ This is less about reconstructing the intention of the author than about explicating the movement in which the text unfolds a world of experience that refigures the world of the reader by the act of reading: a narrative reopens the world.

Although human lives are always already narratively organized, Ricœur maintains that life can still be seen as a *quest* for narrative: there is a permanent pre-narrative quality of experience. Not only do fragments and confusing situations “ask for” clarifying or integrative narratives, but more generally, we are providing narratives “because [...] human lives need and merit being narrated.”⁴⁴ This is an echo of Socrates’ famous remark that an unexamined life is not worth living.

In a situation where both chronometric time and lived time prove to be indispensable to an understanding of ageing, but a theoretical integration of these two perspectives encounters fundamental obstacles, narrative appears to be the most promising way to produce meaningful accounts of human ageing. The tensions and discontinuities that are typical of the basic aporia of time can be tolerated and articulated by the activity of emplotment, which can also integrate

heterogeneous elements such as unexpected events, unintended consequences, fortune or disaster. This power of *mythos* as the “organization of the events” lies in its flexibility, which enables it to incorporate not only lived time but also chronometric time and the sequential change that it represents. In that way, *mythos* may have the potential to make time *human*.⁴⁵

Narrative Configurations of the Ageing Self

Many scientific studies of adult ageing, especially from economics, epidemiology, sociology and psychology aim at describing or explaining how certain characteristics such as income, health and well-being evolve and change over time. Remarkably, such characteristics are considered as being distinct from the identities of the persons who form the research populations. On the one hand, these identities are supposed to be changing; if not, we would speak, not of ageing, but of differences between persons. On the other hand, these “background identities” are supposed to form a constant, unchanging basis for the search for specific changes in the relevant variables, although the idea or hypothesis of ageing as change undermines the idea of such a simple continuity. Indeed, it is not easy to grasp the complexity of ageing identities, which may be one of the reasons that age-related generalizations are so popular.

In the context of governments, large organizations or institutions, background identities tend to be reduced to mere material or bodily identifications. This fits well into the culture of late-modern societies, where questions of “identity” are drastically simplified and “solved” by methods of identification that are legitimated by nation states, that provide their citizens with identity cards and list them in the data banks from which large-scale empirical studies usually derive their research populations. While traditional ways of identification relied upon directly visible characteristics such as height, face and colour of the eyes and hair, the opportunities to change such characteristics have made identification more abstract. Now, it focuses on

characteristics that can only be verified by expert technology such as fingerprints, iris pattern or DNA. Even when a person changes his or her appearance completely, including a change of sex, this identification will not be affected.

Although material identifications merely establish that this specific body does or does not correspond to the name or number that figures in the database, additional information is usually supplied through attached profiles containing information that is relevant for the specific system that runs the database such as a bank, the police or a social-security institution. As these profiles are not without narrative elements, advanced technological methods of identification represent not the end but the beginning of a more thorough questioning of what a personal identity might be, without assuming that this identity remains static over time.

Material identifications may seem to offer an unequivocal solution, although even fingerprints and DNA may not be completely stable as people age. This kind of identification, however, does not tell us anything about what kind of person we are encountering. Most modern languages have two words for two basically different forms of identity: *sameness* (*Gleichheit, mêmété*) and *selfhood* (*Selbstheit, ipséité*). In their difference, these words reflect a classic Latin distinction between *idem* and *ipse* that remains clarifying when discussing the issue of identity as “permanence in time.” “Sameness” is used to refer to objects that are like other objects or to the basic traits of a character or a face that remain the same, in the sense that they make it possible to recognize or re-identify a person, even after many years.

In developing the distinction between sameness and selfhood, Ricœur has been inspired by Heidegger’s elaboration on “Self Maintenance” (*Selbst-Ständigkeit*) in *Being and Time*, where Heidegger has explained that the permanence of things is different from the permanence of beings who are concerned with their own being.⁴⁶ Whereas things are left to themselves or are

maintained by human beings, the permanence of human beings must be understood as *self-* maintenance. For Heidegger, the driving force behind this self-maintenance is the anticipation of death confronting the human being with its proper self. The anticipatory resoluteness in the face of death opens and re-affirms the self in its existential uncertainty, but frees it from a thing-like sameness. Ricœur appreciates Heidegger's clarification but disagrees with his one-sided emphasis on approaching death and the ensuing narrowing of human beings to their individuality as the domain of authenticity. Ricœur emphasizes instead the maintenance or constancy of the *self* in relation to *others*: the loyalty to oneself in keeping one's word or promises to others. Examples are continuing commitments to others, such as faithfulness, trustworthiness or friendship. In contrast to Heidegger's individualist resoluteness in the face of death, the emphasis falls here on facing the many uncertainties of life and affirming what one sees as most important in living with others. Personal identity can be understood as a balancing through time of two forms of identity: the sameness of a solidified character and the self-constancy of the given word. Personal identity finds a privileged form of self-maintenance in narrative, a possibility to continue to articulate oneself without having to draw on a quasi-permanent essence. Narratives can answer the question "who is this person?", instead of merely connecting a name or number to a body. The structuring of emplotment makes it possible to compose a meaningful story out of unconnected events, bits and pieces of information; a configuration that remains provisional as it continues to be challenged by new questions and contingent events that have to be integrated in the stories of one's life. As a continuing quest for self-understanding or self-interpretation, personal identity finds an eminent form of mediation and articulation in narrative. Faced with the impressive diversity of his or her life, a person can articulate, reflect upon and develop his or her

singular dynamic identity, drawing on popular stories or metaphors but also on literary narratives that have produced important cultural models for interpreting crucial situations or life events.

Thus, the self is re-figured by the reflective application of narrative configurations in which the person becomes the reader and writer of his or her own life; a challenge that has been met in an exemplary way by authors such as Proust in his *In Search of Lost Time*. Such a process can be seen as the narrative form of the Socratic self-interrogation from which the self emerges as the fruit of an examined life. There may be more than one story, as human existence may be too complex to fit into a single life story, just as it is too complex to be understood in terms of one single time dimension. We recall Ricoeur's observation that "narrative identity is the name of a problem as much as that of a solution."⁴⁷ However, this also opens the possibility to develop acceptably coherent stories instead of remaining stuck with unintelligible bits and pieces.

Chronometric time remains crucially important for any scientific approach to ageing as it provides us with instruments to measure the duration, succession and simultaneity of events and processes. However, measurements of the duration of human life (age) are not sufficient to explain or understand ageing because there are major differences between people of the same age. Moreover, chronometric measurements do not tell us anything about the ways in which ageing as living through time is experienced. This suggests that both temporal approaches to ageing, chronometric time and lived time, are necessary to understand human ageing. The next question, however, is how to interrelate these temporal approaches that tend to exclude or occlude each other. Here, the intermediary role of the narrative appears to make it possible to articulate stories about human ageing that can be understood and shared as meaningful reflections of our temporal human condition.

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¹ See Burrow (1986); Sears (1986).

² See Blackburn and Holford-Stevens (1999).

³ See Baars (2012); Zerubavel (1981).

⁴ See Thane (2005).

⁵ See Birren (1959), 8.

⁶ See Oeppen and Vaupel (2002).

⁷ See Vaupel (2010).

⁸ http://gamapserver.who.int/gho/interactive_charts/mbd/life_expectancy/atlas.html

⁹ See Schaie (2013).

¹⁰ See Mackenbach et al. (1997); Crystal (2016).

¹¹ See Baars (2010).

¹² See Baars and Visser (2007).

¹³ See Schroots and Birren (1988); Hershey and Wang (1980); Richardson and Rosen (1979); Yates (1988, 2007).

¹⁴ See Yekkala et al. (2006).

¹⁵ See Yates (2007).

¹⁶ Cf. Yates (2007); Uffink (2007).

¹⁷ See Gilbert and Epel (2009).

¹⁸ See Kirkwood (2005).

¹⁹ See Gurland, Page and Plassman (2004).

²⁰ See Yates (2007).

²¹ See Birren (1999), 460.

²² See Robinson and Jackson (2001).

²³ See Glenn (2004), 475.

²⁴ See Bytheway (1995).

²⁵ See Cumming and Henry (1961); cf. Baars (2012).

²⁶ See Butler (1963), 66; Baars and Lamme (1993).

²⁷ See Bytheway (2011).

²⁸ See Gavrilov and Gavrilova (2006).

²⁹ See Baars (2012).

³⁰ See *The Gerontologist* (2015).

³¹ See Heidegger (1996).

³² Cf. Hoy (2012).

³³ See McTaggart (1908); Ricœur (1988).

³⁴ See Baars (2017).

³⁵ See Heidegger (2003), 169.

³⁶ See Blumenberg (1986); Ricœur (1988).

³⁷ See Ricœur (1988); Baars (2012).

³⁸ See Aristotle (1995), *Poetics* 50b31.

³⁹ See Aristotle (1995), *Poetics* 50a15.

⁴⁰ See Greimas (1970); Propp (1968).

⁴¹ See Aristotle (1995), *Poetics* 50b3 and 50a1.

⁴² See Ricœur (1991); Baars (1997).

⁴³ See Gadamer (2005).

⁴⁴ See Ricœur (1991), 75.

⁴⁵ See Ricœur (1988).

⁴⁶ See Heidegger (1996), 369.

⁴⁷ See Ricœur (1988), 3:249.