### Bernard Froussart

## GENEALOGIES AS THE LANGUAGE OF TIME

# A STRUCTURAL APPROACH - ANTHROPOLOGICAL IMPLICATIONS

To take a structural approach to genealogy means dealing with it as a story written in a language that is unknown and yet to be deciphered. It is the very language of time—individual and familial—in which a human being situates, often in a striking manner, the principal life and death events of his own destiny. Or better perhaps, it means discovering this in genealogies, which must first be exhumed from the dusty cabinets where a solid and excessively documentary tradition has too long confined them, in order to consider them now, in a sense, as venerable "black boxes", potentially containing secrets of the intimate functioning of families, capable of providing unknown information on this subject, with meaning and logic winning out over the apparent fantasy with which they have been coated.

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### I. AGE AND ITS LANGUAGE

The ages reached by individuals at the time of genealogical events that mark them can be considered as *words of time*. When people marry, father or bear children, or die, they can be seen as speaking in a particular way; the age they have reached at that precise moment is analogous to a word. Unlike words in ordinary language, this word is composed of time to such an extent that it is interchangeable with it;<sup>1</sup> similar to words in a recognized language, it is endowed with form and meaning.

Form, which can be represented in a variety of manners (by measurable angled segment, digit, number, letter, diverse symbols), makes it possible to recognize these words and to extract them from temporal background noise in order to pronounce them or to manipulate them at will. It also makes it possible for them to bear information or meaning, the most accessible of which is the natural link of age with a given genealogical event; but another sort of meaning can be found in the relation of one age to another age to which it sometimes corresponds, the one reproducing the other or referring to it, in order to provide an unsettling index of temporal conservation.<sup>2</sup>

A father is killed in war. It is easy to imagine that his sudden disappearance will plunge the family into mourning. Simultaneous to their loss is their grief, which also supposes the loss as a necessary condition, to the extent that we can say that the death of the father leaves an indelible mark on the surviving relatives.

These reflections invite us to make a distinction, when a genealogical event occurs, between a pair of complementary ages made up of a "marking" or "active" age and of all the "marked" and "passive" ages of individuals who somehow experience the event without being its agents. The usefulness of such a distinction between the active state and the passive state of age is not immediately apparent. However, it assumes great importance for a

<sup>&</sup>lt;sup>1</sup> It is useful in this respect to distinguish clearly the words of language that make it possible to speak of or to "metacommunicate" about time, such as the abstract terms of age and time, from the pure time contained in age. Although time cannot be limited simply to age, age is entirely in time.

 $<sup>^{2}</sup>$  It is through this approach that we will later examine the familial structure, renamed "familial invariable" for its cybernetic connotations.

description and analysis of age in its principal constitutive elements and facilitates clarification of the successive inscriptions that generally make up an age reached at the time of a significant familial event.<sup>3</sup>

Although in the course of the following pages the role of age in inter-familial organization will become clearer, it is important here to point out two aspects that are normally overlooked or inadequately appreciated. Age inscribes an individual in a position, in a relational role, by locating him at one position of the system and not at another. This insertion takes place at a certain point in time, suggesting that age fulfills a spatial role as well as a more specifically temporal one.

The first aspect is evident among siblings where the first-born child occupies the position of eldest, recognized in one manner or another by society and culture. A woman who experiences maternity for the first time at the age of 28 sees this age preside over her maternal existence. From that point on, inevitably, 28 years will separate her from her child. Once it has been created by the birth of the child, this temporal interval remains stable. It is no longer affected by the constantly increasing ages of the two persons in question, and it constitutes a structural characteristic that functionally orders these two persons within the relational group. In still other words, age plays a recognitional role that we will later find in marriage as well.<sup>4</sup>

The second aspect of age is temporal since it concerns its location in the succession of ages produced in a genealogy. Intuitively we can grasp the meaning of this by returning to the analogy between age and word. The latter generally occupies a place in the sequence of sounds or the phrase that is not without its sig-

<sup>&</sup>lt;sup>3</sup> The descriptive code still called the "menetic code" is partly based on this distinction. For example, conventionally the letter "d" designates any active age of death or the length of existence of an individual; the letter "l" (for lost) designates an age of mourning. The active age at which a parent generates is coded "a". We can therefore automatically break down his death age into the age at which he becomes a parent plus the age at which his child experiences his death. This produces the following formula: d = a + 1. See B. Froussart and M. Lecamp, "Code descriptif du temps familial et algorithmes de durée de vie", *Psychologie médicale*, 1988, vol. 20, No. 11.

<sup>&</sup>lt;sup>4</sup> On this subject see B. Froussart and M. Estève, "L'écart d'âge entre époux comme organisateur temporel", *Dialogue*, 1986, No. 93.

nificance, even if several locations in the sequence could be possible. This is what is meant by the syntax of location. The same could be said for age. Although it is obviously evident that a man cannot father unless his own father has generated him previously, this must be taken even further. It must be said that the age at which individuals marry, father, bear children or die<sup>5</sup> seems to obey a natural order that is not determinist but indeed grammatical. Examples can further illustrate this phenomenon by which age assumes an integrating role that is both spatial and temporal for the individual within the familial structure.<sup>6</sup>

### GENEALOGY: A SYSTEM OF SIGNS

Every genealogy is then the source of a two-fold change in perspective since it can be considered as a text to be deciphered; and, in order to accomplish that, the arborescent system of dates that previously constituted its essence can be transformed into a temporal diagram offering several new particularities. Each individual can be represented by a horizontal life line running from left to right (the arbitrary direction of time), with a family then assuming the appearance of a musical score, a nuclear circle that of a musical staff, an example of which can be seen in table I.

The family there is made up of a parental couple: X (the father), Y (the mother) with the five children designated A, B, C, D, EZ; A is the eldest son, EZ the youngest daughter born in 1934, two years before the death of her mother Y in 1936. The familial entity is thus projected temporally into a plane that is simply a win-

<sup>6</sup> This approach must be distinguished from others, better known, elaborated in studies such as M. Philibert, *L'Échelle des âges*, Paris, Le Seuil, 1968, II.I, "Le foisonnement des périodisations préscientifiques masque le caractère fondamental des échelles", p. 80 ff.

<sup>&</sup>lt;sup>5</sup> If some readers may be surprised by the arbitrary limitation of these three types of events, we would reply that it is in fact a choice based on a pratical end. By beginning with a study of these ages there is a greater chance of touching on the group morphogenesis, with birth increasing the family, death amputating it and marriage segmenting it. These three types of events effect the form of the social entity. Later we can examine the manner in which disease aids in maintaining this form through a study of the ages at which it afflicts related individuals, and then through a study of other significant events.

dow opened onto a portion of its historical development. Each fragment of time is indicated therein to the extent that it is pertinent, i.e. linked to a genealogical event of morphogenesis. Two axes can be discerned, one horizontal, the diachronous axis, and the other the vertical axis of synchrony. There was an interval of nine years between the deaths of the two parents, coded S9 or dd,<sup>7</sup> which cannot be identified with any age since it was not as such borne by any individual.



I. Chronogenealogical table (Borek I)<sup>8</sup>

Along the life lines of the parents X and Y appear the births of the children, like branches coming out of the trunk of a horizontal tree. We see the right angles of generation and of fili-

<sup>&</sup>lt;sup>7</sup> For this see B. Froussart, M. Lecamp *et alii*, "Essai sur l'organisation du temps familial: théorie ménétique", *Génitif*, 1986, Vol. 7, No. 3, pp. 15-42 and in particular § 2.3, "Décomposition du mène", Tableau III, p. 25.

<sup>&</sup>lt;sup>8</sup> We have called this type of diagram a Borek diagram after the name of the psychologist who discovered the principle of this transformation (see below our article princeps, note 12). The model distinguishes between two types of geometrisation. In Borek I, the distance between the lifelines, although determining parallel right angles, is arbitrary. In Borek II it is determined by ages of generation, which results in a representation that is mathematically more coherent but that requires more room. This point is developed in "Le temps des familles", with a preface by G.G. Marcani, in the spring 1990 issue of *Bulletin de psychologie*, Paris.

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ation,<sup>9</sup> the generational nodes indicated by triangles and circles depending on whether the children are girls (circles) or boys. At the intersections are noted the ages in years, with the ensemble correlated to dates.

Converting a genealogy into a diagram of this kind makes it possible to observe that each genealogical event—or more generally, each familially and/or individually significant event—is automatically the occasion for the release of a "cluster" of ages, relatively dense or not depending on the number of individuals composing the entity or taken into account by the analysis and the number of events that have occurred.

In other words a genealogy "releases" a raw mass of temporalspatial and functional data that can then be more easily mastered. Indeed the constellation of age figures or of temporal segments can be precisely defined by their nature, their form, their amount, the bearer/generator character, their "product";<sup>10</sup> they can be variously coded (menetic code) and represented (geometrisation of Borek diagrams I and II). In the ensemble of data thus organized, structural analysis can then be used at will to identify the structures of order or the regularities in the midst of which ages are sometimes read.

### TOWARD A THEORY OF COINCIDENCES

The coincidence of events in the lifetime of a family<sup>11</sup> and the reappearance of ages within genealogies<sup>12</sup> seem to a certain ex-

<sup>9</sup> In Table I, the right angles of generation are those in which one side corresponds to a portion of the parental life line; the angles of filiation are those in which one side corresponds to the life of the subject who is born:  $\lfloor \_$ .

<sup>10</sup> Every "passive" age implies a "product" constituted of the child who is born, the person who dies, the relative who marries; this product is indicated as a superscript in the upper right of the menetic transcription. Thus the expression 9  $\stackrel{4}{\times}$  would mean "grand-parental age 'g' reached by the individual X at the birth of his grandchild AZ". This child is not the agent of age "g" but a product of generation. <sup>11</sup> Like those of events in time: a grand-parent dies when one of his grandchil-

<sup>11</sup> Like those of events in time: a grand-parent dies when one of his grandchildren is born.

<sup>12</sup> On these reappearances, see our article princeps: "La réapparition des âges dans le système familial. Proposition d'une méthode d'examen. Application à trois alliances", *Systèmes humains*, vol. 1, No. 4, Québec, Trois-Rivières, 1985, pp. 13-34.

tent comparable to the minor impulsive acts of daily life that once served for Sigmund Freud as valuable indicators of the functioning of the psychoanalytical subconscious. To the extent that an age reappears within a genealogy it is possible to assign it, *a priori*, an objective role of conservation since there is an embryo of regularity. Nevertheless, chance can also produce repetitions. It is thus necessary to arm ourselves with several precautions and above all to avoid proceeding down the traditional path of an interpretation of coincidences in the name of some sort of esoteric numerology; ours is to the contrary an "exoteric" operation.<sup>13</sup>

The quest for coincidences, for temporal relationships and regularities in genealogies has as purpose to inform us not of the unconscious functioning of the human being but of an eventual and hypothetical temporal organization that controls the moment in which the familial events of morphogenesis occur. The idea underlying this search is taken from the cybernetic postulate holding that in a dynamic system (and the family belongs to this class of systems), entrances and exits must be organized temporally, just as in a factory, for example, where one cannot come and go in total disorder.<sup>14</sup> Births represent entries and deaths the exits in a family; using this axiomatic expression it is possible to formulate an hypothesis which states that they cannot occur simply by chance.

Examining this question concretely through the study of genealogies conceived now as maps or projections of the familial structure functioning dynamically, and more particularly through the unusual path of certain relationships, we leave the field of pure ideas and undertake progressive verification of the validity of the hypothesis.

But unlike epidemiological statisticians or fundamentalist biologists working in a laboratory and seeking proofs using costly experimental equipment and sophisticated mathematics, we are

 <sup>&</sup>lt;sup>13</sup> R. Abellio and Ch. Hirsch deal with this difference between esoteric and exoteric numerology in *Introduction à une théorie des nombres bibliques*, Gallimard, 1984, p. 63 ff.
 <sup>14</sup> This idea is largely developed in F.E. Mairlot, *La Nouvelle cybernétique. Es*-

<sup>&</sup>lt;sup>14</sup> This idea is largely developed in F.E. Mairlot, *La Nouvelle cybernétique. Essai d'épistémologie des systèmes dynamiques*, Brussels, Chabassol, 1983. "L'invariant, object de la cybernétique ou la forme en tant que système", p. 111 ff.

<sup>47</sup> 

more like an explorer lost in a jungle who by chance runs across people speaking an unknown language. Those who accompany him doubt that the natives are speaking a language analogous to their own. It is clear that verification of the validity of the idea that these people can speak a human language does not necessarily involve statistical calculation but the slow detection, as a result of long and patient listening, of audible regularities that make it possible to identify the first words. A second generation of explorers, better equipped with recording and analytic instruments, will be able to apply a statistical apparatus that cannot be used at the time of the initial contacts.

The coincidences and relationships in which we are going to be interested are analogous to sounds that are repeated and that make it possible to identify the first words of this language speaking through genealogies. Then will come the stage of constructing a first generation grammar.

The theory of coincidences consists in postulating that people who marry, have children and die do so ordinarily by referring themselves automatically to the past, by consulting their ancestors in a certain manner, in order to produce a human act that is temporally experienced, organized, integrated, in conformity with certain rules or referential procedures. Let us now attempt to determine the parameters of this theory by examining the unexpected death of a young man. Did he attain his age at death at a temporally not indifferent moment? The menetic analysis of his death will tell us.

### II. EXAMPLE APPLIED TO SUDDEN DEATH FROM A HEART ATTACK

Death occurred during the night of 17 July 1988. Jean-Luc J., with no known medical history, was awakened suddenly by what he took to be a simple digestive disturbance, accompanied by an oppressive sensation in the chest. After a sudden cooling sensation and nausea, he fell into a coma and died shortly thereafter, even before arrival of the emergency squad who could only certify the death and diagnose its cause: heart attack. Born 25 June 1955, he had just reached the age of 33 years.

Beginning with the original family of the subject, we would like to undertake a temporal analysis of his age at the moment of death. After a sometimes long and expensive documentary phase,<sup>15</sup> dates are transformed into ages in accordance with the model given in Table I, which makes it possible to establish any temporal coincidences or relationships between the ages arrived at simultaneously in the family on the day of death and certain familial ages appearing previously. Use of this procedure (transformation of genealogical data into "Borek I" and limiting the examination to the original family of the deceased and those of his father and his mother) reveals the existence of seven relation-



### Maternal relationships

II. Original family of Jean-Luc J. Borek diagram

<sup>15</sup> Assembling and verifying data require a great deal of time, which exhausts many genealogists. For practical reasons we will limit ourselves here to three contiguous families: the original family of the subject, the original family of his father and the original family of his mother. Father of Jean-Luc: Louis J., born 21 February 1924; mother: Marie L., born 2 june 1924, premature death on 30 November 1967; child A: Odile, born 2 May 1954; child B (Jean-Luc J.); child C: Josette, born 21 July 1958, married, two children; child DZ, male, stillborn 3 May 1963, no given name. For the rest of the data see in No. 395 of the *Bulletin de psychologie* our article, "Aspects commémoratifs d'un décès par infarctus". In the same article can also be found an attempt at a statistical validation of relationships through variable analysis.

ships that we will designate as follows: c1, c2, c3, c4, c5, c6, c7; we propose to examine them one at a time to determine their intense formal significance<sup>16</sup> and to demonstrate how the age at death can be considered as part of a network of relationships that suggest a high degree of integration in the genealogy.

Each relationship is created by associating two ages, at a high rate of approximation, with one being part of the list of ages on the day of death of the members of Jean Luc's original family (Table III), and the other deriving from the original families of the mother and of the father; consequently the relationships concern the line of the mother or that of the father, with each one attesting in its own fashion to a temporal reference in the ascending line of the deceased.

Age of Louis, father of the deceased:	64 years (23,523 days)
Age of Marie, mother of the deceased:	34 years (23,421 days)
Age of Odile, eldest sister, A:	34 years (12,495 days)
Age of Jean-Luc, deceased, B:	33 years (12,076 days)
Age of Josette, younger sister, C:	30 years (10,954 days)
Age of still-born child, DZ:	25 years (9,207 days)

III. Table showing ages of members of Jean-Luc's original family on the day of his death

An examination of Table II makes it immediately possible to perceive a double relationship that appears only upon the death of Jean-Luc. The parental ages of 30 and 34 years, reached in turn in 1954 and 1958, the years of the birth of Odile the eldest and Josette the last living child, correspond to the ages of

<sup>16</sup> A first sort of significance is provided by the fact that the ages here placed in relationship are those reached by people who are very closely related. These are not indifferent ages since all concern the generation or the death of close blood relationships of the deceased. For documentary purposes we can still speak of significance in the sense given this term by F. Collot, "Une théorie de la 'signification' prolon-geant la théorie de l'information", *Revue de Bio-Mathématique*, No. 91, 1985, "La correspondance", pp. 39-45. Full significance can only be guaranteed by the ability of a relationship to contribute to temporal organization or at least to its revelation to the observer. The significance concerning the placing in relation of forms of time is for this reason called "formal"; it leaves aside the psychological significance.

mourning<sup>17</sup> of 34 and 30 years respectively, reached by these same two children at the death of their brother, who is ranked B by birth. This observation leads to a calculation of the exact age in number of days in order to see if the coincidence still holds and in order to establish the rate of approximation. (A relationship in years may in fact be proven inexact when another scale is adopted.) Let us take from Table II the double relationship (Table IV, Fig. a and b):



IV. Time "fold" Temporal structure of the reappearance of ages 34 and 30 years on the day of death of Jean-Luc J.

For the two original ages of 34 and 30 years, or more precisely of 12,467 and 10,926 days (ages at which Marie gave birth) there is a corresponding reappearance of "counterpart" ages of 34 and 30 years, or 12,495 and 10,954 days. Let us rephrase this double relationship in order to ascertain its structure and order. Child B (Jean-Luc) dies when his elder sister A and his younger sister B are within 28 days of having the same age that their mother had when she gave birth to them, as shown in the two diagrams of Table IV that illustrate the structural information we are attempting to establish.

 $^{17}$  For easier reference, the ages concerned by a relationship have been circled. The note "p.m." indicates an age reached "post mortem" after the death of the person in question. Menetic analysis considers that time is not suspended by the disappearance of individuals within a family and that it is important to take into account the age that otherwise would have been reached by deceased persons in order to bring out the temporal links that unite the living to those who preceded them in this structure.

Table IV provides a representation of the phenomenon in the form of a "time fold". The death does not occur at just any relational moment but within the framework of a temporal structure already described.<sup>18</sup> If the square diagram of Figure a is folded along a diagonal running from the upper right corner to the lower left corner, the two maternal ages of 30 and 34 years fall exactly on the two mourning ages of the elder and younger sisters of Jean-Luc. In a more transformational perspective, a series of two generational ages becomes, n years later and simultaneously (shown by the column representing the synchronous axis), the two ages at the time of the loss of a loved one.

We give the name menetic "phrase" to this type of duplicative configuration because we find therein two closely subordinated parts (as in linguistic phrases) with the column referring to the line, the present resting on the recent familial past, death being articulated around generation or life. Thus the genealogical event, when it occurs, is embedded in a succession of ages like a word in a phrase, thereby indicating a hidden organization of the time of life and of death.

The third astonishing relationship (c3) appears clearly in the Borek diagram of Table V.



MARIE is born

V. Reappearance of an age of mourning in the maternal line when Jean-Luc dies

<sup>18</sup> See above, B. Froussart and M. Lecamp, 1986, 1987, 1988.

Jean-Luc's maternal grandmother, Lucienne Yvette, born 5 October 1903, suffered the loss of her eldest daughter Marie, future mother of Jean-Luc, at the age of 64 years, just as the latter lost her eldest son at the same age, both mother and daughter having died previous to the premature death of their child. The relationship holds true to within 11 days. An identical form of time appears 21 years later, indicating a temporal preservation or transmission in the family.

The maternal relationship c4 links the age of the child DZ at the death of the elder brother Jean-Luc, 9,207 days, to the age of the maternal aunt Françoise, younger sister of Marie, mother of Jean-Luc, at the death of the latter's maternal grandfather, Eugène, on 8 September 1954, 9,214 days.

A relationship can also be established between the age at which Eugène became a father, by the birth of Marie, Jean-Luc's mother, on 2 June 1924, at 25 years or 9,267 days, and the age at which DZ lost his brother B (relationship c5): 9,207 days.



VI. Structures of relationships c6 and c7 at the time of death of Jean-Luc J.

### Paternal relationships

In Table VI can be seen relationships c6 and c7 providing confirmation of the death configuration from the paternal line. Emile, Jean-Luc's paternal grandfather, became a father by the birth of Louis, future father of the deceased, at 25 years or 9,206 days of age (Emile was born 7 December 1898 and Louis 21 February 1924). Emile became grandfather for the last time with the stillbirth of child DZ at 64 years or 23,522 days compared to 23,523 days. This relationship holds true to within one day.

The age of Jean-Luc at his death is thus assumed into a structure that commemorates simultaneously and precisely the birth of the mother (c5) and of the father (c6), the death of the mother or the loss for the maternal grandmother (c3), the loss of the paternal grandfather (c4), the birth of the still-born child DZ (c7), the end of grandfatherhood for Emile (c7), entrance into maternity for Marie (c1), the birth of Odile and of Josette (c1 and c2). We can conclude this temporal analysis of the age at death, appearing in such a richly eloquent ensemble in the outline of this family history, by noting the significantly organizational role of the stillborn child DZ. This child represents a veritable "semantic node" since its age at death is linked to three previous ages. This is even more remarkable in that such children are sometimes not mentioned in genealogies, and these omissions make analysis more difficult and conclusions more conjectural.

### TOWARD REGULATED DEATH

Imperceptibly the analogy between age and words leads toward a strange and yet perfectly logical concept, one which traditional psychology can only resist in an initial confrontational stage. This is the concept of regularity and conformity in production and composition of age, with grammatical and syntactical rules. This means distinguishing two types of death, those that are regular and the others.

Whereas the latter occur at random, apart from any reference to the familial history of the person who dies "out of sequence", the former, as seen in the quite instructive death of Jean-Luc J.,

seem to occur in a commemorative context, more or less intensive but always significant from the point of view of time. The age at death is thus uttered in a phraseological structure that closely coordinates the present and the past, synchrony and diachrony. It is then possible to say that language humanizes death by regulating it. This is not determinist conformism but a familial history preparing the production of the uttering of the temporal word of death or "mene" of death<sup>19</sup> in such a way that it obeys an intra-familial syntax and semantic. This concept can be understood intuitively by considering the chaotic death represented by certain accidental demises,<sup>20</sup> due for example to natural disasters or to war. In the majority of these cases, the "rules" of the environment prevail and are imposed on individuals. A temporal analysis of these deaths does not allow establishing a context for the appearance of the age of death that is temporally "reasonable" or significant. Nevertheless, after this nothing is as before, and these traumatic deaths are branded into the survivors by both passive age and active age, the date, the circumstances, the location; they will later take this into account in order to give meaning to the future by articulating it around the irregular temporal configuration of the past. In this way disorder becomes order, the family structure accomodating irregularity in order to make it its own, humanizing it in a sense.

We have been able to show how this regularity is still expressed by similarities of composition between ages of death or spans of existence hardly comparable numerically.<sup>21</sup> Visually, in the Borek diagram representation, nothing is noticed. It is the use of the literal code and the comparison of elements making up

<sup>19</sup> In the model the words of time, because of their specificity distinguishing them from ordinary language, are called "menes", whence the term menetic given to the theory concerning them. <sup>20</sup> The are set which are set wh

<sup>20</sup> The age at which an accident can occur or be experienced is frequently regular; even though he was killed in an automobile accident, Jean-Luc's maternal grandfather died at an age that obeys the model precisely.

<sup>21</sup> For this, see our article, "Algorithme d'organisation temporelle de trois décès grands-parentaux", *Actualités psychiatriques* No. 7, 1987, pp. 55-62. It is important to add that the descriptive algorythm does not create necessity; if three life spans obey the model it is because the model is capable of inducing a process of comparability, but this does not mean that death is programmed. It can only be "informed".

the ages at death that make it possible to determine an identity of composition in these apparently disparate life spans.

We can thus hope to achieve more rigorous formulas, kinds of rules for the span of existence that define its composition formally, logically and temporally. These formulas could be rewritten in many different manners, some of them being synthetic and condensed, as chemists do,<sup>22</sup> without this in any way reducing human beings to a simply material state. Such a rule functions like a machine for finding other rules by making an inventory of the variants.<sup>23</sup>

### III. A TEMPORAL ORGANIZATION OF BIRTHS AND OF MARRIAGE

Can we apply a similar analysis to the time of births? Without being so bold as to affirm this, we are going to attempt to propose indices from a genealogical fragment whose dates have been carefully certified, that of the B family, shown in the Borek diagram in Table VII, in order to bring out any possible recurrence of ages.<sup>24</sup>

Here we find an ancestral couple: Germain and Marie, who gave birth to three children: Florent, Aurore and Magali. Florent had no children; Aurore had but one son, Theo; and Magali had two children, Jean and Elise, the latter having in turn two children, Gaël and Jeanne.

A careful examination of the diagram, in which are noted the ages of each one at the time genealogical events occurred (here given in years in order to simplify this initial stage of analysis), reveals the appearance five times of the age of 24 years, four occurrences which seem significant to us: the age of the ancestor

<sup>23</sup> An example of a frequently observable variant is this: the age at death combines the age at the birth of the first child and the age at the birth of the last along with the age of one or the other when they become or cease to be parents in their turn. <sup>24</sup> The following pages represent the essential conclusions of the article, B. Froussart and M. Lecamp, "Approche cybernétique du temps d'une famille", XIe Congrès international de cybernétique, XVIIIe symposium, Namur, August 1986, Acta.

<sup>&</sup>lt;sup>22</sup> R. Hoffmann and P. Laszlo, "Representation in Chemistry", *Diogenes*, No. 147, Casalini, 1989, p. 23 ff.: chemical representation as language.





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Marie when she became a mother in 1924; the age of her eldest daughter Aurore when she gave birth to Theo in 1953; the age of Magali, the youngest daughter at the time of the birth of her last child, Elise, in 1961; and the age of maternity of Elise, that can also be associated structurally with the death of the ancestor Marie.<sup>25</sup>



VIII. Recurrence of child-bearing ages in a lineage

Table VIII summarizes this series of repetitions by representing them in a still clearer fashion.<sup>26</sup>

This is a manifest preservation of forms of time that is all the more striking in that it covers a familial system with a small number of children, with the period observed extending over 61 years of life in a maternal line. A mother, her two daughters and her only grand-daughter each have a child at the same age of 24 years. Beginning with Marie, it is as if each woman in the descending line consulted the ancestor or the previous female parent in the

<sup>25</sup> Marie's life span obeys the model strictly, particularly in the "rule of death" described earlier, since her age at death, namely 85 years, is equal to the sum of the ages she had reached upon becoming and upon ceasing to be mother, plus one of the ages of maternity of her daughters: 85 = 24 + 37 + 24. Calculation of this in days provides an astonishing approximation (less than a half-day per year of existence). <sup>26</sup> The ages of 24 years reached by Elevent in 1048 is well-deform the set of the ages of the ages of 24 years reached by Elevent in 1048 is well-deform the set of the set of the set of the ages of the ages of 24 years reached by Elevent in 1048 is well-deform the set of the set

 $^{26}$  The age of 24 years reached by Florent in 1948 is excluded from the analysis since it is not an age of parenthood. However, it is part of the syntax of admitting a stranger into the family (the husband of Elise).

line in order to know exactly when would be the right time for giving birth in order to have a "commemorative" child, thereby declaring the mene of parenthood in reference to the familial past.<sup>27</sup> Finally we can conclude this example by simply pointing out as an additional piece of information the syntactical or phraseological structure of production of the ages when Theo was born, in order to show how these births obey the referential model previously explained.



IX. Theo's birth phrase

Once again we find the by-now familiar time "fold", showing that birth occurs at a not-inconsequential moment in the progression of ages pronounced in the B family in order to insert the new arrival into the genealogical arrangement in light of the familial past.

#### STRUCTURAL APPROACH TO TIME OF MARRIAGE

Just as Claude Lévi-Strauss did with elementary or semicomplex societies even while suspecting that liberal societies or "machine societies" disposed of analogous but specific means of organiz-

<sup>27</sup> These four ages of giving birth are themselves part of a superstructure called the "FLS structure", not discussed here.

ing marriages,<sup>28</sup> it is possible to observe in certain genealogies the first indices for a temporal organization of marriage. Time contributes to this organization in two ways, assisting in choice of a spouse and determining definition of the moment for contracting a marriage.<sup>29</sup> Let us examine each of these in order to demonstrate their structural, logical or formal appropriateness.

### CONTRIBUTION OF TIME IN CHOICE

Like Buddhists upon the death of their Dalai Lama, beginning their search for a "recognizable" child who can be nothing else but who denotes through certain characteristics his ability to replace the deceased in continuity and permanence, we seem to do the same when we marry. We seem to seek, without being aware of it, a mate endowed with marks making it possible to be assimilated in one manner or another to a member of our own family, most often to a brother or a sister, although not always.

If we look at primitive or traditional societies from the perspective of their familial interests, we are struck by the manner in which the individuals who make them up apply great effort to unendingly constructing and reconstructing the categories of prescribed, authorized and prohibited mates. They expend a great deal of energy in this effort that inevitably will become reproduction under threat otherwise of group annihilation. Instead of seeing individuals united haphazardly, we see an unrestrained creation of classes, limits, barriers; of rules for access, exchange and circulation, of movement of men towards women and *vice versa*. The choice of a spouse is often a matter of the greatest importance for the family who is careful not to abandon this choice to some sort of spontaneous, romantic self-selection orchestrated only by passions and feelings. Study of these various movements is a great delight for scholarly anthropology.

<sup>&</sup>lt;sup>28</sup> G. Charbonnier, *Entretiens avec Claude Lévi-Strauss*, Plon, Julliard, 1961.
<sup>29</sup> It is above all a time of process made up of several intense moments including the first encounter; beginning of cohabitation; institutional, customary, administrative and religious rituals. Only observation can situate them temporally at the inscriptive level.

It seems that there is something similar to this to be found in our liberal societies that manifests itself furtively when individual A wants to marry individual B, each one unknowingly exhibiting temporal characteristics that inform and regulate the process<sup>30</sup> of meeting and then attachment. What is rarely remarked, however, is the fact that an individual may choose a partner who appears in his existence when someone else disappears from his own family, with the chosen person in a certain way filling the empty place of the deceased. To parody Freud's "wolf man", we could just as easily speak of a "number man". Here is an example encountered of a man who had lost his maternal grandmother at the age of seven; later he married a person seven years younger than himself, in other words a person who had appeared at the same time the ancestor disappeared. In order to validate this observation empirically, it is necessary to take into account major differences of 10, 14 or 18 years between spouses, relatively atypical in our society, and then attempt to see what this means in the inscriptions. Thus we know of a man who has been married three times, each time with a person 18 years his junior; he was 18 years old when is mother gave birth to a stillborn child. His successive partners appeared in time when the child in his family disappeared.<sup>31</sup> Freud married a Martha who was born at about the same time as his own sister Maria, which is related to the anthropological concept of a "classifying" spouse, Martha being part of the class of "fictional" sisters of the husband.<sup>32</sup>

<sup>51</sup> In passing we can also note the frequent pairing of time and names, with the chosen partner having a name that sounds like that of the deceased person.

<sup>32</sup> There is another aspect of time less easily accessible and yet seeming to contribute as well to the construction of a "liberal" marriage: considering the overall temporal structure of the family of the other person. For lack of an expression to describe this, we have called it "*numéro-comptabilité*" (numerical accounting). This is expressed in the numerous and precise disconcerting similarities between the two genealogies that come into contact but that are established only by the birth of a child resulting from a union of the two of them. The two genealogical "apparatuses" can be seen as partially complementary or symmetrical. We will give no examples of this here for it would require an examination of complex temporal configurations. It is understandable that this type of organization could control the union in order to make the temporal organization of generation easier and to allow

<sup>&</sup>lt;sup>30</sup> On regulatory time see the article "Théorie ménetique" by Dr. G.G. Maruani in *Dictionnaire des thérapies familiales. Théories et pratiques*, under the direction of J. Miermont, Paris, Payot, 1987, p. 562. <sup>31</sup> In passing we can also note the frequent pairing of time and names, with the





X. Borek diagram of the genealogy of Sigmund Freud<sup>33</sup>

### THE MOMENT OF CHOICE IN MARRIAGE

The function of time in marriage is here to contribute to its being realized at "the right moment", which does not mean a unique moment since, within the framework of the model, it is a matter of a referential temporality: the familial past offers numerous possible points for anchoring the event to be celebrated. Table X shows the example of the marriage of Sigmund Freud, allow-

genealogical reference to the two lines, which is facilitated by interstructural numerical accounting.

 $^{33}$  Table taken from the article in *Systèmes humains* cited above in note 8.

ing us to see that Freud married when he reached the age his mother Amalia had attained when she gave birth to her last child, Alexander. But since she had lost her father at the same time, Freud's marriage commemorates both the death of his grandfather and his mother's last maternity. Automatically when the elder brother married, the younger child had reached the same age as their mother at the time of her first maternity.

### ANTHROPOLOGICAL PERSPECTIVES

If concordant and multiple observations can be found to confirm the hypothesis of organized genealogical time supporting indices occurring subsequently, it could have importance in several branches of human sciences. The structural analysis simply outlined here could be used by applying it to an examination of genealogical time without seeing it become dissolved in the effort of formal reduction.<sup>34</sup> The success of structuralism in the analysis of primitive or traditional societies and their institutional or symbolic productions could be extended by applying the theory to certain unknown aspects of technological societies.

A path would then be opened up leading to an exploration of the relationships between modern societies, whose internal organization is powerfully informed by the use they make of time considered significant,<sup>35</sup> and societies that ignore this. The question of a functional equivalence to be established between the functional organization of chronologized genealogies automatically regulating movement (entries and exits, marriages, births and deaths) in relatively anomic familial organizations, and the organization of relationships in primitive or traditional societies,

<sup>34</sup> Many authors complain of the difficulty of structural analysis in integrating the dimension of time. This difficulty is felt as well in the analysis of "liberal" familial systems. <sup>35</sup> We now know better the role of time in the advent of mederal training the

<sup>35</sup> We now know better the role of time in the advent of modernity since the appearance of the book by J. Attali, *Histoires du temps*, Paris, Fayard, 1982, and that of D.S. Landes, *L'heure qu'il est, les horloges, la mesure du temps et la formation du monde moderne*, Paris, Gallimard, 1987.

would perhaps here find the beginnings of an answer in accordance with a remark by the anthropologist R. Needham.<sup>36</sup>

Moreover, we could see developing, apart from any determinist perspective, the analogy between the grammatical organization of language and the organization of genealogical time, while the perfecting of the algorythm of definition or composition of ages for marriage, parenthood and death demand the epidemiology traditionally dedicated to their study. A new examination could be brought to the principal contemporary theories of time,<sup>37</sup> whose point of departure is generally not man but the material sciences and which aim at cosmology rather than recognition of the relationships that human beings may have with their sociofamilial and personal creations.

In conclusion let us reaffirm that time is an entirely significant element forcefully informing human behavior. The study of genealogies is seen to be a very special manner of access to its modes of expression. Thanks to this, human reactivity benefits from a new viewpoint, that of the familial structure better understood in its fundamental relationships with the individuals who make it up and who contribute to its construction as well as to its maintenance.

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<sup>36</sup> In "Remarques sur l'analyse de la parenté", R. Needham writes that we still do not know why systems of relationship function like genealogies: *La parenté en question, onze contributions à la théorie anthropologique*. Under the direction of R. Needham, Paris, Le Seuil, 1977, p. 105.

R. Needham, Paris, Le Seuil, 1977, p. 105. <sup>37</sup> G. Pineau, *Temps et contretemps*, Montreal, Ed. Saint-Martin, 1987, chap. 5, "La guerre des temps scientifiques", pp. 59-78.