

Cultural Symbols and the Making of a Longer Human Lifespan

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Abstract: This paper is an attempt to explain why members of the human race live, on average, longer than most members of other living species. I argue that there is a strong correlation between the longer human lifespan and what I call Cultural Symbols: spoken and written human language, thought, religion, knowledge, science, myths, laws, cultural values and norms (CS). These ideas also explain other features which may distinguish humans. As such, CS could constitute an interdisciplinary concept or a theory within social sciences and human sciences, as well as biology related sciences. I have elaborated my argument through a theoretical cultural perspective that I would like to refer to as Bioculturology. Islam's vision of human CS has been found to be of great help in the articulation of the major thesis of this paper.

Keywords: Theory of cultural symbols, longer human lifespan.

I Cultural Symbols are Central to Human Identity:

Before it is possible to explain by means of Cultural Symbols (spoken and written language, thought, religion, knowledge, science, laws, myths, cultural values and norms) (CS) why humans live longer, I need first to present my CS theoretical framework which is based on a number of observations regarding five features which strongly distinguish humans from other species. It is within this CS theoretical framework that the longer human lifespan will be accounted for.

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The observations in question are the following:

- A - The process of the human body's (bio-physiological) make up, growth and maturation is very slow when compared with those of other living beings.
- B - In general, humans have a longer lifespan than those of most other species.
- C - Humans are radically distinguished from other species by their dominant and powerful role in the running of this world and universe.
- D - Humans are decisively privileged when compared with other living species by what I have called CS above.
- E - Human identity is made up of two parts: the bio-physiological body and CS. It is a fully dualistic identity.

The legitimate question which may be raised now is this. Are there any relationships between those five distinct human features? There is certainly a direct relationship between A and B because slow human body growth and maturation necessarily require a longer lifespan to enable the full realization of human differences and the different phases of bio-physiological growth and maturation. Consequently, the link between A and B is of a causal nature. Unfortunately, neither the Scientific American (SA) magazine nor the New Scientist one provided me with hard scientific data that explain the slow pace of the human body's growth and maturation. SA simply advised me (October 19, 2005) to do the following: "You might try searching anthropology websites for possible answers". My analysis here of the subject matter indeed adopts an interdisciplinary social science perspective.

As to the human bi-dimensional identity, it is as well a direct outcome of the human organic body (the bio-physiological component), on the one hand, and the cultural symbolic component, on the other.

The search for a relationship between the domination of humans in the world and the remaining four distinct features strongly shows that features A and B (slow bio-physiological growth and maturation and a longer lifespan) could hardly predispose humans to be unique dominant beings over other species, since humans are, for instance, much weaker physically than many other species. As such, it could be hypothesized implicitly and suggested that humans' dominant roles in the world are

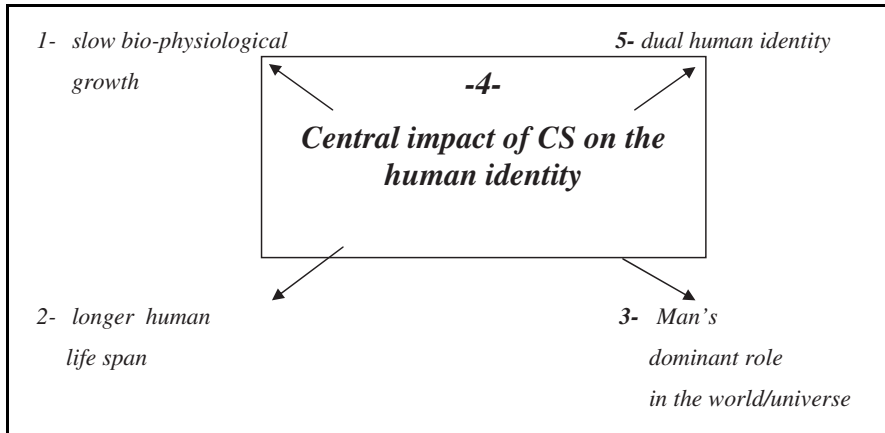
strongly related to features C and D, already underlined, i.e. the human dualistic identity and CS.

CS' principal role in the determination of human destiny goes even further than just the central place which humans occupy in the world and the universe. The importance of CS also manifests itself indirectly in features A and B. Slow human body growth and maturation may be explained by the fact that human global growth and maturation involve **two fronts**: The bio-physiological front as well as those of CS.

In contrast, the body growth and maturation of the rest of the species are overall of a rapid nature, because they are due to the absence of CS in non-human species. In short, the growth and maturation of non-human species is **uni-dimensional**, with a bio-physiological dimension. Thus the rapidity or slow pace of the entire growth and maturation processes of species depends on whether it has to do with uni-dimensional (bio-physiological only) or bi-dimensional (bio-physiological and CS) growth and maturation of the total entities of living species. In other words, it takes a much longer time in the number of months and years for humans to grow and mature both at the bio-physiological and CS levels. This is because human growth and maturation involve two fronts, unlike other species where growth and maturation include only **a single front**: the bio-physiological one. The following graph shows the CS centrality in the human entity, that is to say, the four distinct human features displayed in the graph demonstrate that they are affected by the impact of CS. On the one hand, the very slow growth and maturation of the human body, and consequently longer human lifespan, are influenced by CS because the latter constitute a second front for global human growth and maturation. That is, the need of humans to be involved in two levels of growth and maturation requires the slowing down, so to speak, of both processes of the human bio-physiological and CS growth and maturation. The net outcome of this is a longer human lifespan, on the one hand, and later human cognitive maturity, on the other.

Furthermore, the two features of human dual identity, as well as the domination of the world by humans, are also in my CS theoretical framework, the result of CS as mentioned before. The capacity of CS to explain these four distinctive human features enables CS to be strongly a potential **Cultural Theory** (Urry & Keat, 1975, : 13; Dortier, 2004, : 812)

The above description of the strong role played by CS on the destiny of humans on more than one side allows me to say: **"Humans are cultural symbolic beings by nature"**. In other words, CS are at the very centre of human identity and as such exercise a heavy global impact on humans.



Graph (1)

CS centrality in the human identity as shown above has led to the emergence of my new concept which I would like to call Cultural Biology as manifested in 1, 2 and 4 in the graph. That is, CS slow down the bio-physiological pace of the processes of human growth and maturation. Consequently, the longer human lifespan is a further necessary time condition - in terms of more years and decades - that human CS need to be fully grown and mature. It has been well established, especially in cognitive psychology, that CS are slower in their growth and maturation than their bio-physiological counterparts in humans.

We have been told by specialists that humans reach their peak for bio-physiological growth and maturation around the age of 25 (Rischer & Easton, 1992, : 603). As to human thinking, acquisition of knowledge and/or science, and/or religious experience as essential components of CS, they cannot reach their peak stage of growth and maturation at the age of 25, but rather reach their ultimate growth and maturation after the age of 40. In other words, these very important CS need a much longer human lifespan to be well developed, fully grown and mature. Consequently, humans must have a special genetico-bio-physiological

design to meet human CS' requirements for a longer lifespan in order to be able to develop, grow and reach their peak of maturity among humans.

The thesis of my concept of Cultural Biology is quite different from that of Sociobiology (Wilson, 1975). While the latter considers biology to be the basis for a lot of human social behaviour, Cultural Biology sees that the existing suitable human genitico-bio-physiological design for a longer human life span is the outcome and response to the longer time it takes CS to be fully developed, grown, and mature. This new outlook of CS shows that the latter have a global influence on humans with regard to their behaviour and genitico-bio-physiological identity. As such, my Cultural Theory makes CS central to the understanding and explanation of the behaviour of social actors and the dynamics of human societies and civilisations. The graph above clearly shows that CS are also central to human nature (Dhaouadi, 2005,: 55-66).

CS are, therefore, the first direct and indirect strategic keys that social scientists have at their disposal to understand and explain human behaviour in both their individualistic and collective sense.

II CS and their Crucial Use in Soft and Hard Sciences:

Based on the above theoretical framework and on the arrows of the graph, I consider **CS** to be the **crucial divide** between the human race and other species. The meaning of CS corresponds more or less to that of the term Culture as used by contemporary social sciences. In my view, CS constitute the most central, fundamental part of individual and collective identities. In other words, CS form the very core of humans. On the one hand, other known, living, non-human species cannot compete quantitatively or qualitatively with humans on the CS scale. In short, CS are privileges of humans and their communities. On the other hand, without CS, *Homo sapiens* cannot alone claim leadership and domination in this world and the universe. As such, CS are second to none in the determination of human supremacy over other species. Therefore, **CS are indeed the ultimate centres of humans as a distinguished special race.**

The first class centrality of CS in the making of human individuals and communities makes its impact in human affairs very compelling, including in human biology, as has already been seen and described. That is, we can hardly imagine the human, social actions of social actors and

their collectives without CS input. At one level, CS are often the direct micro- and macro-motivating forces of social actions in social life. At another level, CS play a screening role for both inside the social actor's personality and the outside environment's potential, influential factors to which human communities and their members are exposed. That is to say, CS represent a sort of **a filter** to the influential forces that orient and ultimately shape human, social actions. They are, so to speak, **the checking board** that determines the particular kind of social action which individuals and collectives find themselves engaged in. My assumptions on the nature of CS (their first class position in the identity making of humans and their communities and their imposing impact on human social action) have consequently led me to take **a critical stand** on those analytical social science perspectives which prefer to give priority to socio-economic structural and biological (socio-biological) factors as capital determining forces of social action.

In their explanations of individuals' behaviour and societies' dynamics, Marxists emphasize the determining role of economic factors, functionalist sociologists stress the socio-structures of communities, and socio-biologists put great importance on biological parameters, while social scientists must give credit to all these factors in their analysis of individual as well as collective behaviour. **They must not**, however, conceive the impact of the bio-economico-socio-structural variables as automatic, uni-linear, irresistible forces like the impact of instinctive drives on behaviour among animals. There is overwhelming evidence from contemporary social sciences that the differences in behaviour among individuals within the same community or belonging to various societies are largely due to cultural differences, that is, **human behaviour is strongly culturally determined**. This is not true only of biological factors, but also of their socio-structuro-economic counterparts. The impact of the latter on individuals' behaviour and their communities are systematically **cross-checked** through their own cultural systems which often play the role of a vigilant referee. As such, in the final analysis, the impact of CS on human social actions is very compelling indeed. With the extreme importance of CS in mind, they must become **the first reference framework** of social scientists for both the comprehension and explanation of human behaviour and the community's dynamics.

The current strong emergence of both cognitive psychology (Bly & Rumechatt, 1999) as the leading subdivision in the field of psychology and of the sociology of culture (Bonnell & Hunt, 1999) as a growing front line sub-discipline of sociology is a strong indicator that the role of CS in the analysis of society's dynamics and individual behaviour is increasingly becoming widely recognized in social sciences. This change of perspective is quite legitimate because of the central role CS play in the making of human affairs as stressed by my perspective in this paper. Thus, it is hardly an exaggeration to expect other branches of social sciences and biology related sciences to pay more attention to the impact of the crucial parameters of CS in their attempts to comprehend and explain **human bio-genetic design** and the behaviour of human agencies, along with the dynamics of human communities. The rather imposing impact of CS on orientation, as well as the ultimate determination of human social action, is not only limited to its comprehension and explanation both in the micro and macro senses. My conceptualisation of CS also constitutes **an interdisciplinary conceptual framework**, i.e. an intellectual vision of the human world where CS are considered to be **the most central components of the total human identity**. With these semi-paradigmatic uses, CS could become a strong potential social science framework for **social theory building** about the behaviour of social actors and the collective social action of human communities, as well as of the human bio-genetic make up. As defined, a social theory is an intellectual perspective that can explain aspects and phenomena of social life (Baert, 1998, p. 1). In other words, CS could empower social science researchers to actively engage in theory building at the micro and macro levels of human social life, since humans and their communities are perceived here as profoundly **culturally oriented** by nature. It is hardly a surprise to consider CS as a general resource kit for wide legitimate and credible theory building about human societies and their members.

As such, I consider CS to be an **interdisciplinary masterpiece theory** for social and human sciences. However, its great importance is hardly limited to these soft sciences. I have also found that hard/natural sciences could benefit considerably from my theory of CS in their understanding and explanation of biological phenomena. The latter are the focus of this paper. I use the CS theory to examine a very unusual biological case study which is not been known to have been addressed and analysed by

both hard sciences as well as by soft sciences. CS theory is used to help explain in detail their determining impact on the longer human lifespan.

III The Phenomenon under Study and its Methodology:

The phenomenon studied in this paper and its thesis are inspired neither by my own readings in the social sciences and other related disciplines in English, French and Arabic, nor by my academic and scholarly contacts with colleagues in universities, research centres, intellectual seminars and conferences.

I was shocked when the idea of **the correlation between CS and the longer human lifespan** began in 1995 to gradually assert itself in my thinking (while the correlation between CS and slow bio-physiological growth and maturation manifested themselves in my thinking in 2005). I asked myself this question: Why have I not seen any reference to this correlation in all the written materials I have come across in social sciences and in other disciplines? I had a strange feeling, but my discomfort was lessened somewhat when I started to tell colleagues and students about that correlation. Practically all of them have also expressed their dismay and amazement that they themselves have never thought of this relationship between human CS and the longer lifespan of the human race.

As such, one can hardly hope to find help in modern literature in the different fields of sciences on this subject matter. I even had difficulty in having easy access to basic information about the average lifespan of members of other living species. Such information is certainly important for the investigation of the relationship between CS and the lifespan of living species. I decided to write to the National Geographic Society as well as to Discover magazine in the USA asking them if they had ever published studies, articles and/or books on the longevity of animals. I received no answer from Discover Magazine, but a staff member from the National Geographic Society wrote back to me (Feb. 23, 1995) saying: "We have not published an article on the longevity of animals nor was I able to find a book on the subject in our library. However, I did find the enclosed chart in the World Almanac and Books of Facts (1994) that might be of some help".

It is against this background that I was led to take two contradictory positions:

- (A) I thought that my idea about the correlation between CS and the longer human lifespan was a completely ill-founded idea. This is why there has been no known mention of it;
- (B) I thought that **the idea** of this correlation was really **a new** one, so it deserved to be explored in order to evaluate its credibility.

I chose option (B) despite the enormous scientific challenges and risks involved for **the lonely researcher**.

Ordinary people's observations as well as those of scientists concur that members of the human race live, on average, **a longer life** than most of the members of other living species. Therefore, it is legitimate to ask why there is this difference. I attempt to answer this question through basic facts and observations of **two perspectives**. The first perspective relies heavily on modern bio-genetic science. As to the second perspective, it draws its explanations from the CS framework. On the one hand, humans live longer than most other species, but, on the other hand, they are solely privileged to have CS, so the link between the longer human lifespan and CS could potentially be a strong one, as shown above in the graph. A good hypothesis has great potential to lead to credible science and theory building, if it passes the rigorous cross-checking and testing of its claims.

IV The Human Race's Longer lifespan:

There is a need here to take a look at the average age differences between members of the human race and those of a limited sample of animals. The average lifespan in years of certain animals is as follows: lions (15), tigers (16), sheep (12), cows (15), pigs (10), rabbits (5), gorillas (20), horses (20), and elephants (40) (The World Almanac & Book of Facts, 1994, p. 175). However, the average of lifespan of humans is significantly longer than the average lifespan of the animals referred to here. Even before the modern medical scientific revolution, the average human lifespan in many human societies was more than the average age of most of these and other animals. Obviously, the longer human lifespan is not due to the greater physical strength and size of humans in comparison with animals. As stressed in this study, CS are the determinant factors in making the human lifespan longer.

V The Bio-genetic Perspective on the Human Lifespan:

Modern bio-genetic science is inclined to explain the longer human lifespan by bio-genetic factors in the make up of the human race. Scientific research continues to underline the crucial importance which genes play on numerous aspects of human identity and behaviour. In the last four decades or so, some scientists have even explained the social behaviour of humans through facts and information gathered by the science of biology and genetics. The new sub-discipline of socio-biology is the outcome of that process (Wilson, 1975). Socio-biologists explain some human social behaviour, such as suicide and forbidden marriages between sisters and brothers, by the deterministic logic of human biology and genes. Likewise, geneticists state that the individual's lifespan is strongly determined by the kind of genes he/she has. On the one hand, they consider that an age of 120 years is probably the maximum age human beings can reach. In other words, the inherent make-up of the genes of members of the human race allows them to reach the age of 120 years. In contrast to this, the genes of non-human species do not permit their members to reach that very old age. It is, therefore, the type of genes which each living species has that ultimately determines the maximum number of years which certain members of given species can live. Modern scientific evidence shows strongly that human genes play a crucial role in the making of a longer human lifespan. Much was written in magazines and newspapers about the worlds oldest French lady, Jeanne Calment, who lived to be 120 years old (Time Magazine, 1995 p45). The late French president, François Mitterrand, gave her a certificate for being the oldest, known, human individual in the world. Scientists have found that reaching a very old age appears to run in families. Mrs. Calment's mother died at the age of 86, while her father lived longer than her mother. He died when he was 93 years old (Time Magazine, 1995). Thus, it is through the working of genes that old age can become a hereditary phenomenon among humans.

Scientists believe that individuals who live for a very long time may have a type of genes which has special resistance against the harmful impact of chemical remains which result from nutritional processes in the human body. These chemical residues are assumed to damage more seriously the DNA of the majority of the population as it grows older (Time Magazine, 1995). This scientific observation implies that the

human race may have a **better immune system** than other living species for dealing with the chemical remains mentioned before. However, this observation may only offer an apparent explanation about what may make humans enjoy a longer lifespan. In order for such an explanation to have stronger credibility, it needs to explain why the better immune system of the genes has largely been **confined to the human race**. I don't know at this time if the sciences of biology and genetics have their own scientific explanations for this **human peculiarity**. The Scientific American magazine reply to my question was not helpful.

VI The Need for the Complex Thinking Approach:

Even if these two sciences have a solid bio-genetic explanation for that, this should not discourage scientists and researchers outside of the sciences of genetics and biology to look for other potential or even crucial determinant factors which may also be involved in the making of the longer human lifespan in question. This is quite legitimate at a time when scientists and researchers are more and more convinced of the **complex nature** of the factors which may co-influence a given human phenomenon in particular. The French sociologist and philosopher, Edgar Morin, speaks of the necessity for the adoption today by modern scientists, researchers and scholars of what he calls the complex thinking approach (Morin, 1990). In other words, scholars, scientists and researchers should avoid the use of strict, simplistic reductionist approaches in their studies, particularly of human phenomena which are complex by their own nature. My CS theory in this study is in line with Morin's perspective. On the one hand, to explain the distinct human longer lifespan solely by bio-genetic factors is a very reductionist approach. It can hardly see beyond its frontiers any other plausible, influential factor(s) which should be seriously taken into consideration in the understanding and explanation of the longer human lifespan. On the other hand, my search for the causes behind the phenomenon of the longer human lifespan has shown me that there are more factors involved in the latter than the mere narrow territory of the bio-genetics of humans. As pointed out earlier, I use the CS perspective in order to help understand and explain the cause(s) behind the longer lifespan which the members of the human race are privileged to have.

As argued before, CS need a longer human lifespan to fully grow, develop and mature. Based on the great importance of the role CS play in

the unique destiny of humankind, I could restate the former correlation: on the one hand, humans are absolutely unique because of their enormous skills in the use of CS, but, on the other hand, they are also considerably unique in their relatively longer lifespan. Is there a link between these two unique human characteristics? What kind of a relationship is there between them?

Let us take a look by means of some illustrative examples at how the presence of CS in humans would necessarily require a longer lifespan for them. In modern social science terminology, there appears to be a **strong correlation** between these two human characteristics.

VII The Pace of Growth and the Maturation of CS:

As mentioned before, the human race is distinguished by its possession and use of the complex system of CS. CS need a long time to grow, evolve and reach their maximum maturation. While the growth and maturity of the human body reach their peak around the age 25 as indicated earlier, the beginning, for instance, of the development of mature complex thinking hardly appears before the human individual is 20 years old. However, adequate mature thought does not often materialize before the person is around 40. The peak maturation of human thought usually crystallizes by the age of 40 and beyond (Gardner, 1982, : 357; Hunt, 1982, : 279). These show that the growth, evolution and reaching of final maturation in human thought and other CS related dimensions indeed require a longer lifespan for humans. In other words, the development and full maturation of the world of CS need roughly **more than twice the number** of years needed for the growth and complete maturation of the human organic body.

This state of CS' slow growth and maturation appears to be the outcome of two factors:

- (A) The initial, slow, innate nature of the growth and development of human brain parts relevant to the full use of the complex world of human CS,
- (B) The strong involvement of human individuals in the growth and maturation of the human body in the first 25 years as stressed.

Both these factors tends to make the human brain need a longer time to use and develop fully the entire spectrum of human activities associated with and elaborated by human CS.

VIII Differences in Years between the Child's Muscular and Linguistic Development:

In order to be more specific about the gap in years between these two realms of human development, I compare here the child's body pace of growth with that of his/her linguistic development in order to underline the **slower** development of the human CS. At the age of five months, the child can roll over his/her body on all sides. When he/she reaches eight months, he/she can sit alone, at eleven months he/she can stand by himself/herself, and by his/her first birthday, the child is able to walk alone (Encyclopaedia of Psychology, 1973).

As to the development of the child's language, it goes through several phases. Observations show that the child begins the process of vocalisation and cooing between four and eight weeks of age, whether he/she is alone or with others. Between 12 and 16 months, the child's first words appear as imitations of adult speech, and usually consist of nouns with emotional significance, such as "Mummy" and/or "Daddy". At the age of two years, the child has a good understanding of language and he/she can in general make two and three word phrases. Between four and five years of age, the child uses more adult-like grammar with some complex constructions still missing. His/her vocabulary at this age is between 5,000 and 7,000 words. He/she masters grammar around the age of 12 years (Encyclopedia of psychology, 1973).

These two examples show that the development and maturation of the child's language - the most important of all CS - **need a much longer time** than the growth and maturation of his/her body which permits him/her to stand and walk alone at a very early age. The human being's possession of CS and their implications on the behaviour of the human race lead inevitably to a discussion of the brain/mind, because the latter is the place par excellence for the development and maturation of human CS.

IX The Brain/Mind and the Longer Human Lifespan:

In order to explain this discrepancy in the pace of growth and maturation between these two realms of the human entity, we can refer to what may be called an objective, descriptive approach which is widely used by modern science in order to understand and explain phenomena. Scientists are of the opinion that members of the human race need a

longer lifespan because of their brain/mind CS. The explanation of this relationship is described as follows:

- (A) Observations show that the growth and maturation of the organs of the human body take a much longer time (in years) than the growth and maturation of the organs of the bodies of other living species. Scientists have explained this difference as being because of the presence of the brain/mind in the human race. Because of this slow pace in the growth and maturation of the organs of the human body, individual members of the human race will, therefore, require a longer lifespan, so the organs of their bodies can reach their peak of growth and maturation. What is at stake here is human biology itself. Its processes of growth and maturation are greatly **delayed** when compared with those of non-human living species. There is a fundamental question which has to be raised here and it is a basic research question. What does the human brain/mind (CS) have to do to be able to slow down the biological processes of the human body? Unfortunately, most biologists have confined themselves to the description of the working of human biology. Consequently, the issues which may be involved in these matters (and they are beyond the frontiers of human biology) have hardly been raised.
- (B) Man's brain/mind has made what **sociologists** call socialisation (basically through CS) a very **long process** in terms of the number of years needed for its accomplishment when compared with the length of the process of socialization among the rest of the other living species. Human socialisation consists of the individual's learning the CS of his/her milieu/society, such as language, religious beliefs, customs, cultural values and norms, and the heritage of knowledge/science (CS). With successful socialisation, the individual becomes a full member of his/her milieu/society. In other words, complete and successful socialisation makes the individual assimilate entirely into the melting pot of his/her own society. This can hardly be achieved within a very short time, but rather it may last until the age of adolescence. The lengthy period of human socialisation is largely due to the slow pace, difficulty and **complexity** of mastering and assimilating the CS of society into the basic personality of the individual. Human socialisation is a continuing process and it has practically no end, particularly in ever-changing modern societies.

Moreover, there is a need to go beyond the simple sociological description of the process of socialisation. We need to ask ourselves what there is in CS that makes them not easy to be learned and mastered more quickly and at an earlier age. In other words, what is special about them that makes them slower than biological processes in their growth and maturation? Is there **any hidden dimension** in them that modern natural and social sciences have not dealt with?

The earlier graph in this paper offers only an explanation about the slow human bio-physiological and CS growth and maturation by **the two fronts concept**, but is hardly able to say anything substantial about the inside nature of CS. It does not appear to be within its reach.

X Cultural Determinism and the Human Lifespan:

On the one hand, as has just been shown, the longer lifespan of members of the human race is to be accounted for by the factor of CS underlined in the graph and the text. That is, the presence of CS, besides the bio-physiological body in humans (the double front concept), requires a longer lifespan for human global growth, development and maturation. There is, therefore, some sort of **cultural determinism** behind the average longer lifespan of members of the human race. On the other hand, the living species which do not have CS do not need as a matter of fact a longer lifespan because their bio-physiological growth, development and maturation are terminated in shorter periods, so that each species can fulfil its functions at the appropriate age and subsequently guarantee the continuity of its offspring despite its very short lifespan. However, the distinction of the human race by CS has made its longer lifespan necessary for its own survival. This has been achieved in two ways:

- (A) As has been pointed out, the presence of human CS **delay** by many years the achievement of full growth, development and maturation of the human organic body. While the maturity of the bodies and organs of certain animals can be attained at the age of one or two years, the maturation of the body and organs of humans can hardly be fully realised before the age of 25, as already mentioned. This bio-physiological fact requires that **humans must live longer** in order to fulfil their full bio-physiological growth, development and maturation,

and be able to secure the continuing existence of the human race through the reproductive process.

- (B) As referred to before, the nature of growth, development and maturation of CS (as a **cognitive system**) is much slower than that of the growth, development and maturation of the human body. In order for CS to perform their full and complex functions and roles in the individual's life and in the development of human societies and civilisations, it becomes compelling that members of the human race have a longer lifespan. The time factor in years and decades is **crucial** for the full development of human CS. In other words, the full blown maturity of human CS is not only space (social milieu) dependent, but is also strongly **time dependent**. It becomes, therefore, a compelling necessity for humans to enjoy a longer lifespan. In modern social science terms, there is a strong correlation between the presence of human CS and the need for a longer lifespan.⁽¹⁾

It is evident from the analysis presented here, that the longer human lifespan is largely a response to the presence of CS and their needs. In other words, it could be said **the presence and subsequent needs of CS have dictated, so to speak, the special bio-chemico-genetico-neurological structure of the design of the human race** in order to permit its members to enjoy a longer lifespan than other living species which are deprived of CS or have a uni-dimensional front. My perspective is somewhat opposite to that of **sociobiology** which claims that many kinds of human, social behaviour are triggered by genes and the biology of the human body.

My view here shows rather that it is cultural factors\CS which have in turn influenced the actions of the biology and genes of the human race. It has to do here with what I would like to call **acculturised biology**. That makes my CS theory visibly interdisciplinary. That is, it may be used to explain the socio-cultural as well as the biological dimensions of the

(1) This strong correlation between CS and a longer lifespan is found in the following study: Attendance at cultural events, reading books or periodicals, and making music or singing in a choir as determinants for survival: Swedish interview survey of living conditions. *British Medical Journal*, (Dec. 1996), 313, 21-28, 1577. Conclusion: attendance at cultural events may have a positive influence on survival and mortality.

human entity. The thesis developed here is quite compatible with the newly emerging scientific outlook which calls upon scientists, scholars and researchers to expand their vision beyond the narrow views through which they look at and explain complex phenomena. They need rather to adopt multi-dimensional views. The latter study phenomena as complex entities which are, on one level, influenced by different factors and, on another level, the influential factors are influencing and influenced agents at the same time (Morin, 1990).

XI Biology, Genetics and CS:

The strong correlation established so far between the longer human lifespan and CS is hardly mentioned in the enormous corpus of modern science in general. As pointed out before, both genetics and biology make no reference to the role of CS in the length of the human lifespan. For these two branches of exact sciences, the question of the longer human lifespan has to be analysed and explained only in genetic and biological terms. This does not mean, however, that biologists and geneticists do not make any mention of CS. On the contrary, some even speak of CS as what makes humans human (Rischer & Easton, 1992, p. 602). Nonetheless, they neither look at human biology and genetics through those humanising CS as I have done in my concept of acculturised biology, nor do they say very much about the relationship between CS and human biology and genetics, let alone the very nature of CS, as well as why we grow and mature slowly. In other words, there is hardly any real help from these two branches of modern science which can answer some of the basic research questions on the essential nature of CS. This should explain the already referred to silent reply of the Scientific American magazine on why humans have slow bio-physiological growth, development and maturation.

XII Modern Social Sciences and Missing Transcendental Dimensions:

When we examine the profile of modern Western social sciences, we hardly find any reference to the concept of the transcendental dimensions of CS as used here. For me, the **transcendental dimensions** of CS are displayed in the following features:

(A) CS are volumeless and weightless in the material sense of the terms.

- (B) CS have potential long/eternal lifespans.
- (C) CS have potential rapid/instant mobility through space and time.
- (D) CS charge humans with fantastic motivation and energy that make them very powerful, so they can defy metaphysical forces.

As part of the notion of culture, as defined by the British anthropologist, Edward B. Tylor, CS have received special attention particularly from the disciplines of anthropology and sociology. Both have studied religion, language, cultural values and norms, magic, science, thought, myths, etc. extensively. Countless anthropological and sociological studies have been written about the functions, pace of change, diffusion, etc. of those CS in human societies. Contemporary anthropologists and sociologists have widely used the concept of CS in order to analyse and explain individual and collective social behaviour in human societies. For instance, common cultural values and religious beliefs in societies are used to account for the patterned, collective, social behaviour of individuals of different systems of personalities. Common CS are, thus, the fundamental bases for social solidarity and, subsequently, for the emergence of the phenomena of human societies themselves. As such, the concept of CS is crucially important in the study of the dynamics of human behaviour, whether it is that of the individual or of the community. In contrast to non-human behaviour, which is basically determined by biological instincts, most human individual and collective social behaviour is strongly oriented and shaped by cultural factors. All this shows, beyond any doubt, that CS are serious regulating agents of human behaviour.

This type of analysis of the impact CS have on human behaviour is the common approach adopted by modern social sciences. It may be called a culturally behaviourist approach. The latter looks at CS as external stimuli out there in the social milieu with little interest paid, if any, to the internal side of those stimuli. Behavioural psychologists are well known for their disdain for studying unobservable factors which may affect human behaviour. Their uneasiness with the disciplines of cognitive psychology (the study of the internal state of the human mind) and psychoanalysis (the study of the impact of unconsciousness on human behaviour) appears to be associated with the study of the potential **hidden dimensions** of CS, such as the transcendental features referred to earlier. For example, a review of the countless introductory

books about sociology in the USA confirms the absence of references to the transcendental dimensions of CS. Most of these introductory textbooks have a chapter about culture where definitions of cultural concepts are given, explained, discussed, and sometimes applied. However, despite this, I do not yet recall having seen any of those many introductory textbooks making reference to the transcendental dimensions of CS (White, 1973).

This state of affairs may be accounted for by the general spirit of modern, Western science. On the one hand, it is more inclined to study observable, measurable and quantifiable phenomena. As such, it has a sort of **hostile attitude** towards these phenomena which do not qualify being studied by the rather Positivist approach. On the other hand, devising an appropriate new methodology becomes a big obstacle for the few, non-traditional, modern, social scientists who recognise the legitimacy of those commonly non-observable, non-measurable and non-quantifiable phenomena. In contrast to this, my interdisciplinary CS theory is potentially qualified to give importance to both objective and subjective dimensions of human parameters/ determinants.

XIII Social Sciences Unfit for CS Study:

The total failure of bio-genetic sciences to deal with CS as such, and the partial failure of modern social sciences to address the internal dimensions of CS make both of them unfit to come to our aid in understanding CS from within.

From a methodological viewpoint, there is a pressing need for the discovery of this hidden dimension' of CS. I have established in the preceding pages that there is a strong correlation between human CS and the longer human lifespan. In modern social sciences, correlation relationships between phenomena are usually interpreted in two ways:

- (A) Direct cause/effect relationship. This means one phenomenon is the direct cause of the other phenomenon.
- (B) Indirect cause/effect relationship. This implies that the phenomenon in question is not caused by the other phenomenon in the correlation, but rather by the so-called intervening variable. The latter is a factor/cause different from the phenomenon in the correlation.

It could be said that both modern bio-genetic sciences and social

sciences have, in general, remained **silent** on the direct or indirect cause(s) which make(s) the growth and full maturation of CS take a much longer time in terms of the number of years than the growth and full maturation of the organs of the human body. Social scientists are certainly aware of this factor. However, one can hardly find in the vast social science literature the cause/effect or the intervening variable explanation(s) of this time difference in growth and maturation between the two realms of the human entity: the bio-physical human body and the CS. What one finds, instead, in the enormous literature for the social sciences is "descriptive approach" statements and analyses. In other words, CS are described as if they can be observed and analysed objectively and externally without making reference to why they grow more slowly or last longer (human ideas, thought) than human bio-physical organs. Nor do they consider the plausibility that CS may have 'a **hidden dimension**' which is beyond the objective observable field of Positivist science.

XIV The Islamic Perspective as an Alternative:

There is, therefore, a need for the adoption of an approach different from the prevailing conventional one in modern social sciences. It should be a balanced approach. **It studies CS from within and from without.** It focuses equally on the external (the observable, the objective, and so on), as well as on the internal (subjective, transcendental, etc.) dimensions of CS. In short, I needed a perspective which could help me answer some of the questions about CS which modern social sciences have either not raised or have not been interested in answering. I have chosen the Islamic perspective for this task. There are three reasons for this. First, my interdisciplinary CS theory includes religious elements in its perspective. Second, I have been working on CS for the last seventeen years. The Islamic perspective is present in this work (Dhaouadi, 1996). Third, the Quran, Islam's Holy Book, is full of verses which speak of **dualism** as a common feature of all the phenomena of the universe. From this point of view, the nature of CS could not only be one-sided in nature: external, objective and observable. This view misses the hidden (subjective, the transcendental, etc.) dimension of the nature of CS. According to the Qu'ran, the internal nature of CS is heavily invested with the divine spark. Thus, the focus of modern social sciences on the study of CS from the outside is hardly objective scientifically. The credibility of the entire corpus of modern social science concepts, theories, paradigms, etc. about

CS will, therefore, be very much lacking. The inclusion of Islamic insights in the elaboration of our CS theory is part of making it interdisciplinary.

In using the Islamic perspective in the analysis of CS, I have **two goals** in mind which are fully compatible with the thesis of this study:

- (A) The acquisition of more knowledge about the internal nature of CS. As has been seen, they develop and mature much slower than the bio-physical human organs. Then, the legitimate question which should be raised is: What is in CS that makes them slower in their development and maturation?
- (B) Could the findings from question (A) explain or make sense out (Verstehen) of the strong correlation between human CS, on the one hand, and the longer lifespan enjoyed by members of the human race, on the other? The performance of the Islamic perspective in the exploration of CS in the following pages is to be measured and tested by the kind of answers it will offer to these two major questions.

XV In Search of the Nature of CS:

The above brief description and analysis of the crucial role CS may play in making the human lifespan longer than those of other species can be considered as a sort of Positivist scientific description. That is, it confines itself to the description of tangible observations about CS and their potential weight on the longer human lifespan. This approach can hardly be sufficient to adequately satisfy human curiosity and to articulate a solid understanding and explanation as to why human CS are decisive in the promotion of a longer lifespan for the human species. I need, therefore, to go beyond the mere descriptive approach of CS and raise substantial questions about their very nature: What is the nature of CS themselves which enable them to act as agents prolonging the human lifespan? In other words, what is in them that delays, by many years in comparison with other species, the full development and maturation of the organs of the human body? Also what is in them that makes their own full-blown growth and maturation come at a later time in longer human lifespan? These are not metaphysical, philosophical questions. They are rather very realistic, down-to-earth questions which have to be asked and attempts must be made in search of answers to them. Without

doing so, I can hardly hope to establish solid, trustworthy knowledge about what makes humans distinctly human.⁽²⁾

What is quite clear here is that neither biology nor genetics could be of any great help to me in understanding the nature of CS. The latter appear to constitute a world quite apart from the bio-physio-genetic world of the organs of the human body. Human CS are not made up of bio-genetic-neuro-physiological elements like the human body is. CS are super-organic in Spencer's terminology. This may be one good, plausible reason why they do not follow the same pace of development and maturation as the organs of the human body. In other words, the human entity is composed of **two realms** of different natures. Thus, what is needed is the adoption of an approach suitable for understanding the nature of CS.

This may require the modification or even the abandonment of the ethics and main principles of the Positivist approach adopted by modern, Western science. What is most important in achieving credible science and knowledge is not the given adopted approach per se, but rather the establishment of well-grounded understanding and explanation of the phenomena in question. I have chosen to use **the Islamic perspective** in my exploration of this apparent 'hidden' nature of the universe of CS.

XVI Human Nature in the Qur'an:

In order to identify the nature of CS from an Islamic perspective, I found no better references than the Qur'an itself, which is Islam's first authoritative reference. There are many verses in the Muslim Holy Book that speak with clarity about human nature. I have chosen only two

(2) Contemporary anthropology and sociology are the two disciplines which have studied culture more than any other discipline in social and human sciences. However, both have generally failed to ask and especially to answer those kind of questions about the very deep **transcendental metaphysical nature of culture** as outlined in this paper, particularly from my perspective which indicates that **CS have neither weight nor volume**. Some of the few anthropologists and sociologists who came a little close to those questions and answers ended up using vague, confusing terms that have kept anthropology and sociology at a distance from dealing with the substantive, profound nature of culture. For those few, culture is seen as super-organic, supra-biological, and as an abstraction, having no ontological reality or belonging to extra-somatic context (White, (1973), P. 10, 24, 29).

verses which describe in full the basic components of human nature. The two verses in question are: Behold! Thy Lord said to the angels: I am about to create man, from sounding clay and from mud moulded into shape. When I have fashioned him (in due proportion) and breathed into him My spirit, fall ye down in obeisance unto him (Qur'an, 15: 28-29). Human nature, according to these two verses, is **dualistic** in nature. It is made up of **clay** and **the divine breathed spirit**.

As to which one of these two components is more important in the making of human nature, one interpretation of these two verses may allow one to assert that **the Qur'an gives more importance to the side of the divine breathed spirit into the human entity**, since the angels were ordered by God to prostrate to Adam immediately after, and **not** before, the divine spirit was breathed into him. The angels' prostrating act before Adam is seen as a symbolic sign of respect to this god-like, new, privileged creature who was the only creature to receive **a special divine breathed spirit**. This Qur'anic position in favour of the spiritual dimension of human nature is a fundamental permanent principle which runs throughout the entire text of the Qur'an. We are told again and again in the verses of the 114 surahs of the Qur'an, that human individuals, groups, communities, societies and civilizations can achieve excellence only when their divine breathed spirit **dominates** the materialistic (clay) side of their human nature.

XVII The Meaning of the Divine Spirit among the Qur'an's Interpreters:

The interpretation of the meaning of the verses of the Qur'an has been a major concern for Muslims in the past and in the present. I have chosen a very limited sample of the interpreters (Al-Mufasssirun) of the Quran who have done their work either in Arabic or in English. Fakhrudine Al-Razi, who died in 1210, and Ahmad Al-Ansari Al-Qurtubi, who died around 1293, are two well-known interpreters of the Qur'an of past Muslim civilizations. There are also two widely-used interpretations of the Qur'an which were written in Arabic in the last century by Said Qutb (an Egyptian) and Muhammad Tahar Ben Achour (a Tunisian). In English, there are today two famous interpretations of the Qur'an. Each one of them is considered a highly credible reference by

English-speaking Muslims. The Indian, Yusuf Ali, and the Austrian, Muhammad Assad, are the authors of the two Qur'anic interpretations. Al-Razi (Al-Razi, 1981, p. 185-86) interpreted the word spirit (ruh) as "wind which can be breathed in". Then he admits that real knowledge of the divine spirit is not accessible to humans. As to Al-Qurtubi's (Al-Qurtubi, 1967: 24-25) interpretation of the word "spirit", it is not very different from Al-Razi's. For him, the spirit is like a wind and it is a gentile entity. As to two contemporary Arab interpreters of the Qur'an, Said Qutb (Qutub, 1985, 35, 39) speaks of the divine spirit as that breath which has enabled the human race to transcend its material (clay) make-up and reach out for the spiritual horizon where hearts and minds are in action. For his part, the Tunisian interpreter of the Qur'an, Muhammad Tahar Ben Achour, (Ben Achour, no date, 43-47), sees the divine breath into Adam as a symbol of man's greatness in the eyes of God.

Yusuf Ali gives the following meaning to God's breathed spirit into man: The breathing of Allah's spirit into man is the facility for God-like knowledge, which, if rightly used, would give man superiority over other creatures (Ali, 1989, : 625). As for Muhammad Assad, he interprets the divine spirit this way: "God's breathing of His spirit into man is obviously a metaphor for His endowing him with life and consciousness: that is, with a soul" (Assad, 1980, p. 386).

These six interpretations of the word "spirit" are generally **vague** as to the specific nature of the breathed divine spirit into man. Yusuf Ali's interpretation of the word "spirit" is perhaps the most tangible of all the interpretations referred to here. As mentioned before, the word "spirit" meant for him God-like knowledge and will which were given only to man. It is an interpretation which attempts to avoid being entangled in the vagueness and generality reflected in the other interpretations. In other words, his interpretation of the breathed divine spirit as **"God-like knowledge and will"** invested in man could constitute one step towards helping to identify more concretely the specific identity of the very nature of the breathed divine spirit into man.

XVIII The Operationalisation of the Transcendental Spirit:

The term "operationalisation" is used in modern social sciences to mean that social scientists should attempt to make vague phenomena and ideas more tangible, i.e. quantifiable and measurable, if possible. In this

way, the vague phenomena and ideas in question become operational and **empirically manageable**.

The process of operationalisation is certainly strongly inspired by the epistemology of modern, Western science and knowledge. This epistemology relies heavily in its understanding and explanation of phenomena on identifiable, quantitative and measurable variables and causes. The degree of success in the operationalisation process varies from one category of phenomena to the other. For instance, the so-called subjective phenomena (personal feelings, opinions, etc.) are less easy to operationalise than objective phenomena out there in the external world. Nonetheless, efforts must be made to identify as concretely as possible the hidden dimensions of vague phenomena. As pointed out before, the meaning of the divine spirit as conveyed by the six interpreters of the two Qur'anic verses remains rather vague. I need, therefore, to develop some sort of methodology that may liberate me from the use of vague, general labels which are of no help for a closer, more tangible understanding of the nature of the breathed divine spirit. In order to dissipate the obscurity surrounding the nature of the breathed divine spirit, I need to adopt **the following methodology**.

- (A) I should identify objectively and in tangible terms those elements which really distinguish humans from the rest of the other species and make them superior to all of them. As mentioned earlier, CS (language, thought, beliefs, science/knowledge, cultural norms and values, laws, etc.) are what distinguish the human race most from other species.⁽³⁾

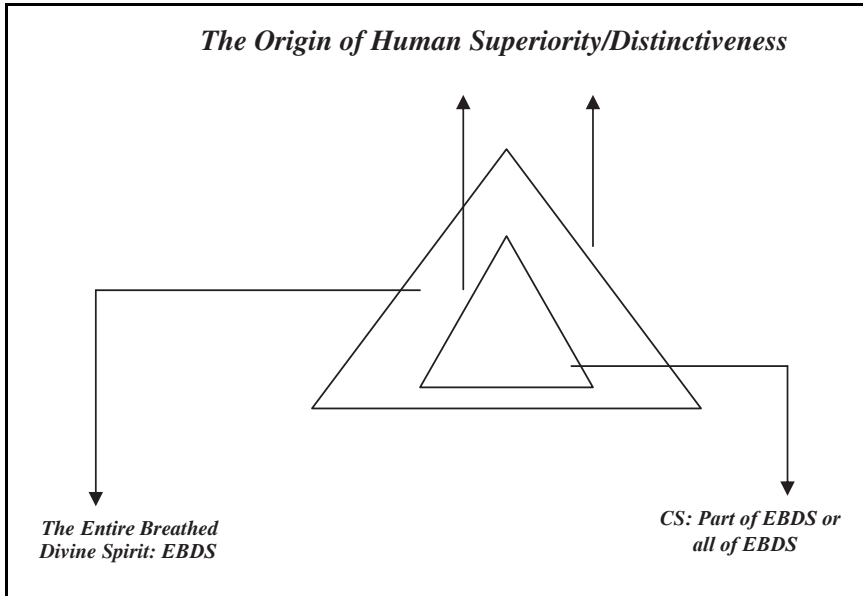
(3) The monthly French magazine, *Sciences Humaines*, included a brief, recent review (No. 139, June 2003, pp. 16-24) about research on human nature from the point of new evolutionary psychology (EP). It shows that EP has two versions of human nature:

(A) The hard version sees human instincts as programs of rigid and very specific rigid behaviour (p. 23). Book?

(B) The soft or moderate version believes that human nature does exist, but it expresses itself in terms of propensities, potentialities, inclinations and tendencies rather than in terms of rigid programs. Book? (p.23). Obviously, this version gives a large role to culture in the determination of human behaviour. As such, it does not come close to our concept of the centrality of CS (culture) in the making of human nature itself. That special, strong centrality of CS does not only greatly determine human behaviour, but also determines the bio-physical destiny (longer lifespan) of humans as argued in this study.

(B) The two Qur'anic verses referred to here speak also explicitly about man's distinct and prestigious status among all the other creatures, including the angels themselves who were asked by God to prostrate to Adam. The breathed divine spirit appears to be behind the special place which was accorded to the human race on this planet and in this universe. As indicated before, the angels' prostration to Adam came immediately after and not before the event of the divine breath being breathed into Adam.

Thus, the human objective analysis and the revealed Qur'anic text **concur on the superiority of humans over other species**. While the former relates it to the human race's unique CS, the latter explains the human's distinct status by the breathed divine spirit in him/her. However, there is **no contradiction** between the two perspectives. The Qur'an consistently attributes humankind's distinct superiority over other living species to its privileged CS as manifested in language use, science, thinking, learning, religion, laws, norms, morality, ethics, etc.. In other words, both approaches point to the crucial role of CS in the making of human superiority/distinctiveness. However, in the Qur'anic perspective, the divine breathed spirit as a source of mans superiority/distinctiveness may have a broader meaning than CS per se. That is, the broader meaning would cover everything that distinguishes humans from non-humans. The drawing below shows the kind of **overlapping** which exists between CS and the divine breathed spirit as the two determining factors of the superiority/distinctiveness of the human race. It remains, however, to be emphasised here that CS are the key factors in the divine breathed spirit for the human race's overwhelming domination over the rest of the species.



My interdisciplinary operational analysis of CS has so far clarified the broader nature of the divine breathed spirit. The latter must at least include human CS. In other words, **the divine breathed spirit must be human CS themselves or more than that**. With this, the identity of the divine breathed spirit is no longer as obscure as it was in the interpretations of the Qur'an's interpreters outlined earlier. Therefore, in these Qur'anic verses the word ruh must first mean CS. I agree completely with the Egyptian Professor, Dr. Zaglul Annajar, that Qur'an interpreters need credible scientific knowledge to convey the right meanings of Qur'anic verses for both the natural and social sciences (Annajar, 2002).

XIX The Nature of the Divine Spirit:

Having established that human CS are, at least, the larger part of the divine breathed spirit does not stop my human curiosity from asking: What exactly is the divine spirit which Qur'anic verses speak about as being breathed into man (Adam)? Of course, my interdisciplinary CS theory encourages us to raise substantive philosophical questions. Humans can hardly claim that they possess a precise answer to that very important question. As a first step towards getting closer to the answer, we need full knowledge of God's spirit. This appears to be

beyond human reach. Many of the Qur'an's verses speak of the limitations of human knowledge. "When they ask thee concerning the spirit (of the inspiration), say The spirit (cometh) by command of my Lord'. Of knowledge it is only a little that is communicated to you, oh men" (Qur'an, 17: 85).

On another level, the Quran states God is unique and "there is nothing whatever like unto Him (Qur'an 42: 11). Thus, we can neither compare His entity to what we know by our senses, nor can we claim that we have a concrete idea about the nature of His spirit. Allah in the Qur'an is the Absolute Transcendental. He is beyond any tangible human recognition and perception. "No vision can see Him, but He can see everything: He is above all comprehension, yet is acquainted with all things"(Ibid 6: 106). He is often perceived by humans as transcendental spirit and power that can only be vaguely imagined by humans. Modern science and past and contemporary philosophies are not of great help to us for an adequate knowledge of the divine entity and its spirit. On the one hand, modern science has almost completely avoided the issue of the divine presence on ideological as well as epistemological and methodological bases. On the other hand, ancient philosophy remained in general metaphysical or mystical in its approach to the study of the divine, and some contemporary philosophers have gone as far as announcing "God is dead."⁽⁴⁾ Thus both revealed and human knowledge do not enable us to have tangible, precise ideas about the nature of God and His spirit.

XX The Manifestations of the Transcendental in CS:

Accepting that CS are the greater part of the breathed divine spirit as outlined in Qur'anic text can hardly be an end in itself. I need rather to show how the transcendental breath is manifested in some of those CS themselves. I present here **three** manifestations where human CS are found to reflect certain transcendental aspects of the dimensions of the divine breath:

(4) The French social/determinist sociologist, Emile Durkheim, and the behaviourist American psychologist, B.F. Skinner, are leading figures in modern behavioural social sciences in their opposition to non-objective factors as determinants of human behaviour.

(A) The Long/Eternal Lifespan of Human CS:

In Islam, Allah is eternal. Qur'anic verses express Allah's absolute eternity in this way: "He is the First and the Last (Qur'an, 57: 3) or "All that is on earth will perish, but the Face of thy Lord will abide forever, full of majesty, bounty and honour (Qur'an 55: 26-27)". Thus, the long or eternal lifespan of human CS reflects some similarity with the divine trait of eternity. Let us take a brief look at how language, the Mother of all CS, extends culturo-symbolically the lifespan of human communities and individuals.

As for the capacity of language to perpetuate the cultural symbolic heritage of human individuals, groups and societies, there is plenty of evidence that attests to that. On the collective level, the written language enables human groups to record their collective memory and to preserve it and eternalize it despite their disappearance as bio-organic entities. The Arabic language's full maintenance of the Qur'anic text of the seventh century is a classical example of language's capacity to preserve for so long or forever the collective heritage and memory from the plausibility of destruction and annihilation that inevitably strikes the organic-physical materialistic existence of those human communities.

Likewise, language enables individuals to survive culturo-symbolically their relatively short bio-organic existence. Well-known thinkers and writers of all human civilizations and of all ages could not have diffused and propagated in full their ideas, theories, and paradigms, etc. if they did not have at their disposal a well-established language in their own culture. The ideas, theories, laws, and so on of Plato, Aristotle, Ibn Khaldun, Ibn Rushd (Averroes), Rousseau, Marx, etc. could not have resisted the odds of time and space and lived for centuries or potentially forever without the help of written languages. In short, linguistic systems permit the cultural heritage of people's memories as well of distinct thinkers' ideas to enjoy a great deal of longevity or even eternity.

New breakthroughs in the area of modern electronic techniques have particularly greatly improved quantitatively and qualitatively humans' chances to perpetuate themselves in a kind of **metaphysical sense**. The codification process is a vivid example of CS' ability to eternalise the word, voice and natural, living image of living creatures as well as inanimate phenomena. The invention of videos is by far the perfect invention that fully enables humans to eternalise themselves

culturo-symbolically. With it, it has become possible today to record in a perfect, spontaneous manner the word, the voice's tonalities and the movement of the individual's body. The late, famous, Egyptian singer, Um Kalthum, is no longer with us today, but she is still with us with the multiple, various poems she sang with her melodious voice and with her well-known Ahat (sad, meditative, loud voice). She is still, as she really was, with us with her white handkerchief standing before her crowded audience every first Thursday of the month of her singing season.

(B) Freedom, Justice and Equality's Transcendental Dimensions:

The cultural values of freedom, justice and equality constitute a second example illustrating yet another type of human CS transcendental profile. What I am precisely interested in here is to show how the impact of these cultural values on human behaviour could galvanise and transform it into a supernatural-like action.

Field observations of both the human race and the rest of the other living beings show, on the one hand, that the behaviour of the latter is profoundly influenced by genetic and instinctive forces, and, on the other hand, human behaviour is largely determined by the impact of CS. The power of the influence of genes and instincts on the behaviour of animals, birds, insects, etc. explains well the **persistent uniformity** of their behaviour that continues to prevail among successive generations throughout time and space. As far as the human race is concerned, there is great variety in the patterns of major or minor behaviour that differentiates one civilisation from another, one society from another, and one generation from another. There is a strong consensus among modern sociologists and anthropologists that those differences in patterns of behaviour are basically due to the impact of human CS, such as religions, traditions, cultural values and norms, systems of knowledge, myths, etc. that exist in those human social gatherings (Smelser & Smelser, 1967,: 80-87). In other words, CS allow humans to have access to freedom of action, choice and differences from other(s).

On this basis, human behaviour enjoys a great deal of flexibility. That is, it is governed by **docile determinism** and not by rigid determinism as is the case with the behaviour of the rest of living species. It is no surprise, from this point of view, to see that the predictions of human behaviour by specialists fail in many cases. Modern psychologists and

sociologists often tend to ground their expected predictions of human behaviour on a rigid deterministic basis whose laws hardly recognise the principles of human freedom, free will, and choice in the equation of potential influences on human behaviour (Philips, 1985).

It is of great importance here to draw attention to the fact that the cultural values of freedom, justice and other universal human values that humans have sought throughout their very long history have hardly been examined with any serious scientific interest on the part of Positivist social scientists. The latter appear to have considered such cultural values as philosophical in nature. Thus, they ought to be rejected outright. Accordingly, they do not deserve profound exploration as to their impact in the shaping of human behaviour. They are seen as metaphysical notions that interest philosophers but not Positivist social scientists. The shortcomings of their approach will persist as long as they deal with human behaviour as completely free from the effect of subjective, transcendental and culturally symbolic factors.⁽⁵⁾

Human beings' remarkable distinctness with the traits of freedom, sense of justice, ability to choose, and so on **brings them closer to the metaphysical world**. In most religions and faiths, gods are seen to be privileged with those characteristics. As such, it is only the human being who relatively shares those qualities with gods. As explained before, Qur'anic text makes a direct allusion to that human transcendental link which is the basis, according to the Qur'an, of freedom, will, the ability to choose, etc. on the part of humans. The origin of all that comes from the divine breath into human nature". Consequently," when I have made him and breathed into him of **My spirit**, do ye (angels) fall down, prostrating yourselves unto him" (Qur'an, 15: 26-29). With that generous divine gift, the human being becomes the most qualified being on earth to take up the full responsibility of its management. "We offered Our trust to the heavens, to the earth, and to the mountains, but they refused the burden and were afraid to receive it. Man undertook to bear it, but he has proved a sinner and a fool" (Qur'an, 33:72).

Neither the worlds of other living species nor that of Artificial

(5) The German philosopher, Nietzsche, (1844-1900) is a classical example.

Human Intelligence machines have the quantity and quality of human CS. It is utterly unrealistic to speak of the meanings of freedom, equality, justice, and so on among other living species as they have been debated by the human race throughout the centuries. The crucial, decisive factor that radically separates humans from both the world of AI machines and non-human living creatures is the set of CS. It is on the basis of the latter that the legitimacy of conceiving the transcendentalisation of human identity derives. Without taking into account the impact of the world of CS on human behaviour, we can hardly expect to formulate an articulate understanding of the nature of humans and their relationships with what surrounds them here on earth or what stimulates their imagination above them in the sky.

What took place on political and social fronts in recent years in Eastern Europe and in the former Soviet Union constitutes a genuine illustration of the transcendental nature of human cultural values as CS. The changes in the political systems in the second half of the year 1989 and in the summer of 1990 in both the socialist Eastern European societies and the former Soviet Union could not be easily understood without reference to the mobilizing effect of CS on the behaviour of social actors. The appeal by various groups for the democratisation of those totalitarian, political regimes was meant to signal the desire for ending the state of siege surrounding the exercise of freedom as a cultural symbolic value. It may be said that the politico-social practices of those dictatorial regimes went against the principle that stipulates **that humans are by nature culturo-symbolic beings**. That is, they could hardly accept in the long run the death of their culturo-symbolic instincts. As argued before, CS are the main sources that generate diversity and differences among human individuals and groups. By their nature, they are hostile to any repressive homogenisation which attempts to make individuals and societies identical to each other. Modern socialist and communist countries' policies are at odds with this. The prohibition to strike in a factory, to travel outside national frontiers, to establish political parties, to speak freely, to criticise, to express opposite views, to protest, and so on, are practices that are in conflict with what CS are intrinsically predisposed to promote. The exclusion of humans from practicing their freedom in the largest sense of the term will ultimately lead to being very

similar to both the world of non-human living creatures and that of AI machines. Our concept of social actors as culturo-symbolic beings **first** is in clear contradiction with the assumptions of historical materialism (Balibar, 1979). The ideology of the political regimes of socialist and communist societies advocates that humans are first of all materialistically and economically oriented in nature. Everything else in human nature is either secondary in importance or has false bases. This materialistic perception of humans has led to the marginalisation, or worse, to the annihilation of the role of CS in shaping human behaviour. This is true especially among extreme, rigid, materialistic Marxist thinkers.

(C) CS' Weightless and Shapeless Nature:

In my perspective of CS in this paper, I have explained the considerable ease by which CS can be brought and diffused through space as being essentially due to the substantial non-presence of certain tangible parameters which non-CS often have. Weight, and physical and material shape constitute the basic tangible parameters of solid, material things and they make up the major obstacles for carrying and diffusing them easily from one place to the other. As for CS, they are intrinsically **weightless** and **shapeless** in the material sense of the words. Their speedy mobility, instant movement, carrying and diffusion from one place to another may be explained by their fundamentally weightless, shapeless nature. As such, as long as CS are kept weightless and shapeless, their transportation and diffusion will be much easier and much faster. For instance, CS have weight and shape when they are in written print which has physical material weight and shape. Carrying books, documents, newspapers, magazines, journals and so on through space takes a long time and great effort if the distance is enormous and the means of transportation are primitive.

Modern means of transportation have certainly improved the speed and reduced the amount of hardship involved in carrying and transporting even the heaviest physical material objects from one place to the other. Nevertheless, their **weight-shape factor** remains a crucial factor as far as the fast mobility of things and the physical work put into their displacement. This idea becomes clear when shape and weight variables are dropped altogether from the scene of the transmission of

CS, that is when CS regain their shapeless and weightless initial intrinsic state. The recent invention of **faxes** has done just that. Small and large written documents can be faxed today and with very little effort instantly reach the farthest points of the globe. Obviously, this is made possible by the elimination of the weight and shape variables of the written print material in which CS used to be sent to given destinations.

The shapeless, weightless characteristics of the nature of CS appear to move them far away from the logic and rules that govern the universe of physical, material things which have weight and shape and put them, instead, in the orbit of spiritual, transcendental beings which are assumed to be shapeless and weightless. This state of being without weight and shape appears to leave no room for any constraint that could block the free, instant movement of CS. Silent communication through telepathy, oral communication by telephone, written communication by faxes and the Internet are all instant communications between the parties involved. This occurs despite enormous, physical, material obstacles like deserts, mountains, seas and oceans which may separate the communicating parties. These four types of communication from a distance have one thing in common: **They are absolutely free from the constraints of weight and volume.** This should explain as well how enormous amounts of printed material in an entire library could easily be put in very small electronic flash drives or hard drives.

My examination of these different manifestations shows that CS have features which make them significantly resemble spirits and supernatural beings. This is strongly compatible with the Qur'anic view of the origin of human CS. In a nutshell, they are part of the special divine breath which Adam received, as pointed out. The mixing of the divine breath with the clay in Adam's creation has established forever **human duality**: matter and spirit or body and CS. The above discussion underlines the fact that human CS are heavily impregnated with the divine and transcendent side of human duality.

The discussion just elaborated on the transcendental manifestations of CS shows well that my CS theory is strongly interdisciplinary. I have used both social and human sciences (anthropology, sociology, political science, religion, and philosophy) to deal with the issues in this paper.

XXI The Image of Man in the Qur'an:

So far I have established two major observations:

- (A) There is a strong correlation between CS and a longer human lifespan.
- (B) From the Qur'anic viewpoint, CS are of divine origin. Consequently, they show transcendental manifestations in human actions.

The question now is this. Is it possible to rely on these two observations in order to account for the longer human lifespan? The Islamic perspective has its own view of the creation of man, as well as his image in the world of countless living species.

- (A) The Qur'an offers its version of Adam's creation. This is spelt out in full in many verses of the Qur'an. The event of human creation was the outcome of the interaction between the physical (clay) and the metaphysical (the breathed divine spirit/CS). In other words, human creation was the result of contact between matter and the divine spirit.
- (B) Qur'anic texts address the consequences of the event of human creation, that is, what happened when the fusion between matter and the divine spark\CS took place. As an answer to such a question, the Qur'an speaks highly of the new creature (**Adam**), because matter (clay) is no longer just matter. It now has part of the divine spirit. In modern terms, the new creature is no longer a purely quantitative (clay) being. With the breathed divine spirit\CS in him, he is now a **qualitative creature** as well.

Qur'anic texts do not only clearly point out these two poles of the human entity, but they side strongly, at the same time, more with man's qualitative dimension whose origin is the divine spirit. As mentioned before, the divine order to the angels to prostrate to Adam came after, and **not** before, the divine\CS spirit was breathed into the new creature: "When I have fashioned him (in due proportion) and breathed into him of My spirit, fall ye down in obeisance unto him". In Qur'anic terms, the most important dimension of the dualistic human entity is the one which had directly resulted from the breathed divine spirit\CS. This is in full logic with Qur'anic epistemology. In the Qur'an, God is the ultimate of the ultimates in wisdom, knowledge, creation, action, mercy, and perfection, so a little spark of His spirit breathed into Adam when he was formed from clay is bound to radically transform the quality of that

dead, shaped clay. This great transformation has not only made man master over the rest of the other creatures, but also God's representative (Khalifa) on this planet. He is superior to other species not because of his quantitative dimension (physical size, height, etc., but basically because of his qualitative dimension: **the special set of CS**. This is the overwhelming position of today's social and human sciences, as elaborated in this paper (Dortier, 2004, p. 398)

XXII Dualistic Human Entity and Longer Lifespan:

How does this Qur'anic, dualistic image of man help to explain the longer human lifespan? It has been emphasised throughout this paper that humans live longer because their bio-physiological organs and CS develop and mature slowly. As such, humans need to live longer in order that their organs and CS can achieve their full development and maturity. How can we use the Qur'anic, dualistic view of man to account for the longer human lifespan?

In order to answer this fundamental question, I confine myself to the use of my CS theory as elaborated in this study. On the other hand, I use a Qur'anic-metaphysico-philosophical vision to help understand and explain how CS can play a decisive role in the making of the longer human lifespan. This approach is anti-Positivist in nature. There should be no surprise in the adoption of such a vision. It is argued throughout this paper that CS are heavily impregnated with transcendental dimensions. The latter can hardly be accepted, let alone be studied, by empirical Positivist science. I would like to discuss the relationship between CS and the longer human longer lifespan away from the narrow logic of strict empiricism and positivism, but within my adopted interdisciplinary perspective. CS have transcendental features. The transcendental universe is different from the five senses humans experience in the material world. The transcendental universe has its own logic, rules and dynamics. My Qur'anic-metaphysico-philosophical approach is greatly free from the constraints of empiricism and positivism. The latter are ill-equipped for the study of the transcendentality of CS. The discussion of CS here is beyond the reach of Positivist science.

Using an interdisciplinary approach, I stick here to the discussion of four ideas/ hypotheses about the links between CS and the longer human lifespan.

- (A) It could be argued that CS grow and mature more slowly because their nature is **more complex** than the nature of the bio-physical organs of the human body. In the words of Cassirer "Man is compensated by another gift which he alone develops and which bears no analogy to anything in organic nature. Not immediately, but by a very complex and difficult process of thought, he arrives at the idea of abstract space" (Cassirer, 1970, p. 48). Thus humans need to live longer because the complexity of their CS requires more time for the realisation of the full development and maturity of complex CS. While the complexity assumption is acceptable as a tangible, objective tool of analysis about the correlation between CS and the longer human lifespan, it does not, however, put an end to many of the questions which can be raised in this regard. For instance, what do we mean by the complexity of CS? What makes them more complex than the bio-physical organs of the human body? Are they more complex because of their metaphysical/divine origin? The answers to these questions are hardly to be sought within the framework of empirical-Positivist science. What is needed here is a perspective that sheds light and improves our understanding of phenomena which empiricism and positivism can practically offer no help. **Interdisciplinary insights from religion, philosophy and metaphysics** should therefore be welcomed, as long as they bring us closer to an understanding of the nature of CS and their special impact on the behaviour and destiny of the human race.
- (B) The correlation between CS and the longer human lifespan could be examined within **a semi-psychological framework**. That is, how spirit affects matter. The Qur'anic version of Adam's creation is a classical example of the interaction between matter and spirit\CS. Adam is the outcome of the combination of clay and the divine spirit. As pointed out, the breathed divine spirit had transformed the quality of the new human being. The divine spark had endowed him with transcendental characteristics. I have shown how CS are heavily impregnated with transcendentality. It could also be argued here that CS do not have only longer/eternal lifespan in themselves, but they also **transfer** this quality to matter. That is, the human body's lifespan is extended. There appears to be unavoidable mutual influence between spirit and matter once they are fused together in

one entity like Adam's. So the side affect of the CS longer/eternal lifespan is carried in a limited manner, so to speak, to the bio-physical side (clay, matter) of the human entity. The semi-psychological view of the longer human lifespan could hardly be in disagreement with the religio-philosophico-metaphysical insights about the role of CS on the human destiny (Pedler, 1981).

- (C) As seen before, CS are the greater important part of the breathed divine spirit into man. They are part of what I have called the qualitative dimension of the dualistic humane entity. From a Qur'anic point of view, the divine spirit, especially including CS, is the best side of man's duality. Without the divine spirit, man could not have been God's only representative on earth. Nevertheless, this has its own consequences. As has been emphasized, the full development and maturation of CS require longer time. In other words, humans have to pay a price for the gift of the enormous use of CS.

The price here is time in years and decades which the full development of both their human body and their CS would necessarily need. However, this price has its positive aspect. It has allowed humans to have a longer lifespan. There is no doubt that human CS are at the core of man's qualitative dimension, as shown in both graphs in this paper. There is, therefore, a strong need for more time in years and decades to pay for that qualitative side, so the full development and maturation of the entire human entity would be materialized. As such, the longer human lifespan ought not only to be examined through bio-genetic determinism, but it deserves to be analysed as well by culturo-religio-philosophico-metaphysical insights.

- (D) From a Qur'anic point of view, the origin of longer human life is breathed divine spirit\CS into humans. There are two manifestations to this. On the one hand, as shown in the preceding pages, there is a strong correlation between a longer human lifespan and the presence of CS among members of the human race. CS take much longer (in years and decades) to see themselves reach their peak in growth, development and maturation. This has made humans enjoy a longer lifespan when compared with the shorter lifespan of members of other living species. That is, the impact here of CS on the lengthening of the human lifespan is **a limited** one.

On the other hand, the Quranic text is quite explicit that the breathed divine spirit has allowed man to ultimately become **an eternal being**. Of course, he/she is not bio-physically eternal in this world. He/she just lives a longer life than other species, but he/she is eternal after Resurrection. According to the Qur'an, he/she will live-forever in Paradise or in Hell. There is no mention in the Qur'anic text either of the Resurrection of non-human species or of their eternal life afterwards. This difference between humans and non-humans in the length of lifespan in this world and in eternal life after Resurrection appears to be strongly related to the special divine spirit\CS which only humans have received, according to the Qur'an. This divine spirit has made man both God's regent in this world and accountable for his/her actions in front of God who will examine human beings' accountability on the Day of Judgement after which humans will live forever in Paradise or in Hell.

As argued throughout this study, CS are outstanding components of the breathed divine spirit. They are decisive forces for the longer lifespan of humans and because of them, humans are also held responsible for their actions in this life for which they receive either eternal life in Paradise or in Hell. In other words, CS may first be seen as the main forces behind the relatively longer human lifespan and, second, as the principal factors, from a Quranic viewpoint, that make humans legitimate for eternal life after Resurrection. Thus, the correlation between CS and the lifespan of human existence appears to be strong both in the **relative** and the **absolute** sense of the length of lifespan.

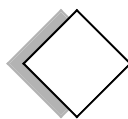
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دور الرموز الثقافية في إطالة أمد حياة الإنسان

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الملخص:

تمثل هذه الورقة محاولة لتفسير «لماذا يعمر أفراد الجنس البشري عموماً أطول من معظم أفراد الأجناس الأخرى»؟ توجد علاقة ارتباط قوية بين طول أمد حياة أفراد الجنس البشري وما أسمىه الرموز الثقافية (اللغة المنطوقة والمكتوبة والفكر والدين والمعرفة/العلم والقوانين والأساطير والقيم والأعراف الثقافية...) تفسر الرموز الثقافية أيضاً معالم أخرى يتميز بها البشر عن غيرهم، وهكذا يمكن اعتبار الرموز الثقافية نظرية صالحة للاستعمال في العلوم الاجتماعية والإنسانية والبيولوجية. ولبيان نظريتي هذه أستعمل إطاراً ثقافياً أود تسميته بعلم البيولوجيا الثقافية Bioculturology وتناقش الدراسة مقولة النظرية ضمن رؤية إيبستيمولوجية إسلامية للرموز الثقافية.

المصطلحات الأساسية: استعمال نظرية الرموز الثقافية، طول أمد حياة البشر.

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