The Reconstruction of Ibn Khaldun's Grand Design of History-making: The Underlying Metaphysical Cause

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Abstract: In his attempt to construct the scientific causal narration of history, Ibn Khaldun became a reductionist by concluding that the once ambiguous phenomena of how "history becomes" is the result of two interconnected causes: *ijtima'* and *'asabiyyah*. Firstly, this article tries to expose the Grand Design of History-making by connecting Ibn Khaldun's different dimensions as part of one comprehensive theory. However, there is a logical problem in Ibn Khaldun's proposal of causal narration of interdependency between causes, which is impossible to solve scientifically and philosophically. Hence, this article attempts to reconstruct the Grand Design of history by eliminating that logical problem. It has been reduced to a proposed final cause that cannot be reduced further. This final cause is an active and dynamic concept of Time, which has been proposed and defended scientifically and philosophically by engaging in different branches of natural, philosophical and cognitive sciences, hence validating the claim and its complete cycle. It might be a new approach to justify History-making with a scientific concept of Time, though it does not rule out the possibility of such arguments. Therefore, it is intended to open a new possibility to view the formation of history and civilisation by the omnipresent phenomenon of time and its role, which is inherently metaphysical and goes against the modern concept of History-making.

Keywords: Ibn Khaldun, *ijtima'*, *'asabiyyah*, the role of Time in History-making, Grand Design of history, Problems in Ibn Khaldun's theory.

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Introduction

> Abd Ar-Rahman Ibn Muhammad Ibn Khaldun al-Hadrami of Tunis . . . an Arabic genius who achieved in a single "acquiescence" of less than four years' length, out of a fifty-four years' span of adult working life, a life-work in the shape of a piece of literature which can bear comparison with the work of Thucydides or the work of a Machiavelli for both breadth and profundity of vision as well as for sheer intellectual power . . . in the Prolegomena (*Muqaddamah*) to his Universal History he has conceived and formulated a philosophy of history which is undoubtedly the greatest work of its kind that has ever yet been created by any mind in any time or place (Toynbee, 1955, pp. 321-322).

The historical thought process of the West was framed to free itself from non-historical constituents in order to build an autonomous, obvious, and vindicated worldview. Furthermore, this worldview struggled to obviate transcendental ingredients from the analysis of history, which is nothing but a conflict of History against the philosophy of history (White, 1959). Therefore, the Western worldview rejects the amalgamation of values given by history and, instead, it argues for a much higher ideal goal that can be achieved by calling upon the actions of the society. Western philosophers tried to balance the outcome of such narratives by being neither optimistic nor pessimistic but by intentionally providing ample space for human errors in this process to accomplish that ideal. Nonetheless, this idea burdened Man with the responsibility of his own fate without turning to anyone else, a complete isolation from metaphysical arguments (Mommsen, 1951; White, 1959). This most challenging abstraction of the idea of history, which is based on some fundamental pre-occupied notions, was understood as a humanitarian disaster that is visible in the form of omnipresence dilution of Man, society, and nature.

The absolute absence of metaphysical ingredients from history constructs a secular outlook of history and Man. However, Ibn Khaldun's idea of history challenges this modern outlook, especially in his book, *Muqaddimah*, which is considered as one of the greatest works ever produced (Toynbee, 1955). For Ibn Khaldun, Man occupies a central

role but he did not burden him to lead the torch of History-making without any external force. Nevertheless, it has been argued that Ibn Khaldun did not attempt to include the Man in the construction of his History-making because, on one side, there was a God he could not know and, on the other side, there was an anthropic idea of society he does not care about. Due to these competing forces, Ibn Khaldun was compelled to unravel abstract mechanisms in the historical materials to support his version of History-making (Busch, 1968; White, 1959). This juncture where Ibn Khaldun was denied access to Islamic ingredients while constructing his abstract mechanisms is the point of inquiry. It is in this historical context and debate that Ibn Khaldun will be analysed. Before that, a cursory review of the related work is necessary to appreciate the methodology of this article.

Wali al-Din 'Abd al-Rahman Ibn Muhammad Ibn Khaldun al-Tunisi al-Hadrami (732-808 A.H./1332-1406 A.D.) was born in Tunis on 1 Ramadan (according to the Muslim calendar). His education was in traditional sciences as per the cultural norms then, but due to his gifted capabilities, he held several key positions throughout Islamic empires. He lived during the fragmentation and cultural dissolution of the Arab Muslim world. A recent biographical study on Ibn Khaldun by Allen James Fromherz has cleared shadows from his personal as well as political and sociological life, which was previously vaguely available in the literature (Karamustafa, 2011). Ibn Khaldun is widely acclaimed for his unorthodox methodology and bold claims in his unmatched works. Being in a North African environment that saw tremendous change during his lifetime, Ibn Khaldun has provided fundamental constituents for his understanding of the rise and fall of empires (Albertini, 2019; Fudge, 2019). Considering the different aspects of his encyclopedic literary work, he has been extensively studied even in a modern scientific context (Gamarra, 2015). The notion of encyclopedic is a negative proclivity as it proposes an unsystematic amalgamation of different fields narrating a theory of History-making. A theory that is very much differentiated internally cannot justify a possible reduction in one another. The methodology employed so far, which is the selection of one part of a comprehensive theory by Ibn Khaldun, remains the main deviation from the original methodology he employed to state the mechanical chain (Dusuki, 2006; Kalpakian, 2008). The core point reveals that various aspects of Ibn Khaldun's comprehensive theory or

social sciences, such as sociology, anthropology, economics and the like (Boruch, 1984; Dusuki, 2008), are delinked from each other, which ultimately result in an unintentional denial of the mega-project Ibn Khaldun tried to propose. Such individuality came into existence not in vain but due to the compartmentalised approach to study human progress as part of the decentralised philosophy of sciences without unity. As a result, even after a dedicated study by Baali (2005), who analysed 300 books of Ibn Khaldun, there is no consensus on whether Ibn Khaldun was a sociologist, economist, political philosopher, political scientist or anthropologist (Baali, 2005; Dhaouadi, 1990). One possible answer that a proponent can give is that he was all of them. Nevertheless, that claim will not solve the problem of the undifferentiated and differentiated character of Ibn Khaldun's new science.

This brings about another question: what if Ibn Khaldun became all of them for the sake of developing a Grand Design — a new science that is able to amalgamate all these individual fields? These individual fields are not a character to link only with Ibn Khaldun as a person. On the contrary, each of them represents one of the necessary attributes of human progress. In developing this new science to better understand human progress, Ibn Khaldun was sometimes a historian and sometimes an economist. On a broader scale, by being an expert in each field, he was trying to build his notion of understanding the human race. That is why Ibn Khaldun's new science has no parallel in time. He cannot be compared with any other individual, except by only one of his expertise. The compared individuals can only represent and understand one attribute of human progress, according to their expertise. One can check this claim by analysing various individuals that have been compared to Ibn Khaldun; they do not show any unity in understanding human progress (Mohammad, 1988). Plato's idea of an ideal human society neither represents the actuality of human progress nor highlights the mechanistic chain of why a society behaves the way it does. Hence, in his description of a just city, Plato puts forth that a just society is one in which "justice is doing one's own work, and not meddling with what is not your own" (Plato, 433 a-b).

This premise is perfect for an ideal society that unfortunately does not exist; hence, the conclusion of a just society in the realist world is impossible. On the other hand, Jean Jacques Rousseau's call for natural accretion of human development was not at all near to the truth (Halsted,

1969). Similarly, Ibn Khaldun diverted away from such ideation about human progress. His methodology was scientific and based on the mechanistic chain in greater detail. He was not a proponent of saving the phenomena concept (Duhem, 1985) but a man of causal explanation, which is a contemporary issue. However, his causal narration in its micro detail falls into clear ambiguities that somehow built a foundation that cannot be considered as a final explanation. There must be a single final cause behind the science of *'umran*, or History-making. This article proposes the final and ultimate cause lacking from Ibn Khaldun's new science of *'umran*. This final cause is inherently metaphysical, which counters the modern view of historical thought process that is devoid of transcendental ingredients. First, the conceptual framework of *'umran* will be discussed in some length, followed by the exposition of the final cause. However, this inquiry is philosophical in its core.

Exposing the Grand Design of *'Umran*

In order to understand the new science of the Grand Design of history of Ibn Khaldun, one has to delve into the pure definitions of *taʾrīkh* and *'umran* because that is the ultimate goal of Ibn Khaldun. *taʾrīkh* means "history" and *'umran* means "construction" (Arnason & Stauth, 2004). Construction means the construction of history, not mere civilisation or culture. That is why this concept can be reduced to the study of any civilisation or culture as a tool but cannot be reduced to the subjective origination in a specific civilisation. As explained below, it is a universal tool that is not specific.

In *Muqaddimah*, Ibn Khaldun defines *taʾrīkh* as a "chain of reports (information)" of human affairs. Logically, history is made of human affairs, which define its structure. It is natural that reports can be true and false; this enables the possibility that any report can be disputed for its true and false premises. Reserving this method of true and false, Ibn Khaldun defined the criteria, that is, "untruth naturally afflicts historical information" (Ibn Khaldūn, 1967, Book 1, *Kitab al-Ibar*). This then poses the issue of how authenticity is determined in something by nature. Firstly, Ibn Khaldun proposed the answer in the form of partisanship, prejudice and flaw in narrators, all of which are subjective and individually initiated by something internal to it. Secondly, he figured out the astonishing factor that belongs to the "very nature of the

various conditions arising in the civilisation" (Ibn Khaldūn, 1967, Book 1, *Kitab al-Ibar*). He explained that if one knows the nature of events along with the circumstances and requirements of existence, then one can distinguish between truths and falsehoods. Based on this logic, Ibn Khaldun put forth his grand aim of the new science of *'umran*:

> The normative method for distinguishing right from wrong in historical information on the grounds of (inherent) possibility or absurdity is to investigate human social organisation, which is identical with civilisation. We must distinguish the conditions that attach themselves to the essence of civilisation as required by its very nature; the things that are accidental (to civilisation) and cannot be counted on; and the things that cannot possibly attach themselves to it (Ibn Khaldun, 1967, p. 38).

For Ibn Khaldun, the truth of history lies in the core of human social organisation, which he distinguished from civilisation. In the very nature of civilisation, there is a process and progress inherently caused by the conditions. This process and progress preceding the conditions is the problem of the statement. This begs the question, what does he mean by conditions?

Whatever the conditions are in Ibn Khaldun's theory, they certainly affect civilisation. Conditions can be explained by following the mechanistic view of the causal relation. History is made by humans as an individual existence but forms an identity that has no physical form and structure to be conditioned. This non-physical structure of history at every moment changes through some "conditions (states)" linked with each other. These active conditions are actually building history. In a more precise manner, through the transition from one condition to another, history is coming into being. Ibn Khaldun, in this context, proposed the concept of *'umran*. It is challenging to describe the existence of *'umran* in terms of physical, non-physical or metaphysical identity but it does have a form until the cause is known. The moment one thinks of the cause, the form of *'umran* loses its identity.

It is known that ' *'umran* exists but no one can change its origin. This concept comes into sharp contradiction with natural philosophy, which, as stated by Aristotle, propagates that, "form is the ultimate

principle of change."[2] In the natural world, form does not diminish by thinking of the causes but this is not the case in *'umran*. Nature works as part of a design to achieve its ultimate form, the perfect state. However, the following concerns arise: Where does *'umran* stand at this horizon? Does the process of history or world construction have any perfect form of underlying condition or state? Could there be something like a perfect state at which history construction can end?

History or world construction that is preceded by its conditions cannot be the final cause. The conditions itself must come into existence by something else. However, for Ibn Khaldun (1967), the final causes of *'umran* in the making of history presents "as a mixture of elements, *ijtima'* and *'asabiyyah* are the same for a being." *Ijtima'* here means assembly or gathering, whereas `asabiyyah* means solidarity or group feelings; both of them are the underlying factors giving conditions to *'umran*. For Ibn Khaldun, *Ijtima' Insani* (social cohesion) is necessary for humans, without which they cannot survive. He explained that it is human nature to have a desire for food, for which they need power and resources. Resources cannot be materialised single-handedly, which naturally creates the need for fellow humans to cultivate that desire. Forced by the natural human desire given by God, individuals came into contact with other fellow individuals to form *ijtima'* (assembly). Ibn Khaldun similarly presented *'asabiyyah* as being necessary, hence equally placing it with *ijtima'*. He argued that without *'asabiyyah*, there is no mission; a kingdom cannot come into existence. However, as per the premises of Ibn Khaldun, *ijtima'* and *'asabiyyah* are a mixture of a being made of elements. Hence, the Grand Design of Ibn Khaldun, which is his new science *'umran*, comes into existence through two natural phenomena in humans: *ijtima'* and *'asabiyyah*. In his causal explanation, Ibn Khaldun became a reductionist by proposing only two things at the core of his new science. Just as an event is composed of cause and effect, Ibn Khaldun prescribed *ijtima'* and *'asabiyyah* as each other's cause and effect but without affecting their own individuality. The reaction of these two creates the existence of *'umran* — the ultimate explanation of human progress.

Therefore, the history or world construction is a product of humans by their default proclivity for *ijtima'* and *'asabiyyah*. Each one has its

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[2] De Anima 416a9-13.

own individuality that is different in characteristics. Here lies the main problem with Ibn Khaldun: is it the inclination towards solidarity that forms the assembly or is it the assembly that prompts the existence of solidarity? The kind of premises that Ibn Khaldun proposed belongs to the unavoidable human nature, that is, man by nature is political, history differs for people by means of getting existence. The point that must be noted is that by informing his premises for the conclusion of History-making, Ibn Khaldun looked into different perspectives of *ijtima'* and *'asabiyyah* and their associations. Thus, it described the psychological, economic, political, geographical, anthropological, sociological, and religious aspects of history initiated by humans. These and some other related factors that Ibn Khaldun uncovered while exposing the History-making are not random but a very regular part of history. The exciting thing that comes into existence through this new science is the very regularity in the History-making. This methodology can be used as a tool to study any particular civilisation. For argument, Ibn Khaldun explained two forms of human organisation, namely *Badawa* (*rural society*) and *Hadara* (*urban society*) (Ibn Khaldūn, 1967).

According to Ibn Khaldun, *Badawa* life is based on strong *'asabiyyah* forming *ijtima'*. People live together for the necessity of life without thinking about any extension in the means of production. By the time the production of means becomes overly demanded, luxury and power dominate the society and it becomes *Hadara*, a human organisation lacking solidarity. It remains a form of assembly without any soul of *'asabiyyah* to complete that human organisation. Ibn Khaldun, by undertaking such an extraordinary task, reduced the once unknown phenomenon of History-making into material variables. It is perplexing to know that a non-physical structure can be explained through a mechanistic causal chain. This is what the Grand Design of History-making.

The Problem of History-making

However exciting the explanation of Ibn Khaldun may be, the individual concepts of *ijtima'* and *'asabiyyah* are ambiguous. He proposed that both *ijtima'* and *'asabiyyah* are *dharura* (necessity). However, if both are *dharura*, what is the cause of this? It does not apply to humans as they are by nature causing both of them simultaneously. It will be

a forceful decree on the free will whereby humans have no choice but to behave in certain ways. Adopting the view of nature, which is considered by Ibn Khaldun to be God-given, does not solve the problem at this junction. It poses two major objections: firstly, it will not explain how the God-given attributes function or how God himself became part of humans and; secondly, it will claim that because it is God-given, He knows what humans are going to do as He instilled in them the very attribute. This simply means that humans are bound by the very attribute God has given them, which result in control over every action they do, be it right or wrong. So, humans can blame God for their misdeeds by such an argument. It should be known that there is a major difference between fate and determinism. Fate has one unavoidable outcome, whereas determinism proclaims to contain micro details of events as part of massive chains of causes and effects (Bobzien, 2001; Broadie, 2001; Long & Sedley, 1987). Hence, it seems incoherent to state that by nature, humans must adopt *ijtima'* and *'asabiyyah*, forming the so-called lazy argument. The lazy argument claims that for any event, if it is unavoidable it will happen, otherwise the opposite will happen (Marko, 2011).

Ibn Khaldun seems to follow this line of premises because if humans have something, then it must be delivered, regardless of human concerns. Humans are not immaterial mechanical causes linked to infinity. On the contrary, they are able to form their own causes based on the effects of being an intellectual species. The difference lies between something that is caused by humans and something that has caused humans to act in a particular way. *Ijtima'* and *'asabiyyah* are caused by humans but there is no negation that something has caused humans to produce *ijtima'* and *'asabiyyah*. That something must be an identity existing in the world, for which Ibn Khaldun composed his two premises. That something can also be justified as a final cause, terminating all possibilities of further investigation on the causal chain.

There is no denial that cause and effect can be simultaneous, as philosophers have maintained this view. However, it is also impossible to label any of them, *ijtima'* or *'asabiyyah* as a cause of others. Based on Aristotle's definition of priority in the physical universe, there are only five ways it occurs: (a) what belongs to priority in time. For example, Plato is prior to Aristotle; (b) what belongs to the *being* whose sequence cannot be reversed. For example, Unity is prior to two: its existence does

not depend on two but two depends on one. A father exists than prior to the son but the opposite is not possible; (c) what belongs to priority in science and oratory. For example, a word is prior to a sentence; (d) what belongs to natural priority because of the love and respect of someone; and (e) Fifth, a prior cause is necessary for the existence. For example, to say "man is" is correct but not because it is the cause of the existence of the "man". Rather, it is "man's" existence that decides the correctness of that statement. Hence, it is a real cause, not the statement. Man's existence is prior to its declaration (Aristotle, 1984).

In order to ascribe priority either to *ijtima'* or *'asabiyyah*, one has to assume the precedence of one in time. However, following the methodology of Ibn Khaldun, it is impossible to claim the priority of one before the other in time, without which cause cannot produce its effect. This simply entails that neither *ijtima'* nor *'asabiyyah* can be the other's cause. Moreover, if it is assumed that *ijtima'* and *'asabiyyah* are simultaneous, being each other's cause and effect without priority in time than a major objection will come to Ibn Khaldun. It will return to the medieval debate of the world's pre-eternity that was solely based on the argument that cause and effect are simultaneous and the priority of cause lies in essence and rank, not in time. This premise ultimately proposed that the world is eternal and God is the creator or is prior to creation in terms of essence and rank but not in time — God and the world are eternal. This is against the scientific facts and even Al-Ghazzali attacked this concept in his masterpiece, *Tahafut al-Falasifah* (Ghazzali & Marmura, 2000; Moad, 2015).

Similarly, it is a self-evident problem that *ijtima'* and *'asabiyyah* are caused by each other. If the principle is taken for granted that two individual identities could be each other's cause and effect, and then by all means there will be no dispute in the claim of science that natural law is governed without any preceding cause, as Stephen Hawkings said:

> To ask what was happened before the universe began is like asking for a point on the earth at 91 degrees north latitude. We are on the inside of the great sphere of space and time, and while we can see to the boundaries, there is nothing beyond to see if only because there is nothing beyond. One should just say: the Universe is (Hawkings & Mlodinow, 2010).

This is not just an ordinary claim; it is in fact a direct denial of God from the natural world. The confusion Hawking's statement made — one that is common in the scientific community —is in the formulation of the question of creation. It does not make sense to convert a logical question into a smart question by saying "there is nothing beyond" because from the beginning, science has struggled to find the answer to the logical question of why the universe came into existence, not "the universe is". For that very question, every domain of the physical universe must be studied with great care, which is still ongoing but completely based on available data. Now, when it comes to the initial point of creation, with no data in hand to hypothesise something, it is propagated that one should simply believe "the universe is" without further asking by what means. It is a sheer contradiction to the methodology of science and also absurd to the human reason, which always seeks satisfaction to the fullest extent. What sort of analogy can be made when science demands no questioning because it has no data to provide an answer With the same line of argument, it would be an injustice to Ibn Khaldun if the logical absurdity of *ijtima'* and *'asabiyyah* is taken for granted in its current understanding. The aim of science must be to reduce the chain of causality to an ultimate cause, after which it cannot be reduced further. For the new science of the Grand Design of History-making, this article aims to reduce the logical problem to an ultimate and final cause — Time.

The Final Cause of the Grand Design

There are two different perspectives on how the cognitive parts of humans came to be as they are. The first perspective supports the idea that the human brain is a product of natural selection. It proposes that certain physical features and behaviours were acquired by organisms for survival; those that survived pass on these traits to their offspring. The traits of an organism produced by natural selection are called adaptation (Cosmides, 1989). The second perspective claims that the brain is the product of a very complex process and its different cognitive capacities are the outcome of the problem-solving methods that occurred during environmental evolution. This process of human cognition is called evolutionary psychology (Barkow, Cosmides, & Tooby, 1995). Additionally, adaptive behaviour and knowledge

occurred through social learning, which distinguishes human cognitive capacities and range (Cosmides, 1989). From such a long process of natural accretion of cognitive capacities, it must be asked where *ijtima'* and *'asabiyyah* would situate.

The article proposes a new approach to understand the process of History-making. Birth, growth, and death are the most beautiful truths of this universe. The explosion of the dwarf planet at Chandrasekhar limit (Chandrasekhar, 1931), the formation of new stars and the chain of populated species on earth are three phenomena that have no exceptions. Although distinct qualitatively, they are not unlinked. On the fundamental level, each step is connected by a single cause and identity, which is Time. *Ijtima'* and *'asabiyyah* are a part of cognitive qualities and, hence, must belong to one of the processes. As per the new proposal, whether or not one considers natural selection or evolutional psychology with social learning as a major part, one thing remains the same and omnipresent in all the processes and that is Time. Before attempting to expose how time can become the ultimate cause, it is important to first explain time itself.

Time directly corresponds to the relation between various existences in the universe. It provides set patterns of events for each existence. Celestial clocks are only a symbol, having no real contribution in those set patterns. On the contrary, it is time that is solely responsible for those activities. The companion of Alexander, Androsrhens noted that plants raise and lower their leaves with a set pattern for night and day. The same finding was reported by Jean-Jacques d'Ortous de Mairan, an 18th-century French philosopher, when he analysed leaf movements in a dark room. He noted that even in the dark room, the leaves rised as they would during the day and fall as they would during the night (Klarsfeld, 2013). Similarly, Swedish botanist, Carolus Linnaeus, reported that different species have a different set pattern and they do not deviate from that pattern based on a pre-determined time. He noted that different species opened their flowers at a different time of day and he could tell the time by observing the flowers in his own gardens; this is now known as circadian rhythm (Kyriacou, 2002). The same set pattern was noted in insects, mostly in terms of hormone production. Certain important hormones responsible for insect moulting, such as *prothoracicotropic*, *ecdysteroids*, and *juvenile*

hormones, are the foundation of the circadian system and central to the timekeeping of insects pattern (Saunders, 2002). The moment any white dwarf reaches 1.4 times the mass of the sun, it explodes and gives birth to a supernova, and that limit before explosion is called Chandrasekhar limit (Chandrasekhar, 1931). All the planets follow a set pattern of time, which none can deviate from. These planets are all different, ultimately resulting in different velocities and mass in space. There is a different span of life for different creatures living in the same environment, which is so-called the space-time continuum. The life span of a common house mouse is four years; it is 38 years for cats, 42 years for polar bears, 62 years for horses, and 86 years for Asian elephants. Similarly, the mean life span of the W boson particle is 10^{-25} seconds but for the moun and anti-moun particles, it is 2.2×10^{-6} seconds. In 1961, Robert Dicke, a physicist, proposed that our universe must be at least 10 billion years old, hence humans are at least that old as well. However, the universe cannot be older than 10 billion years or else, in the near future, the fuel of stars would have been used and one requires hot stars for the sustainment of life. Even this assumption is not as close to the real predicted value of 13.7 billion years as per the Big Bang theory but the point is that it is classified with the exact working of time (Hawkings & Mlodinow, 2010).

If it is true that such extraordinary phenomena are happening all around, then it must be asked what is making so many differences in the life span of different beings. When one mentions life span, it means that each and every event happening to various categories of species takes place but with different time, as each species live their respective full phase of events of life. Such bizarre nature that differentiates events and the experiences of time among individual species cannot be due to space-time, be it flat or curved. Since all are living according to the modern view in a space-time that is common to all, then how can the same space-time classify events of individual existence? Such phenomena are far from the prediction of space-time. In space-time, only space is playing the role; —it is flat where there is less mass and curved where there is high mass—but time is only following one path (vertical) inside the light cone (Halliday, 2014). If only space defined the world line of individual existence and Man have control over space, why does not he make uniformity within existences? The limit is set by nature and humans can play with self-made existence; for that, they

can set both space and time as per their will but that is not possible with natural individual existences, even for space.

Time can be understood from historical changes in the nature of space and history. There were numerous changes in history, including earth for example. According to the Milankovitch theory, there were ice and warm ages that repeated their pattern every 41,000 years (Weart, 2008). This huge pattern resulted in a drastic shift in the earth's ecology and ecosystem, replacing green places with dry lands and rivers with deserts. One example is the ongoing research on the Arabian Peninsula, which states that the area was supposedly green before. Apart from scientific proofs on this green Arabia, it is interesting to find a prophecy in the teachings of the Prophet Muhammad (PBUH) that Arabia will become green again (Al-Bukhari, 1997, Book-5, Hadees-2208). Similarly, from a historical point of view, civilisations came into existence at a certain point in time, developed, and met their end. Amazingly, for this to happen, there were changes in every domain of the earth and nature. Humans discovered things on earth that existed since the beginning but did not touch them as it seems these things were waiting for their true owner. Everything changed then, from how one sees the world to how one acts towards fellow human beings and nature. Such changes were not accidental but came into existence through a process of change in nature and society (René, 1996). All domains of human life and nature adjusted themselves to make it happen. One can find plenty of evidence in the Babylonian civilisation, Greek civilisation, Roman civilisation, Islamic civilisation, the British Empire and others. One can now ask the following questions: were all these changes initiated by space? Can such thinking be a rational argument to satisfy another rational being? If space has nothing in its own nature to initiate something without another cause, then what is there that is responsible for such strange modification everywhere in the universe? There is no other option except Time itself that is creating, changing, and relating new existences.

The active and dynamic role of Time can be sensed from one simple example, which is how time changes the whole space-time continuum for individual events. It is very simple to calculate the distance covered by a vehicle by increasing and decreasing its speed but both of them are related to space, which ultimately tells how much time it will take to reach a specific distance. Until now, time is considered as a paralysed

dimension of a space-time continuum. Now, when time is fixed, the speed will then change with distance accordingly. The point is that both speed and distance are part of space and by keeping time fixed, one is changing both the speed and distance, not just the speed. The unit of speed is meter per second and distance is taken in meters. Both are related to space travel and depend on time to make sense or else speed with only meter unit is nothing but distance. On the contrary, time's unit is second, hour, and the like. It does not depend on any other unit to make sense of its individuality and existence yet it shapes others. In the physical universe, each and every thing has got a certain limit that cannot be crossed off and these limits are set by the so-called immutable laws. For example, the motion of celestial objects is fixed, so any change is unthinkable and, hence, immutable. On the other hand, in order to leave the earth's gravity, there is a minimum escape velocity (Logsdon, 1998) set by nature due to gravity but that limit can be surpassed by deciding the time. Space vehicles can be launched by specifying the time. The problem is not the achievable velocity but the time itself that sets a limit in which nature will not allow crossing. So it is not possible to set a minimal time limit that cannot be achieved by the vehicle. This poses a problem on whether humans are struggling with space to control time or if time is controlling the space.

Each and every thing has got its destination fixed initially, but now it can be debated how it happened without delving into whether it happened or not because birth, growth, and death are the most beautiful truths of this universe. Death is not ascribed to space, speed or mass; it has only one cause, which is Time. One can ask whether quantum or classical physics can determine the precise time for an individual's death. The response is that science knows with certainty some of the particle's life expectancy (decay). This is the sole junction of the wrong premise because if science knows the decay rate or particles' life expectancy, then why is science unable to predict the life expectancy of humans, who are composed of the same particles? Why can science predict some of the natural occurrences without analysing the timeline of that occurrence? At this junction, the real contribution of time can be realised and also justified by all means (Siddiqui, 2018; 2019). Keeping the above role of time in the natural world, the process of Ibn Khaldun's science can now be described.

The Process of Final Cause

The process of a newborn baby can be described in terms of natural selection, evolutionary psychology, and social learning (Barkow et al., 1995; Cosmides & Tooby, 1997). A newborn baby in a forest will survive as per natural selection and he will adapt to the environment of that particular forest. In this situation, his consciousness about good and bad, the way he decides his food and living standard and, most importantly, his approach to learning the purpose of life and nature will dramatically differ with a newborn baby who grew up in a settled human society. The consciousness of both babies will differ in every aspect of psychology. The baby who grew up in the forest would most probably not have any kind of consciousness about *ijtima'* or *'asabiyyah*. It is possible that his consciousness about *ijtima'* and *'asabiyyah* differ in terms of their qualitative definitions, as described by Ibn Khaldun, such as kinship. In the absence of any second human, what type of kinship will these two newborn babies develop through their natural attributes? Each will simply become adaptive to the conscious mind of the environment and would even altogether dislike the idea of *'asabiyyah*. One can say Ibn Khaldun cannot be judged based on a restricted example.

A newborn baby is free of any social heritage. Without understanding, he first notices elders and their teachings. He tries to recognise people around him in an unconscious manner without knowing their real definition. Slowly, after recognising his own power of consciousness, he learns the meaning of language, people, right and wrong, customs, and culture, not through natural selection but through evolutionary psychology and social learning. During this process of transformation from an unconscious child to a conscious man, he will learn about the meaning of *ijtima'* and *'asabiyyah* and how they are linked, along with reason as to why humans must live together. He will even learn how people can be gathered in the name of different ideologies, not mere kinship or blood relation.

The above discussion reveals that, by nature, *ijtima'* and *'asabiyyah* are not a part of humans. On the contrary, they have been adopted through one of the natural methods described above, if one were to justify the new science of Ibn Khaldun on scientific terms and condition. They are a part of a process initiated by something else even before the individual became aware of his own consciousness. Now, whatever method one

employs to explain the process of *ijtima'* or *'asabiyyah*, there is one thing that remains constant from birth to death and that is the active role played by Time.

The first thing that influences a newborn baby is time; without knowing its real definition, he would already start to flow in time. Then he notices the environment around him has grown and even if he does not consider the age of people, he would see that they are somewhat bigger than him and he can use his senses to update his initial consciousness. In human society, he sees that people around him are bigger, older, and dying, and so from the beginning he starts to define his life in terms of growth. This feeling of growth and death strongly pushes him to acquire the necessary equipment (qualities) to survive. For that purpose, according to the environment of any specific place, he creates consciousness to find ways to grow as much as he can. No one wants to die simply for the sake of dying. His consciousness would become stronger through the emotional and rational relations he sees in society. This is how the consciousness of *ijtima'* and *'asabiyyah* became an indispensable part of one's own belief. These added parts of different attributes are not forced by nature. On the contrary, they are included in life by rationalisation, which is based on the continual growth of the individual.

When it comes to the social learning, the conscious man becomes firm that growth and death cannot be surpassed but the struggle to continue that growth is not easy. He would know the process in advance, that is, the most beautiful truths of nature but he would remain the same. Here, "sameness" refers to his "I"-ness; he was born as "I" without consciousness but time forces him to grow. After gaining consciousness, he is growing but still remains as "I". With time forcing him even harder to reach his final growth, he eventually dies when he achieves his final growth but his "I" still remains the same. The change was in his process to achieve that known truth (death) through another known truth (growth) and both of them are forced by the active time. As an active agent, time is shaping the space-time continuum and providing the consciousness of growth and death forces the cognitive dimensions of humans to adapt what is necessary for them.

From the third perspective, which assumes that the man has no time, what will then be his cognitive capacities? In the absence of time,

he will, firstly, not recognise the very truth of growth, which will also be a denial of death. Secondly, following that denial of growth and death, it is impossible to develop cognitive capacities. This type of situation will not create the concept of *ijtima'* or *'asabiyyah*. However, this does not mean that the man will not grow, as time has its own active role to play, whether or not humans recognise its active role in their timeline. Just as in animals, there will be growth without consciousness, following a set pattern of the timeline. Time distinguishes as per the consciousness of each species: those that are able to change their own domain of timeline will do so, whereas the rest will merely follow the set pattern.

As argued before, the aim of science must be to reduce causal narration until the final cause is found, which exists in the world but cannot be reduced further. The argued final cause and its effects are well known throughout the universe. It is not "saving the phenomena" concept (Duhem, 2015) but it does fulfil the requirement of explaining the process of History-making. No identity like that of aether and Dalton's atomic theory is proposed here, which somehow explained and predicted the phenomena but later on tend to be wrong (Braver, 2007; Cruse, 2003). Due to the vacuum in the methodology of science to reach the truth, many leading scholars have abandoned the single methodology, which has resulted in the emergence of dualism in the method of science to know the truth. Paul Feyerabend, a contemporary of Thomas Kuhn, included sacred scriptures in the pluralistic methodology (Mitroff & Feyerabend, 1976). Triggered by the uncommon claims of physics, Robert Oppenheimer, Erwin Schrodinger and others have also turned to Oriental doctrines for the solution of dilemmas brought out by the scientific theories (Capra, 2010; Schrödinger, 1983). This methodology even entered a metaphysical discussion, such as the concept of separability posited to every point of space-time (Maudlin, 2009). The aforementioned facts of science's own methodology posit constraints. As Feyerabend said, "the events, procedures, and results that constitute the science have no common structure" (Mitroff & Feyerabend, 1976).

Hence, both the physical and cognitive perspectives were seen with regard to the Grand Design of History-making in order to avoid the logical absurdity of *ijtima'* and *'asabiyyah*. It has been argued against the perspective of modern science that the proposed hypothesis of active and dynamic time is able to explain the causal narration to all the processes of History-making. It is strictly a reduction of causal chain

to its final point, after which there is nothing found that can explain the cause. Taking inspiration from the scientific methodology and science in general, the Grand Design of History-making by Ibn Khaldun came to its final restructuring without leaving any vacuum in further causal reduction whatsoever.

All of the above discussions are attempts to de-construct and argue against the modern isolation of any metaphysical ingredient in the construction of History-making. Ibn Khaldun reduced ambiguities by reducing causes to two inter-related phenomena. By resonating the idea of Ibn Khaldun, this article further simplified these two causes to a final cause, which is Time. However, based on the scientific approach of this article, the final cause, which is inherently Time, establishes the metaphysical assertion of Ibn Khaldun in History-making. The ontological being in time (Siddiqui, 2018; 2019) is a direct claim of God, who says, "I am the time and in My hands are the nights and the day" (Al-Bukhari, 1997).[3]

Conclusion

The comprehensive theory initiated by Ibn Khaldun, named the Grand Design of History-making, is unveiled and shows the necessary elements that were considered by Ibn Khaldun as a core of his philosophy. It is revealed that Ibn Khaldun has been studied from several different perspectives but they have not successfully conveyed his true idea. Once all these perspectives are amalgamated together, as per his methodology, it is seen that the de-linked arguments posed by Ibn Khaldun at different places describe the one single underlying Grand Design of history –*'umran* — whose causes have been reduced scientifically to two individual identities: *ijtima'* and *'asabiyyah*. Ibn Khaldun materialised the causes of an uncommon phenomenon that can be tested. However, there is a logical absurdity in his reductionist approach, which proposes combining *ijtima'* and *'asabiyyah*. This article reconstructed the theory

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[3] Bukhārī, Tafsīr, 45:1, Tawḥīd, p. 35; Muslim, Ṣaḥīḥ, Alfāẓ, pp. 2, 3; Dārimī, Adab, p. 169; Aḥmad b. Ḥanbal, Musnad, II, pp. 238, 272. However, it must be noted that this does not mean that time is equal to God, neither in the sense of essence nor in the sense of existence. Time may be taken as an attribute of God, among others.

of *'umran* by proposing a final cause that is able to avoid that absurdity on the basis of scientific and cognitive methodology. The aim of science must be to reduce causal chain to a final cause that cannot be reduced any further. Hence, the final cause of the Grand Design of History-making is existential Time, an active and dynamic identity possessed by each existent in this universe but cannot be explained experimentally. This Time is inherently metaphysical and can reconstruct Ibn Khaldun's Islamic Grand Design of History-making against the modern worldview of historical thought process.

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