Exploring Interactions between Awqāf and Digital Data

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Abstract:

The aim of the study is to investigate the interactions between the phenomena of awqāf and digital data through exploratory research that is conducted in this occasion on an unaddressed topic. The study sheds light on the structural phenomena that digital transformation imposes on life in all its aspects beyond the prevailing approach that deals with technique in terms of advantages and disadvantages. The study is inspired by the modeling of natural systems, an analytical framework to provide a basis for the interaction between awqāf and digital data in terms of the balance between efficiency and resilience, in addition to a prospective model based on the distinction between open and closed systems: reliance on knowledge generates open systems through a multitude of bifurcations, while reliance on technique alone creates closed systems that lead to self - destruction. Despite the huge media hype in social networks, digital data should not replace interactions in the natural ecosystems that awqāf have sustained over the centuries by fulfilling the rights of God and those of living creatures.

Keywords: Awqāf, Data, Digital Transformation, Efficiency and Resilience, Open and Closed Systems

مجلة الوقف

استكشاف التفاعلات بين الأوقاف والبيانات الرقمية

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تهدف الدراسة إلى استقصاء التفاعلات بين ظاهرتي الأوقاف والبيانات الرقمية من خلال المنهج الاستكشافي الذي يُجْرى في هذه المناسبة على موضوع لم يتم التصدي له. وتسلط الدراسة الضوء على الظواهر الهيكلية التي يفرضها التحوّل الرقمي على الحياة كلها بشتى جوانبها إلى ما وراء المنهج السائد الذي يتناول التقنية من حيث المزايا والعيوب. وتستلهم الدراسة من نمذجة النظم الطبيعية إطارًا تحليليًا لتأصيل التفاعل بين الأوقاف والبيانات الرقمية من حيث التوازن بين الكفاءة والقدرة على التصدي للصدمات، بالإضافة إلى نموذج استشرافي قائم على التمييز بين الأنظمة المفتوحة والمغلقة؛ فالاعتماد على المعرفة يولِّد نظمًا مفتوحة من خلال العديد من التشعبات، في حين أنَّ التعويل على التِّقْنية وحدها يكرِّس نظمًا مغلقة تفضي إلى التدمير الذاتي. على الرغم من الضجة الاعلامية الهائلة في شبكات التواصل الاجتماعي، يجب ألا تحل البيانات الرقمية محل التفاعلات في النظم البيئية الطبيعية التي ساهمت الأوقاف في استدامتها على مرّ القرون بأداء حقوق الله وحقوق الكائنات الحية.

الكلمات المفتاحية: الأوقاف، البيانات، التحول الرقمي، الكفاءة والقدرة على التصدي للصدمات، الأنظمة المفتوحة والمغلقة.

Introduction

The digital giants have conquered the world through the establishment of an unprecedented communication network that has penetrated the living space of billions of individuals. Containing gigantic volumes of information of all kinds, their databases are constantly enriched in a thousand ways. Through a provocative title "How to tame the tech titans?", the famous British business weekly newspaper The Economist[1] made a bitter observation: The domination of these new master thinkers is not suitable for competition or for consumers. In fact, the issue goes far beyond purely economic considerations. As Alfred Lotka[2] pointed out, when human develop technical organs, either they develop knowledge to know how to use it, or they develop knowledge without knowing how to use it, and then they destroy themselves. Knowledge varies according to how people and 'umrān basharī, or human groups, practice it and differs over time and space, constituting diverse cultures. As long as knowledge is practiced and enhanced, it is a factor of cultural and social renewal and diversification.

As expected, awqāf have not remained immune to this digital transformation for long. Hence the usefulness of this research - the first of its kind - , which is based on the following question: What are the interactions between the awqāf and digital data? This exploration will be carried out from the perspective of perpetuating the knowledge of the awqāf that have accumulated over the centuries in Muslim societies beyond the domestication of technique. This opens the way to questioning the structuring phenomena of the digital on the awqāf beyond the classical debate on the advantages and disadvantages of the technique and, consequently, the SWOT analysis.

After defining the phenomenon of awqāf and that of data in its general and specific meaning which concerns digital data, it will be a question of carrying out a review of the literature to specify the epistemological posture through which the subject will be approached. The presentation of a typology on the data poles that can serve the awqāf in OIC countries, allows to propose a framework of analysis to explore the interaction between awqāf and data through the balance between efficiency and resilience, and a prospective model on the interaction between awqāf and data under the prism of open and closed systems. The conclusion highlights the interest of the research which recalls its different stages and leads to a new questioning in a wider scientific and social context.

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(1) The Economist. How to tame the tech titans. The Economist, 18 January 2018, https://cutt.ly/WKsP57h

(2) Lotka, Alfred J. "The law of evolution as a maximal principle." Human Biology, vol. 17, no. 3, 1945, pp. 188 - 194.

1. Definition of the phenomenon of Awqāf and the notion of Data

Jurisprudential, legal, economic, and financial literature perceive waqf as a gift contract ('aqd tabaru'), an economic institution and a component of social finance respectively. However, waqf is a multi - dimensional phenomenon that cannot be reduced to its jurisprudential, legal, economic, or financial dimension alone. Or any other dimension, moral, cultural, anthropological, social, political, and geostrategic, however are important. A phenomenon is what we can feel through our senses to fully enjoy what life offers us. It cannot be reduced to a notion, i.e. to a representation or construction of the mind. In these conditions, it would be more rigorous to speak of awqāf rather than waqf. A phenomenon is that which manifests itself to the senses or to consciousness, both in the physical and in the psychic order, and which can become the object of knowledge.

In view of the progress of research in the history of the construction of knowledge, anthropology and mesology, it would be more appropriate to study the awqāf as living beings in their environment and to explore the various interactions that take place there. In this respect, the awqāf refers to ecosystems that are constituted by a particular environment as well as by the set of living beings that populate them. This approach is important in view of the analytical and prospective considerations concerning the predominantly structuring phenomena that risk emptying awqāf of its substance. From now on, the researcher in awqāf must give up imposing his fictions and accept to put himself in difficulty. Which would induce an ecology of scientific practices allowing a peaceful coexistence far from complacency: all that is not what matters is opinion[3]. It is because the practices diverge that we can think in terms of ecology, i.e. a situation that brings together beings with different needs, interests, and ways of being.

In its general sense, the notion of data refers to that which serves as a basis for reasoning, examination, or research[4]. In the specific sense, the notion of data is associated with the computer which can only process digital data, since it operates in binary mode. This means that, to be understood by the conventional computing system[5], data can only be represented by two values and these two values can only be expressed by the numbers 0 and 1. Data that

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(3) Stengers, Isabelle. Cosmopolitiques I. Paris: La Découverte, 2003.

(4) Bergson, Henri. L'évolution créatrice. Paris: Félix Alcan, 1907, p. 25.

(5) For example, whereas a classical computer manipulates information bits, which are either 0 or 1, a quantum computer uses qubits. These are generalizations of the classical bits, which are in a way a simultaneous superposition of these two states

are not digital in origin, must be transformed into digital data for the computer to understand and process them. In this respect, digital data can be defined as a set of facts such as numbers, letters, still images, videos, audio recordings, and emojis, that are widely used during daily conversations via social media, text messages, email, and instant chat platforms. A definition only makes sense if it fits into the problem of the study. Hence the need to explore the literature on the subject to specify the epistemological posture, i.e. the way in which the subject will be approached in this research.

2. Literature review and epistemological positioning

Despite extensive research, I have not found any scientific publication that addresses the interaction between awqāf and data, apart from a short article I published recently[6]. This lack of writing shows the interest of this research which started from nothing and gives it a special interest. If the subject is new, this is an unprecedented opportunity to approach it in an original way, far from any institutional agenda or market opportunity which are generating growing interest in awqāf.

The term interaction refers to a reciprocal action of two or more phenomena. Since technique gave the impression in the old continent of allowing everything[7], the sacred seemed useless, which gave rise to what is called 'nihilism'[8] In this tradition, subjecting human life in all its aspects to technology seems obvious. This is not the case for those who believe that technique, as the ultimate manifestation of the will to power, represents the greatest danger[9]. In just a few lines, we can see how two equally condemnable extremes arise: technobeatitude (technique can do anything, we must trust it) and technophobia (technique is the evil that distances us from the Sacred and from Nature). Hence the choice in the title of the term exploration which translates the action of setting out to discover something, without bias or prejudice.

In this spirit, the interaction between awqāf and data will be explored by proposing a framework of analysis based on the modeling of natural systems which requires a transdisciplinary aiming at exploring the complexity of the world, by going beyond disciplines on the one hand, but especially on the other

(6) Belabes, Abderrazak. "Exploring the Awqāf Data Hubs in Saudi Arabia." Islamic Finance News, vol. 19, no. 22, 1st June 2022, p. 20.

(7) Toynbee, Arnold. La religion vue par un historien. Paris: Gallimard, 1963, p. 215.

(8) Zola, Emile. Les romanciers naturalistes. Paris: Georges Charpentier Editeur, 1881, p. 161.

(9) Heidegger, Martin. "La question de la technique." Essais et conférences, Paris: Gallimard, 1958, pp. 9 - 48.

hand by going beyond disciplinary research itself, whether it is jurisprudence, contract law, economics, or finance. The modeling of natural systems feeds on different fields and strives to link data that appear incompatible with each other from a purely disciplinary angle.

From this perspective, the awqāf as a phenomenon cannot be reduced to a gift contract, an economic institution, a constituent of social or non - banking finance. Just like the phenomenon of digital data cannot be reduced to the slogan 'The New Oil in the 21st Century'. Unlike oil, digital data does not run out and even grows at an exponential rate. Confusing digital data with oil means not really thinking about its resources, not regulating them properly, and not developing them ambitiously. Reducing the wealth of tomorrow to digital data is also impoverishing humanity. Far from the Chief Data Officer's slogan 'Creating value from data', this research considers that there are things that are given away, things that are sold and things that should not be sold or given away but kept passing on. As Maurice Godelier shows in his famous book Aux origines des sociétés humaines (In the origins of human societies), it is the social relationships of a politico - religious nature that ultimately account for the formation, transformations, and durability of societies[10].

3. Data hubs that can serve awqāf in OIC countries

The digital activity of national economies has become a marker of their competitiveness and their ability to meet future technological challenges. In this respect, several indices have emerged to assess the digital competitiveness of nations. As evidenced by the World Digital Competitiveness Ranking of the International Institute for Management Development, the Digital Riser Report of the European Center for Digital Competitiveness, the Digital Economy and Society Index developed by the European Commission to assess the development of the digital economy and society in the European Union twenty - seven countries. The Organization of Islamic Cooperation (OIC) could draw inspiration from these initiatives to establish an indicator that measures the digital competitiveness of its 57 member states.

In view of an in - depth investigation through the internet and with actors who work in different institutions related to awqāf, I developed a typology that refers to eight data hubs in which awqāf can take advantage to improve the quality of life in OIC countries, as shown in Figure 2. This typology is set to be refined in the future as new data is collected from the actors concerned, requiring coordination and follow - up as far as possible.

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(10) Godelier, Maurice. Aux origines des sociétés humaines. Paris: Fayard, 2007.

Figure 2. Typology of the Awqaf Data Hubs in OIC countries
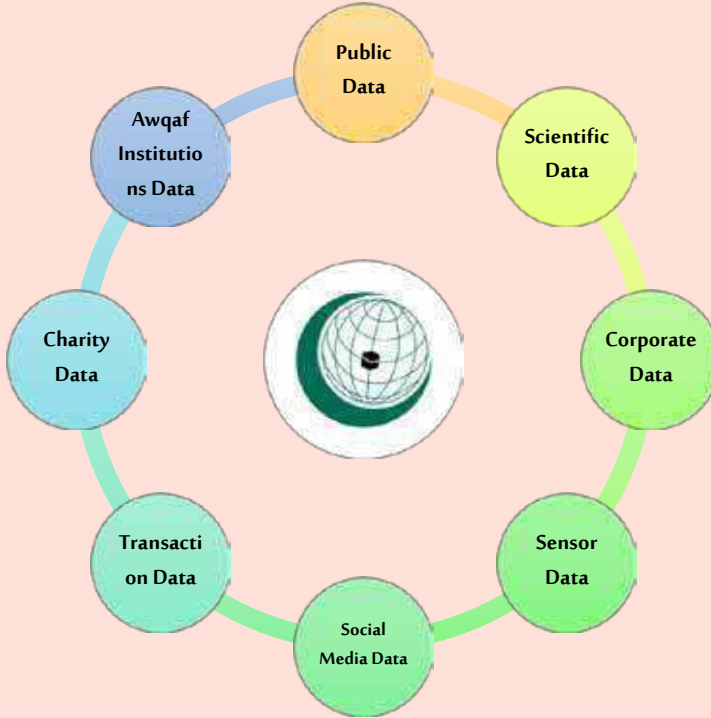
Source: Author's Own

The most important hubs that provide open awqāf data in OIC countries are the following:

1. Public data which includes all data which is or should be legally or voluntarily published or made available to the public, and which is produced or collected by a State, a local authority, or a parastatal organization, as part of their public service activities.
2. Data of the waqf institutions located in different regions of the country.
3. Data of charitable organizations that established awqāf to finance their respective activities.
4. Scientific data issued by universities, research centers, and institutes specialized in Islamic economics that have established research programs and scientific chairs in awqāf.

5. Data provided by corporate through consulting companies, law firms, Islamic banks, investment companies, and waqf companies.

6. Data provided by social media in which many people spend most of their time.

7. Transaction data, most notably the data on financing, investment, donations, operating expenses.

8. Sensor data obtained, for example, through GPS and Internet - related devices which enables to improve the quality of awqāf services faster and at a lower cost.

Given the complexity of the interaction between the awqāf and data phenomena, this typology should be strengthened. But what cannot be fully achieved should not be abandoned simply because it is unfinished. Far from being a mere fashion effect, the analysis of digital data relating to awqāf opens up new perspectives for the actors concerned, civil society, private and public. First, the analysis of digital data, if used wisely, offers the opportunity to better listen to the mawqūf 'alayhim (beneficiaries), to better understand their behavior, to refine the offers intended for them, and to create new services to improve the local quality of life. Then, the analysis of digital data offers the possibility of improving the quality of awqāf management. Moreover, digital data analysis can facilitate the evaluation of services, support decision making, save resources and avoid waste and extravagance. In addition, digital data analysis can be used to anticipate behaviors or needs, leading to the prediction and prevention of future trends, especially in crisis situations.

There is no doubt that digital data analytics will play a vital role in the awqāf of tomorrow, as it finds applications in areas as diverse as research, education, training, financing, investment, marketing, contract anomaly detection, money diversion, impact assessment, contributing to the quality of life beyond GDP through the development of indicators specific to awqāf activities.

Despite its promising potential, the analysis of digital data can give rise to concerns because of the cross - referencing of a large amount of data through very sophisticated algorithms whose actual use is difficult to anticipate. If personal data protection benefits from regulation, it is because it is not easy, if not impossible, to know what the algorithms do with the data, whether they are collected on the web or via our connected objects.

Faced with the non - transparency of algorithms fueled by the digital giants, a discipline has emerged to build numerical methods that extract the underlying

operating logic of algorithms. The transparency of algorithms implies the publication of the algorithm, the type of data - or even the data itself - on which it has been trained or the computer code in which it is implemented.

Despite this evolution, it should be noted that transparency about an algorithm can contribute to the search for its explicability, but does not strictly induce it. It is essential to distinguish between these two terms to construct effective and realistic regulations in light of the evolution of the complexity of algorithmic engineering practices.

4. Interaction between awqāf and data under the balance between efficiency and resilience

In a paper entitled "Commentary on Civilization and Progress", Salah Hussayen[11] indicated that if awqāf were among the masterpieces of civilization that Muslims accomplished over a few centuries to the extent that they fascinated historians, then this civilization was characterized by three basic characteristics, as follows:

1. The rooting of the culture of giving in Muslim societies, one of the most obvious forms of which is the awqāf.

2. Due to its establishment on the awqāf, which conferred a prominent role in the service of humans, this civilization acquired another distinguishing characteristic of being a human civilization.

3. These two distinctive traits have in turn produced two characteristics: 'renewal and continuity' and 'resistance to the factors of demolition and annihilation', qualified in the literature on the modeling of complex systems by efficiency and resilience.

Efficiency refers to the ability of a system to process appropriate volumes of material, energy, or data. It measures the ability of a natural system to function in a sufficiently active and organized manner to maintain its integrity over time. Resilience is the ability of a system to survive a disturbance and absorb shocks without collapsing. It measures a reserve of the natural system in the diversity of actions available to be used to meet the demands of new disturbances, and the acclimations useful for its survival without losing its soul that has animated its life for centuries.

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(11) Al - Hussayen, Salah. Al - A'māl al - Kāmilah li - Fadhīlat al - Shaikh Saleh Ibn Abdul Rahman al - Hussayen [Compilation of Works of al - Shaikh Saleh Ibn Abdul Rahman al - Hussayen]. Doha: Muntadah al - 'Alaqah al - 'Arabi al - Duwali, 2014, pp. 165 - 166.

Two variables relating to the structure of a natural system must be considered. On the one hand, diversity, i.e. the existence of different types of agents acting as nodes in the natural system. On the other hand, interconnectivity, i.e. the number of connections available between living beings. Diversity and the number of connections play a central role in efficiency and resilience, but in the opposite direction.

The notion of interconnectivity a was developed following the study of natural ecosystems[12]. It measures the degree of information exchange between the various elements of the same ecosystem by being between 0 and 1. When there is no exchange, a= 0. When all elements of the ecosystem are interconnected, a = 1.

Research on the modeling of natural systems, conducted for about forty years, has shown that the sustainability of a complex network is measurable and that its optimal balance is between efficiency and resilience[13]. The resilience of a natural system is improved by greater diversity and more connections because more alternative channels are available in case of problems or changes. Efficiency, on the other hand, increases through rationalization, which usually means a reduction in diversity and connectivity, as shown in the figure 3.

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(12) Ulanowicz, Robert E. "Increasing entropy, heat death or perpetual harmonies?" International Journal of Design & Nature and Ecodynamics, vol. 4, no. 2, 2009, pp. 83 - 96.

(13) Ulanowicz, Robert E. "Socio - Ecological Networks: A Lens that Focused Beyond Physics." Frontiers in Ecology and Evolution, vol. 9, 2021, pp. 1 - 8.

Figure 3. The sustainability of natural systems between efficiency and resilience
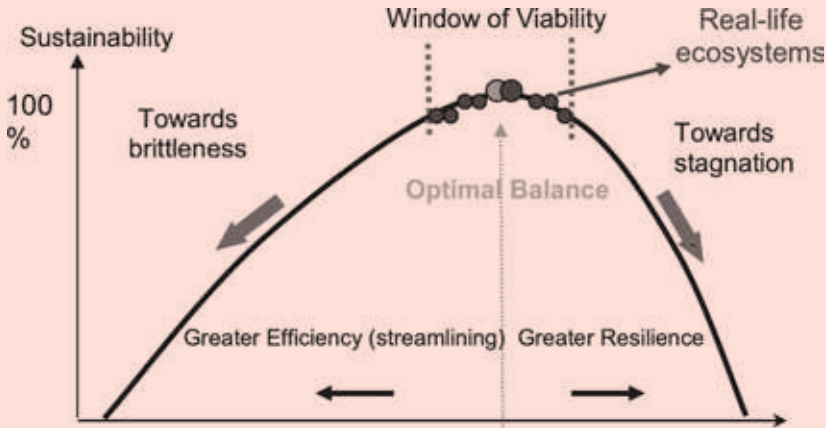
Source: Lietaer et al.[(14)]

A natural system is therefore only sustainable if there is neither too little nor too much diversity and interconnectivity. A system with too little diversity may be very efficient, but it also becomes increasingly fragile. On the other hand, if too much diversity is introduced, the system will stagnate due to lack of efficiency and directionality[(15)]. Furthermore, it has been found that in any sustainable ecosystem, resilience is almost twice as important as efficiency[(16)].

Currently, economic systems, including those claiming the injunctions (aḥkām), maxims (qawī'id), and purposes (maqāṣid) of the Sharī'ah, essentially refer to efficiency under various labels, largely neglecting resilience. Evaluating an initiative by this yardstick - does it promote diversity, and interconnectivity? — is a valuable compass. This is why companies that rely solely on efficiency will never be able to become sustainable in the long term. Collapse is inevitable when the efficiency of a complex system is pushed beyond its window of viability, ignoring the importance of resilience[(17)].

It is important to note regarding awqāf that the natural systems that have

(14) Lietaer, Bernard, Ulanowicz, Robert E., Goerner, Sally J., Mclaren, Nadia. "Is our monetary structure a systemic cause for financial instability? Evidence and remedies from nature." Journal of Futures Studies, vol. 14, no. 3, 2010, p. 93.

(15) Ulanowicz, Robert E., Goerner, Sally J., Lietaer, Bernard, Gomez, Rocio. "Quantifying sustainability: Resilience, efficiency, and the return of information theory." Ecological Complexity, vol. 6, 2009, pp. 27 - 36.

(16) Lietaer, Bernard and Kennedy, Margrit. Monnaies régionales: de nouvelles voies vers une prospérité durable. Paris: Editions Charles Léopold Mayer, 2008, p. 205

(17) Lietaer and Kennedy. Op. cit., p. 206.

survived over the past centuries have not chosen maximum efficiency, but an optimal balance between the two opposite poles of efficiency and resilience. This is because too much efficiency leads to fragility, and too much resilience leads to stagnation. This window of sustainability is not equidistant from efficiency and resilience. For a natural system to be sustainable, more resilience is needed than efficiency.

The uses of digital data in awqāf as living beings should not favor efficiency (the management of data as an asset generating substantial profits) at the expense of resilience (the diversity of awqāf and their interconnections in the local environment). This fashionable trend if it takes effect would be the main cause of their unsustainability. As a result, managing awqāf towards greater sustainability implies strengthening their resilience. Digital data must be used according to the need of each waqf as a living being in its local milieu (umwelt, fûdo 風土). A waqf as a living being is concerned with living and not calculating – he will only calculate accordingly[18].

The awqāf should not be subject to dataism, i.e. the emerging 'religion' that sees the world as a stream of data. If we rely on dataism, the collection and processing of digital data make it possible to understand the phenomenon of awqāf as an algorithm. For dataism, everything is linked to data. The value of everything is linked to its contribution to data processing. In this perspective, the analysis of data would make it possible to understand the past and the present, to predict the future, and to see the world of awqāf as it really is.

According to Yuval Noah Harari[19], dataism has three major goals, as follows:

1. The creation of a universal data processing system, which would link living beings together. This system would be able to understand the entire universe, and thus make the best decisions for living beings.

2. The advent of a universal data processing system would generate a universal theory allowing the analysis of any phenomenon, however complex.

3. The foundation of a universal data processing system and a universal theory can only be laid with the free transition of the data on the network to be efficiently exploited by the smart algorithms.

While the essence of awqāf rests on the dedication of various things in life 'Fī

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(18) I borrow this metaphor from the poet Yves Bonnefoy who writes that a poet's concern is to live and not to say - he will only say consequently; see: Bonnefoy, Yves. Rimbaud par lui - même. Paris: Le Seuil, 1960, p. 112.

(19) Harari, Yuval Noah. "Dataism Is Our New God." New Perspectives Quarterly, vol. 34, no. 2, 2017, pp. 36 - 43.

Sabīl Allāh' (for the sake of Allah), dataism would subjugate them to the law of short - term profit under the guise of value creation, a magical term in marketing communication that dissipates the grip of digital giants who profit from data servitude. This archaeology of the discourse on data science has the merit of showing that the challenges of digital data go far beyond the dimension of pure knowledge. In her book 'The Big Nine', Amy Webb[20] has shown that digital data in its current fashion trend is not intended to serve the interests of the broader public but those of the digital giants. The analysis of the phenomenon should not stop at this first level of explanation but ask what is behind to explore the breadth and depth of the structural changes involved beyond the traditional SWOT analysis and the underlying business model in terms of transparency and information for consumers. Hence the interest in examining thoroughly the reciprocal actions between awqāf and data through the prism of open and closed systems.

5. Interaction between awqāf and data through the prism of open and closed systems

A system is open when it interacts with its ecosystem or the world around it. An open system maintains exchanges with its environment that allow it to self - produce and self - organize. A closed system is a system that does not interact with its environment. A closed system is autonomous and self - organized.

In this respect, the main difference between an open system and a closed system is that in an open system, matter can be exchanged with the surroundings whereas, in a closed system, matter cannot be exchanged with the surroundings. A closed system is a set of relationships isolated from its environment.

The interest of the analysis in terms of open and closed systems is to examine what is predominantly structuring, on the one hand, beyond the purposive dichotomy in terms of advantages and disadvantages, or cure and poison[21]. According to this relative conciliatory approach, the problem is not technique but stupidity. Technique is both what makes people stupid and what makes it possible to fight stupidity. It is a question of thinking about technique and learning to think with it[22]. On the other hand, beyond the approach in terms of SWOT analysis which relies on the identification of strengths, weaknesses,

(20) Webb, Amy. The Big Nine: How the Tech Titans and Their Thinking Machines Could Warp Humanity. New York: PublicAffairs, 2019.
(21) Stiegler, Bernard. "Relational Ecology and the Digital Pharmakon." Culture Machine, vol. 13, 2012, pp. 1 - 19.
(22) Stiegler, Bernard. "Critique de la raison impure." Esprit, no. 3 - 4, 2017, pp. 118 - 129.

as well as opportunities and threats of the market. Regarding the debate on the neutrality of technique which remains seriously problematic for those who take the full measure of its complexity, the approach in terms of advantages and disadvantages, just like the one based on the SWOT analysis, is unproductive because it has the fault of sanitizing the debate and endorsing the course of things.

It should be noted that in strategic management three approaches are possible as follows:

1. Adapting to the market.

2. Influencing the market trajectory.

3. Create a new market through the process of creative destruction whereby the creation of new activities through innovation destroys activities based on old technologies.

In the original Schumpeterian interpretation, it is not destruction that brings creation, but innovation that engenders both. Thus, the victims of destruction are not necessarily the leaders of creation[23]. Digital circles prefer to use the term disruptive technology to refer to innovation that dramatically changes the way business operates. But the real worlds around us offer many more choices than mainstream contemporary economic theory claims. Artists have felt this multitude of possibilities beyond the now - sacrosanct market mechanism for a long time. In the film The Equalizer, Robert McCall gives Teri some advice: "Change your world. Anything you want to be".

Associating SWOT analysis with disruptive technology is an oxymoron, i.e. a combination of contradictory words. There was a misunderstanding of the notion of SWOT analysis, of disruptive technology, or both at the same time. This is not surprising in the age of social networks, where everyone claims to be an expert on everything, failing to distinguish between talking about something and knowing it in depth. The question of the neutrality of technology is a complex subject where an interdisciplinary approach is needed from the moment we change our view of the phenomenon, where we see it as an entanglement of systems.

When it comes to digital technology in its current fashion trend, it is important not to recommend that the awqāf adapt to the servitude of dataism. As Bernard Stiegler[24] notes: "When you adapt to technique, you become a slave to someone

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(23) Schumpeter, Joseph Aloys. Capitalism, Socialism and Democracy. London: Routledge, 1994, pp. 82 - 83.

(24) Stiegler, Bernard. La technique. Interview conducted at the philosophy faculty of the Jean Moulin Lyon 3 University, 2016, https://cutt.ly/zKQQYbn

who controls it and who does not adapt to it. But configures it in the direction of his interests". The technique can replace the knowledge acquired on the awqāf for more than fourteen centuries and which constitutes an invaluable treasure. The underlying problem is therefore not limited to personal data and mass surveillance, as the literature on the law which protects personal data as well as that on data ethics supports. It is a question of the orientation of human action, the dispossession of the autonomy of the faculty of judgment, and the freedom to decide on actions individually and collectively to enhance awqāf and improve the quality of life for all.

If the awqāf have generated, through the centuries and in the different regions of the Muslim world, open systems, digital technology by focusing on data is gradually generating closed systems. For Alfred North Whitehead[25], living beings must produce bifurcations which refer to what is singular, i.e. the improbable and the non - calculable. According to Ludwig Bertalanffy[26], a system that is entirely self - calculating will inevitably destroy itself. It has no new knowledge that can generate bifurcations, as shown in figure 4. Bifurcation is achieved by knowledge, not by calculation. This distinction between knowledge and calculation is essential in the sense that it invites us to take the full measure of the knowledge available on the awqāf acquired over the past centuries beyond the domestication of the technique.

Figure 4. Open natural system that generates bifurcations

Source: Stiegler[27]

(25) Whitehead, Alfred North. The concept of nature: Tarner lectures. Cambridge: Cambridge University Press, 2015, p. 30.

(26) Bertalanffy, Ludwig von. General System Theory. New York: George Braziller, 1968, p. 41.

(27) Stiegler, Bernard. Qu'appelle - t - on Panser ? Paris: Les Liens qui libèrent, 2018, p. 26.

There is no question of denying the importance of calculation or of approaching it in a negative way. But it is essential to realize that it has taken away something essential from humanity by structuring human relations. As Claude Lévi - Strauss[28] has rightly pointed out, "traditional societies are based on personal relationships, on concrete relations between individuals". Moreover, Marguerite Yourcenar[29] noted that in the life of modern man there is an ever - increasing primacy of "numbers". This testifies to an exciting labyrinth between science and technique[30], in the work of the essayist beyond the literature on the history of science and technique and that dedicated to what is commonly termed the philosophy of science, when it is a question of construction of knowledge. It is therefore appropriate to question calculation as the power to configure the phenomenon of awqāf and as a specific mode of reasoning deducing the impact of awqāf essentially from digital data as if they reflected the phenomenon in all its dimensions.

Conclusion

The exploration of the interaction between the phenomena of awqāf and data has made it possible to propose an analytical framework based on the notions of efficiency and resilience, and a prospective model based on the notions of open model and closed model. Derived from the modeling of natural systems, the two models meet and complement each other. If an ecosystem is built solely on efficiency, it can only be maintained by memorizing more data. But the more data it memorizes, the more complex it becomes and the more it tends to collapse. The reduction of intelligence to calculation is contradictory with the modeling of natural systems because it generates closed systems, i.e. self - destructive. Did not the great civilizations that followed one another over the centuries leave behind them deserts? Any civilization pushed to the extreme brings with it its nemesis, self - destruction will be its punishment.

In the light of these extremely valuable analytical and prospecting models, the use of digital data in the field of awqāf needs to be thoroughly explored in close cooperation with stakeholders comprising public, private and civil society actors. It is worth questioning whether algorithms can limit the free will of awqāf, which would empty them of their substance as open ecosystems. How, within the framework of this structuring evolution, can the awqāf

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(28) Lévi - Strauss, Claude. Anthropologie structurale. Paris: Plon, 1996, pp. 425 - 426.

(29) Yourcenar, Marguerite. Œuvres romanesques. Paris: Gallimard, Bibliothèque de la Pléiade, 1982, p. 817.

(30) Roquette, Gilles. "L'œuvre au Noir: un patient labyrinthe entre science et technologie." Marguerite Yourcenar entre littérature et science, edited by May Chehab and Rémy Poignault. Paris: Sirey, 2007, pp. 17 - 28.

continue to generate as open systems knowledge - based bifurcations beyond the calculability based on digital data?

It is up to the various awqāf actors to work towards this demystification of digital data through research, education, and training, but also to attempt a response to governance by numbers[31]. The 'data management in awqāf' course I designed as part of the executive master's in awqāf management and economics given at the Institute of Islamic Economics at King Abdulaziz University is an encouraging initiative that goes in the right direction, despite the difficulty of finding a science teaching resource up to what is intended. Faced with practicing learners most of whom have worked in the awqāf for many years, teaching the course requires considerable effort. Under these conditions, it is difficult to envisage telling anything just by copying and pasting on a PowerPoint embellished with beautiful words.

In a more ambitious perspective, all players should avoid delegating without limits to machines the task of regulating the relations between living beings and their relations with the worlds around them. Each actor must take a step back from the behavior dictated by a voluntary servitude to dataism called the new disruptive world order. Digital data must be integrated into local cultures in an informed manner, within a coherent and robust regulatory framework and with a focus on the sustainability of relationships built through awqāf over the centuries since the foundation of the Qubāʾ in Medina, the first waqf in Islam built on the arrival of the Prophet Muḥammad (Peace be upon him) in 622 centuries to ensure the rights of Allah and those of living beings.

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(31) Supiot, Alain. La Gouvernance par les nombres. Paris: Fayard, 2015.

References

- Al - Hussayen, Salah. Al - A'māl al - Kāmilah li - Fadhīlat al - Shaikh Saleh Ibn Abdul Rahman Hussayen [Compilation of Works of al - Shaikh Saleh Ibn Abdul Rahman Hussayen]. Doha: Muntadah al - 'Alaqah al - 'Arabi al - Duwali, 2014.

- Belabes, Abderrazak. "Exploring the Awqāf Data Hubs in Saudi Arabia." Islamic Finance News, vol. 19, no. 22, 1st June 2022, p. 20.

- Bergson, Henri. L'évolution créatrice. Paris: Félix Alcan, 1907.

- Bertalanffy, Ludwig von. General System Theory. New York: George Braziller, 1968.

- Bonnefoy, Yves. Rimbaud par lui - même. Paris: Le Seuil, 1960.

- Godelier, Maurice. Aux origines des sociétés humaines. Paris: Fayard, 2007.

- Harari, Yuval Noah. "Dataism Is Our New God." New Perspectives Quarterly, vol. 34, no. 2, 2017, pp. 36 - 43.

- Heidegger, Martin. "La question de la technique." Essais et conférences. Paris: Gallimard, 1958, pp. 9 - 48.

- Lévi - Strauss, Claude. Anthropologie structurale. Paris: Plon, 1996.

- Lietaer, Bernard, Ulanowicz, Robert E., Goerner, Sally J., McLaren, Nadia. "Is our monetary structure a systemic cause for financial instability? Evidence and remedies from nature." Journal of Futures Studies, vol. 14, no. 3, 2010, pp. 89 - 107.

- Lietaer, Bernard and Kennedy, Margrit. Monnaies régionales: de nouvelles voies vers une prospérité durable. Paris: Editions Charles Léopold Mayer, 2008.

- Lotka, Alfred J. "The law of evolution as a maximal principle." Human Biology, vol. 17, no. 3, 1945, pp. 167 - 194.

- Roquette, Gilles. "L'œuvre au Noir: un patient labyrinthe entre science et technologie." Marguerite Yourcenar entre littérature et science, edited by May Chehab and Rémy Poignault. Paris: Sirey, 2007, pp. 17 - 28.

- Schumpeter, Joseph Aloys. Capitalism, Socialism and Democracy. London: Routledge, 1994.

- Stengers, Isabelle. Cosmopolitiques I. Paris: La Découverte, 2003.

- Stiegler, Bernard. "Relational Ecology and the Digital Pharmakon." Culture Machine, vol. 13, 2012, pp. 1 - 19.

- Stiegler, Bernard. La technique. Interview conducted at the philosophy faculty of the Jean Moulin Lyon 3 University, 2016, https://cutt.ly/zKQQYbn

- Stiegler, Bernard. "Critique de la raison impure." Esprit, no. 3 - 4, 2017, pp. 118 - 129.

– Stiegler, Bernard. Qu'appelle-t-on Panser ? Paris: Les Liens qui libèrent, 2018.

– Supiot, Alain. La Gouvernance par les nombres. Paris: Fayard, 2015.

– The Economist. How to tame the tech titans. The Economist, 18 January 2018, https://cutt.ly/WKsP57h

– Toynbee, Arnold. La religion vue par un historien. Paris: Gallimard, 1963.

– Ulanowicz, Robert E. "Increasing entropy, heat death or perpetual harmonies?" International Journal of Design & Nature and Ecodynamics, vol. 4, no. 2, 2009, pp. 83-96.

– Ulanowicz, Robert E. "Socio- Ecological Networks: A Lens that Focused Beyond Physics." Frontiers in Ecology and Evolution, vol. 9, 2021, pp. 1 - 8.

– Ulanowicz, Robert E., Goerner, Sally J., Lietaer, Bernard, Gomez, Rocio. "Quantifying sustainability: Resilience, efficiency, and the return of information theory." Ecological Complexity, vol. 6, 2009, pp. 27 - 36.

– Webb, Amy. The Big Nine: How the Tech Titans and Their Thinking Machines Could Warp Humanity. New York: PublicAffairs, 2019.

– Whitehead, Alfred North. The concept of nature: Tarner lectures. Cambridge : Cambridge University Press, 2015.

– Yourcenar, Marguerite. Œuvres romanesques. Paris: Gallimard, Bibliothèque de la Pléiade, 1982.

– Zola, Emile. Les romanciers naturalistes. Paris: Georges Charpentier Editeur, 1881.