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The Role of Digital Humanities in the Democratization of Knowledge

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ABSTRACT

Arguably, the recognition that the printed word is no longer the main medium for knowledge production and distribution and the increasing importance of digital and web-based media rendered it necessary for contemporary academia to seek alternative outlets for knowledge production and dissemination. This paper builds on the interesting developments and advances in the publishing industry in humanities in particular and knowledge, in general, to argue that the digitalization/digitization of humanities set the stage for the emergence of alternative publishing media and techniques to the conventional print and subscription publishing. The paper argues that the newly emergent digital webbased technology empowered the democratization of knowledge within the relatively novel Open Access Publishing. Two major values and practices signal the democratic mood of digital humanities and digital publishing. Those values are access and participation. The author draws on his relative experience in editing and publishing within the electronic Open Access tradition to argue that digitalized and web-based dissemination of knowledge/humanities empowered the "subaltern" to speak and expressed the views and perspectives of postcolonial authors within/versus a largely Western hegemonic publishing industry.

"All humankind by nature desires to know."

Aristotle in the Metaphysics

1. INTRODUCTION

Digital humanities and digital publishing are relatively new fields of research. Historically, the first attempts to use the computing technology in the treatment and consideration of humanistic data date back to the 1940s when some humanists worked to digitize the classics of Thomas Aquinas (Burdick et al. 2004). Computers were then used in textual analysis to speed the activities of content analysis of a large amount of documents. In many respects, early digital humanists were simply doing their conventional activities of counting and sorting with the use of novel technologies. Obviously, the new technology of computing was simply regarded as a procedural tool to perform the same humanistic traditions but, this time, on a higher speed and with larger scales. Publishing also benefited from the technical repertoire of the new computing sciences. It was a case of doing the same job with new methods. The impact of digitalization was thus kept to its most minimum level. In the *digital humanities manifestos*, the UCLA Center for Digital Humanities stressed the fact that the first digital humanists were imitating and restyling their old visions and practices during the use of computing. Thus, there was no clear and well-defined rupture with the traditional humanities; a case of old water in new bottles. The UCLA manifestos state that:

Just as early codices mirrored oratorical practices, print initially mirrored the practices of high medieval manuscript culture, and film mirrored the techniques of theater, the digital first wave replicated the world of scholarly communications that print gradually codified over the course of five centuries: a world where textuality was primary. (UCLA Center for Digital Humanities, para 10)

So, the textual was a priority while the graphic and the visual were at best an effect and at worst completely wiped out. Yet during the 1970s and beyond, a new awareness of the new possibilities of the intersection of humanities and computing technologies was forged. Digital humanists and publishers seized the new potentialities and possibilities offered by the interface of the two disciplines to investigate and explore new issues and concerns. Katherine Hayles

(2012) and Andria Hunter (2015) talked about the emergence of a new or second wave in digital humanities characterized by an increasing emphasis on the visuals, sounds, graphics or what came to be known as "screen culture". This new phase, however, did not mean the end of traditional textual analysis, but it meant that more attention has been paid to the new kinds of research, methodologies, and scholarships offered by this new digital interface. Katherine Hayles went further to affirm that there was a process of assimilation between the first wave and the second wave of digital humanities with a more broadening of perspectives and foci. Hayles traces the first use of the term "digital humanities "at the end of the 1990s. Concerned scholars wanted to go beyond the then familiar label "humanities computing" and use a more appropriate and descriptive name which would "signal that the field had emerged ... into a genuinely intellectual endeavor with its own professional practices, rigorous standards, and exciting theoretical explorations" (p. 24). Arguably, we could identify two different, yet complementary, waves in the history of the development of Digital Humanities. UCLA (2009), Hayles (2012) and Hunter (2015) called them "First Wave" and "Second Wave". However, arguably, we suggest calling the first "digitalized or digitized phase" and the second "digital phase". There is a focal and methodological difference between digitalized humanities and digital humanities. We conceive the difference as being humanities used such new technology to develop audience and readership though electronically archiving its literature using mass-mediated techniques of dissemination and hence reach more and more audiences for the first and humanities as presented, modified and restyled by computing technologies for the second. To put it more bluntly, in the first "digitalized phase", digital media was mostly used as a medium or a procedural tool. Yet in the "digital phase", there emerged a new disciplinary filed where crucial technical and epistemological interface could be detected between the computing technology and the humanities. A kind of a hybrid discipline with new features and values has come to the fore.

Yet, the new possibilities and opportunities that digital humanities offered to humanists brought with them new values and principles which greatly, promoted, we believe, an unfolding process of democratization. Tow fundamental tenets of such democratization have been participation and access. This article argues that the very intrinsic characteristics of digital humanities- and for the concern of this work digital publishing- are constitutive of what it means to be democratic. An analytical descriptive approach is used to investigate the democratic practices of participation and access in digital open access publishing. A case study of one open access web-based academic endeavor is scrutinized to decipher the various processes of participatory, collaborative and open democratic tools in both creating knowledge and its dissemination. This digital site is of the academic journal the *International Journal of Humanities and Cultural Studies* (IJHCS). We start our analysis with a brief consideration of some key aspects of digital open access publishing. Then, we discuss the issues of democratization in digital humanities in general and digital publishing in particular with a minute focus on the key concepts of this paper: participation and access. In the last part, we underscore the mechanisms and practices within the *International Journal of Humanities and Cultural Studies* (IJHCS) which are regarded as key elements in promoting the democratization of academic knowledge and dissemination.

2. KEY CHARACTERISTICS OF DIGITAL OPEN ACCESS PUBLISHING

Open access publishing has been defined by the Budapest Open Access Initiative (2002) as follows:

There are many degrees and kinds of wider and easier access to this literature. By 'open access' to this literature, we mean its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited (2002).

This definition is built on the utopian assumption that knowledge should be freely distributed to the maximum of its consumers and to those who need it. The combination of the old tradition of scholars' and scientists' willingness to publish the results and insights of their academic research with the new web-based technology (internet) enhanced the emergence of the electronic open access publishing as a powerful means of democratic production and consumption of information. To reach such goal, open access publishing has set different ethical and managerial practices which ushered in a number of distinctive characteristics.

Open-access publishing has a number of distinctive characteristics. It is collaborative, socially engaged, global, and timely. Open access publishing is fundamentally team-based. It is the outcome of an ongoing collaboration between different agents from different technical and professional domains. It engages librarians, editors, publishers,

technologists, information computer and scientists. The process of conceptualizing and solving problems is thus the effect of cooperation between all included members.

Open-access publishing is socially engaged in that it opens and extends social and cultural relations between the academic institutions and their socio-economic and political environments. This type of publishing is by nature responsive to the needs of a diverse audience whether professional or amateur. It brings together academic and professional experts which would result in the creation and dissemination of new knowledge and new forms of civic engagement within the framework of community-based learning experiences.

A further aspect is the globalism of open access. Since open access publishing is a web-based, it is, just like all web-based outputs, a global phenomenon par excellence. Ideally, it has been designed to reach virtually every user on the globe who can get a minimum internet connection and technical knowledge. John Willinsky commented on the immediate and global availability of open access publications. He writes that the open access principle is "namely, a commitment to the value and quality of research carries with it a responsibility to extend the circulation of this work as far as possible, and ideally to all who are interested in it and all who might profit by it" (Willinsky, 5 [emphasis in original]). Large scale and global circulation of information are thus vital and even constitutive of the essence of open access publishing. This feature is closely related to the last aspect of this new tradition of publishing.

Timeliness and ubiquity of open access is its major idiosyncrasy. Within the new information age, the speed of changes and novelties is amazing. As the French philosopher Paul Virilio puts it in *The Information Bomb* (2000), the speed of information technology gives rise to a new kind of consciousness and politics called chronopolitics (a politics of time), which is taking the place of a territory-based politics. Thus the computer screen enables the user not only 'to receive data' but 'to view the horizon of globalization, the space of its accelerated virtualization' (Virilio, 16). Hence, digital publishing seems to bridge the temporal and spatial gap by being updated continuously. It invades global spaces and condenses the chronology of time.

3. DIGITAL OPEN ACCESS PUBLISHING AND THE POETICS OF DEMOCRACY

Open access publishing is a comparatively new mode of publication in the publishing industry. In general, digital academic publishing follows two major models of publishing: subscription access and open access. In the first model, the reader or his/her academic institution have to subscribe to the journal in order obtain the information while the second model offers free and open access to the published data. Historically speaking, the first open access journals appeared at the beginning of the 1990s. The number kept increasing because of the new possibilities and opportunities that open access seemed to offer. Arguably, open access publishing has been justified from a number of perspectives each of which highlighted one dimension and anticipated benefit of the field. Repository Manager Ulrich Herb classifies those justifications into five categories: scientific, financial, democratic, social and socio-political arguments (2010). From a scientific perspective, open access publishing facilitates scientific communication and encourages new scientific and academic discoveries. This occurs thanks to the elimination of technical and disciplinary barriers that used to abort large-scale scientific endeavors. Open access publishing, thus, accelerates the pace of scientific development and the scale of its dissemination. Gary Hall commented that:

"Open access provides officials and institutions with the hope of generating and promoting further research, education, and training opportunities, both nationally and internationally. It also facilitates organizations, institutions, and researchers in cooperating and collaborating quickly and cheaply across traditional boundaries and over large geographical distances, a process that simultaneously spreads the values of neoliberalism and the knowledge economy globally." (Hall 189).

Financially, the increasing decline of funds allocated to research activities due to economic crises or the increasing market-and profit-driven character publishing industry made electronic open access publishing a viable and, above all, a cheap alternative. Gary Hall states that "the open-access approach is presented as providing value for money for taxpayers by ensuring they do not have to pay twice for the same piece of research: once for academics to carry out the research; and then a second time to access it in the form of journal subscriptions or book cover prices." (Hall 8). So, financially, open access publishing is an evident choice that saves money for all the concerned; readers, researchers, research centers and governments. To quote Gary Hall again, "the open-access approach to academic publishing offers a means for governments to obtain the maximum return on their financial investments by making

the results of the research they fund "more widely available, more discoverable, more retrievable, and more useful" (Suber, 2018).

The democratic perspective of open access publishing supports the idea that knowledge and academic information has to be within the reach of almost everybody. Equally, the democratization process postulates that technical gap has to be bridged by making technology tenable to less developed countries and communities. Accordingly, participative democracy is not only about intellectual infrastructure (knowledge and information) but equally about technological infrastructure (availability of internet and computing hardware).

Justified from a socio-political and social perspective, open access publishing is presented as the potential empowerment of the powerless. The global unequal distribution of knowledge and technology results into an increasing information gap or what came to be called the digital divide. Here, open access holds ethical and moral potential. It is expected that open access publishing would lessen such digital divide and disparities between the haves and the have-nots, the developed and developing countries, the west and the rest. Open access is likely to create a global public sphere in which immediate access to knowledge scientific information is available to every user who is connected to the Internet. "This enables the breaking down of the barriers between the university and the rest of society, as well as between countries in the "developed" and "undeveloped" worlds; and helps to overcome both the "Westernization" of the research literature and what has been referred to as the "digital divide" through the creation of a far more decentralized and distributed research community" (Hall 190).

Given those pro-open access publishing justifications, the number of open access journals augmented excessively with the spread of web-based technology at the end of the 20thc. The below-stated figure traces the development of the number of open access journals as well as the number of published articles during the last decade of the 20thc and the first of the 21thc.

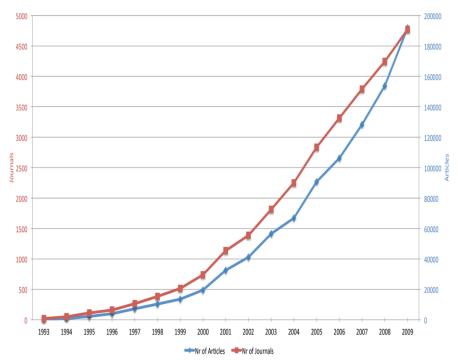


Figure 1: The Development of open access publishing.

As far as the arguments of this article are concerned, digital humanities in general and open access publishing, in particular, tend to proffer new potentialities for the entrenchment of democracy and democratization. The concept of democracy and that of democratization are multi-faceted concepts. They are two complex and contested concepts. They are contingent concepts since they can mean many things to different people within different cultural political and historical contexts. Notably, the democratic practice and meaning in ancient Greece are strikingly different from our contemporary understanding of the concept. Patrick Deneen (2008) captured the indeterminate and complex nature of the concept of democracy. He affirmed that democracy, and by analogy democratization, is "one of those words affording infinite plasticity and applications" (301). This makes it a malleable and multi-semiotic concept.

However, I confine my analysis of the concept of democratization of digital publishing to two major fundamental aspects of democratic tradition; those of "participation" and access". The two concepts are tightly related and interdependent. Thus, no participation is possible without access and no access is meaningful without participation. The concept of participation has been a fundamental one in political theory. Political practice without the effective participation of political agents is not tenable. Participation requires involvement in decision making and political debates. The internet, in general, offered new spaces for multilateral collaboration. Different academics and scholars all over the world could take part in the accumulation of global knowledge.

The concept of participative democracy, also called associative democracy, can be attained when a large number of informed citizens participate in the political and societal issue of their respective public spheres. Participatory democracy requires open access to the sources of information and open discourses on the major public issues so that concerned participants could take well-informed and viable decisions. The participative model of democracy is built on the premise that free open access to information and its flexible exchange result in effectively optimized debates. The participatory democratic theory postulates that political agents engage in political decision-making and bear the responsibilities of their choices. They are collectively responsible for the outcomes of their political choices. This version of democracy is in contrast with the classical liberal conception of democracy which confines the democratic game within a narrow political arena between responsible elites. So, from this perspective, democracy is elitist and understood as competition for political power. It is neither participatory nor collaborative. This conception precludes the possibilities of open access to information and participation is kept to its minimum. The protagonists of the participatory model of democracy demand more opportunities for participation that would lead to direct involvement and engagement (Walker 1966, Pateman 1970; Bachrach and Botwinick 1992).

Popular inclusion, involvement, and participation constitute the basis of the model of the new digital public sphere. Citizens/users are expected to be active participants in this new public sphere. The digital space represents all significant interests in real physical society through including diverse interests and contributors into the public discussion. To this end, open access is central. Open access publishing is seen by many theorists as a means of democratizing research and knowledge through making scientific academic information available to those who need it; those who are also unable to afford it due to the technological and digital divide.

Web-based technology and internet created some specific and distinctive technical aspects that bestow open access publishing with new possibilities and horizons. Intrinsically, the internet is inherently a democratic medium that seems to include more than exclude. It allows democracy to extend and expand in social and cultural life. It permits wider dissemination of information and interactive debates that would result in better educated and informed decision makers. The internet has no center; it decentralizes the conventional centers of power and opts for multilateral activities. Chris Barker argues that: "Internet is hailed as a new social space that is not subject to control by any one centre of power, rather the Net is held to be intrinsically open and democratic" (Italics in the original) (350).

The hypertext technique, that internet uses, allows readers or web users to place their interests at the center of investigation and thus avoid being manipulated by someone else's agenda. Traditionally, TV and books, for example, impose a hierarchical sequence of meanings and views upon their receivers, yet hypertext allows its users to create multiple pathways beyond the canonical authority of the text. This hypertextuality would result in more active and participatory readership.

However, the "technophiliac" discourses of open access publishing have been subject to criticism on the ground that the internet is projected as a utopian idealistic universe capable of doing offering infinite alternative and possibilities. Critics of web-based digital media believe that the internet is, in many respects, an extension or a part of its cultural and material conditions of production. Thus, it cannot be a part while being apart. It may be utopian or premature to postulate that the internet can, on its own, eradicate the well-established unequal relations of power.

The second criticism focuses on technical and logistic concerns. Consequently, there is no guarantee that the large sections of the global population have the necessary technological and technical infrastructure that ensures them easy and permanent access to the minimum services of internet, let alone academic and scientific knowledge (Hall, 2008). Moreover, issues of active participation and interactivity can be curtailed by the dominant broadcast model of the

internet. The dominant few-to-many mass media model is still hegemonic in electronic communication. Here, the users of the internet seem to be considerably passive consumers of electronic web-based output.

Even if access is open and free, this does not mean that the internet would automatically generate active participants. Those participants can be excluded from true collaborative participation. Gerhard Fröhlich suggests that the internet is equally as exclusive as inclusive. In his influential article "Optimum Discontinuation of Information as a Strategist of Scientific Communication" (1998), he stated and discussed the overall principles of scientific communication which seem to persist even within the framework of digital open access publishing. He enumerates them as follows:

- -Communicate informally just as much as absolutely necessary to keep corporations alive.
- -Publish only as much as indispensable to preserve one's claim for priority on findings and their originality.
- -Circulate informally or publish as little information of practical use as possible to prevent competitors from taking competitive advantage of this information. (541)

Accordingly, valuable information is an object of secrecy and will not be dimidiated in the narrow scientific community let alone on the internet. Fröhlich criticizes the optimistic claims that "that internet—based communication, *per se*, would have a leveling and democracy—boosting effect" (quoted in Herb 2010).

Yet, as argued in this article, despite those criticisms, which I believe, highlighted some gaps of the internet and open access online publishing, still, this new mode can revolutionize our relation to knowledge and its consumption. This can be possible given the unprecedented tools that digital space puts within the reach of its users. What follows is the case study of Open Journal System application and the ways it promotes ethical and political issues of democratization and valorization of scientific research.

4. THE CASE STUDY OF THE INTERNATIONAL JOURNAL OF HUMANITIES AND CULTURAL STUDIES

The *International Journal of Humanities and Cultural Studies* (IJHCS) is an electronic academic journal that was established in 2014 by a group of Tunisian and international academics from virtually all fields of the humanities and cultural studies. The journal uses the Open Journal System open source software developed by the Canadian Public Knowledge Project (PKP). The Public Knowledge Project defines itself as: "a multi-university initiative developing (free) open source software and conducting research to improve the quality and reach of scholarly publishing" (PKP). In many respect, the experiences of electronic publishing in the IJHCS, notably technical ones, are empowered by the Public Knowledge Project. This means that all journals using the Open Journal System in their publishing have virtually the same technical aspects and organizational procedures.

The journal is quarterly. It follows the blind peer-review process in the evaluation of the received articles. The IJHCS is an open-access academic journal. Being open access, readers can download articles for free without any subscription charges. The journal allows immediate open access to its content on the principle that making research freely available to the public supports a greater global exchange of knowledge and promotes the democratization of knowledge.

However, open access principle guarantees considerable degrees of engagement and involvement not only of readers but also authors, publishers and editors. The act of publishing becomes a collaborative and participatory one. The published articles are no longer the exclusive property of their authors. Readers are active participants in the act of deconstructing what they read and contribute their attitudes and perspectives. The new media critic Mark Poster evinced how the Internet and participatory web-based spaces enable "new forms of decentralized dialogue . . . new combinations of human machine assemblages, new individual and collective 'voices,' 'specters,' 'interactivities' which are the new building blocks of political formations and groupings" (210). So, this novel experience of reading and rewriting is democratic in that it allows almost every user to first get informed of what is being published and second participate in the ongoing debates. In the IJHCS, there are different reading tools that facilitate access and participation in the production and dissemination of academic knowledge. The below-stated photo shows that readers of the journal have the possibility of commenting on what they read and so become engaged in academic debates with other readers (professional and non-professional), with concerned authors, with editors and even with the publisher.



Figure 2: Reader Comments

The Open Journal System equips the journal with a number of reading tools the aim of which is to make the reading experience richer and more participatory. The reading tools allow the readers the following benefits:

- The possibility to comment on articles that they read.
- The use of different reading tools that are made possible with the use of digital techniques.
- Engagement in the participatory process of rewriting the article.
- Change of the nature of reading and the relationship between the text and its receiver.
- More active reading.
- A considerable collaboration between the reader, editor, author, and technical staff.
- More freedom in using and sharing what they read.

The subsequent photo states some of the possible activities that the reader can perform which browsing the journal.

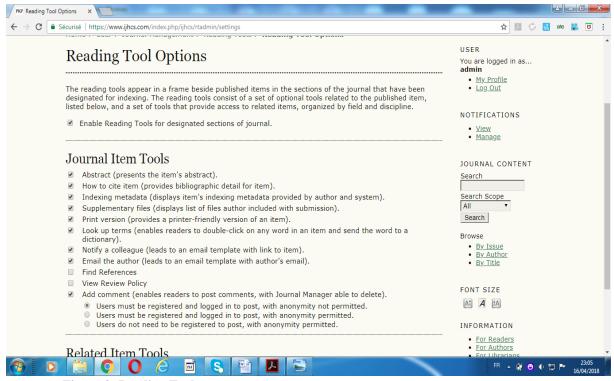


Figure 3: Reading Tools.

The reading tools include a set of optional tools related to the published article, listed below, and a set of tools that provide access to related items, organized by field and discipline. The Reading Tools "assist experienced and novice readers by providing a rich context of related materials from a wide variety of largely open-access sources. The tools use an author's keywords to automatically search a relevant open-access database for related materials which are presented to the reader in another window. Readers have a choice of tools and within each tool a choice of databases, along with access to information about the database". (IJHCS).

Within the theoretical framework of Reception Theory, audience is active in the process of reading/decoding the received messages (Hall, 1973, 1980). Active audiences decode the messages in negotiated ways according to the cultural context in which reading took place. Yet, in tune with the arguments of this article, active audiences cannot be so if access is denied. The participatory potential of the reader is empowered by being able to consult the information and knowledge that he/she needs. Reading tools, thus, empower the act of reading and democratizes the process of reading by maximizing readers' engagement and participation.

However, it is not just the reader who harvests the fruits of democracy and democratization in open-access publishing. The writer is also empowered by being able to spread the perspectives and results of his/her research to as many readers as possible. Open access publishing allows the author to regain the copyrights of his/her publication which permits him/her to reuse his/her material the way he/she likes. Unlike subscription access, open access does not confiscate the authors' ownership of their articles. Scientifically, open access publishing has a number of benefits for the author. It offers the author the following benefits:

- -More visibility of his/her research
- -Increased citation and usage of the published articles.
- -Greater impact factor
- -Greater public engagement with the published articles
- -Wider collaboration and potential interdisciplinary conversations.

The following photo states the visibility of authors in the Open Journal System by being alphabetically indexed.

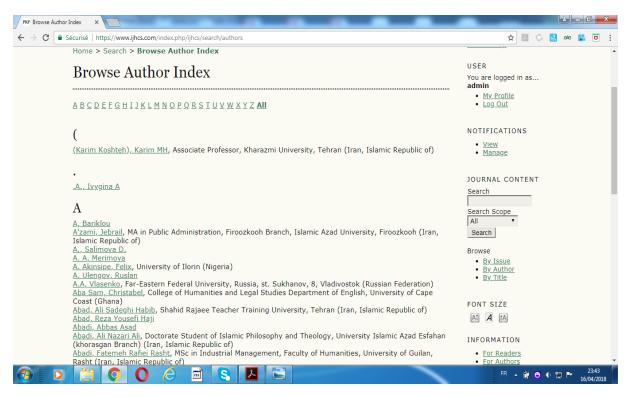


Figure 4: Authors' Index.

The authors' index increases the visibility of authors and their respective articles. It also introduces brief academic biographies of the authors. In my view, the Open Journal System and the open access publishing presented a unique opportunity to authors from different parts of the globe to share their experiences and their academic researches with other authors and with a large global readership. As seen the authors' index the majority of the authors that published their papers in the IJHCS belong to the developing world. Contributors came from a wide array of countries such as Tunisia, Nigeria, Chana, Algeria, Morocco, Zambia, Saudi Arabia, Oman, Jordan, Iran, Iraq, India, and China. This could be understood as the academic and scientific empowerment of already marginalized scholars and postcolonial academic voices. In fact, thanks to open access publishing, there seems to be a process of the decentralization of knowledge production and dissemination with an increasing portion being allocated to writers from less privileged and technologically developed countries. This resulted, I believe, in the gradual and steady eradication of traditional monopolies of the publication industry at a global scale. Thus, as Gary Hall suggested, the open access publishing "provides means of overcoming many of the limitations associated with the old, mass or "big" media, particularly the disempowering and homogenizing nature of the academic publishing industry" (my italics) (189-190). The conventional paper-based or subscription access publishing industry hampers authors and especially those coming from developing countries in their academic contributions. They represent them as homogenous blocks and disempower their academic skills. New relations of power are created within the digital open-access publication in which all concerned parts are interactive and have more or less equal participation in both the production of knowledge and its consumption. Thus, digital publishing is not just a new medium for the dissemination of knowledge, but it creates new practices and genres of knowledge based on the participatory, collaborative and democratic mechanism. Authors and readers share this new space with differential positions according to the extent of their contribution and participation.

5. CONCLUSION

This article argues that open access publishing is a novel technique in electronic academic publishing. It has been justified by a number of scientific, political, social and ethical considerations. Despite its being criticized by a number of critics for being too utopian and even pre-mature in its claims of the democratization of knowledge and scientific information, our experience with the open journal system and open access publishing considerably validates the arguments that open access publishing can be empowering. Its ultimate goals, to use Stevan Harnad have been to make

"The entire full-text refereed corpus online On every researcher's desktop, everywhere 24 hours a day All papers citation-interlinked Fully searchable, navigable, retrievable For free, for all, forever" (Stevan Harnad, in Hall 9.)

Despite some lacunas, this open and free access, we believe, will contribute to the politics of knowledge democratization and help reach the universal values of the so-called "global village".

ABOUT THE AUTHOR

Dr. Hassen Zriba is an assistant professor in British Cultural Studies. He is the Head of the English Department at ISEAH Gafsa. He is the editor-in-chief of the *International Journal of Humanities and Cultural Studies*, managing editor of the *Journal of Studies in Humanities* (published by the University of Gafsa). He is equally an editor and reviewer in a number of international academic journals (*Journal of Linguistics and Literature, Journal of Social Science for Policy Implications, Asian Journal of Social Sciences & Humanities, Khazar Journal of Humanities and Social Sciences.....). He published a number of articles on the issues of race relations, cultural studies, and media studies. Equally, He published two books on political discourse and ethnic virtual identity. Also, Dr. Hassen Zriba has edited a book entitled "I am what I" Say": Readings in Language and Identity (to be published soon) while, now, editing another on the concept of "erasure". He has organized a number of conferences and study days both in Tunisia and abroad.*

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