

# Peripheral scholarly journals: From locality to globality<sup>1</sup>

**Françoise Salager-Meyer**

Graduate School of Medicine, Universidad de Los Andes, Mérida (Venezuela)

francoise.sm@gmail.com

## Abstract

This critical literature review examines the problems faced by scholarly peripheral journals. Two categories of problems were identified. The first one refers to the deleterious effect the “publish-or-perish” mantra has on those journals, such as publication drain and the conduction of research that appeals to an international audience. The second category consists in problems that are related to the context in which these journals are published: lack of funds to run the journals, lack of competent editors and reviewers, problems related to publication ethics, endogamy, etc. The solution to overcome such problems is not to publish more and more journals in peripheral countries – which has been the tendency for the last ten years or so – but to upgrade local journals to global ones that should be published online in order to attract high-quality papers from both national and foreign authors. This would strengthen and enhance these journals visibility and international indexing. It would also increase the global influence of the research conducted in peripheral countries and bring global awareness to the specific scientific, social, cultural and economic features prevailing in such contexts.

**Key words:** periphery, center, scholarly publications, impact factor, peer review, editors.

## Resumen

### *Revistas científicas en países “periféricos”: De locales a globales*

Este artículo analiza los problemas que caracterizan a las revistas científicas publicadas en los países llamados “periféricos”. Ellos se pueden dividir en dos categorías. La primera corresponde a problemas que surgen a consecuencia de la “cultura del publicar o perecer”, tales como la “fuga” de artículos hacia revistas

de mayor prestigio y la investigación de temas de interés para un público internacional. La segunda categoría se refiere a problemas relacionados con el contexto en el cual las revistas “periféricas” están publicadas como, por ejemplo, la falta de recursos económicos, de editores y árbitros competentes, problemas de ética, la endogamia, etc. La solución para resolver dichos problemas no radica en aumentar el número de revistas – como ha sido la tendencia en los últimos diez años – sino en mejorar la calidad de las revistas “periféricas” con el fin de atraer artículos de calidad no sólo de la región donde se publican sino también de otras partes del mundo. Ello mejoraría la visibilidad y la indización de esas revistas. Se incrementaría así la influencia global de la investigación que se lleva a cabo en contextos periféricos y daría a conocer a nivel internacional las características científicas, sociales, culturales y económicas de los países de la “periferia”.

**Palabras clave:** países periféricos, países desarrollados, publicaciones científicas, factor de impacto, editores, arbitraje.

## 1. Introduction. Mainstream vs periphery journals

Science is a noble enterprise, and it is probably the most fantastic achievement in human history, wrote the Boston-based science journalist David Freedman (2010) in an intentionally inflammatory paper entitled “Lies, damned lies and medical science”<sup>2</sup>. In that enterprise – which includes the transfer and dissemination of scientific information – the international visibility of scholarly journals plays a fundamental role. The problem is that, as Jean Claude Guédon (2010) affirms, not all scientific journals are created equal: the publication system is hierarchical. As is the case in many other aspects of human activities, competition, here too, is the rule. Indeed, publications – the written product and final stage of research – are the most important means of regulating the current international system of scientific competition. They embody a great deal of power and structure the careers of the members of the scientific community almost all over the world and in almost all disciplines (Post, 2012). What is more, not only individuals, but also institutions and even countries attempt to maximize published output, with the result that we witness an almost unmanageable increase in the number of scientific journals. According to Boissier (2013), the volume of science, as evaluated by the number of publications, increases tenfold every fifty years, and the number of scientific journals doubles every thirteen years on average. This growth is driven in part by emerging countries, such as China, India, Brazil, South Korea, Russia, and Turkey.

We could divide scientific publications into two sets between which there is a definite gap, asserts Guédon (2010) in compelling fashion: the first one consists in “mainstream science” journals that originate in industrialized (also called “center”) countries, and the second is made up of publications emanating from developing countries and/or emerging research centers, also referred to in the literature as “peripheral” or “non-industrialized”.

Before explaining each set of scholarly publications, two definitions are in order. Firstly, throughout this paper, the expression “scientific publications” will refer to journals reporting knowledge across the full spectrum of scholarly disciplines, from the natural sciences to the arts and humanities. Secondly, because developing countries do not form a homogeneous group and for lack of an all-encompassing term, I will indistinctively refer in this paper to “developing”/“peripheral” countries in contrast with industrialized/mainstream/center ones (Wallerstein, 1991; Canagarajah, 2002). Under the umbrella expression “developing countries”, I then include middle-income countries, such as Iran, semi-peripheral countries such as Croatia (see Bennett, 2014), and the BRICKS group: Brazil, Russia, India, China, Korea and South Africa.

### 1.1. Mainstream/center journals

Mainstream science journals – also called “reputable”, “high-ranking” or “elite” publications – are supposed to be the epitome of excellence, publishing the best research only. They are indexed in international databases, such as the Social Science Index (SCI), the Social Science Citation Index (SSCI) or their equivalents. They are written in English, a language that has become the modern *lingua franca* in a world that is economically, scientifically and culturally dominated by Anglo-American countries. As Lillis and Curry (2013: 224) posit, English has a dominant status within scientific activity, “particularly in relation to the most valued product of science, publications in ‘high status’ journals which constitute a significant form of symbolic capital so essential to building competitive knowledge-based economy.”

The pressure to publish in this reputable literature of science – the so-called “P-or-P mantra” or “P-or-P culture” (Adler & Harzing, 2009) – has increased tremendously worldwide over the past thirty years or so, a period that coincides with the rapid increase in global investments in scientific research, especially in industrialized countries. That pressure has been widely

documented in university-based settings (Martínez, 2011; Harzing, 2013). It is only recently that it has been reported in the *professional* context of teaching hospitals where both research and teaching activities are being simultaneously conducted (Li, 2014).

In both the developed and the developing worlds, that “P-or-P culture” is being harshly criticized because it has led to the elaboration of a point or “merit pay” system that enables a holistic quantification of researchers’ output and determines their recruitment, contract renewal, promotion, tenure, etc (see Section 3.5). This prevalent worship of center-based publications is evident, for example, from the promotion and monetary compensation researchers receive (Englander & Uzuner-Smith, 2013; Johns, 2013; Lee & Lee, 2013; Alberts 2015) to the point that in some countries, such as China (Qiu, 2010; Shao & Shen, 2011), South Korea (Lee & Lee, 2013) and Pakistan (Fuyuno & Cyranoski, 2006), promotions and cash prizes (sometimes up to USD 17,000 per paper, depending on the journal impact factor) are awarded for publishing in SCI journals. As Berer (2012) very aptly puts it, this merit-pay system arises from neo-liberal politics where measurement equals value which equals money, thus reflecting a blind belief in the effectiveness of the market place.

This situation led the Nobel prize winner for medicine and Editor in Chief of *eLife*, Randy Schekman, to announce in 2014 that his laboratory would no longer submit papers to “luxury journals”, such as *Science*, *Nature*, and *Cell*, on the grounds that they were “damaging science” by awarding “inappropriate and distorting incentives” to publish in top-tier journals. “The incentives offered by top journals distort science, just as big bonuses distort banking... Science must break the tyranny of luxury journals,” emphatically declares Schekman (2013: 1). The Nobel Prize winner goes a step further by calling on all journal editors to stop promoting “the gimmick called impact factor”. This, he sustains, would result in research that will better serve science, humanity and society.

It should be mentioned that this *de facto* pressure that uses place of publication as a proxy for quality of science has recently led to a dramatic increase in academic fraud (Anderson et al., 2007; Schekman, 2013), paper retractions,<sup>3</sup> problems related with authorship vs. contributorship, conflict of interests, duplicate publications, and global ethical issues in scholarly publishing (the notorious FFP triad: fabrication, falsification and plagiarism; Smith, 2008). Needless to say, the spectacular cases of academic fraud that

have been discovered and later discussed in the public media have seriously damaged the trust placed in science. This is why it has been argued that governments should avoid crude cash-per-paper incentives to publish in elite journals and rather tailor rewards to promote *ethical* research.

## 1.2. Peripheral/“small” journals

Inspired by the fact that there is a worldwide substantial difference between the classic prestigious international well-established biomedical journals and a large group of “weaker” journals with very different needs and profiles, by the end of 2006 the World Association of Medical Editors (WAME) decided to create the “Small Journal Task Force” (Stegemann, 2013). Now widely used, the expression “small journals” has nothing to do with size or print run, but refers to those journals published in peripheral countries that are absent from the English-biased and center based international databases I mentioned in the previous Section (Stegemann, 2007; Salager-Meyer, 2008; Guédon, 2010; Habibzadeh, 2012). Lack of regularity and low paper quality are perhaps the main common denominator of these “small journals” (Mendoza, 2006; Lee & Lee, 2013; Stegemann, 2013; Sotelo-Cruz, 2014).

In developing countries where the national language is not English, journals are written in the researchers’ native language, whether it is Spanish, Portuguese, Chinese, Russian, Farsi, etc. However, in the search for greater visibility, and, as a consequence, for a wider international readership, some of these journals have switched to English (Gibbs, 1995, in Mexico; Roitman, 2004, in Russia; Habibzadeh, 2006, in Iran; Lee, 2013, in Korea; Piccoli & Procianny, 2007 and Vasconcelos, 2008, in Brazil; Habibzadeh, 2012, in the Middle East). Others have turned bilingual and provide the full text English translation of the papers they publish. Some of these bilingual peripheral journals are supported by international publishing companies, such as Springer in Russia (Roitman, 2004).

Because over 85% of the world’s population lives in the 153 countries categorized as low- and/or middle-income countries, we are probably safe to assume that there is a world of publishing that does not occur in English nor emanates from English-speaking countries. It should be borne in mind, though, that some countries lack the culture and tradition of supporting scientific research. Examples of these are some wealthy Arab countries that provide huge funds for education, but whose share in the production of knowledge is insignificant (Lillis & Curry, 2013, Table 10.1). Research does

not only require logistics, indeed; it also requires the culture that secures its existence, and this culture is minimal in quite a few peripheral countries (Salager-Meyer, 2008).

Peripheral journals have strong reasons to exist. However, Farrokh Habibzadeh (2004), *The Lancet* Middle East editor and former President of WAME, remarks that some people have little faith in journals published in the periphery. He gives the example of Jerome P. Kassirer, a former editor of *The New England Journal of Medicine*, who once asserted that “developing countries should receive guidance on nutrition and immunization before getting advice on medical editing”. As Habibzadeh argues, the truth of the matter is that physicians working in peripheral and/or semi-peripheral countries face health problems that their counterparts working in developed countries do not have to cope with (e.g. malaria and Chagas’ disease). This is then a strong argument for peripheral medical researchers to publish their somewhat different experiences in domestic journals. We should not forget, however, that a strong *raison d’être* of peripheral journals is also to provide a framework for career promotion of faculty members (Salager-Meyer, 2014).

It is true that peripheral journals do frequently suffer from a series of recurrent problems, which explains why they are generally frowned upon not only by researchers from the “center” but also by influential peripheral ones. The following section of this paper deals with the analysis of these problems and is followed (Section 3) by recommendations that should be adopted in order to increase the quality and, hence, the international visibility of peripheral journals (see Salager-Meyer, 2008, 2014; Habibzadeh, 2012).

Before getting to the heart of the matter, I would like to point out that the present paper is a critical literature review, the aim of which is to present a comprehensive picture of the topic under discussion. In this sense, Sections 2 and 3 are not based on original research data but are the product of my extensive reading on a wide array of topics related to academic publishing in general (more specifically to academic publishing in peripheral and semi-peripheral countries), and of my own experience 1) as a member of the Ethics Committee of the institution I work at, 2) as an editorial board member of two applied linguistics peripheral journals, and 3) as an authors’ editor for Spanish-speaking researchers from different disciplines who seek their research paper acceptance in English-medium journals.

## 2. Problems faced by peripheral journals

### 2.1. Deleterious effects of the “publish or perish culture”

#### 2.1.1. Publication drain

The first negative impact the P-or-P mantra has on peripheral journals refers to the outflow of domestic research. Indeed, those peripheral researchers who master the necessary skills to write a paper in English and/or those who have access to programs, such as AuthorAid, will prefer to submit their best papers (i.e. the most original, ground-breaking and/or scientifically robust ones) to English-written journals with a high impact factor.<sup>4</sup>

Li (2014) presents an interesting account of the strategies used by Chinese medical researchers to convey similar clinical messages for a domestic-targeted vs. an international readership. This kind of differentiation perpetuates a scenario of the best research much less likely to be published in domestic journals, and the bulk of domestically published papers not being read or cited by those who publish at the international level (Salager-Meyer, 2008). As Stegemann (2007: 161) asserts, making specific reference to Venezuelan journals: “We should be fighting against the publication drain of regional articles into elite (English-written) journals and for the appropriate recognition of scientific activity in the region”.

This outflow of papers has become very common, especially in the hard, natural and life sciences, with the trend increasing year by year. As Caramelli and Rocha e Silva (2010: 38) report: “to Brazilian editors, it is clear that English-speaking editors and researchers – and, unfortunately, many authors – are blind to Brazilian publications and do not cite or even read them”.

This, no doubt, hinders the development of domestic journals and is damaging for peripheral scholarship because it is difficult for domestic journals to attract stellar research (Shao & Shen, 2011). For example, Habibzadeh (2012) reports that few English-medium medical journals published in the Middle East receive submissions from abroad. This is the case too for the official journal of the Croatian Nurses Association, remark Hodorovic and Hodorovic (2014), who further argue that the presence of foreign authors in Croatian journals could raise publication standards and lead to better research performance of health professionals.

### **2.1.2. Research topics that appeal to an international audience**

This situation not only creates a shortage of high quality articles for most local or regional peripheral journals, but also leads peripheral researchers to use the scarce resources they have to deal with issues that may be of little or no relevance to their community (i.e. their social context), institution or country. The focus on external recognition thus undermines locally important research, shifts the emphasis of research to topics that appeal to an international audience, and discourages governments from focusing on locally relevant policy and funding. We can hence readily assert that the prevailing research assessment system with its obsession with metrics (rankings of all sorts, journal impact factors, h-index, etc.) has a devastating impact on peripheral scholarship and editing.

## **2.2. Contextual/intrinsic factors**

For Habibzadeh (2006), contextual factors are more “fundamental” than those that stem from the worldwide pressure to publish in mainstream journals (see 1.1. above) and are shared by most “small journals”, regardless of their country of origin. It should be kept in mind, though, that not all journals are equally affected. For example, those published in the BRICKS countries (see Introduction) will be less affected than those published in, let’s say, Bangladesh or Nigeria.

### **2.2.1. Shortage of financial resources and poor infrastructure**

Poor infrastructure and lack of funding are recurrent concerns of small journal editors. Lack of funding and strained circumstances ended the publication of numerous journals in Bosnia Herzegovina (Masic, 2011), Bangladesh (Ahmed, 2012), Venezuela (Stegemann, 2007), Mexico (Gibbs, 1995), and Africa (Youdeowei & Mukanyange, 1995). Quite frequently, these journals disappear for a few years and resume publications when finances are available again. What is more, as I explain below, poor infrastructure and financial constraints make it hard for editors to develop desktop publishing skills, improve the production and content of peripheral journals, and maintain regular publication in-print or online.

Mainstream scholarly journals are almost always published by juggernaut commercial publishing houses that, as Shashok (2014) emphatically asserts, are powered more by profit than by the real needs of researchers and the

general public. By contrast, scholarly journals in Eastern Europe (Lysenko, 2007), Bangladesh (Ahmed, 2012), the Middle East (Habibzadeh, 2012) and Latin America (Stegemann, 2007; Vasconcelos, 2008) are affiliated to and published by research or educational organizations. They are thus expected to be viable as long as there is institutional support.

The publishing industry in the periphery is also sometimes supported by scholarly societies and scientific associations that are frequently required to publish at least one journal for official registration. This is the case of some scholarly journals in Venezuela (Stegemann, 2007), Brazil (Piccoli & Procianoy, 2007; Caramelli & Rocha e Silva, 2010), the Middle East (Habibzadeh, 2012) and Korea (Suh et al., 2012). These journals tend to be of a higher quality because their editors are not – or, at least, less – under pressure to accept and publish their fellow researchers' papers. As a consequence, they are in a better position to select the best papers. Many of these journals, remarks Habibzadeh (2012), also receive more funds. An example is *Archives of Iranian Medicine*, a journal affiliated with the Iranian Academy of Medical Sciences that has the highest impact factor of all Middle Eastern medical journals.

### **2.2.2. Authors' pool**

Another problem facing small journals is the difficulty they have in obtaining suitable articles and/or original manuscripts for publication because their author pool is limited, and because, as I explained before, influential peripheral researchers – who generally master English academic skills – prefer to publish their best results in English-medium journals. They moreover generally feel that it is relatively easy to publish in local or national journals. As Li (2014) reports, the perception of this low level of challenge is in line with Chinese doctors' unfavorable comments about domestic journals which they see as lower standard and reporting work of a limited scope, not rigorous enough, thus of a suspicious credibility. Low credibility leads to low submission of high quality papers. This explains why Mexican researchers are frequently reluctant to publish in Mexican journals irrespective of the journal's quality and number of readers. According to Sotelo-Cruz (2014), biomedical researchers in Mexico publish less than 10% of their output in Mexican journals.

### 2.2.3. Article quality

Authors who publish in peripheral local or national journals may have limited skills in conducting research and/or writing up research reports. There is widespread acknowledgement indeed that, in developing countries, there is insufficient emphasis on developing both L1 and L2 (English) written communication skills. This is an “unfortunate inherent characteristic among Middle Eastern societies”, asserts Habibzadeh (2006: 99). This remark is formally echoed by Vasconcelos (2008) in Brazil, Englander and Uzuner Smith in Mexico (2013), Ahmed (2012) in Bangladesh, Murugesan in Rwanda (2012), and informally by many of my Latin American colleagues. Regarding the teaching of English academic writing/research publication skills in peripheral countries, the problem is even more acute because of a lack of qualified EAP specialists and because EAP as a discipline is a rather recent phenomenon (see Salager-Meyer et al., 2015).

In reference to Korean and Iranian scientific journals, Suh et al. (2012) and Habibzadeh (2012) point out that the growing number of newly launched journals is not accompanied by a growth in high-quality articles. Sotelo-Cruz (2014), for his part, reports that papers written by Mexican researchers are poorly written, often with deficiencies in format, content, illustrations, references and originality, and that authors are frequently reluctant to comply with feedback provided by referees to correct article deficiencies. Godlee and Jefferson (2003) moreover remark that many authors will only submit a paper to a smaller journal if the paper has been rejected by a prestigious journal. This is why Lee and Lee (2013: 226) refer to domestic Korean journals as the “graveyard” for papers rejected by international (English-written) journals.

As Gasparyan (2012: 10), editor of *European Science Editing*, points out:

Less popular journals, particularly those from small or disadvantaged scientific communities, usually suffer from submission of poorly written manuscripts which may have been rejected by higher-ranking journals or focus on a narrow scope of interest.

Poor manuscripts are thus published in low-status journals that then fail to attract better quality manuscripts and are, as a consequence, not read, not cited, not indexed. Pérez Tamayo (2006) compares this phenomenon to the Matthew effect: articles in Mexican journals are not cited frequently even when they are of good quality. A vicious circle I will refer to again further on.

#### 2.2.4. Peer reviewers

Opinions on the peer review process (whether it be open, closed, pre- or post-publication) diverge. Some posit that peer review is “something of a lottery, prone to bias and abuse, and hopeless at spotting error and fraud” (Smith, 2009: 8), an opinion shared by quite a few other scholars (Ahmed & Gasparyan, 2013). Others sustain that, although imperfect and not evidence-based, in most cases it does serve as a guarantor of paper quality (Rushby, 2010).

Whatever the standpoint adopted regarding this thorny issue, the frequent scarcity of skilled, committed and unbiased peer reviewers is another hurdle for peripheral journals (Ahmed, 2012; Sotelo-Cruz, 2014). Indeed, in small scientific communities, journal editors have great difficulties finding suitable reviewers, especially international ones. What is more, the pool of reviewers is frequently the same as that of researchers/authors, and there may be only a few accessible experts in a sub-specialized field. This is why peripheral journals are sometimes accused of being endogamic.

Quite frequently too, national reviewers do not return the articles entrusted to them for review in time. Hence, the review process tends to be slow (Sotelo-Cruz, 2014). Occasionally peer reviewers are biased and even antagonistic and write acerbic comments. This, of course, does not encourage researchers to submit their papers to domestic journals.

All in all, the peer review system used by less prestigious journals is far less selective and rigorous than that used by journals with higher rejection rates (Marušić et al., 2002; Habibzadeh, 2012)<sup>5</sup>. Meneghini and Packer (2007) report that in Brazil, where about 60% of the scientific output is published in Portuguese, the quality of the English- and Portuguese-medium articles differs significantly, most of the Portuguese-medium articles having little or no peer review.

“Poor quality writing, unavailability of skilled referees and low effectiveness of peer review are among the major threats to scholarly publishing in Bangladesh”, affirms Ahmed (2012: 42). This, too, has been a major problem for decades in Bosnia and Herzegovina, asserts Masic (2011), where local reviewers, as well as editors from this small scientific community, have always faced the dilemma of being objective, or “harming their friends” and “making enemies” (Masic, 2011: 108). In small countries and/or scientific communities, indeed, local authors and reviewers easily recognize each other even when their identity is hidden.

### 2.2.5. Editors

Peripheral journal editors face many problems as well, some common to editors worldwide, some more specific to small journal editors.

But first of all, what is a “good editor”? A good editor must be an expert in his/her discipline and a good author with a good publication record. S/he must also be well versed in ethical issues and have experience in writing different types of articles and in communicating with authors and reviewers (Abdollahi, 2012).

The problem is that in peripheral countries, the activity is not recognized as a profession: there are no professional career development opportunities and no prior training for academic journal editors. As Stegemann (2007), Masic (2011), González (2011), Uysal and Coker (2011), Habizadeh (2012) and Sotelo-Cruz (2014) report, most domestic journal editors are subject specialist academics/renowned professionals, not professional science editors. “Science editing as a profession cannot flourish without a career path, continuous education and financial incentives”, asserts Ahmed (2012: 42).

Most editors of peripheral journals have turned to editing as a matter of personal choice, on invitation, or because they have been assigned editorial responsibilities by the institutes they work at. They have frequently acquired their knowledge and skills through trial and error and learnt their trade “on the job” among the many stresses and strains the journals are subjected to (Habibzadeh, 2006). Moreover, most of them work pro bono because the task of editing a journal is included in their regular heavy teaching load and research activities. Journal editing, then, occupies a tiny space in their working schedule. All this explains why unfamiliarity with editorial conventions represents the main impediment peripheral editors encounter in their job.

What is more, lack of financial resources impedes small journal editors to connect their own journals with international libraries, databases or indexing systems. In spite of the fact that some international editing organizations, such as the European Association of Science Editors, offer training and education, few editors ever join international professional associations or attend international meetings or training courses related to editorial work because official and/or academic support is rare (Stegemann, 2007; Sotelo-Cruz, 2014).

I should finally mention that it is not infrequent for some peripheral journal editors to receive external influences and be subject to pressure to accept manuscripts by the institution that owns the journal and appoints the editor.

### **2.2.6. International guidelines**

Because small journal editors are unfamiliar with editorial conventions, most peripheral journals do not generally adhere to international guidelines regarding authorship policies and conflict of interest statements. As Stegemann (2007) reports, in Venezuela and other Latin American countries (with some exceptions in Brazil, Mexico, and Argentina, the “big three” in Latin America), the main medical journals do not adhere to and rarely update international guidelines, such as those of the International Committee of Medical Journal Editors (ICMJE). This view is shared by Jaykaran et al. (2011) about Indian medical journals. As expressed in Section 1.1, though, the non-adherence to international guidelines, i.e. non-ethical publishing, is far from being a problem of peripheral journals only.

### **2.2.7. Indexation**

The various problems I mentioned above affect authors’ attitude towards submission and prevent peripheral journals from entering international bibliographic databases, the major challenge of the scientific periphery. Their circulation is very limited, and they are often not available beyond their country or region of origin. This is why González (2011) refers to Costa Rican scientific journals as “orphan” journals. All this entails a lack of regional or international indexation, low citation frequency, low impact factor, lack of visibility, etc.

The lack of international indexation affects domestic journals in China (Wan, 2005), in Bangladesh (Ahmed et al., 1999) where 86% of the journals are not indexed, in Slovenia (Turk, 2011), in Iran (Habibzadeh, 2006) and in the Middle East in general (Habibzadeh, 2012) where only a few journals fulfill the minimum requirements for being covered by major indexing services. This is why publishing in peripheral journals not included in one of the international databases is seen as having little value, particularly in the sciences.

To summarize, I will quote Marušić et al. (2006: 151) who cogently qualify the problems peripheral journals are confronted with as a “vicious circle of

inadequacy”. By this, these authors mean that small journals have an unfavorable starting position “because of the small number of manuscripts they receive, their insufficient pool of reviewers, the low quality of their articles, and their poor international visibility, all of which reduces the pool of potential authors and closes that vicious circle of inadequacy”.

In spite of the situation described above, many peripheral scholars strongly believe that journals in developing countries must continue to be published. The question is how to improve these journals quality so that they can contribute to the enhancement of universal knowledge and act as partners in the international research community.

### 3. How can the vicious circle of inadequacy be broken?

#### 3.1. Quality: The key word

The key word here is *quality* at all levels (for an excellent discussion of the difference between “excellence” and “quality”, see Guédon, 2013). As Habibzadeh (2012) and Sotelo-Cruz (2014) strongly posit, one way to tackle the problems mentioned in the previous section is to spend the limited national publishing budgets on a few journals only. For example, many low quality journals in the Latin American or Middle Eastern regions could be merged to make new quality regional journals with better infrastructures. Some journals could then be amalgamated by region or specialty to improve manuscript flow and share resources. Only then could papers be selected on the basis of their originality and scientific relevance either at the local, national, regional, and/or international level. These high quality papers should have their titles, extended abstracts, and key words translated into English, and the very best papers – selected on the basis of their scholarly significance – could be *entirely* translated into English.

A recently taken translation initiative goes in that direction. I am referring to the Michael Heim translation prize that was awarded for the first time in 2014 and will be awarded annually thereafter for the best collegial translation of a journal article from an East European language into English. The criteria of selection are the scholarly significance of the research, the quality of the translation, and the contribution the translation will make to disciplinary dialogue across linguistic communities.

### 3.2. Journal editors' training

But not only should the articles published be of high quality. Editors, editorial board members and reviewers too should be of the highest status as possible. These “actors” and gatekeepers should uphold ethical standards that could be acquired through topical education, pre- and post-graduate editorial training courses and seminars on research integrity and scientific writing in the researchers' native language (Uzun et al. 2015). Universities, learned associations and international organizations – e.g. the European Association of Science Editors (EASE), the Committee of Publication Ethics (COPE) and the World Association of Medical Editors (WAME) – should be actively involved in the organization of these educational activities throughout peripheral regions. EASE organizes such courses throughout Europe and in Mexico, but more should be done in that respect.

Marušić et al. (2006), González (2011), Uysal and Coker (2011), and Suh et al. (2012) report that the results of the educational and ethical policies mentioned above have been gratifying for Croatian, Costa Rican, Turkish and Korean journals for, in the past years, their inclusion rate in bibliographic indices and databases has significantly increased. Getting out of the scientific periphery is possible, assert Marušić et al. (2006), but more efforts should be made in that direction.

In order to prevent plagiarism (one of the three flaws of today's scientific research), peripheral journal editors should be provided with the CrossCheck service. This is important, affirms Gasparyan (2012: 59) “particularly in emerging science countries, where a large proportion of journals still lack authorship policies and do not adhere to the accepted criteria”. This view is shared by Jaykaran et al. (2011) who specifically refer to Indian journals.

Finally, editors from the different peripheral regions should act as trainers by exchanging ideas, sharing experiences, and learning from one another. This is why the Eastern Mediterranean Association of Medical Editors (EMAME) was created with the purpose of organizing workshops in the region on different aspects of the editorial craft (Habibzadeh, 2012).

### 3.3. Open access

Because geographical distance is no longer an obstacle for international communication except in Africa, governments in the developing world need

to be made aware of the opportunities provided by information technology for the dissemination of research output. Fortunately, several good, free software programs are available, such as the Open Journal System. These can help editors run the whole process in a professional way.

*Ethical* open access (OA) - not predatory/“vanity press” OA (Beall, 2012) – should accept all papers that meet *quality* standards. It is the quality of science that should matter, not the journal’s brand. Ethical OA offers an opportunity to rethink what constitutes research impact and to encourage research sharing and international visibility, issues, as we have seen, that are of particular relevance to the developing world.

It has been repeatedly shown that, within the first year of publication, articles published in the new breed of OA journals are far more downloaded and reach a broader audience than do subscription/toll access articles, thereby increasing their authors’ visibility both within their own countries and worldwide (Salager-Meyer, 2012; Björk et al., 2014). Referring to the official journal of the Croatian Nurse Association, Hodorovic and Hodorovic (2014) report for example that in 2008 the journal started being available online at the Association website. As a result, the annual consultation traffic increased almost threefold over two years. On a much larger scale, Miguel et al. (2011) put forward the impact of OA (green road) on the visibility of journals covering *all scientific fields and all geographical regions*. As Guédon (2010) cogently asserts, OA to the scientific literature is an excellent example of convergence between center and periphery countries: most scientists everywhere agree that OA will improve their ability to work and to contribute to the evolution of science.

### **3.4. Indexation and bibliodiversity**

It could be argued that it will be difficult for these high quality peripheral journals to be included in prestigious indexation systems because they are not written in English. Perhaps, but it is not as important as it seems because powerful indexation platforms like SciELO, RedALyC, LILACS and LATINDEX have been evolving as good substitutes for the SCI and SSCI (Meneghini et al., 2006; Delgado-Troncoso, 2011). By allowing the development of regional (Latin American) scientometric tools, these electronic databases have been able to mitigate the gap between English-medium journals, on the one hand, and Latin American, Caribbean and Iberian ones, on the other.

There is no question, assert Caramelli and Rocha a Silva (2010), that SciELO is mainly responsible for the observed upgrade of Brazilian journals, many of them now appearing in the Web of Science and the Journal Citation Report. Such examples show that OA changes the balance of power in a world dominated by groups which hold thousands of (mostly English-language) journals: it paves the way to what could be called a real “bibliodiversity”, “since it enables the emergence of a plurality of viewpoints, modes of publication, scientific paradigms, and languages” (Jump, 2013).

### 3.5. Peripheral researchers’ evaluation system

Conventional methods of evaluating research impact based on journal citations, particularly the reliance on Thomson Reuters’ journal impact factor (see footnote 3) need to be reconsidered and redesigned. The culture of citations has been designed in the first world, and there is a consensus that many elements are not appropriate for developing countries (Caramelli & Rocha e Silva, 2010; Suh et al., 2012; Englander & Uzuner-Smith, 2013). What is more, citation patterns vary across disciplines. For example, books and book chapters are not recorded, although they are very important in the social sciences. As Chan (2011: 1) asserts, “[f]or too long, research assessment in the developing world has closely followed practices and metrics created by wealthier nations. Even organizations, such as UNESCO and OECD continue to reinforce the use of the journal impact factor”.

In this respect, it is worthwhile mentioning here that more and more academic voices both from the center and the periphery claim that using journal rank as an assessment tool is bad scientific practice, which is a potential threat to the scientific endeavor because it frequently leads to misconduct, even outright fraud (see the San Francisco Declaration of Research Assessment 2012, <http://www.ascb.org/dora/>).

National and/or regional peripheral scientific associations could then lead initiatives to persuade the relevant government officials to drop the journal impact factor requirement and other citation metrics, and peripheral researchers could lobby towards that end at regional levels and through Internet lists and websites. This means that in the developing world, the P-or-P ‘culture’ and pressure should be replaced by what Ravi Murugesan, an AuthorAID training coordinator in Africa, refers to as “influence or perish” (Irikefe et al., 2011) and/or the societal impact of research (Alberts 2015).

## 4. Conclusion

This critical literature review paper has provided a synthesis of the major issues facing peripheral journals and presented a substantial set of realistic steps to be undertaken towards more successful publishing in the developing world. By taking these steps, those small journals that have not made it through yet in international databases/indexes could become academic journals through which distinguished scholars worldwide will communicate with one another. From a strict linguistic standpoint, the presence of English-written titles, extended abstracts and keywords will allow the international scientific community to become aware of insights and research outside the dominant language communities.

In an ideal world, one of Leonardo da Vinci's favorite mottos "Ostinare Rigore" (constant rigor) should be the motto for research in general, in any discipline and for all scholarly journal editors who should ensure that the papers they publish are trustworthy (Allende, 2004). The problem is that we do not live in an ideal world, that ethics is a complex subject, and that good publication practices do not develop by chance. The responsibility to promote measures that may drastically improve the situation of peripheral publications falls upon the international scientific community. If these measures are undertaken, improved quality of scholarly publications and, in the case of medical publications, a consequent boost in standards of health care in the developing world, should be expected. In such a way, small journals will be able to provide leadership in their respective regions. Enhanced *quality* and *highest status* at all levels (articles, actors and "gatekeepers") will lead to increased visibility. This is the only way small journals can break the vicious circle of inadequacy that has plagued them for so long.

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**Françoise Salager-Meyer** was educated at the University of Lyon, France and the University of Texas at Austin. She is the author of numerous publications on written medical discourse, mostly from a diachronic, cross-linguistic and cross-generic perspective. In 1994 and 2004, she was awarded the Horowitz Prize for her works on the pragmatics of written scholarly communication. She was the section editor of the "Language and Medicine section" of the second edition of the *Encyclopedia of Language and Linguistics*

(Elsevier) and is currently coordinating the *Multilingual and Multidisciplinary Research Group on Scientific Discourse Analysis* (University of The Andes, Graduate School of Medicine, Mérida, Venezuela).

## NOTES

<sup>1</sup> A preliminary version of this paper was presented as a plenary lecture at the CERLIS Conference held at the University of Bergamo (Italy) in June 2014.

<sup>2</sup> In that paper, the title of which is a calque of the phrase “*Lies, damned lies, and statistics*”, Freedman argues that much of what medical researchers conclude in their studies is misleading, exaggerated, or flat-out wrong, leading the author to wonder why doctors, to a striking extent, are still drawing upon misinformation in their everyday practice. Freedman’s paper echoes an article written in 2009 by Richard Smith, the former editor of *The British Medical Journal*, entitled “In search of an optimal peer review system” in which the author states that most of what appears in peer-review journals is scientifically weak. Yet peer review remains sacred, worshiped by scientists and central to the processes of science – awarding grants, publishing, and dishing out prizes.

<sup>3</sup> The number of paper retractions due to academic fraud has skyrocketed – up tenfold in the past three decades – with plagiarism and duplicate publications at the root of about 25% of those retractions (Bailey, 2013) – that a website dedicated to their monitoring (<http://retractionwatch.com>) has been created in 2010, whilst the year 2011 was declared “the year of the retraction” (Brems & Munafó, 2013).

<sup>4</sup> Despite widespread criticism of biased coverage and a flawed methodology underlying its calculation, a journal IF continues to dominate research evaluation as if it were the only and universal index to assess the quality of journals (Post, 2012). As a matter of fact, the popularization of this metrics as a rapid and cheap method for evaluating researchers, research groups, teaching/research and universities has stimulated a dynamic interaction between bureaucrats, researchers, and editors.

<sup>5</sup> The rejection rate for many journals is over 50%, and for top-tier journals, it can be over 90% (Leventhal, 2012). The best of all journals, the *Journal of Universal Rejection*, has a 100% rejection rate! This is obviously meant sarcastically.