

Whose Voice Gets Read? English as the International Language of Scientific Publication

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1. Introduction to EILSP

The dominance of English as the International Language of Scientific Publication (EILSP) in practically every academic field is now widely recognized (Ammon, 1990, 2000, 2001a, 2001b; Canagarajah, 1996; Casanave, 1998; Curry and Lillis, 2004; Flowerdew, 1999a, 1999b, 2000, 2001; Lillis and Curry, 2006; Tardy, 2004). Lillis and Curry (2006) state that of the 52,030 academic journals listed in *Ulrich's Periodical Directory* in 2004, 74% were published in English. For some indices, the figures are even higher. In a study by van Leeuwen *et al.* (2001, cited by Tardy, 2004), of the articles listed in the *Science Citation Index* in 1995, 95% were found to be English-medium. Once considered to be a phenomenon most closely tied to the natural sciences, English is also "making strong inroads in the social sciences and humanities" (Flowerdew, 1999b, p.244). According to the Web of Science (2005, cited by Lillis and Curry, 2006), of all the social science articles tracked by the Institute for Scientific Information in 2004, 90% were published in English. Even in studies where the topic of research seems to implicate a local audience who would benefit from having publications written in the local language, the growing trend is to publish in English. Flowerdew (1999b, p.244) reports that one of his informants, a Hong Kong Cantonese historian, "emphasized the importance of publishing in English his findings concerning the thirteenth century porcelain industry in Southern China".

For better or for worse, English has indisputably established itself as the scientific *lingua franca*. Or perhaps I should say, for better *and* for worse. Without question, there are both advantages and disadvantages to the adoption of EILSP. The advantages, however, are more often assumed than stated (Tardy, 2004), and appear to have something in common with those suggested by researchers of English as a *lingua franca* (ELF) (Firth, 1996; Jenkins, 2003, 2006a, 2006b; Meierkord, 1998, 2000; Mauranen, 2003, 2006; Seidlhofer,

2001, 2004). Overarchingly, ELF is seen as a tool through which communication can occur in a maximally efficient and effective manner between people who do not share a common first language (L1). The numbers vary and are invariably outdated, but Crystal (1997, cited by Mauranen, 2003) estimates that 80% of English users are non-native-English-speakers (NNES)¹ and that the majority of interactions occurring in English are between such users. That is, these multi-lingual, multi-competent individuals (Cook, 1999) are using English as a *lingua franca* to communicate with other multi-lingual, multi-competent individuals who are also NNES. The legacy of English, which can be traced to past British imperialism and present-day United States (US) economic and political power, has truly become a world-wide phenomenon, as business deals between Finnish and Korean businesswomen, and travel arrangements between Chilean backpackers and Moroccan tour operators, are increasingly taking place in English.

Correspondingly, EILSP has been adopted as a communicative tool through which scientific research can be disseminated in a maximally efficient and effective manner between academics who do not share a common L1. Flowerdew emphasizes this as the most valuable advantage of EILSP:

Without it, the rapid dissemination of human knowledge, which is now a commonplace, would not have been possible. Dissemination of scientific and technical knowledge has the capacity to bring with it progress in education, health, and social welfare, as well as very significant material benefits on a world-wide scale.

(Flowerdew, 1999b, p.244)

This advantage cannot be underemphasized. As a single common language shared by an ever-growing international community of researchers, English has a vital role to play. However, it is important

¹ I use the term, “non-native-English-speaker” (NNES), with trepidation. I am sympathetic to the arguments (Cook, 1999; Firth and Wagner, 1997) that to insist on referring to such people as lacking (i.e. “non”) is to occlude the reality that they are English users in their own right, and are working within a multi-lingual, multi-competent framework above and beyond the model of the monolingual native-English-speaker (NES). However, at this time, no adequate alternatives present themselves to express the reality of a person who does not speak English as an L1 (Firth and Wagner, 1997). Moreover, I also recognize that NNES and NES are not discrete categories and that the notion of who is and who is not a native-speaker has been widely problematized (Flowerdew, 2001). For the purposes of this discussion, the term NNES is meant to signify English users who identify themselves as speaking English as a foreign, second, or additional language.

to recognize that English has reached its present position via the unrolling of history, rather than via any amount of inherent suitability or kismet. de Swaan makes this clear in his celebration of English:

Let us first praise English, not for its intrinsic virtues, but for the simple fact that it has become the true world language of science, technology, media, and business. [...] Of course, it would have been nice if this global language had been Latin, or Chinese, or French, or for that matter Dutch. But it is not. It happens to be English. None of this has anything to do with the immanent qualities of English. Linguists—for lack of any adequate criterion—consider all languages equally worthy by default.

(de Swaan, 2001, p.71)

Nonetheless, while the advantages of EILSP are considerable, there are also disadvantages to be considered. If, as stated above, English has indeed attained its present position via the unrolling of history, it has been a history replete with struggles for power and supremacy (Canagarajah, 1996). That English remains, in many respects, a vehicle for British/US hegemony cannot be ignored. Nor can we ignore the potential for English to be yet another line drawn between the powerful and the powerless. Tardy (2004, p.252) warns that, “English is a necessary tool, but one that has the potential for quite negative consequences”. It is to these consequences that I now direct my attention. In the following paper, I attempt to answer two questions: (1) What are the foremost negative consequences of the adoption of EILSP? (2) Cognizant of the reality that EILSP is now firmly established and will not likely be deposed any time soon, how can these consequences be minimized? As a response to question (1), in the next two sections I argue for what I believe to be the foremost negative consequences. These are: consequences for NNES researchers, and consequences for the international scientific community. As a response to question (2), I finish with some considerations for how to minimize the effects of these consequences in order to enjoy EILSP to its fullest advantage.

2. Consequences for NNES researchers

The foremost negative consequences of EILSP as experienced by NNES researchers, I believe, occur on at least two levels. These are: linguistic and geopolitical. In the following two subsections I discuss each in turn.

2.1 Linguistic

One year in England/USA – even as a street sweeper – would likely mean more to a scientific career than half a million crowns in the form of a research grant.

(Jernudd and Baldauf, 1987, cited by Swales, 1990, p.190)

The above quote is taken from Jernudd and Baldauf who studied the English-medium publication practices of Scandinavian researchers. This particular informant was commenting on ways in which a researcher's proficiency in English can drastically affect her/his career. In today's "publish or perish" academic climate, a researcher's value to her/his institution is determined primarily based on her/his research output. Output is frequently measured by the number of articles a researcher has published in journals listed in the major citation indices, and the number of times those articles have been cited by other articles listed in the indices (Curry and Lillis, 2004; Flowerdew, 1999a, 1999b). Ultimately, a researcher's output figures prominently in terms of career advancement, such as securing promotions and research grants. As the current trend is for indices to increase their listings of English-medium journals as they decrease their listings of other-language-medium journals (Gibbs, 1995b), researchers have little choice but to write and publish in English if they hope to make an impact in the field and find career success in academia.

Yet, as Flowerdew (2000, p.127) comments, "nonnative-English-speaking scholars, it can be argued – other things being equal – are at a disadvantage *vis-à-vis* their native-English-speaking peers when it comes to writing up the results of their research for publication". Medgyes and László (2001, p.261) go further, claiming, "non-native speakers of English are handicapped in all areas of competence and discourse". Mastery of English for NNES, however you measure it, can require immense amounts of time, energy, and money. Even once a researcher has attained a high level of English proficiency, s/he is still at a disadvantage in comparison to her/his NES colleagues, who are generally able to read and write faster than NNES, freeing up more time for the research itself (Flowerdew, 1999a, 1999b). Other linguistic disadvantages of NNES include: less facility of expression, less rich vocabulary, less capacity for the subtleties of argumentation, and possibility for unwanted L1 transfer (Flowerdew, 1999b). Options for overcoming these disadvantages, such as translating from the L1 to English and relying on NES proof-

readers, are complicated by various issues. For some researchers, writing in her/his L1 is impossible, as it lacks the technical and scientific domains necessary to properly discuss the topic, or lacks an academic register. Moreover, using NES translators and proof-readers can be extremely costly, and there is the considerable difficulty of finding ones who are also knowledgeable in the researcher's discipline (Flowerdew, 1999a).

In the introduction section of this paper I likened EILSP to ELF, and for the reasons listed above, they do have commonalities. However, there are at least two important differences between them. The first is that the domain of ELF is largely spoken, whereas that of EILSP is, by definition, written. As a result, while some researchers are working hard to authenticate ELF as a form of English in its own right by problematizing so-called NNEs speech errors (Jenkins, 2006a, 2006b; Seidlhofer, 2001, 2004), the written domain remains a rigid system where an instance of "non-standard" English (i.e. not British English or US English) is still seen as an error, rather than an example of ELF in use. This rigidity is particularly unforgiving of the kinds of "errors" often found in NNEs writing (Ammon, 2000, 2001a, 2001b).

The second important difference between ELF and EILSP is equally troubling. During ELF interactions there is generally presumed to be few or no NNEs present, and thus, communication is negotiated often entirely by ELF users (Firth, 1996; Jenkins, 2006b; Seidlhofer, 2001, 2004). With EILSP, in contrast, such is rarely the case. Instead, it is common practice for high-status journals to be based in Anglophone centers, such as Britain or the US, and for editorial boards to be composed overwhelmingly of NNEs (Canagarajah, 1996; de Swaan, 2001; Gibbs, 1995b). As such, there is a potential gatekeeping function in place to ensure that articles published conform to NNE standards (Ammon, 1990, 2000, 2001a, 2001b; Canagarajah, 1996; Curry and Lillis, 2004; Flowerdew, 1999a, 1999b, 2000; Lillis and Curry, 2006; Tardy, 2004).

In his critique of current practices that function to exclude NNEs from scientific publication, Ammon (2000, 2001a, 2001b) argues fervently for the rights of NNEs to what he terms, "linguistic peculiarities" (2000, p.111). Such peculiarities might pertain to rhetorical structure, style of argumentation, or might consist of what would be called "creative use of the language" for a NNE, but "an error" for a NNE (McArthur, interview, cited by Rubdy, 2006). As Canagarajah (1996, p.436) maintains, "[b]ecause these mostly bilingual/bicultural scholars are influenced by their indigenous communicative conventions, their writing will display peculiarities that are usually treated by Western

scholars as ample evidence of their discursive/academic incompetence.” Drawing on work by Skutnabb-Kangas and Phillipson (1994) on linguisticism and linguistic human rights, Ammon questions: if it is considered linguisticism for native-speakers of a high-status language to be somehow privileged over non-native-speakers, why is it not also linguisticism when texts written by native-speakers are privileged over those written by non-native-speakers? Such is the case, Ammon argues, when the gatekeepers of scientific publishing (i.e. publishers, referees, editors, reviewers) insist upon measuring NNES writing against NES standards, and are quick to label “deviant” anything that departs from the “norm”. This is a common practice, despite evidence that rhetorical structure is culturally-bound, not simply “logical” (Clyne, 1987, cited by Ammon, 2000), and despite the reality that morpho-syntactic errors are bound to occur when someone is all-but-forced to produce highly sophisticated writing in a foreign language.

To illustrate his argument, Ammon quotes from reviews written about two books of which he is editor. Both reviewers are from the field of sociolinguistics, and should therefore, Ammon reasons, be more linguistically open-minded, and sympathetic to the challenges involved in producing a “perfect” text in a foreign language. However, such is not the case:

A decidedly German substratum peeks through in many of the papers written in English. I counted several instances of *und* for *and*, as well as German-style syntax. [...] In the first 26 pages, this reviewer counted thirty-four errors of proofing, style, and grammar. In some instances, the grammatical mistakes are so severe that near unintelligibility results.

(DiPietro, 1990, cited by Ammon, 2001b, p.355).

It also has to be said that some of the English written by non-native speakers is so bad, particularly when combined with the not infrequent misprints, as to be almost incomprehensible. Obviously, the editors did not have native speakers vet all such contributions.

(Trudgill, 1990, cited by Ammon, 2001b, p.355)

Flowerdew (2000, p.135) provides a further example, quoting from a review sent by an anonymous referee to Oliver, a NNES mass communication researcher, who completed his doctoral work in the US and was trying to begin his publishing career in English-medium journals after returning to his native Hong Kong. The review begins as follows: “Obviously, this manuscript has not been written by a native speaker. There are many problems with language usage that would

need to be corrected were this to be published". Flowerdew questions the usefulness of foregrounding the NES-NNES dichotomy in these cases, where such a label only serves to mask the continuum of possible proficiencies that exist between the two extremes.

In response to such reviews, Ammon (2000, p.113) claims to doubt whether the comprehensibility of the texts is really the core issue, adding, "I dare to assume that unintelligibility is not the main reason why texts in non-native English are often rejected or judged negatively by native speakers". This remark he bases on the fact that rarely did the NES who proof-read texts on his behalf raise issues of intelligibility; rather, Ammon claims these to be instances of linguicism. To counter the trend of polishing NNES texts with a NES cloth, Ammon ensured that the NNES contributions in his subsequent edited collection, *The dominance of English as a language of science* (2001), were treated to "linguistic corrections in line with [his] suggestion not to eliminate all the non-native-speaker traces" (2001, p.x), and published a subsequent article devoid of NES polishing, stating, "in order to exemplify the problem of native speaker norms and privileges presented here, the language has not been 'corrected', apart from items retrieved by a spell check" (2000, p.111). Ammon is clear that his position is not to do away "with standards altogether [...] since it would endanger successful communication" (2000, p.114); rather, he suggests there is a need for an alternative to NES standards, one that is less culturally-bound and more internationally-reaching, in order to account for the challenges faced by NNES in a world that unfairly privileges NES.²

2.2 Geopolitical

It smacks of First Worldism
(Gibbs, 1995b, p.97)

The above quote is taken from Gibbs who conducted a series of interviews with Third World academics (hereafter I will use the less contentious and, I believe, more revealing term "peripheral academics"), in order to illustrate what he describes as "the vicious

² For further reading on the national contexts of NNES working with EILSP see Ammon (1990, 2001b) for Germany; Flowerdew (1999a, 1999b, 2000) for Hong Kong; Inoue (2001) for Japan; Kryuchkova (2001) for Russia; Lillis and Curry (2006) for Hungary, Slovakia, Spain, and Portugal; Medgyes and László (2001) for Hungary; Murray and Dingwall (2001) for Switzerland and Sweden; Paiva and Pagano (2001) for Brazil; Spolsky and Shohamy (2001) for Israel; and Willemyns (2001) for Belgium.

circle of neglect and—some say—prejudice” (p.92) of international scientific publication. This “vicious circle” refers to the immense challenges faced by peripheral academics hoping to publish their research in internationally recognized journals. Gibbs’ informant, a South African biochemist from the University of Cape Town, was one of many peripheral academics to voice his frustration with current practices that seem to privilege researchers working in countries of greater material wealth. Citation indices are felt by many to unfairly represent the one in four academics currently doing research in peripheral countries around the world (Gibbs, 1995a). Although it is estimated that 24% of scientific research is conducted by peripheral academics (Gibbs, 1995a), these researchers are all but invisible, and some estimates put their contributions as accounting for about 2% of the total research listed in citation indices (Gibbs, 1995b).

In the age of EILSP, many peripheral academics are twice disadvantaged. Like their NNES colleagues in more prosperous countries (e.g. Germany, France), they struggle with the linguistic challenges of EILSP. Yet, in addition to this, they struggle with the economic challenges of participating in international scientific publication. For example, lack of funds frequently forces academic institutions in peripheral countries to cut subscriptions to top journals. Gibbs (1995a) relates the situation at Addis Ababa University in Ethiopia, where 90% of subscriptions were cut in 1989 after the elimination of the university’s foreign currency budget, reducing the number of up-to-date publications available to researchers from 1,200 to just 120. Gibbs goes on to describe the situation in India in similar terms, quoting the director of the Indian National Scientific Documentation Center as saying, “India, which used to receive about 20,000 journals in 1983, now gets less than 11,000” (p.13), as well as the former director of the Indian Council of Medical Research as saying, “an Indian is often unaware of the latest trends in science publishing [because] hardly 10 percent of our libraries get the top journals” (p.13). This dearth of up-to-date publications isolates peripheral academics from their international disciplinary communities and greatly reduces their chances of publication. Gibbs quotes the director of the sub-Saharan African program at the American Association for the Advancement of Science as putting it this way, “[i]f you don’t have access to references and the current citations to related work in the North, you won’t pass muster” (p.13).

Often unable to publish their work in high-status international journals, peripheral academics must resort to less prestigious local journals, the majority of which are unlikely to be listed in the major citation indices. Gibbs (1995a) claims that only 50 of the 3,300 journals (i.e. 1.5%) listed in the 1993 *Science Citation Index* originated in

peripheral countries. It is a self-perpetuating cycle, in which peripheral academics are cut off from their international colleagues in terms of both incoming and outgoing publications. To complicate matters further, in his article discussing the nondiscursive requirements of scientific publishing, Canagarajah (1996) explains that for many peripheral academics lack of access to the latest journals is only part of a much greater need. Many researchers working in peripheral countries are also doing so without easy access to computers, printers, photocopiers, fax machines, and the Internet—not to mention so-called “staples”, such as decent quality paper and the postage necessary to submit articles internationally. Canagarajah relates his experience of working at the University of Jaffna in his native Sri Lanka, where there were often lengthy interruptions of electricity and periods during which mail could take up to four months to arrive, if at all. Anecdotal examples, Canagarajah (1996, p.439) laments, are necessary “because the exclusion of Third World scholars from Western academic publications is widely experienced but rarely expressed, [so] there is little published scholarship by these scholars to cite on this issue”.

Clearly, if we are concerned about the spread of British/US hegemony, and the potential for English to be yet another line drawn between the powerful and the powerless, the enormous challenges of peripheral academics must not be ignored. Through this double-bind of linguistic and geopolitical disadvantage, these researchers are effectively silenced, what Swales (1990, cited by Canagarajah, 1996) refers to as being “off-networked” from their international disciplinary communities. Such a practice is bound to have serious negative consequences for the international scientific community. In the next section, I present those I believe to be most worrisome.

3. Consequences for the international scientific community

The foremost negative consequences of EILSP as experienced by the international scientific community, I believe, occur on at least two levels. These are: local and global. In the following two subsections I discuss each in turn.

3.1 Local

I am ashamed. We should do more.
(Curry and Lillis, 2004, p.680)

The above quote is taken from Curry and Lillis who studied the English-medium publication practices of researchers in Hungary,

Slovakia, and Spain. This particular informant was referring to the need for researchers to remain locally-minded, even while they are struggling to become internationally recognized. However, when a researcher's career depends on her/his ability to attain publication credits in the high-status English-medium journals listed in the major citation indices, this increasingly means putting local interests aside (Curry and Lillis, 2004; Lillis and Curry, 2006).

One well-documented consequence of EILSP is its effect on local languages. Gradually, many languages are losing scientific and technical domains, as new developments result in new jargon, and new jargon is increasingly being coined in English (Ammon, 1990; Spolsky and Shohamy, 2001). In Sweden, for example, Swedish-medium publications in the medical sciences stopped altogether in 1997 (Swales, 1997b, cited by Flowerdew, 1999a). Since then, new developments have been disseminated in English-medium publications. When new jargon is needed, it is coined in English, often with no Swedish equivalent. Researchers working towards preserving world languages see domain loss as a step in the wrong direction, and point to the linguistic impoverishment that adds up over time. Mauranen (1993, cited by Flowerdew, 1999b, p.245) puts it this way: "Insofar as rhetorical practices embody cultural thought patterns, we should encourage the maintenance of variety and diversity in academic rhetorical practices—excessive standardization may counteract innovation and creative thought by forcing them into standard forms".

Another consequence at the local level relates to the research itself. To increase chances of publication, local issues most in need of study are oftentimes eschewed in favour of issues that hold more interest for the international scientific community (Curry and Lillis, 2004; Lillis and Curry, 2006; Willemyns, 2001). Informants in a study by Curry and Lillis (2004) describe how they frame their research within theoretical, rather than applied, paradigms in order to cater to high-status international journals, questioning whether the value "of local data extends beyond Anglophone contexts" (p.676). These researchers have found that to focus specifically on applications at the local level would be to risk accusations of "parochialism" or "provincialism" (Flowerdew, 2000; Lillis and Curry, 2006; Paiva and Pagano, 2001). Moreover, not only choice of research topic, but also choice of methodology is affected by EILSP. NNES researchers tend to prefer quantitative over qualitative methods in order avoid the linguistic challenges of writing up qualitative data (Davis and Tschudin, 2007; Flowerdew, 1999b). This obviously has implications on how well issues at the local level are understood, and how well the research findings are able to address those issues by "informing a

wider public and influencing decision-making processes” (Curry and Lillis, 2004, p.680).

In contexts where a local issue *is* found to be of interest to the international community, Canagarajah (1996) suggests that the trend in peripheral countries is for First World (hereafter, centre) academics to arrive from abroad, stay long enough to gather sufficient data, and return home to publish. Meanwhile local peripheral academics “have to depend on center publications for references and citations even regarding knowledge pertaining to local realities” (p.459). As a result, NNEs researchers and peripheral academics, along with their local research institutions, lose out on much-needed recognition for their own discoveries to NES researchers and center academics who are often in a better position to publish (Canagarajah, 1996).

Although it might seem strange to suggest that local-level consequences are experienced as negative consequences by the international scientific community, I would argue that these local-level consequences are felt around the world. As such, the local *becomes* global. In the next section, I describe the global consequences of EILSP in more detail.

3.2 Global

Take cholera, for example. Right now cases are increasing in Mexico. Our researchers have interesting findings about some new strains. International journals refuse our papers because they don't consider cholera a hot-topic. But what if these strains spread across the border to Texas and California? They will think it important then. Meanwhile the previous knowledge about the disease will have been lost. Scientists searching the literature will not find the papers published in Mexican journals, because they are not indexed.

(Gibbs, 1995b, p.94)

In the above quote, the informant is the editor-in-chief of *Archivos de investigacion medica*, now renamed *Archives of medical research* (AMR). The history of this journal goes back to 1970, and provides an excellent illustration of the challenges faced by non-English-medium journals hoping to be included in major citation indices. When AMR was founded as a Spanish-medium journal in 1970, the US-based *Science Citation Index* (SCI) agreed to list it. As one of the top

scientific indices, inclusion in SCI guarantees an article (and its researchers) international coverage. At the time, SCI set various conditions, including an agreement that AMR would publish all issues on time, supply English translations for the abstracts of Spanish-medium articles, and pay a \$10,000 annual subscription fee. Unfortunately, a national economic crisis in 1982 caused a six-month delay in publication, and as a result, SCI dropped AMR from its listing. Since then, every effort has been made to get AMR back on SCI: they provided full-length English translations beside Spanish-medium articles; they dropped Spanish-medium articles altogether in favour of an entirely English-medium publication; they changed the journal's name to reflect this shift in language-medium; they hired an American NES editor; they assembled an editorial board of Mexico's top scientific researchers along with top international colleagues; they stopped accepting Spanish-to-English translations of articles and urged researchers to write directly in English to avoid translation errors; and not since the delay in 1982 have they been late with an issue. Despite these costly efforts, SCI would not reconsider. The main reason for this decision, SCI informed the editor-in-chief, was that the researchers on the AMR editorial board have not been cited enough. The irony, of course, being that, until a major citation index such as SCI lists AMR, the researchers included therein will not get the exposure needed to be cited by others working in the field. Researchers rely on citation indices to remain abreast of new developments. Important research can easily be overlooked by the disciplinary community if it is not available through these indices.

If risk of exclusion from international scientific publication is the foremost negative consequence for NNES researchers and peripheral academics, then it is this exclusion, these missing voices, this absence of diversity on a global scale, that is the foremost negative consequence as experienced by the international scientific community. This is especially the case for the natural sciences, where global problems such as disease and water crises may have local solutions (Gibbs, 1995b; Tardy, 2004). One example is the research being conducted on the cholera virus in Mexico (Gibbs, 1995b). Another is the research on oral and injectable polio vaccines being conducted in Senegal and the Gambia, where "lessons learned [...] are potentially also relevant in South Asia [...]. But such lessons, if published at all, rarely cross national borders" (Gibbs, 1995b, p.94). When NNES researchers and peripheral academics are excluded for reasons of linguistic and geopolitical circumstances, important knowledge is lost. Zielinski stresses:

This is particularly true in fields such as medicine, where diseases are no respecters of frontiers, especially with increased air travel and the resurgence of communicable diseases such as measles and tuberculosis. These diseases, as well as unique information on such topics as AIDS, tropical biodiversity and traditional medicine, are particularly well covered in the local journals.

(Zielinski, 1995, cited by Gibbs, 1995b, p.95)

Equally troubling is that, along with privileging NES researchers, current publication practices also seem to privilege NES countries. Wishart and Davies (1998, cited by Tardy, 2004) found that, of all the articles published in the field of freshwater ecology over a ten-year period, more than 60% originated in five NES countries. Along with impoverishing the world's collective knowledge on such topics, such biases irreparably distort the reality of research in particular fields within meta-analytical studies of scientific practices (Tardy, 2004).

If the great advantage of EILSP is said to be the opportunity for increased international dissemination of scientific research, how can the exclusion of so many people and places be justified? At worst, this exclusion is the result of negligence, at best, it is yet another example of British/US hegemony working through the gatekeepers of international scientific publication to reign supreme. As Van Dijk states:

It hardly needs to be argued that lacking insight into theories, methods, data and results of scholars elsewhere on the globe is a form of scholarly and cultural chauvinism which at the very least diminishes the relevance and generality of our findings, and in any case contributes to the reproduction of prevailing forms of cultural and academic hegemony.

(Van Dijk, 1994, cited by Flowerdew, 2001, p.122)

4. Considerations

With the above consequences in mind, I now finish with some considerations for how to minimize the effects of these consequences in order to exploit EILSP to its fullest advantage. However, because I believe the consequences for the international scientific community result from the consequences for the NNES researchers, addressing the latter would, by extension, address the former. Efforts to minimize the consequences of EILSP as experienced by the NNES researchers, I believe, might occur on two levels. These are: language-centered and person-centered. In the following two subsections I discuss each in turn.

4.1 Language-centered

Scientific Englishes?

(Wood, 1997, *Scientific Englishes* section, para 2)

In keeping with the ELF-EILSP parallel, several researchers (Ammon, 2000, 2001b; Wood, 1997) suggest the possibility of establishing an international variety of EILSP, what Wood (1997) calls “Scientific Englishes”, which would not depend on NES norms; rather, as Ammon suggests:

[E]ach national center (country) is responsible for its own language norms, i.e. those of its own national variety, and not any other. Thus, Britain is responsible for, and only for, the norms of British English, the USA for those of US-English, etc. Attempts at norm control beyond these boundaries, which do in fact occur, should be refuted by the other countries. Accordingly, none of the English-speaking countries individually, nor all of them together, should be allowed to dictate the norms of International English.

(Ammon, 2001b, p.356)

This, Ammon (2001, p.356) admits, is a “somewhat utopian” vision. However, he is not alone in believing that such a shift could significantly minimize the linguistic challenges of NNES researchers. Wood (1997, *Scientific Englishes* section, para 1) also calls for NNES researchers to “stop using the native speaker as the reference group as to what constitutes appropriate scientific English; rather the reference group should be international scientists of whatever language background who use English to communicate”.

Along with a reconsideration of EILSP, Baldauf (2001) stresses the importance of NES researchers recognizing the limitations of a single language and the limitations of citation databases that exclude other world languages. As Baldauf (2001, p.158) states, “in a world that is becoming increasingly multilingual, there is a need for monolinguals, particularly monolingual English speakers because they symbolize the language barrier, to learn and actively use a language other than English, particularly in their role as scientists”. He also encourages journals to become more multilingual, by providing translations of article abstracts (if not full-length translations) in more than one world language, emphasizing that “there is an obligation to our colleagues to provide access to our work” (p.158).

4.2 Person-centered:

What makes me feel bad is I get letters from the reviewer, and in the first two sentences it will say this is definitely not written by a native speaker—they shouldn't point that out as part of the main criteria for rejecting the article.

(Flowerdew, 200, p.135)

In the above quote, the informant, Oliver, is voicing his frustration at current practices that seem to ignore the challenges of NNES researchers trying to participate in international scientific publishing. Rather than penalize NNES for their “non-standard” English, the international scientific community should put measures in place to support them through their linguistic challenges. Mentorships, apprenticeships, and collaborations between researchers who are successful at publishing internationally and those who are not, could be arranged at local, national, and international levels through institutional partnerships, journals, and conferences (Baldauf, 2001; Curry and Lillis, 2004; Flowerdew, 2000; Lillis and Curry, 2006). Crucially, the point is not to pair a NNES with a NES and assume the former will learn something from the latter; rather, Lillis and Curry (2006, p.31) urge collaborating researchers to nurture a “multi- rather than unidirectional process.” Such an exchange could not only provide support to NNES researchers and help them overcome the challenges of international scientific publication, but it could also sensitize NES researchers to those challenges.

5. Conclusion

As stated, the dominance of EILSP in virtually every academic field is undisputed. As a communicative tool facilitating the dissemination of scientific research in a maximally efficient and effective manner on a global scale, the potential advantages of EILSP are enormous. However, in this paper I turned to the potential *disadvantages* of EILSP by addressing the following two questions: (1) What are the foremost negative consequences of the adoption of EILSP? (2) Cognizant of the reality that EILSP is now firmly established and will not likely be deposed any time soon, how can these consequences be minimized? In response to question (1), I argued for what I believe to be the most troubling negative consequences. First, I argued for the consequences for NNES researchers. These occur on at least two levels: linguistic and geopolitical. Second, I argued for the consequences for the international scientific community. These also

occur on at least two levels: local and global. In response to question (2), I finished with several considerations for how the effects of these consequences might be minimized in order to exploit EILSP to its fullest advantage, while ensuring that every voice gets read. Such considerations include the international adoption of what has been termed “Scientific Englishes”, and instituting mentorships, apprenticeships, and collaborations between NES and NNEs researchers to support less successful researchers who struggle with academic publication for linguistic reasons.

Without question, the advantages of EILSP are immense, but in light of the preceding discussion, one can no longer deny that the disadvantages are immense as well. It seems that the adoption of EILSP has resulted in an unsettling contradiction: meant to facilitate communication across the international scientific community, EILSP has instead silenced a large proportion of this community. Mindful of this, how can the international scientific community go forward in the pursuit of truth and knowledge without working towards an inclusive dialogue that does not unfairly privilege NES researchers? In this debate, there are many difficult questions and no easy answers. As a single common language shared by an ever-growing international community of researchers, EILSP can either open wide the gates of scientific discourse, or serve as yet another lock on that gate.

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