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Reinforcing English Hegemony in Library Information Systems

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Espanol & Inglaes: Reinforcing English Hegemony in Library Information Systems

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Abstract

The idea for this paper took root upon discovering that certain words in the library in which I work's catalog do not appear correctly-- words with diacritics, or accents that change the meaning of the word. This begs the questions: in what ways is power created and replicated within our library systems? This paper investigates the ways in which libraries codify and replicate English-centric practices by exploring encoding and acquisitions to begin to uncover for whom libraries are meant to serve through a qualitative literature analysis. Classification, cataloging, and the Internet are also discussed to a lesser degree to exemplify the far-reaching nature of this issue. Finally, this paper addresses potential ways libraries can de-center English practices embedded within their systems. This paper contributes to the discourse on the impact of embedded power hierarchies in library systems and critically explores the frameworks within which we create and communicate information.

Keywords: encoding; information systems; English; acquisition; diacritics

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Introduction

Several months ago in a meeting, a coworker brought up an issue she had noticed when searching for Spanish-language materials in our catalog— words with diacritics appeared incorrectly, though inconsistently so. For example, the author of the book *Aristotle and Dante Discover the Secrets of the Universe* appears in the catalog as Saaenz, Benjamin Alire; Saenz, Benjamin Alire; and Sáenz, Benjamin Alire. These results are not interchangeable; typing “Saenz” into the catalog will yield results for Saenz and Sáenz, but will exclude anything found under Saaenz. This is troubling for several reasons. First and foremost, it renders many items unfindable. Who will think to keyword search for Saaenz, or espanol (which yields 465 results in the catalog), or Maarquez (71 results)? If items cannot be found through the catalog, they are only findable by physically browsing the stacks. This decreases circulation and leads to prematurely weeding these items from the library. Additionally, by allowing words to be misspelled and therefore unfindable in our catalog, we are sending the message that words and names that are not English are not important. This message goes directly against several American Library Association core values, namely accessibility, diversity, and service. In this paper, I argue that the ways in which the English language is centered in library systems are at odds with the library’s values and desire to serve all patrons equitably.

When we see something in the catalog that upsets or unsettles us, writes Drabinski, we can use these examples as entry points which “[reveal] ruptures in the otherwise seamless objectivity that the classification pretends to.”¹ I use this paper as an exercise in exposing the diacritical flaws as the rupture to explore and interrogate the ways that libraries reproduce Anglocentric values and narratives while obscuring or making non-English voices unfindable

through online public access catalogs (OPACs). Drabinski tells us to use these doorways with library users and invite them into the critique, but I feel this work is more appropriate for behind-the-scenes workers: vendors, system analysts, administrators, and catalogers, among others like myself.²

Examining language, in the sense of what language is being used and translation/transliteration (substituting the approximate letter from one alphabet to another), in libraries is not new; much research has been done studying language in classification, cataloging, and beyond.³ This paper builds upon that work and focuses more deeply on the myriad ways that language is embedded within our library systems by exploring the pitfalls of English-centricity in software and Internet code, and examining potential interventions. By studying the role that English plays in our library systems and structures, I also connect the beliefs and values that are inextricably linked to using the English language as a medium for information. I explore the roles of ASCII and Unicode, codes which “represent text in digital form.”⁴ I also examine the ways in which foreign language acquisition and transliteration take place in libraries to uncover points of confusion, additional labor, and potential intervention. I conclude by drawing parallels and connections to the issues which arise with Anglo-centrism in libraries to those on the Internet. This paper takes a multidisciplinary approach, looking through the lens of library and information science practices, critical code, and communications.

It is worth briefly discussing the impact classification and cataloging have on shaping library system values and views. As Olson shows, classification and the catalog are based upon Enlightenment principles and thus impose Western values and viewpoints on users.⁵ By relying on these systems, we are forced to search for materials in terms of sameness and difference, and to break our thoughts into conceptual pigeonholes. This in and of itself is not problematic;

however, classification becomes contentious when these specific, Eurocentric viewpoints are positioned as universalities. Adler argues that the very assumption of universality is colonialism as it is almost always an imposition of minority world viewpoints. Pulling from Butler, Adler points out that “without translation, the only way the assertion of universality can cross a border is through a colonial and expansionist logic.”⁶ By asserting universality in library classification, our specific classification systems serve the role of cultural colonizer by imposing Eurocentric structures and values without question, regardless of local knowledge organization practices or value systems. These ideas are important to keep in mind while unpacking encoding systems and acquisitions to see the ways in which library systems emphasize English while obfuscating other languages are systematic and deeply entrenched.

Encoding Standards

To understand the ways in which library systems reinforce English, let’s begin with the underlying structure: code. Code, as defined by Petzold, is “a system for transferring information among people and machines.”⁷ As with all technology, the possibilities and outer limits of code are evolving incredibly quickly. Despite its ostensible limitless, it appears that the standard for code has remained the same for what seems like technological eons: Unicode. Unicode is a coding standard “large enough to support the writing systems used by all the world’s languages.”⁸ Although Unicode has been available for decades, it would appear that the library system in which I work relies at least partially on ASCII, a 7-bit system which precedes Unicode. ASCII (American Standard Code for Information Interchange) originally held 128 characters, enough for the English language which is (largely) devoid of diacritics (as Reidlmayer points out, no one but the *New Yorker* cares about the umlaut in coöperation).⁹ As ASCII was written in English for English speakers, this was not initially an issue. However, 128 characters is not large

enough to hold diacritics, and certainly not large enough to hold languages with thousands of characters such as Chinese or Japanese. ASCII was widely adopted, which led to “many other standard encodings [to be] defined around ASCII.”¹⁰ In turn, this contributed to a large-scale technological bias towards English on an encoding level. This is seen in the way our library’s interface cannot accommodate letters used outside of English, such as á or ñ. Borgman explains that “[c]haracters generated by a keyboard that is set for one encoding system may not match characters stored under another encoding system; characters with diacritics may display or print incorrectly or not display at all.”¹¹ This is exemplified in our library’s system as diacritics are inconsistently displayed and words are misspelled as a result of this diacritical loss, which is consistent with using ASCII character sets.

While ASCII is a 7-bit code, it is “almost universally stored as 8-bit values,” which translates to 256 characters.¹² To (partially) improve the issue of transliteration, ten ASCII code sets were made, though non-Latin alphabets were still largely overlooked. In response to this oversight, many different extension sets of ASCII were created, though sets were often not compatible with one another. As computer memory became cheaper, it became more feasible to expand systems. Enter Unicode, a 16-bit code maintained by the Unicode Consortium which is based in California. The first 128 characters of Unicode are the same as ASCII characters, which lends itself to compatibility, at least with the initial ASCII set. Unicode was designed with universality in mind, with “one unique code [representing] each character even if that character is used in multiple scripts.”¹³ Since Tull & Straley’s article was published in 2003, Unicode has updated many times, with the most recent release being version 12.1.0 on May 7, 2019.¹⁴ Unicode now supports many scripts, emojis, and bidirectional formatting. So why are our OPACs unable to appropriately recognize ñ? While the capability is available and even

integrated in some places (Sáenz *does* appear in the catalog, along with Saaenz), there are clearly barriers to access. By not fully adopting an encoding standard which recognizes the languages our patrons speak and request materials in, we are sending the message that their needs and the materials they request are less important than those of English speakers.

An article written by Reidlmayer serves as a case study of systemic failure similar to what occurs in our library system today; it is worth noting that Reidlmayer’s work was published 20 years ago.¹⁵ Reidlmayer describes the difficulties and failures of transliteration. The systems he uses lack the support for a full extended-character set, leading to ambiguity and what he refers to as “degraded access.”¹⁶ Because our interfaces are designed for English which uses little to no diacritics, the lack of diacritics was of little importance to its creators. However, diacritics play a crucial role in many non-English languages and leaves users guessing when they are removed. Matters get even more complex when transliterating non-Latin languages into Latin scripts. As an example, Reidlmayer points to the confusion over the name Qaddafi, transliterated from Arabic. Qaddafi becomes Qadhafi, Kaddafi, Gadafi, and 11 other variants from its original Arabic spelling.¹⁷ As illustrated, there is ample room for confusion and ambiguity with transliteration. We see this transliterative failure between languages in our own catalog (see below).

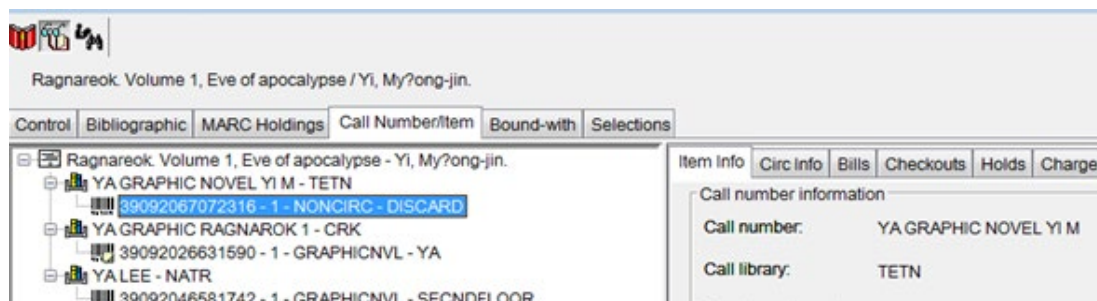


Figure 1: Translitterative and diacritic failure in Ragnarök manga in title and author name.¹⁸

In this example, the title of a manhwa, *Ragnarök, vol 1: Eve of Apocalypse* by Myung-Jin Lee has been improperly transliterated, with the umlaut on the ö of ‘Ragnarök’ transliterating to “eo.” Additionally, the author’s name is written as Myung-Jin Lee on the cover but appears as My?ong-jin Yi in the catalog. Question mark aside, even if a patron searched under “Lee,” as the cover states, they would be unable to find this series which transliterates to “Yi.” Although to our eyes both of these names read in a Latin alphabet, it would appear transliteration of another language (Korean in this case) is happening beneath the surface—transliteration our encoding system cannot adequately complete. This is simply one example of a library resource that was difficult to locate because it is outside the scope of our Anglocentric focus.

Acquisitions

There are numerous barriers in libraries to acquire materials that are not in English. Ward highlights the additional labor put into acquisitions in non-English languages.¹⁹ While she examines a research library, the basic process is similar to that of a public library. Ward summarizes “[i]n comparison to English language acquisitions, the workflow to acquire foreign language titles is typically characterized by less automation, longer processing times, and more frequent human intervention.”²⁰ There is heavy reliance on Machine-Readable Cataloging (MARC) records, which at the time of Ward’s publication had varying standards of quality and automation within the imported records, requiring active discernment and critique when importing. To be able to judge the quality of the record, the cataloger must have a working knowledge of the language in which the materials are published. While this is feasible in a few languages, even in our small library system, it is unrealistic to assume that our sole original cataloger can have a working knowledge of all the languages that patrons request materials in. Seeking out this information is valuable and ensures a high quality of service, but places a

burden of additional time and effort on technical library workers that English language acquisition does not. However, it is imperative to provide high quality resources in the languages which patrons request. While library workers may intervene, commercial library vendors must also take steps to ameliorate this gap in service by providing access to literature in many languages.

We see additional parallels in the selection process. Our library's selectors rely heavily on vendor databases for materials, which are few in languages other than English. While these materials are available, they require further searching, which takes time and effort. Selectors often must seek out materials outside our vendor databases, which are often more expensive to purchase. Furthermore, unless the selector understands the language, it can be difficult to ascertain the quality of a specific item. We are fortunate to have a native Spanish speaker select Spanish-language materials in the library where I work; this is not the case for other languages. However, having a native Spanish speaker does not mean the Spanish records are flawless- as noted, it is quite the contrary, meaning the flaws in transliteration occur somewhere between selection and viewing the item in an OPAC. Furthermore, because we see transliteration issues in our catalog, it is difficult for our Spanish-language materials selector to determine if we have a certain item and on occasion buys the title again because she cannot find the transliterated copy in our system, which wastes both time and money.

Finally, Ward points out that North American libraries expect vendors from other regions to conform to North American standards.²¹ Indeed, we have seen libraries around the world move towards using Dewey Decimal and Library of Congress classification systems. We can also see this assimilation in WorldCat, a worldwide online catalog.²² While this system makes work easier for those accustomed to the formatting and structure provided in WorldCat, it may

be at odds with libraries who do not normally structure materials in this way. The numerous barriers in place for non-English language acquisitions work to further embed Anglocentric supremacy in our library systems.

Implications

Thus far, this paper has examined various ways in which systems are built around the English language in libraries and information systems. Now that a foundation has been laid, we can explore the problems that arise from centering English in systems which are used throughout the world. As previously discussed by Adler, assumed universality left untranslated (or in this case, transliterated) is cultural imperialism.²³ This becomes clear when we acknowledge information systems as sites of power. Drabinski writes, “[a]s the tools that order things, our catalogs and classification structures are themselves technologies of power, facilitating some ways of knowing and not others, representing certain ideological ways of seeing the world, and, crucially, not others.”²⁴ This is certainly the case in our catalog, which only facilitates a seamless search in English. I argue that the concept of library tools extends beyond the catalog and classification structures to include all levels of our information systems where we see this manipulative facilitation at play. Intentionally or not, this reifies the view that languages that are not English, and by extension the speakers of these languages, are peripheral to the library’s priorities. In this way, issues of technology become issues of power. These issues are in conflict with the library’s desire to serve all patrons equitably, as laid out in the American Library Association’s core values. Namely, these systems are at odds with the ALA’s value of access, in which they state that “[a]ll information resources that are provided directly or indirectly by the library, regardless of technology, format, or methods of delivery, should be readily, equally, and equitably accessible to all library users.”²⁵ While we may have the materials on the shelves, they

have been rendered unfindable in the catalog and integrated library system. It is clear that we are unable to provide equitable access in our library due to transliteration, encoding, and acquisition barriers.

It might appear that pushing patrons aside due to diacritical issues is a purely technical oversight. However, Bowker and Star argue that this framing is intentional and part of power systems. They write that

classification systems are often sites of political and social struggles, but...these sites are difficult to approach. Politically and socially charged agendas are often first presented as purely technical and they are difficult even to see. As layers of classification system become enfolded into a working infrastructure, the original political intervention becomes more and more firmly entrenched. In many cases, this leads to a naturalization of the political category, through a process of convergence. It becomes taken for granted.²⁶

By strategically placing these viewpoints (again, in classification and all other levels of information systems) as technical, it shifts the blame away from people creating these systems and onto the technology itself. However, this is a misleading view of information technology. Noble and Reidsma remind us that technology is created by humans, who like all other humans, grow up in societies with values and belief systems.²⁷ Noble describes how bias is written into our technology structures. While she focuses mainly on algorithms, she points out bias on a larger scale: “[o]n the Internet and in our everyday uses of technology, discrimination is also embedded in computer code and, increasingly, in artificial intelligence technologies that we are reliant on, by choice or not.”²⁸ Reidsma specifically points to the human element of technology, quoting Ekström’s TED talk on bias in Internet searching to remind us that “behind every algorithm is always a person, a person with a set of personal beliefs that no code can ever completely eradicate.”²⁹ Reidsma adds, “behind every algorithm is also a company, with obligations to its business model and shareholders.”³⁰ Clearly, those who create the technology

we use daily are not demi-gods, merely humans with biases and interests which may conflict with our own. How then, does that influence our catalog, discovery layers, and what is made available to us at large? We can see how bias creates barriers and additional labor with Anglocentric code and vendors who favor English-language materials, but what are other, less visible ways that bias enters our systems? These barriers to access become political when studied within the perspective of society as a whole and acknowledged as one of many structural inequities.

When looking critically at the ways in which information technology function, one can see that the creators and arbiters of these systems are for the most part from the minority world. The regulatory bodies that control what can and cannot be done through encoding (and in extension, in programming, in software, and on the Internet) are rooted in Western values and interests, despite their global impact. Flammia and Saunders paraphrase Ess to make the case that “[c]ommunication technologies carry the cultural values and communication preferences of the cultures in which they originate; frequently, these values and preferences come into conflict with the indigenous Asian, Latin, and Arab cultures which receive technology.”³¹ These values are deeply embedded in the underlying structures, and technology exchanges are still largely one-sided, with minority world creators imposing value systems upon users from everywhere. As Mark Graham tells us in Young’s article, “[r]ich countries largely get to define themselves and poor countries largely get defined by others.”³² While he is speaking about the Internet, this can also be said for all information communication systems, beginning with encoding standards and working upwards. Rather than being an equalizer, information and communications technologies replicate imperialist power inequalities. Knowing the origins of encoding, it is clear that our

technologies obfuscate non-English languages, the speakers of these languages, and their lived realities.

Considerations

As previously discussed, many of the technologies we use were scaffolded in English; English and Anglocentric values are embedded in all facets of library systems. Rather than starting afresh, we can consider options to work with current systems in thoughtful ways. As mentioned in the introduction, Drabinski encourages us to explore and interrogate these flaws in our systems, an exercise which can yield rich results.³³

To change these systems requires money and time, two things of which many libraries do not have enough. I propose libraries do what is feasible; full systemic overhauls are unlikely. Hudson suggests that “global information inequality is [not] conceptually irredeemable, but rather...it is not innocent...it intersects with broader histories of colonialism...”³⁴ With this in mind, we may explore ways to mitigate the imperialism that is engrained in these systems.

First, Unicode must be fully integrated into all library software. This will create a more seamless language experience for users, though it does not address the issue of cultural imperialism. To that end, several authors recommend moving away from universality in favor of localized, customizable systems which can be better adapted to suit individual community needs.³⁵ This can be done in a number of ways. Adopting open source software is a solution for libraries. Many library information systems are created and operated by private companies. Open source software, in comparison, includes “free distribution, openly available source code, and permission for modification of software.”³⁶ By allowing modification to software, integrated library systems can be a collaboration between software developers and libraries. These information systems may be tailored to suit community needs in ways that proprietary software

cannot. Two examples of open source integrated library systems are Koha and Evergreen, both of which have been widely adopted around the world in many different types of libraries.³⁷ An option for archives is Mukurtu, a system designed for localized, relationship-driven access and management of archival materials.³⁸ Libraries should also work with vendors to ensure a wide array of materials are available. If this is not possible, libraries can look to alternative vendors to find materials. In any case, it is imperative that librarians advocate for their community's needs. Libraries can also turn to inspiration like the Xwi7xwa Library at the University of British Columbia, which uses the Brian Deer classification system.³⁹ This system focuses on indigenous knowledge organization, which highlights locality over universality. By building upon what has been created, libraries can create dynamic, localized systems appropriate for their own community's needs. As a native English speaker and member of the minority world, I acknowledge that there is hypocrisy in my offering recommendations to this particular issue and encourage others to take part in this conversation, looking particularly to marginalized voices already writing about these and interrelated issues.

Conclusion

I have given an overview of these issues in their own parts and together as a system of English and Eurocentric imperialism. For future research, I encourage deeper looks at each of these parts; I found many articles and books that focus on classification, cataloging, and the Internet, but little on encoding or library processes such as acquisitions or critiques of vendor offerings. Additionally, more work can be done to examine the embedded values systems in encoding from various critical perspectives.

As mentioned, there is ample literature about Eurocentrism and Anglocentricity on the Internet. Some authors have already begun the work in bridging the bias on the Internet to bias

seen in library information systems.⁴⁰ At this point in time, the Internet is as crucial a part of library functions as a card catalog once was. The issues we see in library technologies affect information technologies at large. Like ASCII, the Internet was originally written in English, for English-speaking users. This will become a larger issue as the languages profiles of online users change and the majority of users (eventually) will not use a Roman alphabet to communicate. As of April 2019, the fastest growing languages online are Arabic, Russian, Chinese, and Indonesian/Malaysian.⁴¹ In addition to speaking a variety of languages, these users also bring with them cultural values that do not always align with the values embedded in the Internet.

Looking at each of the aspects explored (namely encoding and acquisition, touching briefly on classification and the Internet) on their own, we can see issues with Anglo-centrism. Taken together, we can see each piece as part of larger, systemic problem. We will never be able to rewrite what has already been written; encoding standards, the Internet, and many software systems will always have begun in English. Rather than take this for granted or resign ourselves to this fact, we must continue to interrogate how the English language structures and informs our technology systems. However, we must be mindful that examining and even ameliorating these technological issues should not be considered a comprehensive solution. As Hudson discusses, we must be wary in conflating access to information and communications technology with equity and justice.⁴² Until technologies are able to serve community needs on that community's terms, we must continue to ask, on whose terms are these systems?

We can address English and Eurocentric hegemony by superimposing more open models of technology that fit our local needs, acknowledging that our communities are unique and heterogeneous. Open-source models that allow flexibility can improve many of these issues. By turning to models such as Mukurtu and Koha, we can improve our offerings and make our

systems more dynamic. Vendors also need to think outside what are considered standard (read: Euro- and Anglocentric) offerings to make our libraries more inclusive. Each of these steps, together or separate, are part of addressing our structural, systemic inequities which are produced and reproduced in libraries and societies as a whole.

Notes

¹ Emily Drabinski. “Queering the Catalog: Queer Theory and the Politics of Correction,” *The Library Quarterly* 83, no. 2 (2013): 94–111, <https://doi.org/10.1086/669547>.

² Ibid.

³ Melissa Adler. “The (De-)Universalization of the United States: Inscribing Māori History in the Library of Congress Classification”, In *The Organization of Knowledge: Caught Between Global Structures and Local Meaning* (chapter 3) (2017). doi:10.1108/S2055-537720170000011009; Drabinski, “Queering the Catalog,” and Hope A. Olson. “Sameness and Difference: A Cultural Foundation of Classification”, *Library Resources & Technical Services* 45, no. 3 (2001): 115-122, doi:10.5860/lrts.45n3.115.

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⁵ Olson, “Sameness and Difference.”

⁶ Adler, “(De-)Universalization,” 39.

⁷ Petzold, *Code*, 5.

⁸ “Unicode,” *Unicode*. 2019. <https://home.unicode.org/>.

⁹ András J. Reidlmayer, “Ghost Cataloging” and Other Tales of Degraded Access,” *Art Documentation: Journal of the Art Libraries Society of North America* 18, no. 1, (1999): 29-34, <https://jstor.org/stable/27948998>.

¹⁰ Madelyn Flammia and Carol Saunders, “Language as Power on the Internet.” *Journal of the American Society for Information Science and Technology*, 58, no. 12, (2007): 1899-1903, doi:10.1002/asi.20659.

¹¹ Christine L. Borgman, “Multi-media, Multi-cultural, and Multi-lingual Digital Libraries: Or How Do We Exchange Data in 400 Languages?”, *D-Lib Magazine*, (June 1997), <http://dlib.org/dlib/june97/06borgman.html>.

¹² Petzold, *Code*, 297.

¹³ Laura Tull and Dona Straley, “Unicode: Support for Multiple Languages at the Ohio State University Libraries,” *Library Hi Tech*, 21, no. 4, (2003): 440-450. doi:10.1108/07378830310509745.

¹⁴ Unicode.org.

¹⁵ Reidlmayer, “Ghost Cataloging.”

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ Myung-Jin Lee, *Ragnarök, vol 1: Eve of Apocalypse*, trans. R. A. Knaak (Los Angeles, CA: Tokyopop, 2002).

¹⁹ Judit H. Ward, “Notes on Operations Acquisitions Globalized: The Foreign Language Acquisitions Experience in a Research Library,” *Library Resources and Technical Services*, 53, no. 2, (2009): 86-93, doi:10.5860/lrts.53n2.86.

²⁰ Ward, “Notes on Operations,” 91.

²¹ Ward, “Notes on Operations.”

²² “WorldCat,” *OCLC WorldCat*, 2019, <https://www.worldcat.org/>.

²³ Adler, “(De-)Universalization.”

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- ³⁰ Ibid.
- ³¹ Flammia and Saunders, “Language as Power,” 1901.
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- ⁴⁰ Hudson, “On Dark Continents”; Noble, *Algorithms of Oppression*; Reidsma, “Algorithmic Bias.”
- ⁴¹ “Internet World Users by Language,” *Internet World Stats: Usage and Population Statistics*, November 11, 2019, www.internetworldstats.com/stats7.htm.
- ⁴² Hudson, “On Dark Continents.”

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