Reviewing Encyclopaedia Authority

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Abstract

As traditional encyclopaedias appear to be loosing the favour of the general public, the current paper investigates the extent to which encyclopaedias are still presented as authoritative texts. Here, authority in texts is mostly construed from the theory of cognitive authority according to Józef Maria Bocheński, Richard De George, and Patrick Wilson; in particular from their reflections on the roles, measures and bases of cognitive authority. The content of 80 book reviews on science and technology encyclopaedias is analysed in order to highlight comments pertaining to encyclopaedia authority. Although many aspects of cognitive authorities are covertly discussed within these book reviews, encyclopaedias are not explicitly presented as absolute authorities.

Keywords: Cognitive authority; encyclopaedias; book reviews

Introduction

Reference works such as encyclopaedias have always been one of the first materials to be consulted by the general public in the search for answers to their questions. In fact, Patrick Wilson (1983: 81) states that reference materials such as encyclopaedias often have 'absolute' cognitive authority, thereby implying that answers found in encyclopaedias are considered enough to settle the question. Unsurprisingly, encyclopaedias have traditionally held a prominent place on library shelves within households, schools and universities. However, since the boom of the Internet and with the arrival of *Wikipedia* and other online encyclopaedias, people have had the possibility to access a plethora of alternative resources which are in direct competition with printed encyclopaedias (e.g. Tenopir & Ennis 2001; Bradford et al. 2005; Lewis 2010). In fact, with the never-ending debate surroun-ding *Wikipedia*(e.g. Magnus 2009; Soylu 2009; Chen 2010), the authority of other encyclopaedias has started to be scrutinised (e.g. Bell 2007; Rector 2008; Younger 2010; Kubiszewski et al. 2011) and even well-established works such as *Encyclopaedia Britannica* have been vehemently criticised (e.g. Giles 2005).

The current paper investigates the extent to which, in the 21st century, encyclopaedias are still presented as cognitive authorities, especially in book reviews where recommendations on recent publications are offered to potential buyers and users. Eighty book reviews on science and technology encyclopaedias published between the years 2000 and 2010 are considered here. When, in a previous study, these book reviews had been analysed to assess encyclopaedia quality, it was hinted that these reviews may hold an underlying discussion around the theme of encyclopaedia authority (Rasoamampianina 2012). The content analysis I am undertaking here is intended to expose that underlying discussion. The main question I am addressing is: Beyond the reviewers' critical assessment of encyclopaedia quality, what is being said on encyclopaedia authority? The theoretical framework I am drawing on is firmly grounded on the literature on cognitive authority.

From Defining Cognitive Authority to Studying Encyclopaedia Authority

Initially, the term 'cognitive authority' was introduced to information studies by Patrick Wilson – a librarian, information scientist and philosopher – in his book *Second-Hand Knowledge: An Inquiry into Cognitive Authority* (1983). Wilson acknowledged that his concept of cognitive authority is based on the concept of 'epistemic authority' as defined by Józef Maria Bocheński and Richard De George. Bocheński was a logician who studied, among many other topics, the concept of authority. Bocheński mentioned cognitive authority in several publica-

tions (Bocheński 1963, 1965a, 1965b, 1989) and discussed it more thoroughly in his book *Was istAutorität? Einführung in die Logik der Autorität* (originally published in German in 1974 and translated into French by Secretan in 1979). De George is a philosopher who is currently studying political and moral authorities but who, in the past, dedicated a couple of papers to epistemic authority (De George 1970, 1976) as well as an entire chapter on 'The Authority of Knowledge and Competence' within his book *The Nature and Limits of Authority* (1985).

Other researchers have continued reflecting on the nature of cognitive authority (e.g. Peters 1965; Adams 1976; Chambers 1979; Watt 1982; Rieh 2005). Recently, there have been a growing number of researchers who used cognitive authority as theoretical framework for their empirical studies (e.g. Rieh & Belkin 2000; Fritch & Cromwell 2001; McKenzie 2003; Moed & Garfield 2004; Savolainen 2007; Hughes et al. 2010). Many researchers have also studied specific facets of cognitive authority such as trustworthiness, credibility, or reliability; and some of them have done so by focusing on the particular case of *Wikipedia* (e.g. Chesney 2006; Lackaff & Cheong 2008; Goodwin 2009; Magnus 2009; Francke & Sundin 2010; Lucassen & Schraagen 2010; Kubiszewskiet al. 2011). Because researchers commonly adhere to the general tenets of cognitive authority as outlined by Bocheński, De George and/or Wilson, the current paper mostly – but not exclusively – discusses cognitive authority according to these three philosophers. For the sake of consistency, the term 'cognitive authority' is used throughout this paper.

In non-specialist terms, a cognitive authority is an individual or an institution considered as 'an authority' on a particular subject, as opposed to an individual or an institution 'in authority' within a particular community (Peters et al. 1958; Young 1974; Green 1998). In the literature, cognitive authority is not only seen as the authority of people who 'have more knowledge than normal /.../ more knowledge than other people' (De George 1985: 27), people with 'superior knowledge' (De George 1976: 80) but it is also seen as the authority 'of one who knows better, i.e. of the expert in the field' (Bocheński 1965b: 167). Moreover, a cognitive authority is a person who is being actively sought after for insights and whose influences are being consciously recognised as 'proper' (Wilson 1983: 15). In other words, a cognitive authority is a person who is accepted to exert some form of intellectual ascendance over other people.

Although reference works such as encyclopaedias are often recognised as absolute cognitive authorities, the literature on cognitive authority tends to overlook the case of texts (and institutions) and concentrates more on the case of individuals. In fact, Bocheński (1989: 62) does not even accept that texts may hold authority. For him, the bearer of authority should be a conscious being, which is not the case with texts. Of course, all texts are written by individuals and it could be argued that it is the authority of these individuals which is transferred to the texts they author; yet Bocheński does not allow such a transfer. By contrast, De George

(1970: 200) writes that the bearer of authority could also be a text or other human artefact. Taking the example of reference materials such as encyclopaedias, De George (1985: 28) explains that, in theory, it is the author who is the authority on the topic discussed in the text, but, in practice, the author is often ignored by the readers who directly put their trust in the text. Wilson agrees with De George and further argues that there are cases where 'a text may acquire cognitive authority independent of the authority of its author' (Wilson 1983: 168). For instance, 'for the very naïve people, any publication may carry authority; the mere fact of something being said in print /…/ is enough to give it weight' (Wilson 1983: 81). In fact, even among the more educated people, a text which has been used by many or which has been used for quite some time can gain a reputation – hence an authority – of its own. Similarly, a published text which has gone through many revisions and re-editions can gain a reputation and authority to the extent that it may be 'thought of as an institution in its own right' (Wilson 1983: 169). This said, De George and Wilson only sporadically examine the authority of texts in their works. Because of this oversight, many of my reflections on the cognitive authority of texts are drawn from existing discussion around the cognitive authority of individuals.

In the current paper, I am revisiting three aspects of cognitive authority and analysing how these aspects are discussed within the book reviews on encyclopaedias in order to answer the following questions:

- Which of the roles of cognitive authorities are played by encyclopaedias?
- How is encyclopaedia authority measured?
- How is encyclopaedia authority justified?

Book Reviews on Science and Technology Encyclopaedias

A systematic sampling conducted on the *Elsevier'sScienceDirect* database on 31st March 2011 provided the 80 book reviews analysed in the current paper. From the list of journal articles published between the years 2000 and 2010 within the 'review article' category, those with the words 'encyclopaedia' or 'encyclopedia' in their title and those which pertain to science and technology topics were selected. As many as 75 out of the 80 reviews focus on printed encyclopaedias although some of these reviews also include brief comments on alternative formats. In three cases, the reviews focus on CD-ROMs and in two cases, on online encyclopaedias.

These 80 reviews concern 66 specialised encyclopaedias published by 27 publishers: a third of these titles are by Elsevier/Academic Press, a quarter by Wiley, and the remaining titles by other well-known publishers located in North America and Europe (e.g. CABI Publishing, Taylor and Francis, Chapman & Hall, Oxford University Press, or Cambridge University Press). Most of these titles are in their

first edition: there are only six titles in their second edition, two titles in their third edition and one title in its twelfth edition.

As many as 73 out of 80 reviews are signed, gathering up to 85 reviewer names altogether. Limited information is provided on who these reviewers are or how they got involved in the task of reviewing encyclopaedias. One reviewer reported that he is a journal editor who had failed to find suitable reviewers, three reviewers had been approached by the book review editors, and a handful of reviewers seem to be conducting book reviews for specific journals at regular intervals. Within my sample, reviewers are rarely involved in the writing of more than one review, as seen in 8 cases. More often than not, they are the sole author of their review, as seen in 61 cases.

The 80 reviews range from one paragraph comments to ten page essays. In general, reviewers' comments on the authority of encyclopaedias are interspersed throughout the text and – as described in the rest of this paper – very diverse in nature.

Roles of Encyclopaedias

Firstly, according to the literature, the principal role of a cognitive authority is not only to effectively communicate knowledge (Bocheński 1989: 61) but also to 'substitute the knowledge of one person in a certain field for the lack of knowledge of another' (De George 1970: 201). Secondly, a cognitive authority is expected to serve as a guide and source of advice (De George 1970: 201); thirdly, to influence the thinking of others (Wilson 1983: 14); and finally, to express informed opinions (Wilson 1983: 16-18). This last point combines the interpretation of current knowledge and the formulation of predictions beyond what is already known. In practice, it means that a cognitive authority should be able to (1) indicate the state of knowledge on a specific topic; i.e. tell whether the knowledge can be consi-dered as correct – or at least widely accepted – or not; (2) answer questions never asked before from the current state of knowledge; and (3) assist in times of uncertainties and controversies by weighting the various competing ideas, by indicating which ideas can be taken into consideration and which ideas can be ignored, and by suggesting how to deal with these competing ideas.

Within the 80 book reviews analysed in the current paper, comments on the role to be played by encyclopaedias are found in 32 cases. The majority of the reviewed encyclopaedias are reported to be playing only one or two roles at a time. Most roles suggested in the literature on cognitive authority are mentioned, even if the terminologies used by reviewers often differ. For instance, in relation to the principal role of cognitive authority, a handful of encyclopaedias are presented in a way that their chief goal seems to be the communication of existing information. Examples of such goals are: 'to present information' (Clements 2002: 106); 'to list every person, every event and every occasion that has some

bearing on [a subject]' (Williams 2001: 285); 'to provide a comprehensive collection of knowledge' (Sapidis 2005: 137); or 'to cover everything in a complex range of topics' (Kennedy & Jin 2005: 392). Some encyclopaedias are reported to be making more efforts than others by summarising the main ideas, by synthesising and organising existing knowledge logically, by ensuring both a broad and in-depth coverage, or by highlighting the links between interconnected ideas.

Regarding the role of encyclopaedias as guides and sources of advice, encyclopaedias are typically described as 'a reference' (e.g. Okamoto 2001: 212). More specifically, encyclopaedias are reported 'to provide a complete resource for research' (Kennedy & Bandaiphet 2003: 394), 'to direct the reader on to further specific topics' (Kennedy & Mistry 2003: 344) and 'to ensure that readers will be able to find accurate and up-to-date information on all major topics' (Emery 2003: 93). In several cases, encyclopaedias are presented as 'authoritative answers to perplexing questions' (Kennedy & Jin 2005: 392) or as 'an attempt of collecting a series of answers on the major issues in [a given science]/…/ so that the readers can receive rapid answers on the major questions' (Vercelli 2007: 60) and can 'more easily find answers to questions from their own desks' (Kennard et al. 2005: 201).

Some of the roles of cognitive authority are less commonly observed in encyclopaedias. For example, although most encyclopaedias are reported to aim for up-to-date information, the state of the knowledge presented within these encyclopaedias is rarely made explicit. Few reviewers talk about encyclopaedia entries with information which is presented as questionable or as a consensus according to the current state of knowledge within the scientific communities. One reviewer even complains that some of the entries within the *Encyclopedia of Atmospheric Sciences* should discuss existing uncertainties in the use of measuring devices and argues that

> knowing these uncertainties is critical to determining the bottom line. The answers to the aforementioned questions may be debatable, and we can no doubt have fun in discussing them. But they are necessary. /.../ Let that debate be resurrected. (Anonymous 2003: 317)

One role of cognitive authority, which is never explicitly discussed within reviews, is the intellectual influence that encyclopaedias may exert on their readers, although anecdotal evidence is sometimes provided. For instance, within the review of *The Concise Encyclopedia of Fibromyalgia and Myofascial Pain*, one can read: 'Anyone who may have been sceptical about the existence of these conditions is likely to think again!' (Rugg 2003: 622). Similarly, no one mentions the potential assistance provided by encyclopaedias in times of uncertainties and controversies as explained in the literature on cognitive authority.

Finally, there are three additional roles played by encyclopaedias which are not mentioned in the literature on cognitive authority but which are reported by the reviewers. These roles are: 'to share the excitement and to feed the curiosity of

others [on a subject]' (Lawler 2002: 135), 'to make jumping into [a new subject] highly accessible' (Griffin & Silliman 2009: 65), and 'to make [information on a subject] universally available at no cost to users' (Kennard et al. 2005: 201). Although important and legitimate, I would argue that these roles have limited relevance to the authority of encyclopaedias, except maybe by amplifying the attractiveness of the encyclopaedias for the public, thereby increasing the chance of the encyclopaedias to be chosen as the preferred reference materials.

Measures of Encyclopaedia Authority

The cognitive authority of a published text can be measured according to five parameters: the scope, the degree, the extent, the intensity and the sphere of authority. But before mentioning anything specific regarding the encyclopaedia under scrutiny, many reviewers start or end their review with qualifiers hinting at the perceived authority of the latter. Below are typical examples: 'a major publication' (de Silva 2002: 1241); 'a key reference work' (Edwards 2003: 279); or 'the most definitive text on…' (Carvel 2001: 185).

Scope of Authority

The scope of authority is defined from the range of topics and from the depth of treatment, which allows the communication of greater knowledge to the readers. When the range of topics covered is considered limitless, the scope of authority is immeasurable and one can talk about 'universal authority' (Wilson 1983: 20), though, only generic encyclopaedias – and some religious texts – may fall, if at all, within that category. In practice, the readers can relatively easily assess the scope of authority of a text by looking at the titles, tables of contents and indexes.

A close analysis of the reviews indicates that the scope of the encyclopaedia is mentioned in 57 reviews. Most reviewers simply present a quick run-through of the table of contents volume by volume, section by section, or chapter by chapter. Other reviewers provide an in-depth description of the major sections or even a detailed overview of the content of selected entries, which appear to be chosen at random or which fall within the domain of expertise of the reviewer. In a few cases, the reviewers assess the scope of the encyclopaedia by making a comparison with the content of other texts. For instance, Sparkman (2004) compares *The Encyclopedia of Mass Spectrometry* with other reputable reference works published in the last 50 years. More commonly, reviewers compare the consistency of the coverage within the encyclopaedia instead of comparing this latter with other texts. For instance, when assessing the scope of the *Encyclopedia of Soil Science*, it is reported that

> the treatment of soil biological and ecological issues is much less extensive than physico-chemical aspects of soil science. Of the more than 350 chapters, less than 30

are focused directly on biological issues, although there are biological and ecological inputs into many other chapters. (Edwards 2003: 279)

The scope of the encyclopaedia is deemed inappropriate for the targeted audience in only one case. That is when the reviewer of the *Encyclopedia of Hormones* criticises

The publishers have indicated in their publicity that this volume is designed to be read by non-endocrinologists. /…/ It is difficult to imagine an individual with an interest in introductory information over such a broad range of endocrine topics. Instead, it seems best suited for wider usage, for example, by a biology department or library as a first source of endocrine information. (Castracane 2003: 446)

In general, it is rare that reviewers offer some value judgment on the scope of the encyclopaedia they are reviewing.

Degree of Authority, Extent of Authority, Intensity of Authority

The degree of authority is another parameter used to measure the cognitive authority of a text. It is related to the probability of being believed or accepted by the readers. De George (1985: 20) talks about this in terms of extent of authority and intensity of authority. The extent of authority can be seen as a function of the number of people who are considering the text as an authority. A practical approach to capture the extent of authority is to refer to the number of people who are recommending the text to others. By contrast, the intensity of authority – also called weight (Wilson 1983: 13) or degree of seriousness (Wilson 1983: 17) – can be seen as the level of acceptance of that text among the people for whom it is an authority. This can be captured through an analysis of citation patterns where texts, which are most cited and endorsed by many people, are considered the most authoritative in the field. When all statements are unconditionally accepted, as was traditionally the case for encyclopaedias and religious texts, one can talk about 'absolute authorities' (Wilson 1983: 18).

I discovered that book reviewers do not really provide a detailed assessment of the degree, extent, or intensity of authority of a given encyclopaedia according to the approach described above. Only the extent of authority is sometimes discussed but in very broad terms since no number is provided. The most detailed assessment I found within my sample is the report made on *Anaesthesia and Intensive Care A to Z: An Encyclopaedia of Principles and Practice*, when the reviewer recounts

Many of our anaesthetists, ODPs, theatre nurses and paramedics have gone out and bought the book after 'borrowing' my copy in the operating theatre. That fact speaks for itself! (Greenslade 2000: 93)

In the task of assessing the extent of encyclopaedia authority, some reviewers refer to the experience of people around them, as illustrated in the quote above. One alternative adopted by other reviewers is to refer to their own experience, past or future. For instance, reflecting on the past, Greenslade (2000: 93) recalls that, in

his department, '[*Anaesthesia and Intensive Care A to Z: An Encyclopaedia of Principles and Practice*] was attracting the same sort of attention normally reserved for a new Ferrari in the car park' whereas Enser (2006: 182) confesses: 'In my student days, many years ago, I would have appreciated a work such as [the *Encyclopedia of Meat Science*].' Projecting in the future, Dorr (2001: 189) claims: 'I intend to use the MITECS [*MIT Encyclopedia of the Cognitive Sciences*] extensively over the next several years and will make parts of the volume required reading for students in my classes.' Finally, instead of referring to personal experience or to the experience of other people, a couple of reviewers opt to invite the individual reader to imagine his or her own experience with the encyclopaedia. A typical example can be seen in Fisher's (2009: 535) comment: 'You may want to keep [*Epilepsy A to Z: A Concise Encyclopedia*] near your clinic office to pull down on behalf of a patient who is befuddled by a particular medical term.' In fact, a common way to provide a measure of the extent of authority is to speculate on the possible impact the encyclopaedia may have on a larger audience. Such speculation can be based on the encyclopaedia's potential to provide unique contributions or to fill a knowledge gap within a discipline – arguments which both are used by Okamoto (2001) regarding the MITECS and its contribution to the field of artificial intelligence. The extent of authority can also be inferred from the timeliness of the publication, as argued by Kennedy and Jin (2005) regarding the release of *The Encyclopedia of Grain Science* at a time when cereals are playing paramount roles as a global food source. It should, however, be noted that, when reviewers are speculating on the extent of the authority of an encyclopaedia, many of them make vague and unfounded statements which could eventually fail to provide any useful indication for the readers.

Sphere of Authority

One last way of measuring cognitive authority is through what Wilson (1983: 19) calls 'the circumscribed spheres of authority' which combine the scope of authority and the intensity/weight of authority. According to this concept, each text covers a well defined range of expertise within which the influence exerted on the readers is at a maximum –that is within the core of the sphere of authority– and as the text ventures away from this core, its influence decreases. But precautions have to be taken when measuring the sphere of authority because the range of expertise offered within a text and the information sought by the readers do not always overlap. For instance, the readers may be looking for answers outside the stated scope and sphere of authority of a given text; or the readers may only be looking for answers on only one or two topics whereas the text may have a much wider scope. So, 'it is finally for the audience to decide on the scope or the sphere within which it would value the authority's words' (Wilson 1983: 20).

Surprisingly, although many reviewers within my sample define the scope of an encyclopaedia, few of them actually make the distinction between the topics

which are within the core of the sphere of authority and those at the periphery. Among those who do, Windley (2006), for instance, specifies that among the strong points of the *Encyclopaedia of Geology* are entries on Southeast Asia, Pan-African Orogeny, or Brazil whereas the weaker points are entries on Central Asia, China and Mongolia, and Japan. Typically, topics outside the core of the sphere of authority consist of entries with perceived gaps and shortcomings.

In order to grade the weight of different topics within the same encyclopaedia, some reviewers prefer to classify topics according to various audiences with different centres of interest and levels of expertise. This is what Kemeirait (2006) does when he subdivides the content of the *Concise Encyclopedia of Plant Pathology* into sections of great importance for professional plant pathologists, sections for college students, and sections for gardeners and other people generally interested in plants. More generally, some sections may simply be inappropriate for a certain type of readers whereas other sections may be more 'interesting' (Williams 2001: 285), 'fascinating' (Petrie 2010: 215), etc. This last point is related to the 'level of attractiveness' of a text, which I am discussing in a later section of this paper.

Justifications for Encyclopaedia Authority

Wilson provides a detailed analysis of the basis of authority in texts. He identifies five major ways whereby the public justify their choice of a given text as their cognitive authority on a specific topic.

Reference to the Authority of Authors and Editors

The public primarily rely on the authority of the authors. If a given author is considered as an authority in his or her field –because the public intuitively or rationally believes it to be the case (Bocheński 1989: 62), because the public refers to the author's formal education and diplomas, occupational specialisation, professional experience, and reputation among experts (Wilson 1983: 21-22), or because of many other reasons (De Georges 1985: 34-42) – then the text that the author writes is authoritative. And considering the similarities between the tasks performed by authors and editors, if the latter are considered authorities in their fields, then the texts that they produce are equally authoritative.

Reviewers within my sample seem to pay particular attention to the authors' occupational specialisations, professional experiences and reputations, as seen in 36 cases. Typically, a headcount of the experts involved is provided along with a breakdown of their area of expertise and their country/region/institution of origin. At times, the credentials of the editors and those of the members of the editorial board are also specified. Reviewers also seem to care about the number of people involved in the development of the encyclopaedia under scrutiny, as seen in 38

cases. In general, great number, high level of expertise and high diversity of authors and editors are considered a guarantee for authority; there are, however, a few reviewers who disagree. Van Loon (2006), in particular, complains that, in the case of the *Encyclopaedia of Geology*, having a 26-person advisory board on top of an editorial panel is counter-productive because it jeopardises the balance in topic coverage and hinders the control of incoming manuscripts.

Reference to the Authority of Publishers and to the Publishing History

Reference to the authority of the publisher is sometimes used by the public to assess the authority of a given text because some publishers are known to be 'big producers of works of high quality' and 'the winners of the struggle for recognition of cognitive authority' (Wilson 1983: 45-46). In fact, 'a publishing house can acquire a kind of cognitive authority, not that the house itself knows anything, but that it is thought to be good at finding those who do and publishing their work' (Wilson 1983: 168). In other words, because a publisher is known to work with many authors who are authorities in their fields, it is assumed that any text from the same publisher would also be written by authors of similar calibre. But in the process of assessing the authority of a text, the public also refer to its publishing history. Indeed, 'the issuance of several successive editions and translations serves as an indirect test of authority, counts as an extraordinary accomplishment, since for most texts the first edition is also the last' (Wilson 1983: 168). The underlying argument is that a text, which is translated or reprinted, must be highly demanded by the public, possibly due to the superiority of its content; and a text which is re-edited must be a better, or at least an updated, version.

   Within my sample, the name of the encyclopaedia publisher is typically provided in the title of the book review, along with other information necessary to identify the encyclopaedia under scrutiny (the title, the name of the authors, the year of publication, etc.). However, the publishers' credentials are never specifically discussed in any part of the review. By contrast, the development process and the publishing history of the encyclopaedia attract more attention. In particular, the amount of time and effort needed for the development of an encyclopaedia is readily mentioned. Yet, it is unclear which is preferable: 'a collection which represents over 40 years of labour,' as Buster (2001: 1249) reports on *The Encyclopedia of Visual Medicine*, or 'an encyclopaedia which was written and published under two years,' as Clements (2002: 106) reports on *The Encyclopedia of Arthropod-Transmitted Infections of Man and Domesticated Animals*. The case of reprints and re-editions is clearer in that reviewers seem to value them. They readily mention not only the date and number of reprints and re-editions but they also typically provide information pertaining to the success and authority of the earlier versions. For instance, regarding *Anaesthesia and Intensive Care A-Z: An Encyclopedia of Principles and Practice*, it is explained that 'the first edition became so popular that reprints were made in 1996 and 1997' (Tang 2000: 297), and that

'the latest edition has a lot to live up to as its forerunner is well established as a fundamental anaesthetic guide, but [it is believed] it will achieve this comfortably' (Jones & Columb 2004: 300). Some reviewers also particularly insist on specifying the rate of update as well as the amount of change in content between reprints and re-editions. Talking about the *Encyclopedia of Virology*, Desselberger (2009: 140) for instance explains that 'the third edition has been prepared nine years after the second edition and has been updated substantially, commensurate with the enormous amount of new data in all areas of virology and increasing the size of the work from 3 to 5 volumes.'

Something which is related to the publishing history and found within a couple of book reviews but which is not explicitly mentioned in the literature on cognitive authority is the possibility for some encyclopaedias to be modelled on other authoritative works. For instance, Fisher (2009) reports that *Epilepsy A to Z: A Concise Encyclopedia* was derived from the well-known *Dictionary of Epilepsy*. Although not stated explicitly, reviewers seem to be of the opinion that part (if not all) of the authority of the model is expected to be passed on to any text which derives from it.

Reference to the Recommendation from Other People and Institutions

Another strategy commonly used by the public in the process of choosing which text to consider as a cognitive authority is the reference to the recommendation from other people which are already recognised as cognitive authorities (parents, teachers, etc.), or not. A book reviewer – and by extension the reviews he or she writes, such as those analysed in the current paper – offer indirect recommendation on which text to consider as cognitive authority. However, it is crucial to check who the reviewer actually is because

> if the reviewer already has cognitive authority for us, his review constitutes a personal recommendation (or not). If we are given sufficient information about the reviewer, along with the review, we may be able to arrive at an estimate of his authority. If the reviewer is unknown, his judgment may mean nothing, while if he is an anti-authority, unreliable and wrong, his praise may be fatal to the works he reviews. (Wilson 1983: 168)

As a general rule, only recommendations from experts should matter (Wilson 1983: 68), along with the recommendations from librarians (Wilson 1983: 165-196) as the latter know how to recognise cognitive authorities from practice and from principles already widespread within their profession. Additionally, recommendations from reputable institutions –which Wilson (1983: 168) refers to as 'institutional endorsements'– can be accepted. Typical examples are the case of texts published by a governmental agency or by a state printer and the case of texts sponsored by a learned society or by a professional organisation. Even the award of a prize to a text (or to its author) or the use of a text as a textbook in an educational institution can be seen as forms of institutional endorsement.

In 74 out of the 80 reviews from my sample, reviewers warmly recommend the purchase and the use of the encyclopaedias under scrutiny despite the fact that the latter are often reported to contain flaws and shortcomings. There are only three cases where reviewers do not recommend the encyclopaedia and one case where the reviewer does not provide any form of recommendation at all.

Although reviewers sometimes talk about the experience of other people with the encyclopaedia under review, they never report of any direct recommendation from these people, or from librarians. Also, out of 80 reviews, only the one written by de Silva (2002) refers to some form of institutional endorsement. In this case, an institution – the American Psychological Association – is mentioned to be collaborating with a publisher – the Oxford University Press– on the publication of the *Encyclopaedia of Psychology*; however, no additional detail, which could be used to get a better picture of the potential authority of this encyclopaedia is provided. Obviously, the readers are expected to know that the American Psychological Association is a prestigious institution within its field. This expectation is legitimate since the review is published in a journal for American psychologists; otherwise, the implication of the involvement of this institution in the development of this encyclopaedia would be lost on the readers. This is also the only case where the name of the publisher is mentioned in the core of the review. Because American psychologists also probably know of the Oxford University Press, the publisher's reputation can contribute towards establishing the authority of the encyclopaedia, as explained in earlier section of this paper.

Reference to the Genre

It is possible to find cognitive authority without any reference to the people who are writing, publishing or recommending a particular text. Wilson (1983: 184) explains that authority can be implied when the text belongs to a genre already recognised as authoritative, which is the case for all reference works. Then, the public only needs to check whether the text actually respects widespread expectations on the genre or not.

In the majority of the reviews within my sample, there is a description of the encyclopaedia under scrutiny (in particular the size, the layout of the text, the appearance of the illustrations) even if the length and amount of details provided vary from one review to another. A few times, adherence to common expectations, norms and standards within the world of encyclopaedias is also hinted. For instance, Bianchi Porro (2006: 70) writes: '*As expected*, all the articles are arranged in a single alphabetical reference by title/…/ article titles begin with the keyword or phrase indicating the topic, followed by any generic term,' and immediately adds: 'Articles are arranged *in a standard format* starting from title, glossary, defining statement, body of the article, cross-references and further reading' (emphasis mine). It is explained that 'the readers are immediately looking for a 'standard look and feel' ' (Kennard et al. 2005: 206). When widespread expecta-

tions, norms and standards are not respected, encyclopaedia authority is swiftly questioned, as clearly illustrated in the following comment:

> Is the *Encyclopedia of Soils in the Environment* really an encyclopaedia? Any layman would probably say yes looking at the four glowing red covers with gold lettering– that is certainly how an encyclopaedia should look. But when considering the length of an entry, it is doubtful as the average entry is a mini-review or article of about 8 pages, and not a concise and informative 300-word piece of information. (Hartemink 2006: 240)

Test of Time, Test of Intrinsic Plausibility, Test of Contentment

As a way of recognising cognitive authority, Wilson (1983) suggests three additional tests which the public can apply. Firstly, there is the test of time whereby the public is assessing whether the text was published within a relatively acceptable period. This test highly depends on the topic as, in 'conservative sciences,' the rule is: the older the better; whereas in 'progressive sciences,' it is the total opposite. Secondly, there is the test of intrinsic plausibility which consists of a rapid assessment of a brief excerpt of the work. This test not only refers to the perceived plausibility of the content but also takes into account key characteristics such as the school of thought, the theoretical framework, or the research paradigm. We can use our background knowledge of and expectations on the topic to help us assess the work. In practice, the rule is simple:

> If the sample of text we read strikes us as nonsense, we are unlikely to continue; if it seems eminently sensible, we may read on. (Wilson 1983: 169)

Finally, the last test for recognising cognitive authority – which Wilson (1983: 169) calls 'a test of credibility' but which I would call 'a test of contentment' – is to ask: 'Need I look further or can I take this source as at least provisionally settling the matter?' In practice, we generally start by evaluating whether whatever text already available to us seems authoritative enough for our taste. If the text fails to directly respond to and amply satisfy our needs, only then would we search until we find something of satisfactory quality.

Nothing on the test of time, as explained above, is mentioned in the 80 reviews within my sample. By contrast, the test of plausibility and the test of credibility/contentment seem to be embedded within the quality assessment that reviewers conduct on the encyclopaedias. Large portion of book reviews are dedicated to detailed quality assessment of the entire encyclopaedias, of specific sections, or of specific entries. In this process, the reviewers pay the greatest attention to the quality of the content by focusing – in decreasing order of frequency – on the completeness and informativeness; on the currency, clarity, objectivity, reliability and accuracy; and finally on the stability and representativeness of the information provided. This last parameter – which I define as conformity with the general expectations regarding encyclopaedias, as well as conformity with conven-

tions specific to the subject field – combines the test of the genre and the test of plausibility mentioned earlier in this paper.

Regarding the test of plausibility, reviewers often compare the content of encyclopaedias with what is commonly discussed within the scientific community. Two examples can be given as illustration. On the content of *The Encyclopedia of Mass Spectrometry*, it is written:

> *As one might expect*, much of the subject matter of Chapter 10 involves reactions of carbanions/…/. *Logically enough*, the topics of ion chemistry are divided into three chapters: Chapter 8 on neutralization and charge reversal; Chapter 9 on positive organic ion chemistry; and, Chapter 10 on negative organic ion chemistry. (Wilkins 2004:I, emphasis mine)

Similarly, on *The Encyclopedia of Arthropod-Transmitted Infections of Man and Domesticated Animals*, it is explained:

> This book follows the convention that parasites and pathogens can be transmitted by vectors, and that infections also can be transmitted in that way, but that diseases, even infectious diseases, are not 'transmitted'. (Clements 2002: 106)

Regarding the test of credibility/contentment, firstly, there are a few cases where reviewers actually present the encyclopaedias under review as a direct response to an active demand from the public. For instance, Carr (2001) talks about the encyclopaedia as a timely effort in that the publication occurs at a time when the topic covered is of great concern for the public, thereby implying that the latter is actively looking for texts on the matter. In fact, even reviewers acknowledge that it should not be taken for granted that the public would always be looking for the information offered within encyclopaedias. Castracane (2003: 446) reports for instance on the *Encyclopedia of Hormones*: 'It is difficult to imagine an individual with an interest in introductory information over such a broad range of endocrine topics.' Secondly, there are other cases where reviewers claim that the encyclopaedia under review amply satisfy the public's need, For instance, de Silva (2002: 1242) presents the encyclopaedia as 'a first place to look up a topic, and as a source that points one towards further reading' whereas Sparkman (2004: 763) claims that the encyclopaedia 'will save countless hours of searching through many references,' i.e. the readers would be so satisfied that they would not need to look for other texts.

Attractiveness as a Way of Increasing Encyclopaedias' Chance of Becoming Cognitive Authority

Before concluding this paper, I would like to comment on one aspect of texts which – as far as I am aware – is not explicitly discussed by neither Bocheński, De George, nor Wilson, but which is repeatedly mentioned in book reviews. I am referring to what I call the 'attractiveness' of a publication. A particular work is not only attractive because it may provide the readers with the information needed

to understand a given topic, it is also considered attractive because of the writing style, the graphical illustrations, the general appearance or the external packaging. It could be argued that these features not only grab the readers' attention, but they also provide pleasant feelings during the reading and encourage the readers to read further, even on topics they may not have been looking for. For encyclopaedias, which have the widespread reputation of being boring and forbidding despite enclosing invaluable knowledge, attractiveness contributes to hold the readers' attention long enough until the value of the information presented permeates the readers' mind and convinces them of the authority of the work as a whole. Some of the features mentioned above may be used primarily by authors to improve the informative value of a given publication and by publishers to increase the market price; but I would argue that they may also be used by the public as one of a number of pragmatic steps towards finding authoritative texts even they may not be considered as a legitimate basis on which authority should be grounded.

In fact, attractiveness is a feature of text, which is often discussed by researchers who study information trustworthiness and credibility. For instance, Teun Lucassen and Jan Maarten Schraagen(2010) indicate that, in general, the longer a text and the higher the number and quality of relevant images used as illustration, the greater its chance of being trusted. Helena Francke and her collaborators (2011) add that it is generally considered better if the text is well structured and if the publication is in print rather than in digital format. Obviously, no universal rule can be set as the same feature of a given publication may be perceived differently based on the individual reader's expectations in a given situation. Indeed, there are cases where long and detailed texts can deter the readers (Lackaff & Cheong 2008), complex images can have little impact (Richman & Wu 2008), and online materials can be more attractive than books (Biddix et al. 2011).

In as many as 78 out of 80 reviews within my sample, there are descriptive comments pertaining to the attractiveness of encyclopaedias: on the clarity and arrangement of the text, on the number and aesthetic value of the illustrations, on the quality of the typography and the binding (in the case of printed encyclopaedias), or on the user-friendliness (in the case of digital and online encyclopaedias). For example, it is written regarding the *Encyclopedia of Geology*:

> My first reaction when I inspected the set of books was: 'What a [sic] beautiful books.' They are well bound, very well printed and the illustrations (the book is fully printed in four colours, but there are, of course, some black-and-white photographs and drawings) are almost all attractive... (van Loon 2006: 134)

Reviewers readily praise these encyclopaedias, which are pleasing to the eyes, but they also seem to value those, which appear serious and have an air of authority. By contrast, any shortcoming may adversely affect the way the encyclopaedia is perceived by readers, as illustrated by the comment on the *Chemical Engineer's Condensed Encyclopedia of Process Equipment*:

> After receiving this book for review I started browsing through it and that gave me an as yet unidentified bad feeling. Then I started reading some entries /…/, although it remained difficult to pinpoint what the real problem was I had with the book. /…/ The book contains a lot of illustrations to elucidate the text, but most of them are of very bad quality. This is where my son helped me out: a lot of illustrations have apparently been picked from other publications and have been adapted in size and/or form to fit the space. This has led to distorted equipment (ellipses instead of circles) and gives the impression that process equipment is full of ellipsoidal rotors, pulleys, vessels, etc. (van der Meijden 2001: 338)

Some reviewers seem more eager than others to talk about the attention-grabbing potential that encyclopaedias may have, as illustrated by Lawler's account of his experience with the *Encyclopedia of Marine Mammals*:

> There is the value of the unexpected things that one stumbles upon by curiosity and find attractive: I began reading (sampling) the book by first looking for articles by authors of whom I know. One of the first of these was Tim Gerrodette, who wrote the 'Tuna-Dolphin Issue' section. Despite my intention to turn directly to that section, my eye was continually caught by other interesting sections. I took well over two hours to get to the Tuna-Dolphin section, steps along the way including diving physiology, surveys and feeding strategies and tactics. (Lawler 2002: 135)

In general, most reviewers simply use very warm and expressive words to point to the potential emotional response a text may rise in the readers: 'An absorbing read!' (Petrie 2010: 215), 'This was fascinating' (Lord 2006: 125), 'Included is a long chapter entertaining as a novel and addressing everybody' (Skovgaard 2008: 213), 'It certainly will make any reader discover the amazing history of /…/' (Modi 2008: 356), 'Most readers will be surprised to discover that /…/' (Wanamaker & Grimm 2004: 1275), etc.

Concluding Remarks

In addition to pointing out the influence of attractiveness in increasing the chance of encyclopaedias of becoming cognitive authorities, the analysis of the 80 book reviews conducted in the current paper indicates that book reviewers generally offer a very detailed – albeit sometimes rather concealed – discussion on encyclopaedia authority. Firstly, regarding the expected roles played by cognitive authorities, encyclopaedias are portrayed as valued reference materials, which effectively inform and guide the public.However, they are sometimes criticised for failing to provide clear information on the state of knowledge, particularly in the case of uncertain and controversial topics. Moreover, the intellectual influence that encyclopaedias may exert on the public (if any) is almost never explicitly acknowledged. Secondly, regarding the measure of encyclopaedia authority, the scope of encyclopaedias is often greatly described; whereas only incomplete assessments of the degree, extent and intensity of encyclopaedia authority are provided, often through alternative and somewhat imprecise methods. Finally, regarding the basis for encyclopaedia authorities, the majority of the tests generally prescribed to jus-

tify authority in texts are found in book reviews. There are many comments pertaining to the credential of encyclopaedia authors and editors, to the rigor of the development process, to the timeliness of the publishing history, to the plausibility and credibility of the content, to the adherence to widespreadnorms and standards within the genre, and to the degree of contentment of the readers with the work; but nothing on the test of time. Overall, book reviews tend to present encyclopaedias as invested with less authority than in their traditional image of absolute authorities.

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