AN APPRAISAL OF REFERENCING STYLES IMPORTANCE AND HIERARCHY OF NUMBERS IN LEGAL RESEARCH

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INTRODUCTION

Referencing styles and hierarchy of numbers are indispensable components of the research process. They are imperative for the researcher to know and note in any scholarly research work, otherwise the whole essence of the entire study will be defeated, misrepresented and unacceptable. The referencing styles utilized by the researcher in his or research is solely dependent on the stipulated academic institution. I will proceed to evaluate referencing styles and hierarchy of numbers as essential areas of research in a concise ,descriptive, explanatory, narrative practical manner with useful examples. I wish you happy reading and better understanding research work.

Referencing

There are several styles of referencing in the process of writing theses, essays and project works. They include the Harvard system of referencing, the Modern Language Association style (MLA), the classic, etc. Whichever the student uses will depend on preference by his institution, department or establishment.

General Rules of Citation

Repeating Citations

1. **Id.** (i). Use Id. not Ibid. (ii). Id. may be used whenever a citation is to be *immediately preceding* authority. Any variation between the previous and present footnote must be indicated. e.g. 1. A.V.B., [1973] 2 O.R. 1. 2. Id. at 10. (iii). Where the reference is to a parallel citations, the short form should be parallel as well. e.g. Id. at 20 (S.C.R.); 65 (D.L.R); 9 (C.C.C.).

2. **Hereinafter** Where subsequent reference is made to any *secondary* material, provided 'Id.' should not be used, shortened form making reference to the author(s) and, if need be, the date may be used, provided its use is indicated in the original footnote. The date is used where there are other references to different works of the same author. e.g. J. Day, *A tramp in the American woods* (9th ed. Cleveland: Hough Street Press, 1965 [hereinafter day (1965)])

3. **'Infra' and 'Supra'**

(i) Infra' is used to refer to portions of the text or footnotes which come *after* the present footnote. e.g. 15. see text, infra, at 365.[1]

(ii) Where reference is made to a work by a contributor in a book edited by another, the citation is as follows: (a) The name of the author of the work; (b) The title of the work in quotations (not underlined), followed by a comma inside the second quotation mark; (c) And the word 'in' followed by the proper citation for a book with an editor. e.g. F. Nugan, Pre-Incorporation Contracts‖, in J. Ziegel, ed., *Canadian Company Law* (Toronto: Butterworths, 1967) at 197.

(iii) For the contributors to Law Society Special Lectures, the journal will use the following style: M. Gorsky, The Landlord and Tenant Amendment Act, 1968-69. Some Problem of statutory Interpretation‖ (1970) LSUC Special Lectures 443 at 449.

Periodicals

1. The full citation

   (i) The author's name (one initial, as with books) followed by a comma. If no author is shown, use the form of designation in the journal.

   (ii) The title of the article in italics.

   (iii) Parentheses enclosing the date of publication.

   (iv) The volume number (where there is one). If a journal does *not* have individual volume numbers, substitute the date in *square brackets*.

   (v) The abbreviated name of the periodical. e.g. Can B. Rev.; Osgoode Hall L.J.; Yale L.J; U. of T.E.J. Examples: H.P. Green *Nuclear Power: Risk Liability and Indemnity* (1973), 71 Mich. L. Rev. 479. H.W.R. Wade, *The Basis of Legal Sovereignty* (1955) Camb. L.J. 172. *Industrial Due Process and Just Cause for Discipline* (1958-59), 5 U.C.L.A.L. Rev. 603

[1]*Legal Research Methodology and Project Writing II,* nou.edu.ng/sites/default/files/2018/04/JIL%20448%20main%20Course, accessed 21 -06- 2019.

(vi) Where non-legal periodicals are cited, they should be cited using the legal format. e.g. A.P. Thornton, *The Sound of Running History* (1973) International Journal 591.

2. The following are examples of citations from other periodicals

(i) A piece from a magazine Henning Cohen, ―Why is Melville for the Masses‖, *Saturday Review*, 16 August 1969 at 19-21. Irving Howe, ―James Baldwine At Ease in Apocalypse‖, *Harper's* Sept., 1968 at 92.

(ii). A report from a daily newspaper. Boston Herald, Oct. 14, 1954 at 6, Col. 1.

(iii) A signed article (but not ad a news report) from a newspaper. Brittan, ―Tory Radicalism‖. *The Times* (London), July 1954 at 7, Col. 6.

(iv) A book review is cited by the name of the reviewer. A. Linden. *The New Wright: A Magnificent Triump* (1971), 4 Liberal Newspaper 24.

Supra is used to refer to portions of the text or footnote. e.g. 76. See, *Supra*, note 23 at 223-29. With *supra*, if the name of the case, book, or article cited earlier appears in the text, you need not repeat it. e.g. 14. *Supra*, note 8 at 15 If the name of the authority to be cited for the second time is not in the text, you indicate it. e.g. 14. Alli v. Rotimi, *Supra*, note 4/15. Cheshire and Fifoot, *supra* note 12. Do not use *supra* or *infra* to refer to statutory material. The full citation must be repeated unless it immediately precedes the present citation. *Supra* and *infra* may be used to refer to groups of cases or statutes. e.g. 22. See cases cited note 11, *Supra* 23. See discussion pp. 22-27, *infra* Note – The first time a case is named in the text, the name must be printed in full with the full citation in the footnote. Subsequent references to the case may be by the name of one of the parties or an established popular name, no citation is necessary if the reference is within the general discussion of that case.

Referring to Sub-Divisions in Material Cited

1. *Reference to the Total Work:* A reference to an entire case, article etc. gives only the beginning page of the authority. e.g. 65 D.L.R. (2nd) 21.

2. *Reference to page Number(s):* (i). When referring to a particular page, give both the beginning and reference pages (unless this is a situation where 'Id.' can be used). (ii). Use 'at' to refer to a page, not the abbreviation 'p' e.g. W.R. Jackett, *The Federal Court of Appeal* (1973) 11 Osgoode Hall L.J. at 255-57.

Signals and Parentheticals

1. No signal: Cited authority directly supports statement in text.

2. *Accord:* Cited authority directly supports statement although facts are different. The use of 'accord' is most frequently appropriate when two cases are directly in point but the text quotes from or states the facts of the cases; citation of the other would be introduced by 'accord.' Similarly, the law of one jurisdiction may be cited as in accord with that of another if the law is exactly the same.

3. E.g. (when used in combination with other signals, preceded by a comma). There are other examples but citation to them would not be helpful

4. See Cited authority constitutes basic source material supporting an opinion or conclusion of either fact or law drawn in a textual statement. It indicates that the asserted opinion or conclusion will be suggested by an authority rather than that the opinion or conclusions is stated by the cited authority.

5. *Cf.:* Cited authority supports a statement, opinion, or conclusion of law different from that in text but sufficiently analogous to lend some support to the text.

6. Compare…with… Authorities cited, taken together and offer some support for statement in text

7. *Contra:* Cited authority directly contradicts statement although facts may be different 8. But see Cited authority strongly suggests a contrary proposition (N.B. but should be dropped from all contrary signals following the first).

9. But *cf.:* Cited authority supports a position different from the statement in text, but sufficiently analogous to it suggest a contrary conclusion.

10. See generally Cited authority is broader in scope than, or develops a question analogous to discussion in text without lending support to proposition asserted, but can profitably be compared with it.

11. *Loc. Cit:* Cited authority is in the same passage referred to in a recent note, when other references have intervened (used sparingly).

12. *Op. cit:* Cited authority is on a different page of a work recently noted (used sparingly)

13. *ff:* Cited authority continues on pages following that cited.

Using Footnotes or Endnotes

The footnotes or endnotes serve two purposes namely, the identification of materials used in quotations in the report and the notice of materials not immediately necessary to the body of the research text but still of supplemental value. In other words, footnotes or endnotes are meant for cross references, citation of authorities and sources, and elucidation or explanation of a point of view. Footnotes or endnotes are also used primarily to avoid plagiarism and to acknowledge the source of your information -- not only direct quotations, but also specific facts and opinions. Another usage is to make incidental comments upon your source or to amplify textual discussions, i.e., to provide a place for material which you consider essential, but which would disrupt the normal flow of the text. The rule is that all statements of particular opinion which are not original with you, and all facts which are not common knowledge, must be noted. Notes may either be placed at the bottom of the page (footnotes) or gathered together on a page or pages at the end of the text (endnotes). For the reader, it is more convenient to use footnotes.

A. **How to Footnote or Document Research**

To avoid a long series of references to the same work, especially in reports on a single book, page numbers may be given in parentheses immediately after quoted material. The edition used must be described fully in an initial footnote, however. Similarly, if a source is clearly indicated in the text, and fully cited in an initial footnote, it may be redundant to footnote a succession of subsequent quotes.

B. **Footnote Numbers**

Footnotes should be numbered in one series or consecutively through an entire paper or report, except in a thesis, where each chapter contains its own series of footnotes. At the footnote of the page, again, the footnote number should be indented. Indicate the place in your text by an Arabic numeral, placed immediately after the passage or quotation to which it refers, and raised slightly above the line. Footnotes/endnotes should always be single-spaced, though they are divided from one another by double space. If more than one source is cited, each citation should be separated by a semicolon.

C. **Difference between Footnote and Bibliographic Form**

It is important to note that bibliographic form differs from footnote form in several respects. Whereas in a footnote the author's name is given in its normal order (first name first), in a bibliography the authors' names are listed alphabetically by surname. Also, both punctuation and indentation in a bibliography differ from what is found in footnotes.

The References

Bibliography

References or bibliography-contains details of all the books, articles, reports and other relevant works you have directly referred or consulted during your research in your thesis or report. Bibliographies should contain three sections; table of Cases, Table of laws, and other Bibliographic Materials. The Table of cases should contain judicial decisions listed according to country (or international jurisdiction). The countries should appear in alphabetical order. Within each country, the judicial decisions should be listed in alphabetical order according to the name. If a decision has no name, but is cited as Decision, the word "decision" should be treated as the title for purposes of the bibliography; if there is more than one such case they should be listed according to date.

The form in which a judicial decision is listed should be exactly the same as that of a full citation, except that it is not necessary to state the name of the country in parenthesis since the cases are already classified by country. Also, where the decision appears in a publication containing more than that decision, refer only to the page on which the decision begins.

The Table of laws should be organized in the same manner as the table of Cases; that is by country or international jurisdiction and in alphabetical order, and in the same form as a full

citation. Particular articles or sections, etc... should not be cited. Where the law appears in a publication containing more than that law, refer only to the page on which the law begins.

The section containing other bibliographic material should be organized alphabetically according to the name of the author or editor, according to the title. Interviews should be listed according to the word "interview." The form in which the material is listed is the same as for a full citation (including, for books and government documents and reports, the name of the publisher and the place of publication), with the following exceptions. The first initial of a European author should follow the surname, separated from it by a comma. If there is more than one volume in the set, specify the total number of volumes and not the particular volume or volumes of which use was made. Specify the years of publication, inclusive, of all volumes of the set. (This exception, of course, does not apply to magazines and journals.)

When listing books, documents, etc., do not give a reference to a particular page, article, chapter etc; refer only to the book as a whole. However, when listing articles in journals, magazines, books or newspapers, refer to the page on which the article begins. If more than one work by the same author is cited, a long dash is used in place of the author's name when the second and later entries to that author's work are cited.[2]

Examples of Bibliography:

A. **Table of Laws**

Foreign

i. Income Tax Act, 1952, **Halsbury's Statutes of England** (2d ed.) Vol. 31,as amended, Finance Act, 1953 vol. 33, p. 114 and, Finance Act,1960, vol. 40 p. 423.

ii. Tanganyik Independence Act. 1961. **Halsbury's Statutes of England** (2d ed.) , vol. 41, p. 176.

Ethiopia

i. Law of companies of 1933 (unpublished, Archives, Faculty of Law, Addis Ababa University)

ii. Income Tax proclamation, 1961, proc. No. 173, **Neg. Gaz**., year 20, no. 13.

iii. Federal Civil Servants Proclamation, 2007, Art. 18, Proclamation No. 515, **Federal. Neg.Gaz**.. year 13, no.15

[2]Prof (Dr) Khushal Vibhute &Filipos Aynalem, *Legal Research Methods*, chilot.wordpress.com

iv. Council of Ministers Regulation to provide for the Functioning of Ethics Laison Units, 2008, Regulation No. 144, **Federal Neg.Gaz**., year 14, no.12 ostage Rates Regulations, 1961, Leg. Not . No. 245, **Neg, Gaz**., Year 21,no.2.

France

i. Decree No. 56-83 of Nov. 15, 1950 Dalloz, 1956, legis.,p. 490

B. **Table of Cases**

Ethiopia

i. Belete Belaineh v. Public Prosecutor (Sup. Imp. Ct., 1962**), J.Eth.L.,** vol.1,p.162

ii. H.V.A. Ethiopia v. The Inland Revenue Department (High ct., Addis Ababa, 1962), **J.th.L.,** vol.2, p.66.

iii. Zenash Bekele v. Haregewoin Bekele (Federal Supreme Court, 2007, Civil Cassation Case No.18394) (unpublished).

iv. Teffera Gizaw v. Menna Bekelech (High Ct., Addis Ababa, 1965), **J.Eth.L**., vol.2, p.81.

France

i. Brionnet (conseil d'Etat Dec 21, 1960) Dalloz, 1961, Jurisp., p. 391.

ii. Schauer c.Chom de fer du Midi et Riviere (Cour de cassation Feb 6 1924), Da loz Heb., 1924, p.161.

Germany, Federal Republic

i. Decision of Reb. 12, 1952 (Fed. Sup. Ct.) **Entscheidungen des Bundesgerichtsrofes in Strafsachen**, vol. 2, p. 150, translated in G. ueller, **Materials on comparative criminal Law** (New Your, New York University School of Law, 1960), p.75.

Nigeria

i. Akinwande Thomas v. Oba Alalyeiuwa Ademola (Su. Ct., 1945), N**eria L. Rep** Vol 18, p12

ii. Mallam Musama Labaran v. B. Shonibare (Div. Ct., 1937), **Nigeria L. Rep., vol** l.13, p. 122.

C. **Other bibliographic Materials**

1. **Books**

a. A book with one author.

Jones, W.T. A History of Western Philosophy. New York: Harcourt, Brace & Co., 1952. [Because a bibliographic reference identifies the whole book, rather than a specific part, page numbers are unnecessary.

b. A book with two or more authors.

Bushnell, David, and Neill Macaulay. *The Emergence of Latin America in the Nineteenth Century*. Second edition. Oxford: Oxford University.

In legal research, the most widely used citation guide is The Bluebook: A Uniform System of Citation. The Bluebook employs the use of footnotes, as opposed to parenthetical references usually seen in APA and MLA style.[3] When writing a paper with a lot of references to legal materials such as laws, court cases, and legislative materials, you are strongly advised to consult the Bluebook.[4]

On the other hand, if writing a paper in APA, MLA, or Chicago style, each of them contains a dedicated section on citing legal materials. The Bluebook: A Uniform System of Citation, a style guide, prescribes the most widely used legal citation system in the United States and the world in general. The Bluebook is compiled by the Harvard Law Review Association, the Columbia Law Review, the University of Pennsylvania Law Review, and the Yale Law Journal. Currently, it is in its 20th edition. It is called the blue book because of the colour of its cover.[5]

Generations of law students, lawyers, scholars, judges, and other legal professionals have relied on The Bluebook's unique system of citation in their writing. In a diverse and rapidly changing legal profession, The Bluebook continues to provide a systematic method by which

[3]Hurt, C., *The Bluebook at Eighteen: Reflecting and Ratifying Current Trends in Legal Scholarship*, 2007, 82 IND. L.J. 49, 51-52.
[4]Chisholm, A., The Bluebook: A Uniform System of Citation, 20th Edition. 2015.
[5]Sora, J. W. (2003). American Psychological Association (APA) Citation Style (author-date format). J.W. Sora (ed.). Random House writer's reference. New York, USA: Random House, Inc.

members of the profession communicate important information to one another about the sources and legal authorities upon which they rely in their work.

Also, the AUSTRALIAN GUIDE TO LEGAL CITATION (AGLC) is another guide that is used when referencing legal researches. When submitting a piece of academic work, you must properly acknowledge the sources of information that you have used in your research. You must reference your sources whenever you quote, paraphrase, or use someone else's ideas or words.[6]

Using this system, acknowledgement is in the form of:

- Footnotes: Citations in the body of the page, using a superscript (raised) number placed after the relevant text, which refers to a footnote listed at the bottom of the page.
- Bibliography: Provided at the end of the paper, this gives detailed information about each source featured in the footnotes, as well as details of the other sources consulted in preparation of the assignment.

There are also other different referencing styles though not particular to legal research which includes:

Documentary Note Styles

In documentary note styles (documentary-note citation systems), references are given in footnotes or endnotes. The notes are indicated by digits, which then recur with the full reference at the bottom of the page (footnote) or after the entire text (endnote). The digit is usually placed after the full stop ending the sentence to which the reference belongs.

Oxford and MHRA are documentary note reference styles.

Example:

The following example comes from an article about China during the Cultural Revolution in a journal called Politics, Religion & Ideology.

Example:

When he launched his great pre-emptive stab at the spectre of revisionism in 1966, Mao did so by playing the 'mass' card. China's Minister of Public Security, close to Mao at the time and speaking about the so-called 'vanguard of the masses' – Beijing's Red Guards – told police officers in August 1966 not to:

[6]Melbourne University Law Review Association (2010). Australian Guide to Legal Citation, Third Edition. Melbourne University Law Review Association in collaboration with Melbourne Journal of International Law Inc, Melborne.

say it is wrong of them to beat up bad persons: if in anger they beat someone to death then so be it. If we say it is wrong then we'll be supporting bad persons. After all, bad persons are bad, so if they're beaten to death it is no big deal![5]

But who were the 'masses'? How could one tell them apart from what, in a different discursive realm, would have been identified as the 'anti-masses'? Four months later, Kang Sheng – a member of the Politburo Standing Committee described by his foreign biographers as Mao's 'evil genius'[6] – spelled out the heuristic rule-of-thumb to be employed to tell the apparent from the real 'masses': 'Whoever opposes [CCP Vice-Chairman] Lin [Biao] or Chairman Mao is a counter-revolutionary. They are not the masses, but the enemies of the masses'.[7]

[From endnote section of the article:]

5. Beijing shi huaxue gongyeju jiguan hongse xuanchuanzhan, ed. *Wuchanjieji wenhua dageming ziliao* (*Materials on the Great Proletarian Cultural Revolution*), 4 vols (Beijing, 1966), Vol. 2, p.192.

6. John Byron and Robert Pack, *The Claws of the Dragon: Kang Sheng – The Evil Genius Behind Mao – and His Legacy of Terror in People's China* (New York: Simon & Shuster, 1992).

7. Shoudu dazhuan yuanxiao hongweibing daibiao dahui Zhengfa gongshe, ed., *Zhongyang fuze tongzhi guanyu wuchanjieji wenhua dagemingde jianghua*(*Speeches by Responsible Comrades from the Centre on the Great Proletarian Cultural Revolution*), 2 vols (Beijing, 1967), Vol. 2, p.109. (Schoenhals, 2008, pp. 4, 16-17)

In this style of referencing, references are indicated by superscripted numerals and the full references are then given in endnotes. The numbered reference style used by this journal is presented on their website:

Parenthetical Styles or Author-Date Styles

In parenthetical, or author-date styles, in-text references are given within parentheses before the full stop of the sentence containing the reference.

APA, Harvard, and MLA are parenthetical reference styles.

Example:

The example below comes from an article in *Advances in Cognitive Psychology* about music performance anxiety in young musicians.

Example:

Osborne and Kenny (2005a) also found that MPA [Music Performance Anxiety] was more specifically related to social anxiety than trait anxiety with stronger positive correlations between the MPAI-A and social phobia measures than MPAI-A and trait anxiety. Results on the Social Phobia Anxiety Inventory for Children (SPAI-C; Beidel et al., 1998) indicated potentially higher rates of social phobia diagnosis (between 6% and 21%) than those found in most adolescent community samples (between 1% and 2%) (Anderson, Williams, McGee, & Silva, 1987; Essau, Conradt, & Petermann, 1999; Kashani & Orvaschel, 1990; Maroon, 2003). (Kenny & Osborne, 2006, p. 107)

When using the parenthetical reference system, APA is used. Last names of authors of works referred to plus their publication year are provided in parenthetical references. A list of references, where full bibliographic details are given, is then supplied at the end of the article.

Numbered Styles

In numbered styles, sources are referred to with Arabic numbers within square brackets or in superscript, and the references are listed in a numbered reference list after the text. References are numbered in the order in which they first appear in the text.

Vancouver and IEEE are numbered styles.

Example:

The example below comes from the IEEE Transactions on Biomedical Circuits and Systems. It is the opening of an article about loudspeakers for digital hearing aids.

Example:

Previous studies of anatomy, physiology, and psychophysics have contributed to a growing curiosity about normal versus impaired auditory systems [1]–[3], attracting the benefits of hearing aids for the hearing impaired [4], [5]. Approximately 28 million Americans have hearing impairments. Hearing loss affects nearly 17 in 1 000 children under the age of 18, and the incidence increases with age: nearly 314 in 1 000 people over age 65 have hearing loss. According to recent statistics, however, 80% of those who could benefit from a hearing aid chose not to use one. The reasons for the number of untreated cases include reluctance to recognize hearing loss and common misconceptions about hearing aids, such as a social stigma to wearing them. People find hearing aids inconvenient, and some accept that losing hearing capability is a part of aging, known as presbycusis [6], [7].

[From References:]

[1] L. Squire, H. Schmolck, and S. M. Stark, "Impaired auditory recognition memory in amnesic patients with medial temporal lobe lesions," *Learning Memory*, vol. 8, no. 5, pp. 252–256, 2001.

[2] C. Duncan, "Psychophysics and psychology hearing," *Amer. J. Psychol*., vol. 92, no. 2, pp. 377–379, 1979.

[3] B. Moore, "Psychophysics of normal and impaired hearing," *British Med. Bull*., vol. 43, no. 4, pp. 887–908, 1987.

[4] J. Dianne, "Hearing loss, speech, and hearing aids," *J. Speech Hearing Res*., vol. 36, pp. 228–244, 1993.

[5] P. Kricos, S. Lesner, and S. Sandridge, "Expectations of older adults regarding the use of hearing aids," *J. Amer. Academy Audiol*., vol. 2, pp. 129–134, 1991.

[6] G. Gates and J. Mills, "Presbycusis," *Lancet*, vol. 366, no. 9491, pp. 1111 1120, 2005.

[7] J. Cohen-Mansfield and J. Taylor, "Hearing aid use in nursing homes. Part 2: Barriers to effective utilization of hearing aids," *J. Amer. Med. Dir. Assoc*., vol. 5, no. 5, pp. 289–296, 2004.

(Je, S-S, Rivas, F., Diaz, R. E., Kwon, J., Kim, J., Bakkaloglu, B., Kiaei, S. & Chae, J., 2009, pp. 348, 357)

This reference style is provided in the form of Arabic digits within square brackets. The full references are then listed (in the order in which they appear in the text) at the end of the article. On the journal's website, instructions for authors are available. The reference style used in this example is IEEE.

What is Referencing?

- Referencing is also called as citation.
- Referencing can be defined as a method of acknowledging and recognizing someone for his or her innovative work that you used in you research to back and support you idea.
- A reference usually includes the name of author, date of publication, name and location of the publishing company, title of the journal or name of the book, title of the research or chapter’s name, and DOI (Digital Object Identifier)
- In your document, referencing is done at two levels; first you need to give a brief reference in the body of text called as “in-text citation”, and secondly a detailed reference is provided at the end of the document in the form of a list.

What are the Purposes of Referencing?

- Referencing has become a necessary element of academic writing.
- It is used to locate the original source of work so that everyone may access the material and understand it in his/her own way.
- Another purpose of it is to fight with plagiarism

HISTORY OF NUMBERS

A number is a mathematical object used to count, measure, and label. The original examples are the natural numbers 1, 2, 3, 4, and so forth. A written symbol like "5" that represents a number is called a numeral. A numeral system is an organized way to write and manipulate this type of symbol, for example the Hindu–Arabic numeral system allows combinations of numerical digits like "5" and "0" to represent larger numbers like 50. A numeral in linguistics can refer to a symbol like 5, the words or phrase that names a number, like "five hundred", or other words that mean a specific number, like "dozen". In addition to their use in counting and measuring, numerals are often used for labels (as with telephone numbers), for ordering (as with serial numbers), and for codes (as with ISBNs). In common usage, number may refer to a symbol, a word or phrase, or the mathematical object. Numbers can be classified into sets, called number systems, such as the natural numbers and the real numbers.[7]

Hierarchy of Numbers

In mathematics, a hierarchy is a set-theoretical object, consisting of a preorder defined on a set. This is often referred to as an ordered set, though that is an ambiguous term that many authors reserve for partially ordered sets or totally ordered sets. The term pre-ordered set is unambiguous, and is always synonymous with a mathematical hierarchy. The term hierarchy is used to stress a hierarchical relation among the elements.

A mathematical hierarchy (a pre-ordered set) should not be confused with the more general concept of a hierarchy in the social realm, particularly when one is constructing computational models which are used to describe real-world social, economic or political systems. These hierarchies, or complex networks, are much too rich to be described in the category Set of sets. This is not just a pedantic claim; there are also mathematical hierarchies which are not describable using set theory.

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[7]Matson J., "The Origin of Zero". *Scientific American*, www.scientificamerican.com/article/history-of-zero/ accessed on 21 -06- 2019.

One of the harder things to understand and appreciate about numbers is that they form a hierarchy. Just like all trout are fish, all fish are vertebrates, and all vertebrates are animals, all natural numbers are integers, all integers are rational numbers, and all rational numbers are real numbers. On the other hand, just like some fish aren't trout, some real numbers aren't rational, some rational numbers aren't integer, and some integers aren't natural numbers. For some reason this tends to be very confusing, but it's just like saying that all women are people, but some people aren't women. (The same goes for men, of course, and then there are kids too.) Never mind the people, but you need to understand this language, and be prepared to give examples of the various types of numbers.

Importance of Hierarchy of Numbers in Legal Research

1. **It is comprehensive and precise**. West attorney-editors index cases into more than 400 topics and 98,000 points of law, enabling you to quickly find other cases that address your exact legal issue – in any jurisdiction.
2. **It helps you search for legal concepts**. Legal research is often a hunt for principles or concepts not easily retrieved with literal word searches. The Key Number System identifies and indexes legal concepts so you can find cases stating or applying a legal concept, even if those terms aren’t in the opinion.
3. **It helps you find what you need faster**. Easily identify on-point Key Numbers by browsing or searching the outline on Westlaw Next. Or, click on Key Numbers inside documents to quickly locate cases with the same or similar legal concepts and principles.
4. **It is current and accurate**. As the law evolves so does the West Key Number System. Each year, we make hundreds or even thousands of changes – adding new Key Numbers for emerging topics and reclassifying expanding areas of the law. Plus, it’s completely integrated with KeyCite®, so you’ll know the cases you rely on are still good law.

CONCLUSION

We have seen that references are filled with details of all the books, articles, and other vital works the researcher directly referred or consulted during his/her research in the dissertation, thesis or report. References and bibliographies should contain three sections; table of Cases, Table of laws, and other Bibliographic Materials. Number are mathematical objects used to count, measure, and label. The original examples are the natural numbers 1, 2, 3, 4 and so on. Numeral systems are an organized way to write and manipulate this type of symbol. Numbers can be divided into sets, called number systems.

Hierarchy is a set-theoretical object, made of a preorder defined on a set. Hierarchy is used to emphasize and depict a hierarchical relation among the elements in an ascending or descending way. Nonetheless, referencing styles and hierarchy of numbers are important tools for researchers.