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## **Finding bias in geography textbooks**

### **A proposed case study**

#### **Introduction**

The paper outlines proposed methods of determining bias and the meaning of this bias in selected geography textbooks used at the secondary level in the United States. The proposed examination is an interdisciplinary approach that touches upon both geography and education. Specifically, this proposal examines an issue within geography education, a subfield within geography. My research question is: how do authors represent Mexico? Such an interdisciplinary approach is unconventional within geography, which traditionally has examined the physical features of the Earth or the people and cultures that inhabit it.

The purpose of this essay is to outline the contours and lay the foundation for future work along the geography/education interface using a nontraditional, qualitative method, the case study. This essay reviews prior research, and provides a series of proposals as to how to examine the ways in which Mexico has been represented in United States' secondary-level geography education over the last 160 years. This research aims to determine how Mexico and Mexicans have been represented within the larger historical context of US-Mexican relations. Salvucci has examined how Mexico and

Mexicans have been represented in U.S. History books, but no similar study of geography textbooks has been undertaken.<sup>1</sup> Mexico, with its estimated 99 million inhabitants,<sup>2</sup> is the United States' closest neighbor to the south. Given its size, importance and proximity, Mexico is increasingly being represented to Americans through images and information produced by the media. Using a longitudinal content analysis of secondary school geography textbooks published in the United States, this examination will reveal how geography textbooks and their authors have treated Mexico and Mexicans over time. It is hoped that the proposed methodology and subsequent research will aid present and future geography textbook authors by exploring an example of how minority groups have been represented. The field of geography and the subfield of geography education is aided by this proposed research by providing methodology through which other countries and larger world regions can be examined.

### **Different research methods**

The proposed research method for this study is the case study. Creswell defines case studies as 'the exploration of a "bounded system" or a case (or multiple cases) over time through detailed, in-depth data collection involving multiple sources of information rich in context.'<sup>3</sup> Using the case study method, selected geography textbooks will be analyzed for their content on Mexico. Research methods involved in textbook analysis may be

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<sup>1</sup> Salvucci, Linda K. (1991) 'Mexico, Mexicans and Mexican Americans in secondary school United States history textbooks.' *The History Teacher*, 24 (2): pp. 203-22.

<sup>2</sup> This figure is taken from 2000 data. United States Department of Commerce, United States Census Bureau (2003) *2000 international data base*. Washington D.C.: United States Department of Commerce.

<sup>3</sup> Creswell, John W. (1988) *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks: Sage Publications.

quantitative or qualitative. Some researchers, according to Beck and McKeown, state: 'if you can't count it, it doesn't count,' implying a reference to quantitative research.<sup>4</sup> While Larkins, Hawkins and Gilmore state that, 'qualitative reviews of texts are more informative.'<sup>5</sup> Beck and McKeown further state that qualitative research can help in textbook analysis by providing a representation of the extent of the concept or situation: 'Qualitative information can enrich qualitative work.'<sup>6</sup> The methodology should be selected such that it gives the researcher the most revealing and productive information about the topic being investigated.<sup>7</sup> Both quantitative and qualitative research methods can be used to 'reveal' and 'produce' relevant information to represent Mexico and Mexican in United States geography textbooks.<sup>8</sup> Quantitative methods can reveal how many pages, paragraphs, lines, and words used to describe Mexico and Mexicans. However, qualitative methods, such as content analysis can provide actual statements that the authors use in describing Mexico and Mexicans, thus providing the reader with detailed examples.

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<sup>4</sup> Beck, Isabel L. and Margaret G. McKeown (1991) 'Substantive and methodological considerations for productive textbooks analysis.' In: James P. Shaver (ed.) *Handbook of research on social studies teaching and learning*. New York: Macmillan, pp. 496-512.

<sup>5</sup> Larkins, A.G., M. Hawkins and A. Gilmore (1987) 'Trivial and noninformative content of elementary social studies: A review of primary texts in four series.' *Theory and Research in Social Education*, 15 (3): pp. 299-311.

<sup>6</sup> Beck and McKeown, 1991.

<sup>7</sup> Ibid.

<sup>8</sup> Ibid.

### **Different types of content analysis**

Krippendorff argues that content analysis is a research technique used to provide knowledge and new insights, a representation of the facts and a practical guide to action. Content analysis is a tool which produces results that may be replicated by other researchers following similar research techniques.<sup>9</sup> Misulis states that content analysis can be a way to investigate what is taught by teachers and learned by students.<sup>10</sup> White argues that content analysis can be used by teachers to develop a substantial knowledge framework to analyze social studies textbooks for a lack of objectivity and substantial knowledge.<sup>11</sup> White further argues that the framework for analysis consists of three overarching ideas that link topics or concept together within the text:

1. Look for the presence of the conceptualization of big ideas, such as the articulation of an overall scheme, major concept being studied, or the selection of the topic that gives meaning to the text.
2. Connections between the big idea or major concept and the supporting ideas and concepts. Does the author support his or broad assertions with complex ideas and concepts?
3. Elaboration of the big ideas in the text. Does the author use a verbal richness that enhances the topic by providing specific details that support local facts?<sup>12</sup>

Beck and McKeown argue that content analysis should include extensive examples of the text under investigation.<sup>13</sup> In a textbook analysis, the researcher must provide abundant examples of his or her treatment of the situation being examined. Examples give details that provide meaning to the analysis of the situation, be it positive, neutral or negative. Commentaries are required for the researcher to develop an explanation as to why a

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<sup>9</sup> Krippendorff, Klaus (1980) *Content analysis: An introduction to its methodology*. Beverly Hills: Sage Publications.

<sup>10</sup> Misulis, Katherine (1997) 'Content analysis: A useful tool for instructional planning.' *Contemporary Education*, 69 (1): pp. 45-47.

<sup>11</sup> White, Jane J. (1988) 'Searching for substantial knowledge in social studies texts.' *Theory and Research in Social Education*, 16 (2): pp. 115-40.

<sup>12</sup> Ibid.

<sup>13</sup> Beck and McKeown, 1991.

textbook has been judged adequate or inadequate in helping students to learn the concept or situation. The researcher must explicitly articulate his or her thinking about the concepts or situation being reviewed. This can be difficult because the researcher is so aware of the problem being studied that he or she may not be able to articulate it in a way that others can understand. The researcher must also analyze his or her own thinking about what in the text caused him or her to make certain judgments, and spell out the reasons for these judgments. If the researcher, while conducting the content analysis, finds bias in the content being researched, then examples of the bias should be included in the discussion.<sup>14</sup>

### **Present study and research questions**

Beck and McKeown argue that there are benefits to both quantitative and qualitative research methods. In the present study, a combination of both quantitative and qualitative methods will be used. Three questions serve to guide the research:

1. How is Mexico represented in the text? Does the author present any biases, either in favour or against Mexico? If biases are found, what words are used? How many times are these words used?
2. How has Mexico been represented graphically and visually in geography textbooks over the last 160 years?
  - A. How much detail of Mexico is included spatially? Are cities included? If so what cities? What physical features are included if any?
  - B. What are the dimensions of the map in the textbook?
  - C. What visual material or illustrations are provided to enhance knowledge of Mexico?

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<sup>14</sup> Beck and McKeown, 1991.

3. Do the above change over the 160 years examined in this study? If so, what is the trend towards altered representations of Mexico? What explicit examples be provided of these changes?

Eight significant periods in US-Mexican history have been selected as potential influences upon the representation of Mexico in secondary school geography textbooks.

These eight periods include:

1. 1840 to 1846, the era of the Mexican-American War
2. 1861 to 1865, United States Civil War
3. 1896 to 1900, the Spanish-American War
4. 1910 to 1918, World War I and the Mexican Revolution,
5. 1916 to 1917, Pershing's expedition into Mexico
6. 1920 to 1938, the Good Neighbor Policy
7. 1940 to 1963, the era of the Bracero Program, 'Operation Wetback', McCarthyism and Camelot
8. 1970 to the present, the era of 'free trade', pre- and post- NAFTA

The eight time periods represent major events in the history of US-Mexican relations. The eight periods will be used as guidance for the selection of geography textbooks. However, because of the historical nature of this study, some books selected might not fit rigidly into all eight periods.

## Instrumentation

To determine the representation of Mexico in United States geography textbooks at the secondary level, a two-dimensional matrix will be used to keep information in an orderly fashion (see Appendix A). One dimension of the matrix relates to the second research question, with space for a listing of cities and physical features, and for the size of the map, which will be measured by its height and width in inches. The other dimension of the matrix will have space for the first research question, with room for biased terms; a count of the most used terms; the total number of words and paragraphs; and whether it is Mexico on its own, or Mexico in the context of Latin America, that is represented. To determine an author's bias, a technique developed by Pratt will be used.<sup>15</sup> Pratt developed a method to determine the overall favourable or unfavourable percentage of textbook material on a given subject, relying partially on a list of key words.

Pratt noted that since World War II research had been conducted on how minorities are represented in textbooks, suggesting that prior research did not assess the author's attitudes as represented in the textbooks. As a result, he developed a percentage score that indicates the extent of the textbooks' favourable or unfavourable evaluation of minority groups. The creation of a percentage score allows a comparison of different authors and textbooks. Pratt stated that research involving content analysis has its roots in World War II and the examination of propaganda material generated by both the Germans and Japanese. This propaganda analysis called for the isolation of certain key words and counts of their frequency. Content analysis allows the researcher to discern precisely what attitudes or values are expressed in communication. Textbooks are a form of communication that are carefully written, edited, and selected by schools: textbooks represent a distillation of information that society seeks to communicate to students.<sup>16</sup>

To evaluate textbook bias, Pratt created Evaluation Coefficient (ECO) Analysis. Pratt used a refined the Evaluation Assertion Analysis produced by Osgood, Saporta and

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<sup>15</sup> Pratt, David (1972) *How to find and measure bias in textbooks*. Englewood Cliffs: Educational Technology Publications.

<sup>16</sup> Ibid.

Nunnally in 1956, several times before producing the ECO Analysis instrument.<sup>17</sup> In writing textbooks, authors communicate their attitudes, which include value judgments. A writer's attitude or value judgment as expressed in the textbook can be determined by first listing all the evaluative terms used to describe a group. The terms used by the author can then be labelled as favourable, unfavourable or neutral. The percentage of favourable and unfavourable terms used, as compared with the total, can then be determined.<sup>18</sup>

Pratt's ECO Analysis does not analyse illustrations, maps, or pictures, which can help distort of the image of a minority group. However, the text accompanying the illustrations, maps, or pictures may be evaluated using ECO Analysis. Pratt originally outlined twenty-one steps for using his ECO Analysis. Of these, fourteen were critical in conducting this research. Those steps were:

1. Define the sources to be analysed.
2. Define the subject of interest completely enough so as to leave no doubt.
3. The analyst should practice to become familiar with the procedure, scoring and how to resolve inconsistencies.
4. Peruse the source for references to the subject. Each time a favourable or unfavourable word is used record it on the score sheet. This analysis should be slow and careful. Problems with analysis occur when words are omitted.
5. Words that are merely descriptive should not be included.
6. Evaluative terms can be applied in a positive or negative way and should not be overlooked.
7. Terms should be listed as adjectives, nouns, and participles.
8. A cardinal rule in analysis is never to violate the original meaning of the word.
9. Be careful of the use of irony.
10. Statements directly and indirectly quoted should also be counted.
11. A total of the favourable and unfavourable terms will be compiled.
12. Calculate the coefficient of the evaluation:

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<sup>17</sup> Osgood, C.E., S. Saporta and J.C. Nunnally (1956) 'Evaluative Assertion Analysis.' *Litera*, 3: pp. 47-102.

<sup>18</sup> Pratt, 1972.

- a. Multiply positive terms by 100.
  - b. Add the total positive and negative terms.
  - c. Divide the two scores.
  - d. Score will range from 1 to 100 with 50 being neutral.
  - e. A minimum of ten terms is needed to determine any biases.
13. Count the terms most frequently used to describe the subject.
14. Final analysis, count the number of words and lines devoted to the subject.<sup>19</sup>

The validity of the ECO Analysis is evaluated by a counting of the frequency of words with expressive value judgments that are applied in communication such as written text. The utility of ECO is supported by a survey of Canadian textbooks between 1969 and 1971 which analysed the text for favourable or unfavourable views of English and French Canadians.<sup>20</sup> Pratt's results revealed that French Canadians were more favourably portrayed than were English Canadians. Pratt, to determine reliability of the ECO Analysis, trained four graduate students in the use of the ECO Analysis procedures. The correlations coefficients among the ratings of all four graduate students yielded a mean reliability of .947. The correlation coefficients for pairing of responses between two graduate students resulted in a reliability mean of .973. A delayed re-test of the graduate students, yielded a strong test – re-test reliability of .755.<sup>21</sup>

#### Matrix of words

To determine if a word is favourable or unfavourable Pratt examined Osgood, Saporta, and Nunnally's 1956 study.<sup>22</sup> Osgood, Saporta, and Nunnally weighted words or assertions with an attitude value. The weighting of the value of the words, according to Pratt, was arbitrary and thus the instrument produced different scores when applied by different people. Pratt drew 293 words from the 1000 most commonly used words

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<sup>19</sup> Ibid.

<sup>20</sup> Ibid.

<sup>21</sup> Ibid.

<sup>22</sup> Osgood, Saporta, and Nunnally.

considered by Thorndike and Lorge<sup>23</sup> to be evaluative, either favourable or unfavourable. Pratt then conducted an analysis of the 293 words to determine if, in fact, the words were unfavourable, neutral or favourable. Pratt had 40 students in the eleventh and twelfth grades examine the words in conjunction with 40 graduate students. Pratt chose eleventh and twelfth graders because they are the ones most likely to encounter the words in their textbooks. Each group's ratings of the words were given a score, from +1 (favourable), to 0 (neutral) to -1 (unfavourable). The scores for each word were combined and the sum classified as favourable, neutral or unfavourable. In the cases where the two groups differed as to whether a word was neutral or evaluative, the word was classified as neutral. Pratt notes that this occurred for only eight words.<sup>24</sup> A matrix of Pratt's words that will be used in the present study are in Appendix B.

### Identifying biased words

To examine if words are biased, or can be considered to be biased, there are no fixed rules.<sup>25</sup> Prejudicial, racial or slang words can carry an ethnic bias or involve controversial or confusing usages.<sup>26</sup> Bias, for the purposes of this study, means a personal and/or unreasonable distortion of judgment, or in other words, prejudice. Being biased has, as its behavioural manifestation, exhibiting characteristics of bias.<sup>27</sup> Allport notes that the meaning of the term 'prejudice' has changed over time. At first it was considered 'a judgment based on previous decisions and experiences', but it then changed to take on the 'emotional flavour of favourable or unfavourableness that accompanies such a prior and unsuccessful judgment'.<sup>28</sup> Allport further adds that prejudice can be defined simply as 'thinking ill of others without sufficient warrant'.<sup>29</sup>

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<sup>23</sup> Thorndike, E.L. and I. Lorge (1944) *The teacher's word book of 30,000 words*. New York: Teacher's College Press.

<sup>24</sup> Pratt, 1972.

<sup>25</sup> Herbst, Philip (1997) *The color of words: An encyclopedic dictionary of ethnic bias in the United States*. Yarmouth: Intercultural Press.

<sup>26</sup> Ibid.

<sup>27</sup> Mish, Frederick C., E. Ward Gilman and Hubert P. Kelsey (1986)(eds.) *Webster's ninth new collegiate dictionary*. Springfield: Merriam-Webster.

<sup>28</sup> Allport, Gordon W. (1954) *The nature of prejudice*. New York: Addison-Wesley Publishing.

<sup>29</sup> Ibid.

Pratt examined textbook authors' biases because textbooks traditionally have been a primary method of instruction, and author's biases can be reflected in their writing. Students, according to Pratt, are likely to develop prejudicial attitudes from the content of their textbooks. Authors, argues Pratt, who may not directly use obviously biased or prejudicial terms, may instead express value judgments through certain uses of other terms. As he explains:

'The writer of a history textbook, for example, may feel a responsibility to accurately record the fact that all the Americans fighting at the Alamo were killed by the Mexicans; but he has no obligation to say that the Mexicans slaughtered, massacred, or murdered the Americans.<sup>30</sup> The terms slaughtered, massacred, and murdered are terms that incorporate a value judgment about the behavior of a particular group at the battle of the Alamo.'<sup>31</sup>

As Herbst states there are no hard-and-fast rules for defining bias.<sup>32</sup> But Herbst did attempt to create a dictionary of biased words.<sup>33</sup> A word or expression carries bias, according to Herbst, when it expresses particular attitudes about ethnic groups. That word or expression may create a boundary between 'us' and 'them'. According to Herbst, the most common forms of biased words are slang epithets or slurs. Slurs tend to identify people's flaws, as the user sees them, and can become stereotypical; they are used by a dominant group against minority groups to create a perception of keeping them 'in their place'. Biased words are not limited just to slang epithets or slurs, but can also take the shape of slanted political discourse, caricatures, demeaning attitudes, accusations, overgeneralization, or exclusion of a group.<sup>34</sup>

Not all biased words have a negative meaning. Biased words can also have a positive meaning for some members of minority groups, or may include neutral

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<sup>30</sup> Pratt, 1972.

<sup>31</sup> Ibid.

<sup>32</sup> Herbst, 1997.

<sup>33</sup> Ibid.

<sup>34</sup> Ibid.

alternatives. The usages of biased words, which occur in our pluralistic society, and which are influenced by the shifting political currents or changes within our society, establish differences, for better or worse, among different groups.<sup>35</sup>

To ensure that a complete listing of biased words is compiled, Pratt's word list (Appendix B) will be used and Herbst's dictionary *The Color of Words: An Encyclopedic Dictionary of Ethnic Bias in the United States* will be consulted as the content analysis is conducted. If a word does not appear on Pratt's ECO Analysis list, but in Herbst's dictionary of biased words, it will then be noted and recorded on one dimension of the instrument (Appendix A).

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<sup>35</sup> Ibid.

## **Conclusion**

This paper outlined proposed methods of determining bias and the meaning of this bias in selected geography textbooks used at the secondary level in the United States. This essay outlined and laid the foundation for future work, as well as a method that maybe used to undertake it: the case study. Traditionally, geographers do not employ the use of a qualitative research method such as case studies. This proposed research is to determine how Mexico and Mexicans have been represented within a historical context of the relationship between the United States and Mexico. The representation of Mexico and Mexicans, I hypothesize, will show various trends within United States geography textbooks at the secondary level. Specifically, during periods of negative interaction, the portrayals of Mexico and Mexicans in United State geography textbooks will be more negative than during periods that are less volatile. This research will not only show the favourable and unfavourable ways authors have written about Mexico, but also how Mexico has been graphically and spatially represented during the last 160 years.

## References

- Allport, Gordon W. (1954) *The nature of prejudice*. New York: Addison-Wesley Publishing.
- Beck, Isabel L. and Margaret G. McKeown (1991) 'Substantive and methodological considerations for productive textbooks analysis.' In: James P. Shaver (ed.) *Handbook of research on social studies teaching and learning*. New York: Macmillan, pp. 496-512.
- Creswell, John W. (1998) *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks: Sage Publications.
- Herbst, Philip (1997) *The color of words: An encyclopedic dictionary of ethnic bias in the United States*. Yarmouth: Intercultural Press.
- Krippendorff, Klaus (1980) *Content analysis: An introduction to its methodology*. Beverly Hills: Sage Publications.
- Larkins, G., M. Hawkins and A. Gilmore (1987) 'Trivial and noninformative content of elementary social studies: A review of primary texts in four series.' *Theory and Research in Social Education*, 15 (3): pp. 299-311.
- Mish, Frederick C., E. Ward Gilman and Hubert P. Kelsey (1986)(eds.) *Webster's ninth new collegiate dictionary*. Springfield: Merriam-Webster.
- Misulis, Katherine (1997) 'Content analysis: A useful tool for instructional planning.' *Contemporary Education*, 69 (1): pp. 45-47.
- Osgood, C.E., S. Saporita and J.C. Nunnally (1956) 'Evaluative Assertion Analysis.' *Litera*, 3: pp. 47-102.
- Pratt, David (1972) *How to find and measure bias in textbooks*. Englewood Cliffs: Educational Technology Publications.
- Salvucci, Linda K. (1991) 'Mexico, Mexicans and Mexican Americans in secondary-school United States history textbooks.' *The History Teacher*, 24 (2): pp. 203-22.
- Thorndike, E.L. and I. Lorge (1944) *The teacher's word book of 30,000 words*. New York: Teacher's College Press.
- United States Department of Commerce, United States Census Bureau (2003) *2000 international data base*. Washington D.C.: United States Department of Commerce.

White, Jane J. (1988) 'Searching for substantial knowledge in social studies texts.' *Theory and Research in Social Education*, 16 (2): pp. 115-40.