

GEOEDUCATIONAL AGENTS: THE ROLE OF MOTION PICTURES AND
TELEVISION PROGRAMS IN THE RECOGNITION OF LANDSCAPES

by

Larry P. Kleitches, B.A., B.A., M.A.

A dissertation submitted to the Graduate Council of
Texas State University in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
with a Major in Geographic Education
December 2013

Committee Members:

David R. Butler, Chair

Richard W. Dixon

Richard E. Earl

Leo E. Zonn

COPYRIGHT

by

Larry P. Kleitches

2013

FAIR USE AND AUTHOR'S PERMISSION STATEMENT

Fair Use

This work is protected by the Copyright Laws of The United States (Public Law 94-553, section 107). Consistent with fair use as defined in the Copyright Laws, brief quotations from this material are allowed with proper acknowledgment. Use of the material for financial gain without the author's express written permission is not allowed.

Duplication Permission

As the copyright holder of this work I, Larry P. Kleitches, authorize duplication of this work, in whole or in part, for educational or scholarly purposes only.

DEDICATION

To the departed, but not forgotten, Omar Klicic and Merle E. Fyock (wise grandfathers) and Eleanor Kleitches (astute aunt): Each proved through words and actions that the worst obstacles in an individual's path are often placed there by that same individual.

ACKNOWLEDGEMENTS

I would like to thank everyone at Texas State who has vitalized me over the last four years. I begin with the encouragement and enthusiasm provided by Dr. David R. Butler, advisor and committee chair. This dissertation would not exist without his intercession over two years ago; I will be forever grateful for his guidance and rapport even when we disagreed. Many thanks to my internal committee members, Dr. Richard Dixon and Dr. Richard Earl, and my external committee member, Dr. Leo Zonn of the University of Texas, for the dedication, insightful comments, and toil.

During my four-plus years at Texas State I had the distinct honor of getting to know colleagues, including Todd Moore, Melanie Stine, and Shelley Burleson, people who I wish to thank for their time and support, and with whom I hope to maintain friendships even as professional opportunities keep us physically separate. I would like to especially recognize the hard work and invaluable contributions of time and advice provided by the staff in the Geography Department at Texas State: Allison Glass-Smith, Pat Hell-Jones, and Angelika Wahl. From Indiana University of Pennsylvania, I would like to thank my now blissfully-retired thesis advisor, Dr. Joseph Benclski. The enthusiastic, dedicated manner in which he taught and worked with students provided me with the impetus to be persistent and continue with my academic and teaching careers.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	v
LIST OF TABLES	ix
LIST OF FIGURES.....	x
LIST OF KEY TERMS/DEFINITIONS	xv
LIST OF ABBREVIATIONS/ACRONYMS	xvi
ABSTRACT.....	xviii
CHAPTER	
I. INTRODUCTION	1
1.1 Research Goal and Question	1
1.2 Research’s Place Within the Discipline	7
1.3 Structure of the Dissertation	7
II. PLACE AND PLACE SUBSTITUTION.....	8
2.1 The Correlation between Place and Landscape	8
2.2 Place Substitution	9
2.2.1 Right Place, Wrong Time	15
III. GEOGRAPHY AND EDUCATION	21
3.1 The Nation’s Report Card: Geography 2010	21
3.2 Informal Learning: Learning Outside the Geography Classroom	24
3.2.1 Photoplay	25
3.2.2 Every Picture Tells a Story	30
3.2.3 The Medium is the Message	34
3.2.4 Carryover into Learning outside the Geography Classroom.....	37

3.2.5 Carryover into Classroom Approaches for Teaching Geography.....	43
3.3 Transmitters of Geography	46
IV. RESEARCH METHODS	52
4.1 Examination of NAEP Report Card.....	52
4.2 Examination of Existing Literature.....	53
4.3 Case Studies	53
4.4 Survey	55
4.4.1 Analysis of Results.....	59
V. CASE STUDIES	65
5.1 Parameters for Case Studies.....	65
5.2 Components of Case Studies	71
5.3 Case Study 1: California as ‘California’	72
5.3.1 <i>San Francisco</i>	73
5.3.2 <i>Lethal Weapon</i>	77
5.4 Case Study 2: California as Somewhere Else	79
5.4.1 <i>NCIS</i>	79
5.4.2 <i>MASH/M*A*S*H</i>	84
5.5 Case Study 3: Somewhere Else Beyond California	87
5.5.1 <i>Common Law</i>	88
5.5.2 <i>The Dollars Trilogy</i>	91
5.6 Case Study 4: Other Places for Other Reasons	97
5.6.1 <i>Doctor Zhivago</i>	100
5.6.2 <i>Texas Rangers</i>	102
VI. RESULTS	109
6.1 One-Way ANOVA Testing.....	110
6.1.1 Formal Geographic Education	110
6.1.2 Informal Geographic Education.....	112
6.1.3 Physical Geography Education	113
6.1.4 Future Research Baselines	114
VII. DISCUSSION OF RESULTS AND FUTURE RESEARCH	116

7.1 Present Research	116
7.1.1 Informal Geographic Education	117
7.1.2 Formal Geographic Education	118
7.1.3 Physical Geography Education	119
7.2 Future Research	120
7.2.1 Modifications to the Existing Methods	120
7.2.2 Future Research Baselines from the Current Research	122
7.3 Epilogue	122
APPENDIX A	128
APPENDIX B	129
APPENDIX C	130
APPENDIX D	135
APPENDIX E	136
APPENDIX F	137
WORKS CITED	140

LIST OF TABLES

Table	Page
1. Pool of potential research survey candidates (black columns) Spring Semester 2013	57
2. One-way ANOVA of number of incorrect answers (dependent variable) by number of completed post-secondary geography credits	111
3. One-way ANOVA of number of incorrect answers (dependent variable) by number of Spring 2013 geography credits	111
4. One-way ANOVA of number of incorrect answers (dependent variable) by number of filmed entertainment viewing hours	113
5. One-way ANOVA of number of incorrect answers (dependent variable) by which course (GEO1310 or GEO2410) student took survey in	114
6. One-way ANOVA of number of incorrect answers (dependent variable) by whether they had either taken and passed, or were currently taking, the other course	114
7. One-way ANOVA of number of incorrect answers (dependent variable) by age	115
8. One-way ANOVA of number of incorrect answers (dependent variable) by gender	115

LIST OF FIGURES

Figure	Page
1. On an exam, this is where an undergraduate student at a northeastern university believed New York City to be located, adapted from exam papers graded by the author.....	2
2. According to another student at the same university, this was the third largest city in the U.S., adapted from exam papers graded by the author	3
3. “The Great Geyser Basin of the Madison River in Yellowstone National Park”, in Arnold Guyot’s <i>Physical Geography</i> (1885)	4
4. Castle Geyser, Yellowstone National Park	5
5. Monument Valley, complete with rider on a horse.....	9
6. Postcard, adapted from a Western Air Express photo, of the First National Studios backlot.....	11
7. Backlots of MGM11	
8. MGM Studio Map of Lot #3	12
9. The “New England Street” on the MGM backlot	12
10. The “40 Acres” Backlot, utilized over the years by RKO Radio Pictures, Selznick International, and Desilu	13
11. The Columbia Picture “Brownstone Street” Backlot.....	13
12. Paramount Studio Location Map 1927, per Lukinbeal	14
13. Photograph of Toronto, Canada	15
14. Photograph of South Korean countryside	16
15. Countryside along Going-to-the Sun Road, Glacier National Park	17
16. Topanga Canyon, California	17

17. Universal Studios backlot, per Dickens	18
18. Nogales Airport, Nogales AZ-airport scenes for <i>Battle Hymn</i>	18
19. Percentage of fourth-grade social studies instruction time devoted to geography	22
20. Percentage of eighth-grade social studies instruction time devoted to geography	22
21. By percentage, amount of time employed for particular topics in fourth grade, eighth grade, and twelfth grade during social studies instruction devoted to geography	23
22. ‘ <i>Scarface</i> ’ bifold panel: American release poster [UA 1931]/ French release poster.....	28
23. ‘ <i>She Done Him Wrong</i> [Par. 1933]’ bifold panel.....	29
24. Sweeping cityscape presented on curved screen in 1952’s <i>This Is Cinerama</i>	31
25. Movie poster advertising the spectacles of <i>Bwana Devil</i>	32
26. Vazquez Rocks outside Los Angeles, CA	35
27. The Colorado Rockies.....	37
28. Loess plain in southeastern Nebraska’s section of the Great Plains	38
29. Cowboys on cattle drive in 1879.....	39
30. The Alaskan frontier	39
31. New York City’s Central Park	40
32. Portrayal of urban activity in a scene from the trailer for <i>The Big Combo</i> [AA 1955]	41
33. View of the Shenandoah River and Massanutten Mountain in the Shenandoah Valley, Virginia	41
34. Early twentieth century homestead in Fannin County, GA.....	42

35. ‘Appalachian’ bifold panel: <i>Deliverance</i> [WB 1972]/ <i>Wrong Turn</i> [Fox 2003]	43
36. 1965 German release poster for <i>Old Surehand-Part I</i> , released in the United States in February 1968 as <i>Flaming Frontier</i> [WB]	50
37. Conceptual charting of elements of geographic Comprehension	64
38. Cast of <i>The High Chaparral</i> at their Arizona shooting location, with the local vegetation.....	66
39. Actual California chaparral	66
40. ‘ <i>Doctor Who</i> ’ bifold panel: the interior and exterior of the TARDIS.....	68
41. Bridge Street heading past the Franklin Borough plant of Bethlehem Steel, one of the Johnstown-area filming locations for <i>Slap Shot</i>	70
42. Montreal, Canada- filming location for <i>City on Fire</i>	70
43. San Francisco’s Golden Gate Bridge swathed in a summertime Fog	74
44. A view of San Francisco after the 1906 earthquake and subsequent fire	75
45. San Francisco, CA during the 1930s.....	76
46. The MGM backlot-the shooting location for the movie <i>San Francisco</i>	76
47. El Mirage Lake outside Victorville, CA, the actual shooting location <i>and</i> the actual on-screen location for a pivotal scene in <i>Lethal Weapon</i>	78

48. The Blue Ridge Mountains of Virginia, popular onscreen setting for <i>NCIS</i> 's numerous outdoor scenes	83
49. The actual <i>NCIS</i> shooting location in the San Gabriel Mountains outside Santa Clarita, CA.....	83
50. Malibu Creek State Park, prior to 1976 the Fox Ranch, actual shooting location for <i>MASH</i> and <i>M*A*S*H</i>	86
51. Indigenous Korean vegetation: Korean fir (<i>Abies koreana</i>)	87
52. The Los Angeles setting for the TV series <i>Common Law</i>	88
53. New Orleans LA, actual shooting location for the series.....	89
54. An above-ground tomb at Metairie Cemetery, New Orleans, LA	90
55. An example of Googie architecture: the Theme Building at the Los Angeles International Airport, built in 1961	91
56. Almeria Province, Spain, the shooting location for the entire <i>Dollars</i> trilogy.....	93
57. The route from Tucumcari, NM to El Paso's border twin, Ciudad Juarez, Mexico	95
58. White Sands National Monument, the southern part of a field of white sand dunes composed of gypsum crystals.....	95
59. The countryside outside El Paso, TX, the setting of <i>For a Few Dollars More</i> , the second in the Sergio Leone <i>Dollars</i> Trilogy starring Clint Eastwood.....	96
60. The Allegheny Mountains of western Pennsylvania.....	99
61. Mount Baker, in the Cascade Mountains of the Pacific Northwest.....	99
62. The Russian boreal forest (taiga) setting for <i>Doctor Zhivago</i>	101

63. Joensuu, Finland, one of <i>Doctor Zhivago</i> 's outdoor shooting locations	101
64. Jasper National Park, in the Canadian province of Alberta	102
65. The Nueces Strip, the setting for <i>Texas Rangers</i>	104
66. Palm trees in Brownsville, TX.....	105
67. Outskirts of Brooks, Alberta-the <i>Texas Rangers</i> shooting Location	105
68. The location (thick black square) of Brooks, Alberta, relative to the Red Deer River (thick blue line)	107
69. <i>Texas Rangers</i> at home on the Canadian range-Usher (left) and James Van Der Beek	108
70. Köppen-Geiger Climate Map of Eastern Europe Russia (Peel 2013)	125
71. The beaches of Sochi, Russia, popular for the adjacent waters that are considered to possess healing properties	125

LIST OF KEY TERMS AND DEFINITIONS

Term	Definition
Movies	Filmed entertainment: Motion pictures made exclusively for entertainment purposes.
TV shows	Filmed entertainment: Television programming Made exclusively for entertainment purposes.
Geoeducational	Relating to geographic education
Suspension of disbelief	The temporary and voluntary setting aside of our views about reality in order to enjoy the attributes of a play poem, story, movie, TV show, or story (Wheeler 2013).

LIST OF ABBREVIATIONS/ACRONYMS**

AA.....	<i>Allied Artists Pictures Corporation</i>
ABC.....	<i>American Broadcasting Corporation</i>
AIP.....	<i>American International Pictures</i>
ANOVA.....	<i>Analysis of Variance</i>
BBC.....	<i>British Broadcasting Corporation</i>
BV.....	<i>Buena Vista</i>
Col.	<i>Columbia Pictures</i>
DIY.....	<i>DIY Network</i>
CBS.....	<i>Columbia Broadcasting System (no affiliation with Col.)</i>
FCC.....	<i>Federal Communications Commission</i>
Fox.....	<i>20th Century-Fox</i>
Fox TV.....	<i>Fox Television Network</i>
HBO.....	<i>Home Box Office</i>
HGTV.....	<i>Home and Garden Television</i>
IMDb.....	<i>Internet Movie Database</i>
MGM.....	<i>Metro-Goldwyn-Mayer</i>
MPDDA.....	<i>Motion Pictures Producers and Distributors of America</i>
MTV.....	<i>Music Television</i>

NAEP.....	<i>National Assessment of Educational Progress</i>
NBC.....	<i>National Broadcasting Corporation</i>
NCAA.....	<i>National Collegiate Athletic Association</i>
NCDC.....	<i>National Climatic Data Center</i>
NCES.....	<i>National Center for Educational Statistics</i>
NOAA.....	<i>National Oceanic and Atmospheric Administration</i>
NRCC.....	<i>Northeast Regional Climate Center</i>
NRCS.....	<i>National Resources Conservation Service</i>
Par.	<i>Paramount Pictures</i>
RCA.....	<i>Radio Corporation of America</i>
RKO.....	<i>RKO Radio Pictures</i>
SRCC.....	<i>Southern Regional Climate Center</i>
UA.....	<i>United Artists</i>
USDA.....	<i>United States Department of Agriculture</i>
USGS.....	<i>United States Geological Survey</i>
Univ.	<i>Universal Pictures</i>
WB	
.....	<i>Warner Brothers (Warner Brothers-Seven Arts throughout the latter 1960s)</i>
WRCC.....	<i>Western Regional Climate Center</i>

**** For inline citations, motion picture and television production companies and networks are contained within [] to differentiate them from inline literary citations contained within ().**

ABSTRACT

Despite years of attempts, the geographic aptitude of students bound for college has either stagnated or actually continued to slip. In many states, geography is just a part of the social studies curriculum, and a minimal one at that. If that is indeed the case, where are future college students getting their geographic knowledge, in particular their knowledge of landscapes? It has been widely believed for many decades that popular media, whether it is books, radio, movies, or television, shapes social and intellectual development, with just as many years of research conducted. If there is merit to this belief, perhaps this is from where students are deriving their information.

Testing was done on students at a university in Texas to determine this. The initial analysis failed to support the concept of media impact, but other intriguing possibilities did arise, possibilities that do not remove motion pictures and television programs completely from the discussion.

CHAPTER ONE

INTRODUCTION

1.1 Research Goal and Question

“The camera is an instrument that teaches people how to see without a camera.” — Dorothea Lange, photographer

Geographic education is focused on how to successfully convey the skills to conduct research in the discipline of geography, how to hone preexisting talents that are potentially useful to the discipline (i.e. observational skills), and refine their critical thinking abilities. Beyond the classroom, the anticipation is that students will be able to take their capabilities and apply them to areas outside pure geography, such as choosing restaurants (Burnett 2013), determining the best place to live (Kleitches 2012), finding the best location to start a business, or make informed choices at the ballot box. Nevertheless, despite continuous efforts over the decades, the 2010 results for geography displayed no significant changes in National Assessment of Educational Progress (NAEP) geography scores for eighth graders and, in fact, indicated an actual decline in those scores (Appendix A) for twelfth graders since 1994 (National Center for Educational Statistics 2011).

These twelfth graders are the ones who will eventually head off to college seemingly ill-equipped, illustrated by Figures 1-2 and the subsequent examples. A student in a college course attended by this author could not name the leading industry in her hometown; not the *name* of the leading company, just the industry. In another course attended by this author, a student did not believe that there were people living in the world, even in developed nations, without indoor

plumbing. The student then wondered openly about where they actually went to the bathroom, proceeding to be grossed out at the answer from the instructor.

At the 2013 NCAA Men's Basketball Tournament, ESPN columnist Rick Reilly asked several basketball players from LaSalle University (a university in Philadelphia noted for its academic tradition) about the home city of their next opponent in the tournament, Wichita State University. The written summary of the exchange was:

"I recently asked three student-athletes of the La Salle University basketball team what they knew about Wichita and the state in which it existed, since Wichita State University was their next opponent. Silence. Blank stares. Blinks. Finally, one of them said, "We saw one of those Which Wich places today. Is that it?""

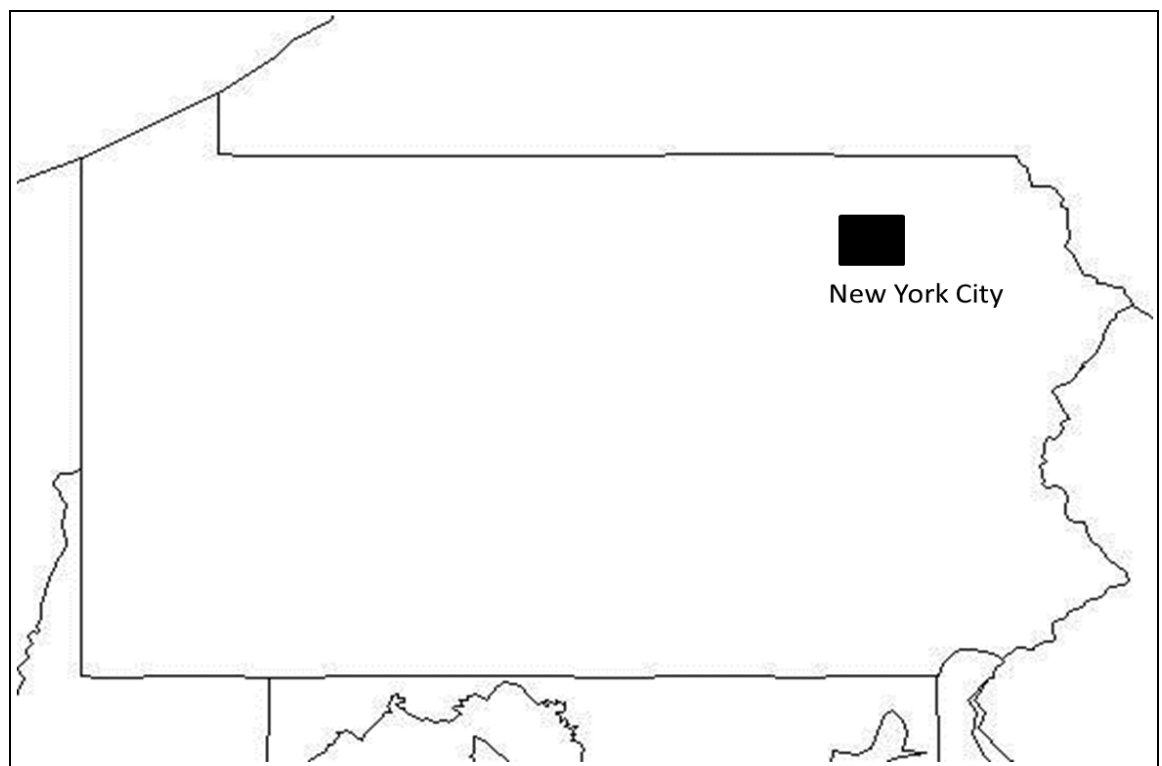


Figure 1: On an exam, this is where an undergraduate student at a northeastern university believed New York City to be located, adapted from exam papers graded by the author.

Ideally geographic data would be both acquired and transmitted through textbooks, journals, and other formalized settings. In point of fact, a great deal of geography information, as well as other forms of information, is obtained by the



Figure 2: According to another student at the same university, this was the third largest city in the U.S., adapted from exam papers graded by the author.

general public from sources more accessible to them, such as movies and television (Coombs and Ahmed 1974; Berry 1981; Dorr 1983; Rogers 2004). When shooting filmed entertainment such as a movie or TV show, place substitution occurs because more emphasis is placed upon budgetary considerations and accessibility, and whether or not the locations look good on film, rather than the trueness of the settings (Gasher 1995; Lukinbeal 2012).

Filmmakers rely on any discrepancies between the real and the filmed being accounted for by an audience's willing suspension of disbelief (Dorr 1983;

Heath 1993; Ferri 2007). With suspension of disbelief, you knowingly walk into a theatre, or pick up the remote, and fully understand that what you are about to see is a manufactured narrative, and while it is playing you *believe* that the world being exhibited is real *for the purposes of the storyline*. This is in opposition to suspension of *belief*, where the implication is that you are *not* accepting what is onscreen, that you *do not believe* whatever is being portrayed onscreen (L. Zonn, personal communication, November 4, 2013), even for the storyline.

The discipline of geography explores changes in patterns on the Earth, whether those patterns consist of people, weather systems, or land masses. The field of physical geography utilizes extensive fieldwork and the relevant technology of the day to analyze and record the physical environment (Figures 3 and 4), convey any

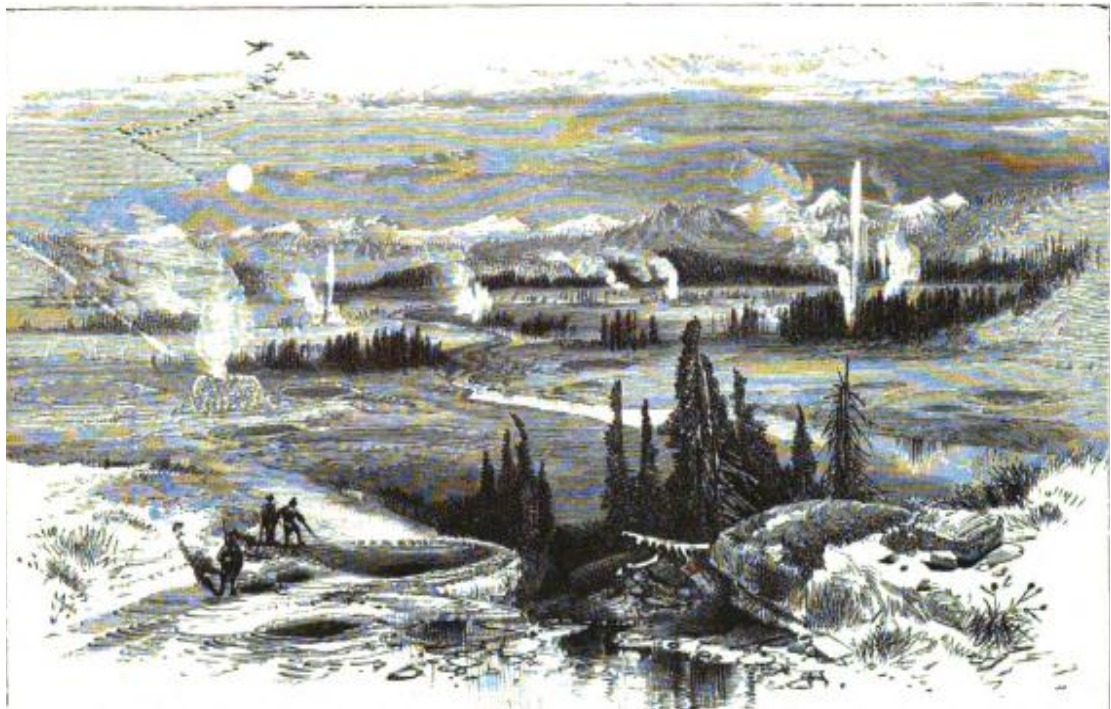


Figure 3: “The Great Geysers Basin of the Madison River in Yellowstone National Park”, in Arnold Guyot’s *Physical Geography* (1885)



Figure 4: Castle Geyser, Yellowstone National Park (Carleton University 2013)

changes and their prospective impacts to an audience, and carry it further to potentially implement preventative and corrective action. Preventative and corrective action, however, relies on a receptive and well-informed audience that is aware of geographic situations and how those situations could change.

The goal of this research is a better understanding of people's perception of geographic information, from where they obtained it, and how where they obtained it from shaped their understanding of geographic information. The dominant question this research seeks to answer is: *Do inaccurate geographic portrayals in filmed entertainment affect student recognition of landscape features?* This question leads to the subordinate question: *Does geographic recognition change with more exposure to formal geoeducational settings?*

The investigation being conducted to answer these questions must be multifaceted. While the capstone of this research is the student survey, its nucleus is the amended content analysis of movies and TV shows. As stated by the American Heritage Dictionary (2009) content analysis itself is at the most basic a systematic analysis of the content rather than the structure of a communication, such as a written work, speech, or film, including the study of thematic and symbolic elements to determine the objective or meaning of the communication.

Berelson and Salter (1948) in their classic content analysis study highlighted the media under-representation of minority groups. They studied prejudice, a consistent discrimination against minority groups of Americans, in popular magazine fiction (Berelson and Salter 1948; Prasad 2008). They analyzed 198 short stories published in eight of the popular magazines during the period between 1937 – 1943 and discussed their findings under broad categories such as the distribution of characters, their role, appearance, status and their goals (Prasad 2008).

This allowed a picture to be painted of the behavior patterns portrayed in the media of the era. Carrying it beyond to today, illustrations of place substitution can be logged and then an endeavor can be made to ascertain how much, if any, media influence there is on geographic education.

Amended content analysis is advantageous because the source content of movies and TV shows is readily obtainable and inconspicuous. In addition, it can present an objective account of events, themes, and issues that might not be immediately apparent to a reader, viewer, or general consumer. However, amended

content analysis can also be time consuming, plus it cannot independently tell us what people really think about these images or whether they affect people's behavior. That is why for the objective of this research a survey is also being employed as a means to 'complete' the content analysis by providing a measurable cohort to the visuals.

1.2 Research's Place within the Discipline

The research conducted, involving investigation through a literature review, relevant specimens from filmed entertainment, and surveying of university geography students, will fit into the discipline of geography, not just the field of geographic education.

Much of the existing literature in geographic education appears to break into one of four camps (noteworthy practitioners in parentheses): curriculum (Dr. Richard Boehm), cognition (Dr. Roger Downs), societal impacts on a student's education (Drs. David Stea and James Blaut), and teacher proficiency (Drs. Osvaldo Muñiz-Solari and Clare Brooks). The objective of this research was the study of a component of student input (preexisting knowledge) being brought to the college classroom. This component, recognition of geographic features in images, is potentially vital in how educators teach geography.

1.3 Structure of the Dissertation

The dissertation is broken down into seven chapters (Introduction, Place and Place Substitution, Geography and Education, Research Methods, Case Studies, Results, and Discussion of Results and Future Research), closing with the Appendices and Works Cited sections.

CHAPTER TWO

PLACE AND PLACE SUBSTITUTION

*"I know that Colorado is not the Jordan, nor is Southern Utah Palestine.
But our intention is to romanticize the area, and it can be done better
here"*

— George Stevens, director, *The Greatest Story Ever Told* [UA 1965]

2.1 The Correlation between Place and Landscape

“Place” is a frequently occurring concept in geography texts (Cresswell 2004). According to Matthews and Herbert (2008), place in geography is a form of bounded space, even if those boundaries are indeterminate. Place, according to the Merriam-Webster Dictionary (2008), means among other things: physical environment; physical surroundings; an indefinite region or expanse a building or locality used for a special purpose; a particular region, center of population, or location; or a building, part of a building, or area occupied as a home.

These definitions put “place” at variance with “landscape”, another popular term in geography. The Merriam-Webster Dictionary defines “landscape” as the landforms of a region in the aggregate or a portion of territory that can be viewed at one time from one position, a picture representing a view of these landforms, or the art of depicting such scenery. Place, for the purposes of this research, will be defined as a specific area (such as New York City or the San Gabriel Mountains) signified by a particular set of landscape features, both natural and man-made, plus precipitation and vegetation. Place substitution will be defined as the use of one place to represent another, for instance the Monument Valley along the Utah/Arizona border (Figure 5) acting as Texas in *The Searchers* [WB 1956], and Toronto, Canada,



Figure 5: Monument Valley, complete with rider on a horse (Public Domain Pictures 2013) standing in for Detroit in the Steven Seagal movie *Exit Wounds* [WB 2001].

2.2 Place Substitution

The assignment of an identity is often intentional, particularly in the world of entertainment. The different identity is usually not for political gain, but rather an economic one: an effort designed to produce maximum popularity (and related profits) with as minimal an effort and cost as possible. When making popular entertainment set in modern times, the developers are concerned with the *representation* of modern elements and whether these elements are realistic, as opposed to real life (Dorr 1983).

Popular entertainment set in older times (for instance, a biblical epic) relies on the *reproduction* of elements from that period of time to bring the period

back to life onscreen. In both modern and historical productions, the goal of the producers is to *reconstruct* the time element to create a successful suspension of disbelief (and thus a successful product), regardless of the veracity of the individual parts.

The key component is how to produce a willing suspension of disbelief in the audience that what they are seeing with their own eyes in the viewing place of their choice is believable. A major issue when stage plays first achieved wide popularity was how to make audiences suspend their disbelief and believe what they are seeing is actually taking place in the setting of the play and not in a crowded outdoor venue or small wooden stage. The same problem would continue into the motion picture age.

During the earliest days of motion pictures in the United States, filmmakers created products directly aimed at the city dweller (Lukinbeal 2002). These early motion pictures were for the largest part “actualities” or documentary shots of cityscapes, so, producers were therefore content to remain in Eastern urban areas, especially New York City (Kirby 1989). World War I, and the need for warmer and more realistic settings, particularly for Westerns, saw the motion picture industry conduct its own version of the westward migration to balmy surroundings (Appendix B) as both time and the rising costs of moviemaking pressed forward (Myers 1998; Lukinbeal 2002; Reid 2010). The move westward did not eliminate shooting on studio backlots, as many studios such as First National, MGM and RKO chose to acquire vast acreages and construct large immovable studio facilities to



Figure 6: Postcard, adapted from a Western Air Express photo, of the First National Studios backlot (USGenWeb Project 2013)

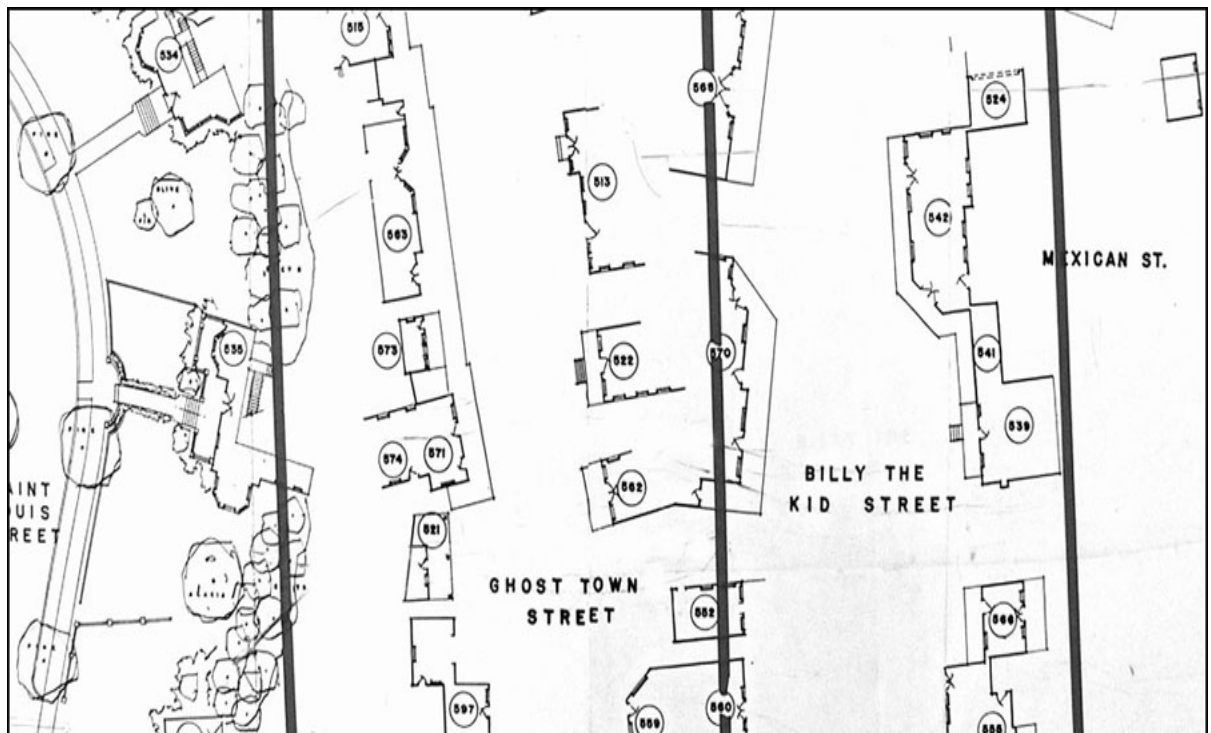


Figure 7: Backlots of MGM (Bingen, Sylvester and Troyan 2010)

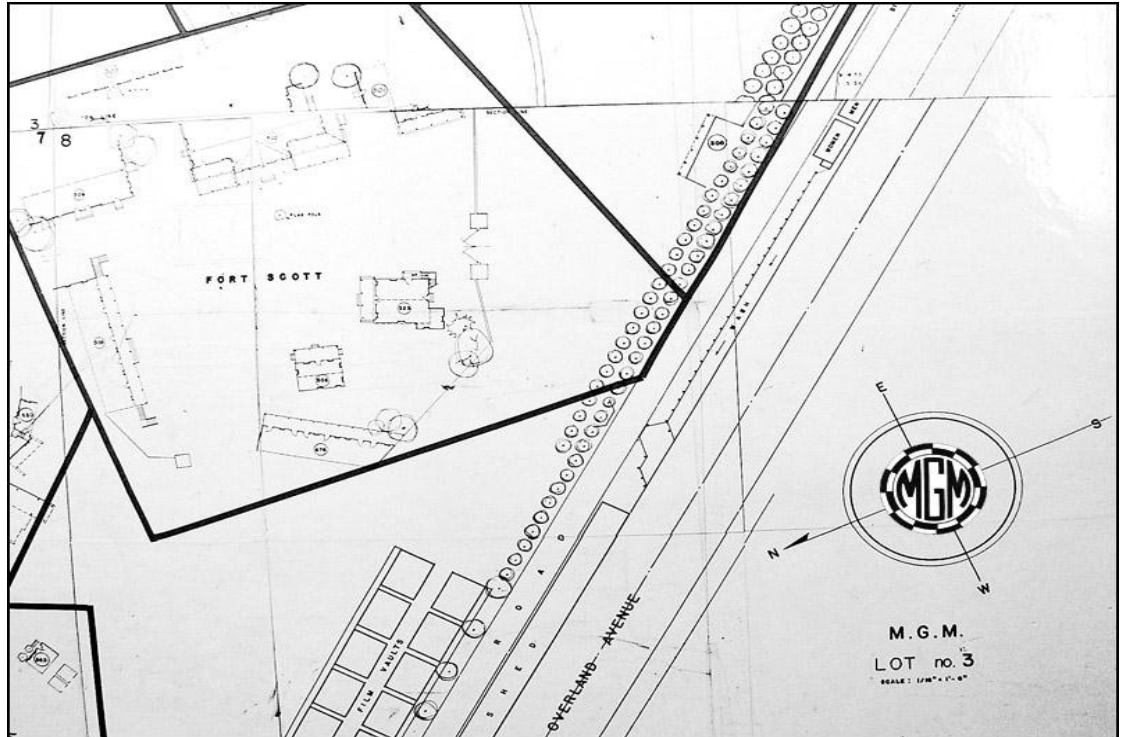


Figure 8: MGM Studio Map of Lot #3 (Bingen, Sylvester and Troyan 2010)



Figure 9: The "New England Street" on the MGM backlot (Bingen, Sylvester and Troyan 2010)

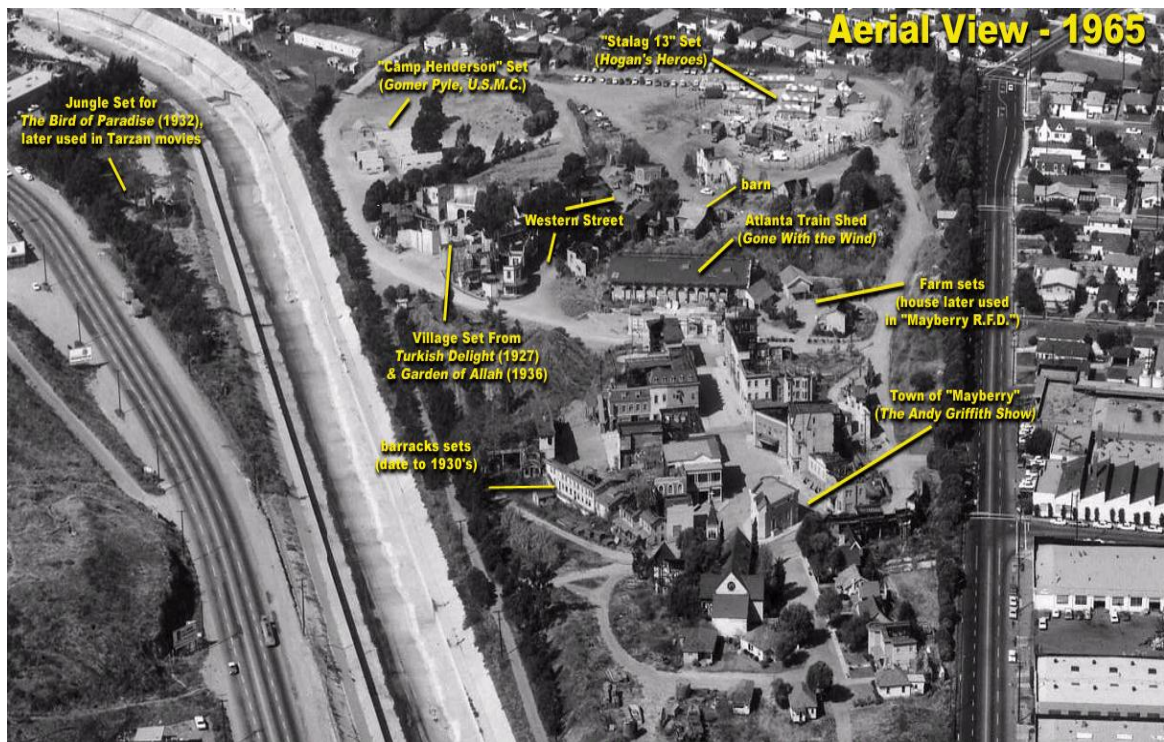


Figure 10: The "40 Acres" Backlot, utilized over the years by RKO Radio Pictures, Selznick International, and Desilu (RetroWeb 2012)

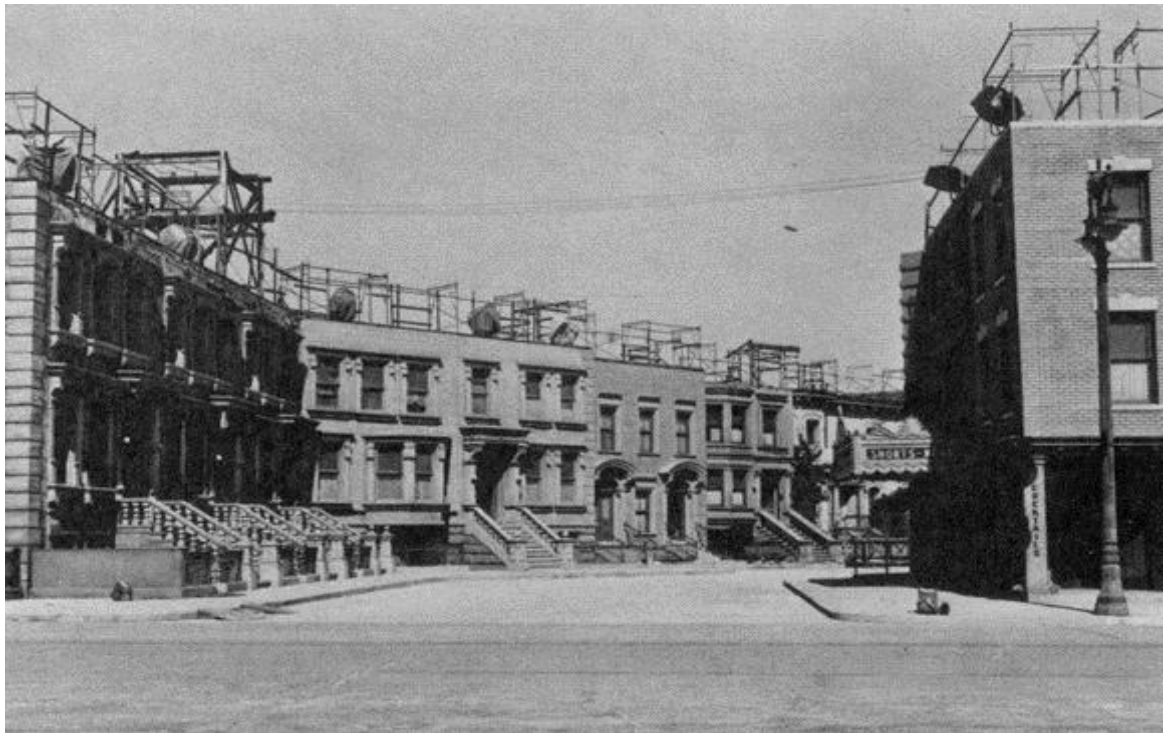


Figure 11: The Columbia Pictures "Brownstone Street" Backlot (Columbia Ranch 2010)

better control the product they were creating (Figures 6, 7, and 8). Why spend the money and have logistical nightmares for outdoor shooting, whether in the actual location or in California locations, when you already had a New England set, a New York City set, or a jungle set built on your lot (Figures 9, 10, and 11). Even when outdoor locations were actually utilized, the Paramount Pictures location map (Figure 12) illustrates how natural settings still did not equate to geographic reality.

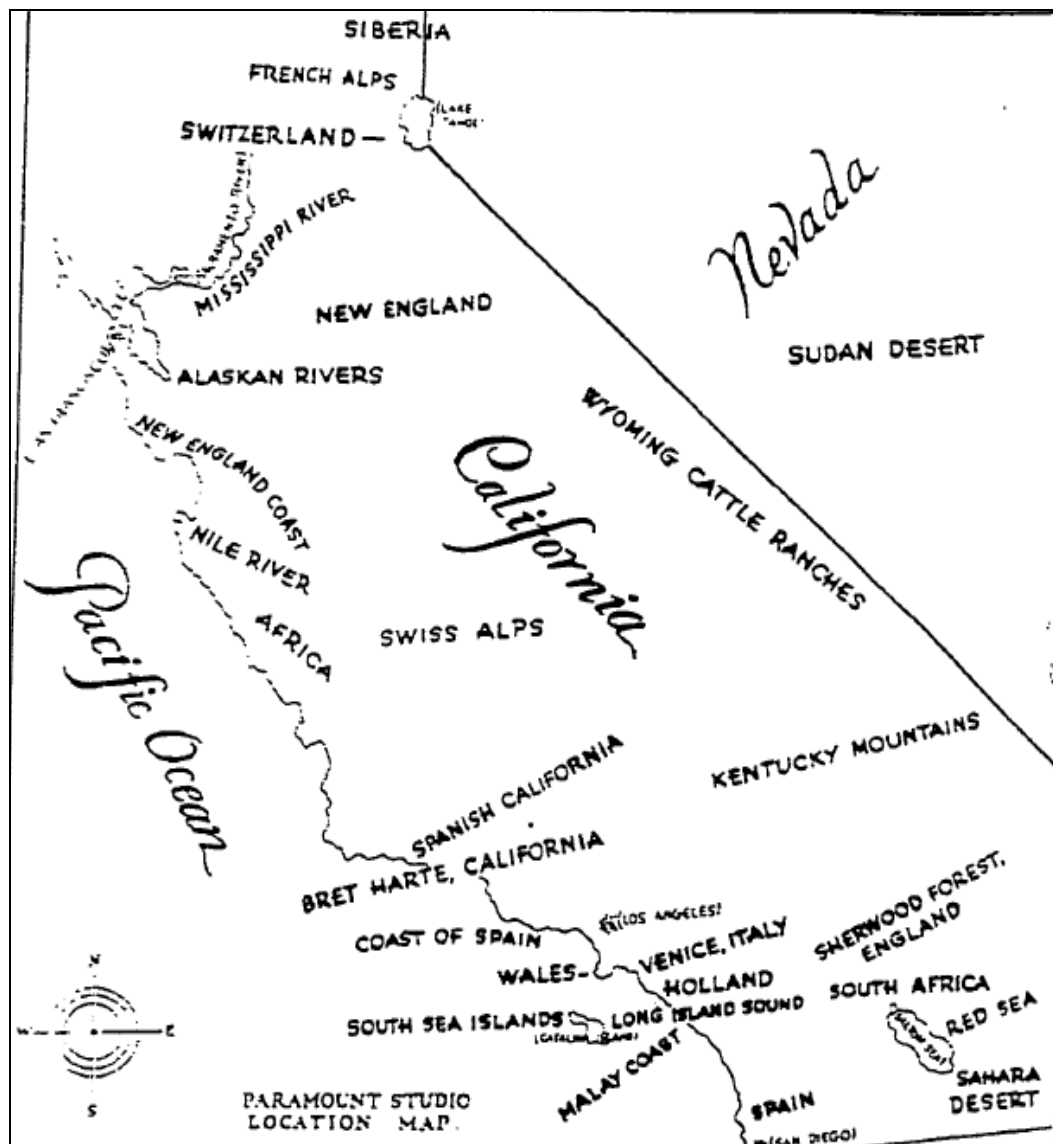


Figure 12: Paramount Studio Location Map 1927, per Lukinbeal 2002

2.2.1 Right Place, Wrong Time

Backlots are still widely utilized in motion picture and television production and have not gone away. Nonetheless, numerous filmmakers utilize real open-air locations whenever outdoor settings are required (Lukinbeal 2012). This does not mean “Real open-air locations” have become the same as “actual settings”. For example, the city of Toronto (Figure 13) has stood in for a variety of American cities including Minneapolis, New York City, and the aforementioned Detroit. The circumstance of real open-air locations is further illustrated by the following activities captured on film.



Figure 13: Photograph of Toronto, Canada (University of Toronto 2012)

During the Korean War, a skirmish breaks out between American and North Korean units; in close proximity another squad is carrying out clandestine activities,

children in danger are being evacuated to an orphanage, and medical units are anxiously awaiting casualties from both actions. Many years after the Korean War, a full-scale armed attack ensues while an international criminal is being transported across Korea by a military convoy.

The initial skirmish is from *All the Young Men* [Col. 1960], a battle melodrama starring Alan Ladd and Sidney Poitier. The clandestine activities are being carried out in *War Hunt* [UA 1962], which is today best known for being the feature debut of Robert Redford. The orphanage is from *Battle Hymn* (Univ. 1957). The medical units are the staffs of *MASH* [Fox 1970] and *M*A*S*H* [CBS]. The armed attack was from the 2010 pilot for the new *Hawaii Five-0* on CBS.

What these filmed portrayals share, above and beyond the Korean aspect, is that none were actually filmed in Korea (Figure 14). A large portion of *All the Young Men* (particularly the battle scenes) was filmed in Glacier National Park in



Figure 14 Photograph of South Korean countryside (Michael Mellinger 2011)



Figure 15: Countryside along Going-to-the Sun Road, Glacier National Park (Jeffrey Sullivan 2008)



Figure 16: Topanga Canyon, California (Kristin Tsafos 2009)



Figure 17: Universal Studios backlot, per Dickens 2008



Figure 18: Nogales Airport, Nogales AZ-airport scenes for *Battle Hymn* (Davis-Monthan Aviation Field Register 2002)

northwestern Montana (Figure 15); *War Hunt* was lensed in California's Topanga Canyon (Figure 16); *Battle Hymn* at Universal Studios in California and in Nogales, Arizona (Figures 17 and 18); both *MASH* and *M*A*S*H* were filmed at the Fox Ranch (now Malibu Creek State Park) in southern California; and the scene from *Hawaii Five-0* was filmed along the north shore of Oahu.

Each of the six divergent geographic areas contains beautiful, distinct scenery, unique physical characteristics, and climate, making them the right places for exploration and observation. Each area also possesses their unique set of problems requiring action. However, each is captured at the wrong time, when they are expected to conceal their natural distinctiveness in order to take the celluloid place of a seventh location also deserving of study, requiring the audience to suspend disbelief, and believe that Malibu Creek State Park and Glacier National Park *do indeed* resemble Korea.

The uncertainty of whether or not movies and TV shows are geoeducational agents as a result takes on another layer. The layer consists of how willing and steadfast that suspension of disbelief is, and does it potentially aid or hamper geographic recognition in a nation where, in many school districts, geography is not a mandatory subject. This layer is stratified by the decades-long discussion within geography about what the discipline is and what are proper teaching methods.

Although the majority of geographic educators do not wish to focus exclusively on place, thus turning it into a discipline of 'spot the country and name its capital city', place *does* matter in geography (Kirk, Lösch, and Berlin 1963; Duncan

1990; Fujita 2012). Geography is a study of patterns, or the Three W's: What (are we looking for), Where (is it occurring), and Why (there and not *there*). If students are having difficulties with place, one of the major components, it could easily throw off logical assessments of the other two.

CHAPTER THREE

GEOGRAPHY AND EDUCATION

“What we’ve got here is a failure to communicate.”
— *The Captain (Strother Martin), Cool Hand Luke [WB 1967]*

3.1 The Nation’s Report Card: Geography 2010

The National Assessment of Educational Progress (NAEP), administered through the U.S. Department of Education, is the largest nationally representative and continuing assessment of what America's students know and can do in various subject areas. 2010 results for geography displayed no significant changes in NAEP geography scores for eighth graders and, in fact, indicated an actual decline in those scores for twelfth graders since 1994 (NCES 2011). According to the NAEP, approximately two-thirds (67 percent) of fourth-graders had teachers who reported that they spend only 40 percent or less of their social studies instructional time on geography (Figure 19), and approximately 51 percent of eighth-graders had teachers who reported that they only spend between 1 and 10 percent of their social studies instructional time on geography (Figure 20).

Another point of interest was how the time devoted to geography instruction was actually employed (Figure 21) at the elementary, middle/junior high, and secondary levels. All but one percent of fourth-graders had elementary teachers who reported using maps and globes as a part of geography instruction, whereas approximately one-quarter of students had teachers who reported never or hardly ever studying other countries and cultures (26 percent), space and place (25 percent), and 25 percent reported studying spatial dynamics and connections (NCES 2011).

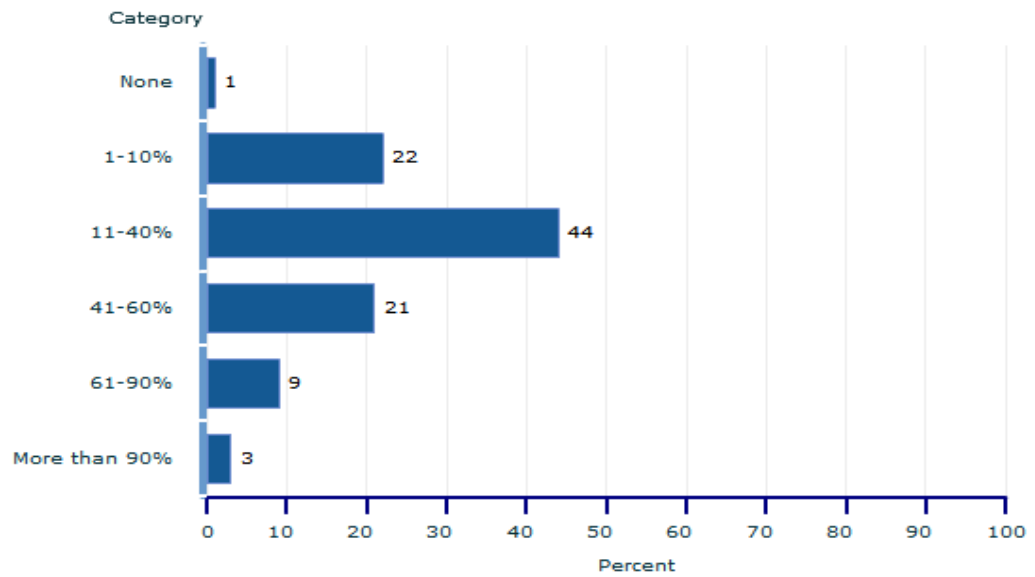


Figure 19: Percentage of fourth-grade social studies instruction time devoted to geography. (National Center for Educational Statistics, 2011)

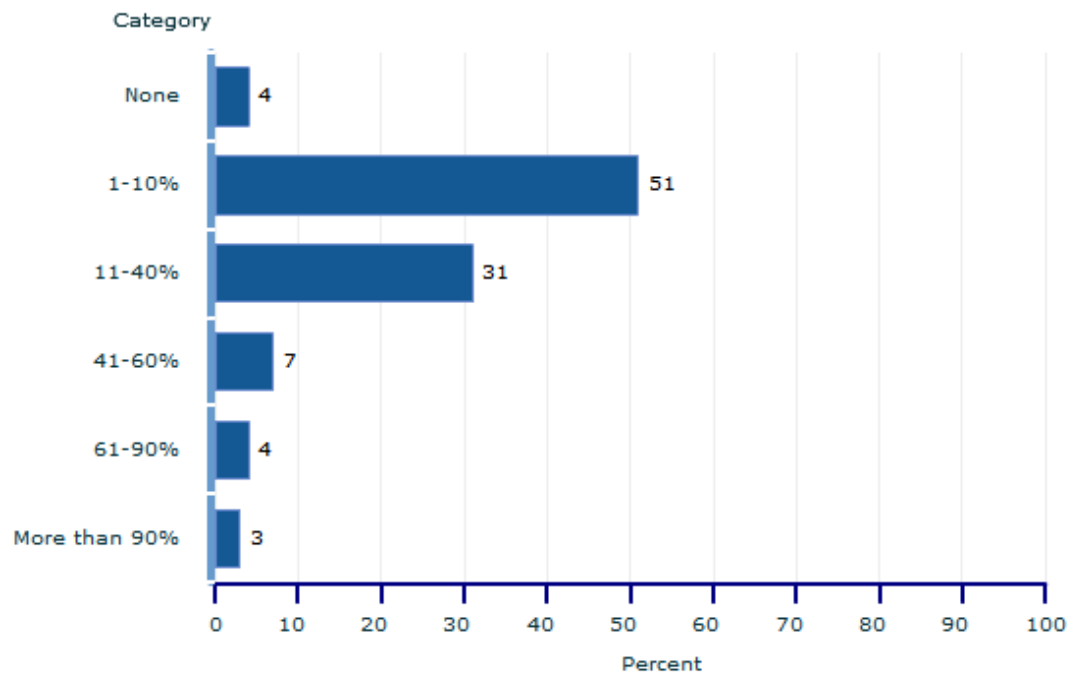


Figure 20: Percentage of eighth-grade social studies instruction devoted to geography. (National Center for Educational Statistics, 2011)

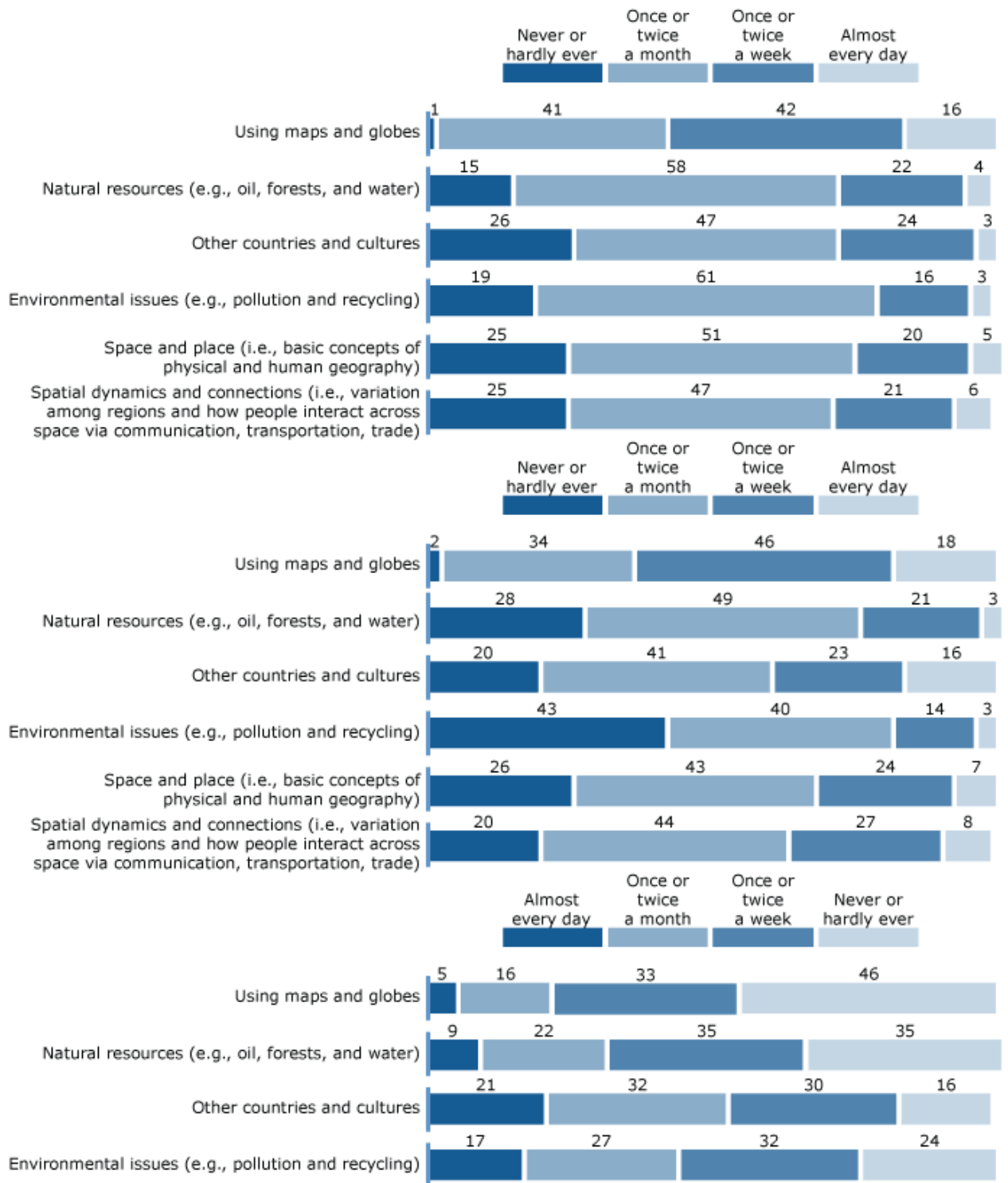


Figure 21: By percentage, amount of time employed for particular topics in fourth grade, eighth grade, and twelfth grade during social studies instruction devoted to geography. (National Center for Educational Statistics, 2011)

At the middle/junior high level, ninety-eight percent of eighth-graders had teachers who reported using maps and globes as a part of geography instruction, whereas 43 percent of students had teachers who reported never or hardly ever teaching environmental issues in geography (NCES2011). At the twelfth-grade level, about 54 percent of secondary social studies teachers reported using maps and globes as part of studying geography, whereas about 16 percent reported never or hardly ever studying other countries and cultures. With these figures appearing to point to a lack of teaching *within* the formal classroom, the question to be asked is where students are getting their information.

3.2 Informal Learning: Learning outside the Geography Classroom

Informal learning is the nonsystematic lifelong process by which every person acquires and accumulates knowledge, skills, attitudes and insights from daily experiences and exposure to the environment: at home, at work, and at play, or from the example and attitudes of family and friends (Coombs and Ahmed 1974; Livingstone 1999; Buckingham 2000; Rogers 2004) outside the formal classroom. This learning can be obtained from travel, reading newspapers and books, or by listening to the radio or viewing films or television (Coombs and Ahmed 1974; Earl and Pasternack 1991; Buckingham 2000; Rogers 2004). The potential power to influence has long been a concern to professional researchers and lay people alike (Peterson and Thurstone 1933; Phillips 1982; Sargent *et als.* 2006), although the impact was considered to be more on social and cultural standards than perceptions of physiography.

Because informal learning by its very definition is not formally

regulated, the sources of information involved in the lifelong process are not regulated beyond their own unique internal arrangements. Movies and TV shows are frequently shaped by forces outside the actual production unit, ranging from politics to profit. The vast amount of existing research on the influence of movies and TV shows examines social and cultural impacts, not how physical concepts and structures are interpreted. Physiography, however, should be seriously considered. If studios are preoccupied with the detractors about to be discussed, then little wonder they were more concerned with them than whether or not the Andes Mountains were actually painted backdrops and studio set props (*Only Angels Have Wings* [Col. 1939]), or if the area around Lone Pine, California actually looked like Asia (*The Adventures of Marco Polo* [UA 1938]). In fact, in order to minimize *any* controversy, keeping filming in or as close to Hollywood as possible was probably preferable to risky location shooting (Parish 1976; Meyer 1979; Lewis 1994). Veracity of place was not important in filmmaking; the important thing was the unfettered distribution of the particular studio's product without worry of being banned.

3.2.1 Photoplay

Movies arrived on a grand scale and by the early twentieth century had replaced the theater and travelling shows as the primary entertainment medium for consumers. The fact that the overwhelming majority of movies were in black and white, diverging from the color schemes of the real world, was not a major concern of the viewing public. Nevertheless, by the end of the 1920s the motion picture industry was rocked by a series of scandals involving Mary Pickford divorcing her husband, the

murder trial of Roscoe “Fatty” Arbuckle, the shooting death of director William Desmond Taylor, and the drug-related death of actor Wallace Reid (Jarvis 2004). These scandals, in unison with movies featuring salacious titles and themes such as *Traffic in Souls* [Univ. 1913] and *The Sheik* [Par. 1921], led parent groups and religious organizations to protest what they saw as the wrong form of education their children were getting from the motion picture studios (Donnelly 1938; Couvares 1992).

Although no single movie was considered to be the final straw, an additional tipping point for many of those critics was *The Callahans and the Murphys* [MGM 1927], of which no print is known to exist. A seemingly innocuous title about two Irish families, the film rankled protest groups with its humorous high-point of the film: the St Patrick's Day picnic (Walsh 1990). The two matriarchs carry out obligatory “Irish” behavior by getting uproariously drunk at the picnic, pouring schooners of beer down the front of each other's dresses, and ending with a donnybrook with police wagons and ambulances racing to the scene (Walsh 1990). Another major plot point was the character of Ellen Callahan being forced to go to the country to have a baby, which the audience is led to believe is illegitimate (Walsh 1990).

In response to this ‘improper educating’ of America's youth, the Motion Picture Production Code was adopted by the Motion Pictures Producers and Distributors of America (MPPDA) in 1930 (Walsh 1990; Doherty 1994). The general principles of the Production Code (Jacobs 2013) stated that:

- Theatrical motion pictures, that is, pictures intended for the theatre as distinct from pictures intended for churches, schools, lecture halls, educational movements, social reform movements, etc., are primarily to be

regarded as *Entertainment*. Mankind has always recognized the importance of entertainment and its value in rebuilding the bodies and souls of human beings. But it has always recognized that entertainment can be of a character *harmful* to the human race, and, in consequence, has clearly distinguished between:

- *Entertainment which tends to improve* the race, or, at least, to recreate and rebuild human beings exhausted with the realities of life; and
 - *Entertainment which tends to degrade human beings*, or to lower their standards of life and living.
- Motion pictures are very important as *Art*. In the case of the motion pictures, this effect may be particularly emphasized because no art has so quick and so widespread an appeal to the masses. It has become, in an incredibly short period, *the art of the multitudes*.
 - The motion picture has special *Moral obligations*. The mobility, popularity, accessibility, emotional appeal, vividness, straight-forward presentation of fact in the films makes for intimate contact on a larger audience and greater emotional appeal. Hence the larger moral responsibilities of the motion pictures.

Despite much fanfare, the Production Code was not enforced with much energy during the early 1930s because of concerns over box-office receipts and competition from radio. This timeframe saw the rise of the violent gangster film (Figure 22), in particular through the movies *Little Caesar* and *The Public Enemy* [both WB 1931], and *Scarface* [UA 1932]. The same studio that produced and distributed the first two movies also released *Baby Face* in 1933, starring Barbara Stanwyck as a woman who literally sleeps her way to the top. This movie featured a scene where Stanwyck and a

man enter the ladies restroom while the phone rings incessantly, leaving no room for doubt about the activity that is taking place. Mae West's comedies *She Done Him Wrong* (Figure 23) and *I'm No Angel* [both Par. 1933] were viewed by many, despite their rousing box-office success, as titillating beyond acceptable standards (Curry 1991).

In response to what appeared to be an obvious flouting of the Code for reasons of profit, the Catholic Legion of Decency was created in April 1934 (Vaughn and Evensen 1991; Maltby 2003). Not coincidentally, also in 1934 the MPPDA, now under the stewardship of Joseph Breen instead of former Postmaster General Will Hays, modified their code to make room for far more stringent enforcement (Black 1994). The major change was that all films released after July 1, 1934, had to obtain a certificate of approval before being released (Maltby 2003, Jorgenson 2010). While this was taking



Figure 22: 'Scarface' bifold panel: American release poster [UA 1931] (University of Virginia 2013)/French release poster (Listal 2013)



Figure 23: 'She Done Him Wrong [Par. 1933]' bifold panel (Focus Features 2012/ American Movie Classics 2013)

place, radio was digging in as a major form of entertainment. This new form of entertainment was not visual, meaning the cause for unease was still measured in social and cultural impacts, not physical; after all, even radio at its finest could not reproduce the image of a mountain. As radio's growing popularity was exposing Americans of all backgrounds to new and sometimes unsettling ideas, efforts at stringent enforcement similar to what was being done in the movies found their way to radio.

These efforts came to bear during Mae West's 1937 appearance on NBC's top-rated *Chase & Sanborn Hour*. On the show, Mae West starred in a comedy skit based on the Garden of Eden that drew complaints of indecency from offended listeners (Curry 1996). The sponsor and network apologized after a voluminous number of complaints from people mobilized by the Legion of Decency, resulting in the Federal

Communications Commission (FCC) issuing a letter of reprimand to NBC and its affiliates (Craig 2006). Although no other fines or penalties were levied, and the long-term effects of the campaign have long been in debate, the incident was still an important landmark in the prewar debate over government's role in regulating radio (Craig 2006).

The arrival of World War II saw a stream of movies coming out of Hollywood that were designed to both boost public spirits and raise enthusiasm for the fight (Basinger 2003), but supply scarcity, restricted budgets, and live combat obviously prevented these films from being lensed in the actual locations. The efforts ranged from *Commandos Strike at Dawn* [Col. 1942], where Canada stood in for Norway and *Wake Island* [Par. 1942], filmed in San Diego and around California's Salton Sea, to *Busses Roar* (sic) and *Casablanca* [both WB 1942] and *Mission to Moscow* [WB 1943], with their heavy reliance on studio soundstages and backlots. Veracity of place was not important here; the important thing during these years was the portrayal and distribution of the wartime message without drawing the ire of the Breen Office or the Legion of Decency.

3.2.2 Every Picture Tells a Story

Television's ascension to prominence in the post-World War II had an altering effect on the existing forms of media (Bogart 1956; Chisholm 1993). Movies were falling behind in customers, as it was easier and less costly to spend time watching a Western or a comedy at home rather than suiting up and trudging out to the nearest cinema (Conant 1960; Stanley 1978; Gomery 1985). Movies began to experiment with more adult themes and grittier subject matter to combat the inroads.

To present this new approach, more and more movies began to be filmed in color, whether through the use of Technicolor or individual studio variations such as Metrocolor [MGM] and WarnerColor [WB] (Mordden 1988; Furnett 1988; Chisholm 1993). Even lower-budget studios, among them Monogram Pictures, Producers Releasing Corporation, Republic Pictures, and Screen Guild got on board through the Cinecolor and Trucolor processes. Displaying in color was not the end, as in the 1950s it became a commercial necessity to give the multitude of new TV watchers what they couldn't get on a small screen (Schwartz 2013).

This necessity brought the introduction of Cinerama, first presented in 1952 (Figure 24) by the Cinerama Corporation, in the appropriately named *This Is Cinerama*. By simultaneously projecting images from three synchronized 35 mm



Figure 24: Sweeping cityscape presented on curved screen in 1952's *This Is Cinerama* (Bucknell University 2012)
projectors onto a huge, deeply curved screen (Reeves 1999), the movie displayed sweeping views of a rollercoaster in motion and Niagara Falls among other sights, tied together with a panoramic coast-to-coast view of the American landscape, filmed from a

B-25. The same year also saw the hugely profitable release (Figure 25) of the low-budget, principally studio-filmed *Bwana Devil* [UA] in 3D (Kozarski 2000; Mitchell 2004). In 3D, a regular motion picture camera system was used to record the images as seen from two perspectives and special glasses were provided to view the images (MacGowan 1956; Berggren 2004). The commercial success of *This Is Cinerama* and *Bwana Devil* presaged the development of other cinematic processes, such as CinemaScope [developed by Fox] and the Paramount VistaVision process.

All of these color and cinematic processes promised the movie audience real life while still inside the theatre. What was not mentioned was *how* they defined real life. These processes often distorted the scale of the onscreen images to where they were

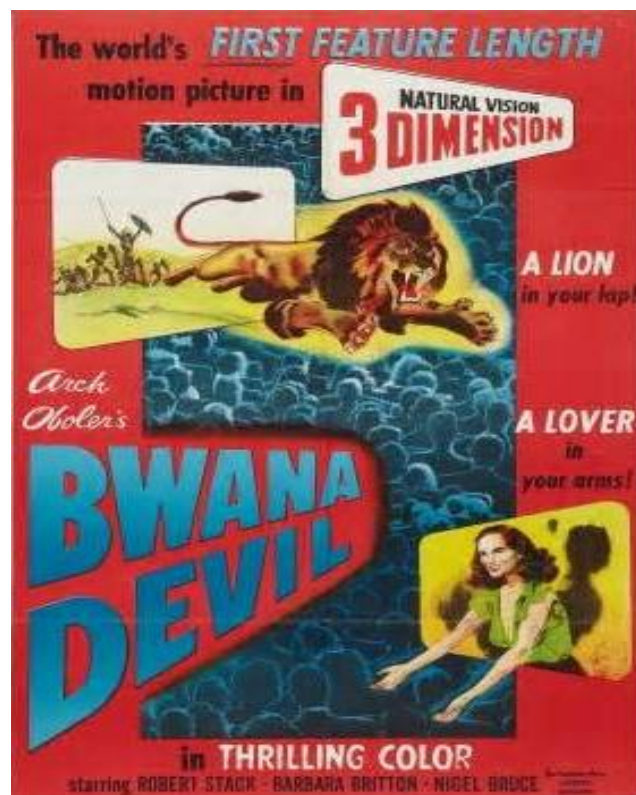


Figure 25: Movie poster advertising the spectacles of *Bwana Devil* (Internet Movie Poster Database 2012)

bigger than real life, or made the images so brightly colorful (or muted) they often resembled little in real life, particularly when these movies contained numerous outdoor scenes (*The Searchers* [WB 1956]; *North by Northwest* [MGM 1959]; *The Comancheros* [Fox 1961]). Scrubbed of imperfections and magnified in scale, the geographic depictions in movies took on a 'vintage penny postcard' (Sawyer and Butler 2006; Youngs 2012) appearance. This manifestation, much like the penny postcards depicting natural and manmade sceneries, was designed to draw paying customers, which it did many times over. However, it set off an unusual aftermath; directors who sought a more 'realistic' look to their movies often utilized nonrealistic black and white film stock (*Detective Story* [Par. 1951]; *The Harder They Fall* [Col. 1955]; *Men In War* [UA 1957]) to do so.

The enforcers of the Production Code and the Legion of Decency were still concerned about the social and cultural schooling people were deriving from movies. In the light of the motion picture industry losing its status as the only entertainment medium in town, and what they were now attempting in order to regain their standing, both the Production Code and the Legion of Decency gradually lost their sway over Hollywood features. By 1968, the Production Code had ceased to exist, replaced by the motion picture industry itself on November 1, 1968, with its own program of film classification, the Motion Picture Rating System (Friedman 1973). Under this new system, films would no longer be removed from distribution because of content, but instead be rated for viewing by a particular audience according to that content and its predetermined age suitability.

3.2.3 *The Medium is the Message*

Although in development for many years prior, the end of World War II signaled the authentic rise in television's popularity. Families had accumulated savings during the war years, and were eager to purchase homes, cars and other luxuries denied them during the war, and television sets soon joined that list (Edgerton 2009). The first major explosion of sets into the American marketplace occurred in 1946-1949 (Abramson 2007). Unlike radio, where the sponsor was the driving force in programming, in television the networks exercised more authority by handling this role through licensing the programs themselves and relegating the advertiser to joint or participating sponsorship (Boddy 1986).

This setup saw the creation of many shows now considered to be part of what has been dubbed "The Golden Age of Television" of the 1950s. These shows were almost exclusively in black and white because of budgetary reasons, the syndication of black and white movies to television, and the major presence in many homes of comparatively inexpensive black and white televisions. The programming was dominated by TV shows ranging from *The Texaco Star Theatre* to professional wrestling to *Gunsmoke* to *Playhouse 90*.

By the end of the 1950s, the first color Western (*Bonanza*) would premiere on NBC. Even though the ratings were dreadful during that first season, NBC stuck with the series because the network's parent company, RCA, was using *Bonanza* as a vehicle to sell large numbers of color televisions. Although there were major holdouts (*Perry Mason* and *Twilight Zone* [both CBS]; *Maverick* and *The Outer Limits* [both

ABC]), ultimately TV shows would be produced in color, in particular the healthy number of Westerns and outdoor adventures remaining on the air. Color here could be a bad thing, however, as color screens began to display the fact (if perceived by viewers) that many of these Westerns utilized the same outdoor settings regardless of on-screen location, such as Corriganville in the Simi Valley of California and Vasquez Rocks Natural Area Park in the Agua Dulce area of Los Angeles, California (Figure 26).

Whether in the black and white era, or during the rise of color programming, not all were thrilled by the rampant popularity of the medium. Boston University's President Dr. Daniel L. Marsh in a baccalaureate address warned that 'if the [television] craze continues with the present level of programs, we are destined to have a nation of morons.' (*Time Magazine* 1950). As with motion pictures, people began to speak loudly about the social and cultural education being transmitted on a daily basis by television, notably in FCC chair Newton N. Minow's infamous speech delivered on May



Figure 26: Vazquez Rocks outside Los Angeles, CA (Brad Shelton 2007)

9, 1961 to the National Association of Broadcasters convention in Washington, DC. This speech was where he made the comments equating commercial television programming to a vast wasteland (Minow and LaMay 2008).

Television, in its incarnation as a leading entertainment source, is viewed as a technological medium, an economic system, a facet of democracy, and a part of everyday life all at once (Mittell 2009). A great deal of concern has been expressed by parents, educators, and others over the years about the possible influence of television on children and its link to socialization functions (Comstock and Freeman 1975; Stroman 1984). Similar to concerns voiced about movies, it was believed that numerous researchers and lay people that television was providing people as a whole, and children in particular, with the wrong type of education. Research had been conducted on television's impact on obesity, alcohol consumption, and violence (Eron *et als.* 1972; Phillips 1982; Taras *et als.* 1989; Grube 1995). The quandary was what to do and who was to do it.

The United States Congress, the television industry, and the FCC proposed the TV Parental Guidelines system as a television content rating system on December 19, 1996. The system was originally to be used in conjunction with a controversial electronic device known as a V-Chip (Balkin 1996). The proposal went into effect by January 1, 1997 on most major U.S. broadcast and cable networks in response to public concerns of increasingly explicit sexual content, graphic violence and strong profanity in television programs (Cantor 1998; Abelman 1999). It was established as a voluntary-participation system, with ratings to be determined by the individually

participating broadcast and cable networks. However, there was immediate disagreement over how the ratings would be determined. In October 1997, the system that went into place just that January was amended to include ratings based on content as well as age (Cantor 1998).

3.2.4 Carryover into Learning outside the Geography Classroom

Why are these events relevant to the study of geographic education? Butler (1995) observed how internal and surface processes such as weathering and soil development are often treated as if they occurred in a vacuum untouched by the animals that live there. This perspective can be carried over to the field of geographic education as well. Enormous amounts of time have been placed into developing programs and curriculum to transmit geography to students while overlooking the fact that, akin to natural environmental processes, geographic learning does not occur in a vacuum

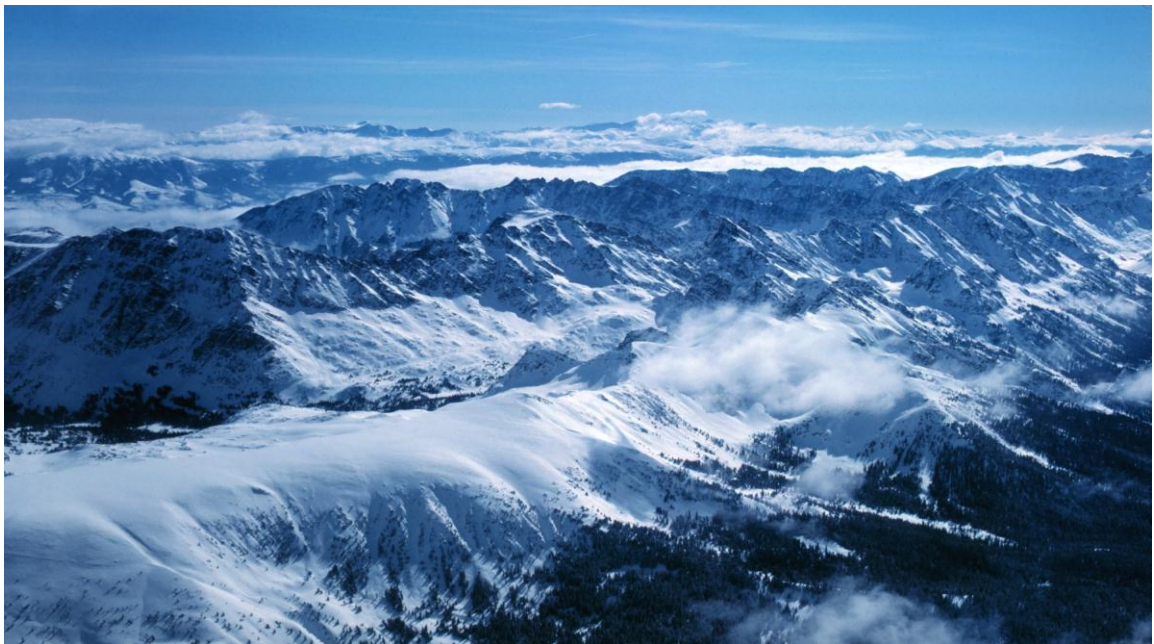


Figure 27: The Colorado Rockies (National Atmospheric and Oceanic Administration 2013)



Figure 28: Loess plain in southeastern Nebraska's section of the Great Plains (Judy Miller 1980)

(Georges 2009). Monks during the Middle Ages were often cloistered in their monasteries, away from nearby villagers. Students in the present era are not cloistered; they come and go, living lives beyond the doors of the classroom. They spend hours on their computer, going to movies, and watching television (Herr 2008).

Although past layperson concerns and academic studies have focused upon social and cultural contexts, iconic imagery displayed through popular media has long possessed a hand in the perception of place making (Youngs 2014). Notions of natural landscapes were illustrated in popular media via sweeping vistas of mountain ranges (Figure 27), the open expanses of the Great Plains, the Old West, or the frontier of Alaska (Figures 28, 29, and 30) (Agnew 2012; Blake 2014).

This created a common, if imprecise, vision of these places as areas for unbridled opportunity and rebirth (Gallagher 1986; McCarthy 2000; Holmes, Zonn,



Figure 29: Cowboys on cattle drive in 1879 (Old West Gallery 2013)



Figure 30: The Alaskan frontier (Alaska State Society 2013)

and Cravey 2004). Sweeping notions of natural surroundings have not been the sole images exhibited on screen.

Contrasting with the grand vistas of nature, the North American urban landscape (Figure 31) consistently portrays hard-boiled accounts of lives gone wrong amid dark portrayals of congested, distressed backdrops teeming with criminal life (Figure 32) and human despair (Martindale 1991), even when the setting [*Batman* WB 1989; *Dick Tracy* BV 1990] is depicted onscreen in bright vibrant colors (Lukinbeal and Kennedy 1993; Lukinbeal 2005; Mast and Kavin 2011). Between the open spaces to the west and the cities along the Eastern Seaboard are the Appalachian Mountains (Figure 33). Longstanding stereotypical images (Figure 34) of Appalachians, referring to both the



Figure 31: New York City's Central Park (Alex Shay 2013)



Figure 32: Portrayal of urban activity in a scene from the trailer for *The Big Combo* [AA 1955] (Deutsches Filminstitut 2012)



Figure 33: View of the Shenandoah River and Massanutten Mountain, in the Shenandoah Valley, Virginia. (Appalachian Views Photography 2013)



Figure 34: Early twentieth century homestead in Fannin County, GA. (Mars Hill College 2012)

mountain range and its inhabitants (Figure 35), abound in entertainment media (Speer 1993; Cooke-Jackson and Hansen 2008). These images portray the Appalachian Mountains physically as an overcast, forbidding, isolated place filled with people who are lazy and uneducated (blissfully so, according to *Lil Abner* and the *Clampetts*), and morally prone to corruption (Speer 1993; Arnold et al. 2004; Cooke-Jackson and Hansen 2008). Admittedly, a certain percentage of people in the Appalachians do fall into those categories, and there is a certain level of criminal activity that occurs in an urban setting. Filmed entertainment repeatedly amplifies these elements to the point where many people accept them as real (Albrecht 1999; Beeton 2005; Sadler and Haskins 2005) regardless of what actual statistics might say.

Dating at least as far back as Quigley in 1937 and 1947, filmed entertainment and education were (and are) peculiar bedfellows to the casual observer. To



Figure 35: 'Appalachian' bifold panel: *Deliverance* [WB 1972]/*Wrong Turn* [Fox 2003] (Internet Movie Database 2012)

that casual observer, a motif exists that movies and TV shows, whether they are sitcoms, crime dramas, or the latest in the *Transformers* franchise, exist in their basic forms to provide entertainment and escape from the everyday. Education's role is to develop a citizenry through information provided within prescribed settings that is cognizant of the world at large and how to relate to that world. Filmed entertainment and education would thus appear to be an unusual pairing. In reality, a great deal of information is obtained by the general public from sources more accessible to them through informal learning.

3.2.5 Carryover into Classroom Approaches for Teaching Geography

A long-term, commonplace discussion among researchers and educators is how to teach geography in the classroom (Patton 1972; Saveland 1993; Gersmehl

2008). Dr. James Hayes-Bohanon, Professor of Geography at Bridgewater State University in Massachusetts and the Director of the US-Brazil Consortium on Urban Development, provided his own response to the situation in a blog entry on his university website (2010):

“I agree that we want “good” geographic education, which by definition would not be boring. The problem we face in the U.S. is that it is usually not taught by geographers, since the advent of social studies. I do not think the problem is mainly about the choice of electronic information sources used in class. Someone who really knows geography can make a simple wall map come alive. A teacher without a strong geographic education who is thrown into geography class will not be able to do much with the flashiest of new geo-toys.”

Sekeres and Gregg (2008) talked about the use of poetry to teach students geography. Within their research, they discussed about how elementary teachers can use poems to target important aspects of reading instruction: phonemic awareness, phonics, fluency, vocabulary, and reading comprehension. When these poems contain substantive geography content, teachers are then able, for instance, to slip geography mini-lessons into discussions of vocabulary or reading comprehension (Sekeres and Gregg 2008). As children are taught about the language play of poetry and as they reread poems to develop fluency, teachers are successfully able to keep core geography concepts central to the children’s attention. College students have written qualitative essays after reading Jules Verne’s *Around the World in Eighty Days* as a means to examine the world around them, also increasing their interest in geography as a whole (Donaldson and Kuhlke 2009).

In the classroom, researchers and teachers wishing to illustrate environmental change over extended periods of time require imagery that pre-dates widespread aerial photography and satellite products (Sawyer and Butler 2006). Historical

ground-based photographs are difficult and expensive to acquire, and resorting to field trips and technology such as GeoWall to fill in the blanks come with their own cost and liability issues (Butler and Wilkerson 2000; Slocum, Dunbar, and Egbert 2007; Patrick 2012). Photographic images on early picture postcards, with their widespread production and usage in the late 19th and early 20th centuries, provide valuable, visual data on environmental conditions in the preaerial photograph era as long as the educators are aware of the possible distortions introduced as a result of the “artistic license” associated with hand-done color printing and tinting of the original panchromatic images (Sawyer and Butler 2006). Their widespread production and continuing availability at “flea markets” and on-line auction sites results in tremendously reasonable prices as opposed to tracing the original print or negative (Sawyer and Butler 2006).

The popular novel *The Hunger Games* has been utilized of late to teach geographic concepts to middle and high school students (Painter 2012a). The setting of Panem from the book is converted into an exercise involving mapping and how the fictional settings actually match up with present-day North America (Painter 2012a). The alliances displayed in the book were converted into an exercise involving critical thinking. In this exercise, the students discuss the pros and cons of joining a particular alliance. This discussion takes into consideration what is actually involved in making a real-life alliance (among them economic gain, military might, cultural connections, and political considerations) and how these alliances work to literally shape the Earth’s surface (Painter 2012b).

In the classroom, given that access to physical environments is

unobtainable because of their location, inherent risks, and their partially nonrepresentational quality, teachers can benefit from the use of the indirect perception of the environment transmitted by movies and TV shows, different media that both achieve similar results in describing environments (diPalma 2009). In fact, in the construction of geographic imagery relating to places, if we have not experienced the place directly then indirect sources dominate the perception of place (Zerbi 1993; diPalma 2009).

This use is not restricted to depictions of the physical environment. The British film *Bend It Like Beckham*, released in the U.S. by Fox in 2002, has been used in the cultural geography classroom to engage students with core concepts, such as ethnicity, migration, acculturation, and assimilation, and with more advanced modes of analysis such as the assembly of social roles (Algeo 2007).

Aforementioned paragraphs have touched upon sources of informal geographic learning plus tools and curriculum for teaching geography in the classroom. The initial component for each is the available transmitter from which the information radiates as well as the repeaters to carry the transmission over rough terrain.

3.3 Transmitters of Geography

Communication flows are an important way for information to move around and be received (Adams 2009). Whether it is the linear, uninterrupted Lasswell formula, the Shannon and Weaver model with signal degradation, or the Katz and Lazarsfeld two-step model, spread of information requires a transmitter to convey that information (Lasswell 1948; Katz and Lazarseld 1955; Weaver and Shannon 1963; Adams 2009). Geography, as a sensory discipline that employs embedded means of

documentation, orientation, and representation in map depictions, globes, travel descriptions, landscape depictions, paintings, photographs, and filmed pieces (Zimmermann 2007), depends on transmitters. This has consistently posed a motivating dilemma not only because mass media depictions have been and still are part of individual and societal conceptions of the world, but also because of the mass media's power to conceptualize and spread ideas and underpin the status quo (Zimmermann 2007).

The discipline of geography has long been portrayed in the established mass media of their respective day, including eras when the accepted "visual media" was provided through written literature. Homer was considered to be the first Greek geographer via his vivid description of geographic settings in the *Iliad* and the *Odyssey* (Martin 2005). Both epic poems, in particular the *Odyssey*, depicted winds, colorful localities, and climatic conditions besetting the protagonists and antagonists of each. Modern researchers have established the likelihood that these descriptions were of real places, woven together to create glowing tales of adventure (Martin 2005).

The Travels of Sir John Mandeville, written in French and first circulated between 1357 and 1371, relates the tales of a world traveler, the eponymous Sir John Mandeville. The book provided vivid accounts of the journeys of Mandeville, such as native plants and spices, and provides an elementary description of the Earth's shape and its latitudes, and how it could be possible to sail around the Earth (Mandeville and Moseley 1984). The book was considered authoritative in matters geographical throughout Europe, reportedly consulted by Christopher Columbus and Sir Walter

Raleigh alike (Kohanski and Benson 2007). Columbus purportedly used the book as one of his sources of proof when pitching the idea of travelling west to reach the East Indies to the various courts of Europe (Adams 1988). All of this influence was despite the fact that, much like Homer, there is a great deal of doubt as to whether Mandeville actually existed or was merely the compilation of several men or even a completely made-up person.

Many consumers of entertainment in the 16th and 17th centuries obtained their knowledge of foreign lands from the plays of William Shakespeare (Mayhew 1998). This knowledge was conveyed through plays set among sundry locations including in contemporary and historical Italy (*Romeo and Juliet*, *Two Gentlemen of Verona*, *The Merchant of Venice*, *Julius Caesar*), Egypt (*Caesar and Cleopatra*), Scotland (*Macbeth*), and Denmark (*Hamlet*). Shakespeare even collected praise for what was perceived as superb geographic knowledge (Theobald 1733; Mayhew 1998) despite what was later found to be glaring mistakes in his geography (Mayhew 1998) and constant theories about if he actually wrote his own plays, whether someone else actually wrote them, or if even *he* really existed

Unmistakably real people were Mark Twain and Karl May. Twain, born Samuel Clemens, became an influential American through his tales of locations he had visited: *The Innocents Abroad or The New Pilgrims' Progress* (Europe and the Middle East), *Roughing It* (the American West), and *A Tramp Abroad* (central and southern Europe). Moving beyond travel stories but still keeping rooted in places he had personally experienced, he composed two of his most famous works: *The Adventures of Tom*

Sawyer, and *Adventures of Huckleberry Finn*, both based on his upbringing in Missouri.

Unlike Mark Twain, German writer Karl May never lived the experiences or ventured to the area he wrote the most about, the American West. His tales of gunplay and action centered on characters with the colorful names of Old Shatterhand, Old Surehand, and Winnetou, and effectively invented the Wild West for generations of Europeans, among them Albert Einstein (Morton 1987). When American GIs visited Germany, they were surprised to see German children decked-out in buckskins and feathers and playing “Indians” (*The Economist* 2001). May’s imagination often went into overdrive as he related his tales, featuring geographic and cultural inaccuracies throughout his works, which did not keep him from claiming them as autobiographical (Morton 1987). Until recently his books, although still in wide circulation, were published in German only. His influence is still felt today by numerous people throughout Europe who have gleaned their knowledge of the American West from him, inaccuracies and all (*The Economist* 2001).

The printed page with hand drawn art would gain a formidable competitor by the latter nineteenth century in the form of motion pictures. Matthew Brady’s vivid images of the Civil War in the 1860s stirred their own concoction of popularity and debate before the Hollywood scandals and the Production Code were even a glimmer in someone’s eye. After Brady, the labors of Eadweard Muybridge (1878: capturing movement of animals through photography), George Eastman (1884: roll film; 1888: Kodak camera; 1889: flexible transparent film), Auguste and Louis Lumiere (1895: world’s first public film screening), Marcus Loew (nickelodeons), Edwin S. Porter (1903:

the first credited Western, *The Great Train Robbery*) and the arrival of grand bijous specifically built to house large numbers of paying moviegoers, would erect a new transmitter for geographic knowledge.

The works of authors like Twain and May would provide source material for this new transmitter. Twain's writings would see numerous adaptations and the efforts of Karl May would eventually be adapted into movies, with a few seeing U.S. release dates. Among these (Figure 36) were *Flaming Frontier* [WB 1968], with Englishman Stewart Granger as Old Surehand and Frenchman Pierre Brice as Winnetou, set in the American West but filmed in Yugoslavia by a German production company. As

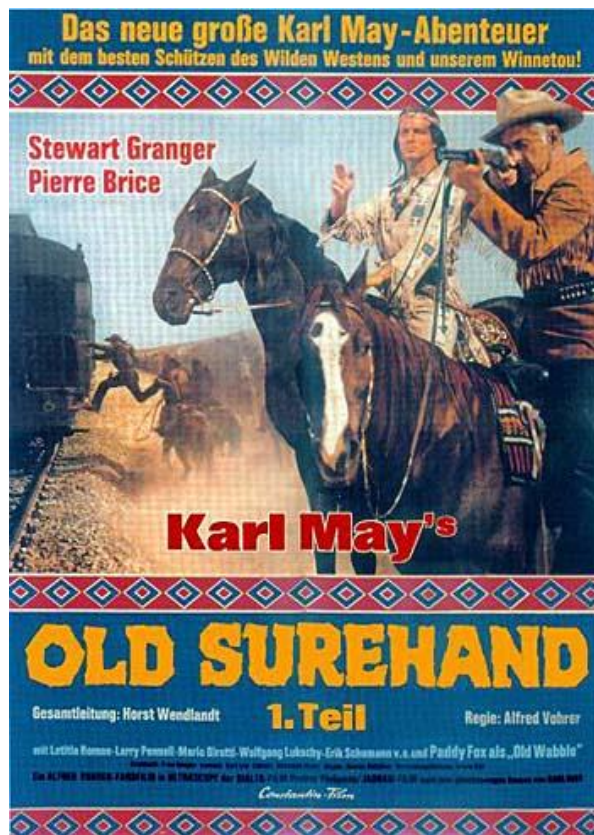


Figure 36: 1965 German release poster for *Old Surehand-Part I*, released in the United States in February 1968 as *Flaming Frontier* [WB] (Karl May USA 2012)

observed earlier, movies would prove dominant even in the face of radio (sound, yes, but no images) until the advent of television after World War II.

Each transmitter brought its own advantages (color, improved photography) along with persistent disadvantages (geographic inconsistencies) to the communication of geographic knowledge. How these advantages and disadvantages play a role in geographic comprehension will be demonstrated additionally in Chapter Five when direct examples of geography transmitted through filmed entertainment are discussed.

CHAPTER FOUR

RESEARCH METHODS

“I’m in the United States; I’m in Santa Fe, New Mexico. The supervisor said, “Old Mexico, New Mexico it’s still the same. You’re going to have to call the Mexican Consulate”.”

— A phone exchange between a customer trying to buy tickets for the 1996 Summer Olympics in Atlanta and a ticket coordinator.

Findings in the most recent NAEP Report Card for Geography appear to bolster research previously conducted in the 1980s and 1990s, which indicated that students were performing poorly on assessments of geographic expertise and that many Americans were geographically unschooled. In addition, this lack of geographic capability is being brought to the university level by these same students. The research in this dissertation is an attempt to gauge the geographic knowledge of students, conceivably where they are obtaining their knowledge, and provide useful guidelines for educators. The research was conducted through a review of the NAEP Report Card to find current trends in geographic learning and teaching, a review of existing literature (focusing on factors influencing formal and informal knowledge acquisition, geography in the media), amended content analysis through case studies of specific filming situations, and a survey of university students taking geography courses.

4.1 Examination of NAEP Report Card

The 2010 NAEP Report Card for Geography was studied to determine current trends. The 2010 edition was the most recent version compiled. From this version, an extrapolation was performed to clarify what the current trends in

geographic knowledge are plus current trends in how class time in grades K-12 is utilized to teach geographic material.

4.2 Examination of Existing Literature

The research then continued with an examination of existing literature.

This examination was broken down into several sections.

- Existing literature on formal geographic education, including teaching methods and materials
- Factors influencing knowledge acquisition through informal learning, including factors originating with lay people
- Geography in the media-where it is portrayed and how it is portrayed

The objective of this examination was to establish a conceptual model of the transmission of geographic knowledge and how this transmission is either amplified or altered, much like 1950s UHF stations trying to broadcast across a dissected plateau. These stations were often affected by elements beyond the power of their signal, such as rugged terrain, weather conditions, or regulations on where to place their tower. The transmission of geographic knowledge likewise is, in practice, often shaped by elements out of the control of professional educators because a segment of the learning process (how much is the question) takes place outside the classroom.

4.3 Case Studies

The investigation being conducted to answer these questions must be multifaceted. While the capstone of this research is the student survey, its nucleus is

the amended content analysis of movies and TV shows. As stated by the Houghton Mifflin Dictionary (2009) content analysis at its most basic is a systematic analysis of the content rather than the structure of a communication, such as a written work, speech, or film, including the study of thematic and symbolic elements to determine the objective or meaning of the communication.

Case studies were compiled of several different examples of filming. When determining the case studies, the decision was made not to concentrate on one particular location. For example, the choice was made not to solely emphasize movies and TV shows filmed in Canada. There was also no effort to concentrate singularly on entertainment media that were set out in 'the countryside' exclusively; a selection in one of the case studies involved the place substitution of one city for another city. In determining the focus components, the signs of climate visible to the naked eye: precipitation, temperature, vegetation, and landforms or architecture depending on the location, were determined to have maximum workability.

This is geographic research, meaning location had to come into play as a focus component as well. California was selected because it is maintained by many to be the motion picture and television capital of the world. This made the state a recognizable and viable conduit: either it was filmed in California *or* it was not filmed in California. From these focus components, the first case study was calculated to be entertainment media that was filmed in California and set in California. The second case study involved entertainment media that was filmed in California but set elsewhere. The third case study involved entertainment media that could have been

filmed in California but were filmed elsewhere. The fourth case study involved entertainment media that was filmed outside the portrayed setting but not in California.

Amended content analysis was advantageous because the source content of movies and TV shows is readily obtainable and inconspicuous. In addition, it presented an objective account of events, themes, and issues that might not be immediately apparent to a reader, viewer, or general consumer. Since this was an amended content analysis, the focus components used in each case study were not broken down and categorized numerically. The focus components could not independently tell us what people really think about these images or whether they shaped people's landscape conception. That is why for the objective of this research a survey was also being employed as a means to 'complete' the amended content analysis by providing a measurable cohort to the visual elements.

4.4 Survey

The capstone of the actual research was the student survey. The objective of the survey was the study of factors of student input (preexisting knowledge) being brought to the college classroom the secondary level of education. This factor, as shown through recognition of geographic features in images, is potentially vital in how educators teach geography. The overall query being investigated within the body of this research is whether or not the willing suspension of disbelief needed for television and motion picture viewing carries its way into informal learning, and by extension into formal geographic education, affecting

recognition of geographic features. This research, in tandem with other research, will provide an insight into the improvement of geographic education by addressing potential deficiencies in student comprehension through curriculum offerings better designed to meet these deficiencies. As part of this research, a survey (Appendix C) was conducted of university geography students at different stages of their careers.

The survey was conducted at Texas State University-San Marcos. This site was selected for the following reasons:

- It is recognized in numerous publications as the largest geography department in the United States, in terms of faculty strength and student enrollment.
- The university offers Bachelors, Masters, and Doctoral degrees in a variety of fields in the discipline of geography, allowing one to follow up the ladder of geography if the person so wished.
- In addition to its 2011 recognition as a Hispanic Serving Institution by the U.S. Department of Education, the university also serves students from many states and countries.
- The student body is a mixture of traditional and nontraditional students in terms of age plus a mix of genders and ethnic backgrounds.

The students involved were enrolled in the World Regional Geography (GEO1310) and Introduction to Physical Geography (GEO2410) courses at Texas State University. There were 555 students enrolled to take GEO1310 during the Spring 2013 semester, and 163 students enrolled to take GEO2410 and its affiliated lab section (Table 1). The GEO2410 figures did not count students only enrolled in the lab section of the course; these students were listed as GEO4190, or independent study, students.

Table 1: Pool of potential research survey candidates (black columns), Spring Semester 2013 (Texas State University-San Marcos Department of Geography 2013)

APPLICABLE INTRODUCTORY-LEVEL GEOGRAPHY COURSE ENROLLMENTS FOR SPRING 2013			
GEO1309 (Introduction to Cultural Geography: 2 sections)	GEO1310 (World Regional Geography: 8 sections)	GEO2310 (Introduction to Environmental Geography : 1 section)	GEO2410: (Introduction to Physical Geography: 4 sections)
36	116	<i>Total: 29</i>	17
58	129		59
<i>Total: 94</i>	52		57
	127		30
	15		<i>Total:163</i>
	69		
	31		
	12	<i>Source: Graduate Advisor Office, Texas State University-San Marcos Department of Geography</i>	
	<i>Total:555</i>		

These courses are intended to provide both an introduction to geography for students who are potential geography students and a foundation for those who have already declared a field of geography as their major or minor. Since they are intended as gateway courses, with a mixture of both geography and non-geography students, it is believed these students would provide the most cogent responses. However, it is important to note that while the intent is for the students to take them in a sequential manner (the 1310 course first and then the 2410 course), students do not always take them in that order.

A signed consent form for each student was determined to be unnecessary after IRB review. Nevertheless, it was explained with each administering that the survey was completely voluntary and that there were no immediate benefits associated with taking the survey or any penalties for not taking the survey. An email was sent to the instructors teaching each course because the survey, while brief,

would take up class time. The following was the provisional format for the actual email (Appendix D) that was sent under the subject line “Research Participation Request”:

‘As part of my dissertation research, I am conducting an examination of the level of geographic recognition students are bringing into your classroom and what influences it. This examination features a survey to be conducted within your classroom by myself or an approved associate. This survey should not take more than 10 minutes of your class time, or the length of a teaching evaluation. This project [insert IRB Reference Number] was approved by the Texas State IRB on [insert IRB approval date]. Pertinent questions or concerns about the research, research participants' rights, and/or research-related injuries to participants should be directed to the IRB chair, Dr. Jon Lasser (512-245-3413, lasser@txstate.edu) and to Becky Northcut, Director, Research Integrity & Compliance (512-245-2314, bnorthcut@txstate.edu). Your participation is not mandatory. If you do respond affirmatively to this email, we will then set up a mutually agreeable date.’

The survey commenced by asking students a series of demographic questions. This set of questions was followed by a series of paired images obtained from formal educational materials, tourist sites, and individual collections. The objective in making the specific selections was to connect them with the aforementioned case studies and areas that should already be familiar to the students. Each student was then asked to correctly identify the real locale. The entire survey was presented via PowerPoint in the classroom in order to enhance the images, prevent the likely distortion arising from printing off numerous copies, and reduce paper. The survey did not take longer than it would for the completion of teaching

evaluations filled out by students.

The dependent variable was the number of incorrect answers on the paired images portion of the survey. This portion is *not* a trivia section. The intent is to see if students have been visually jaded by constant exposure to filmed images and not to test their recognition of specific movies or TV shows. None of the images were direct screen captures because of studio and network copyright restrictions. All of the images instead are photographs of the locations being compared. The images have been paired by actual location and a filmed location substituted for the actual one, for instance a movie set in Texas but filmed in Canada. In some of the pairs the actual location is featured first, while in others the shooting location is featured first. This was done in order to prevent haphazard selection as best as possible. The pairs of images were selected for the following reasons:

- Connectivity to the case studies and literature review
- Locations in Texas with which students at a Texas-based university should have some familiarity
- Major cities in the United States
- Important nation-states in the world (ex: Russia)
- Locations recently in the news (ex: Korean Peninsula)

4.4.1 Analysis of Results

Once the surveys were completed, the final responses needed to be tabulated and tested. The Analysis of Variance (ANOVA) method for the testing of survey responses was utilized to look at whether or not the means of the existing groups were

all equal.

As part of this, separate calculations involving the effect size were performed. An effect size is a measure typically calculated by taking the difference in means between two groups and dividing that number by their combined (pooled) standard deviation (Texas Education Agency 2011). The final calculation describes the magnitude of the difference between two groups, but although it *can* tell you the degree to which the null hypothesis is false, it *does not* determine the significance level.

Effect sizes can be considered small (less than or equal to .20), medium (less than or equal to .50) or large (less than or equal to .80) (Cohen 1988). A small effect size means that if the magnitude of the difference is less than or below .20, any difference is inconsequential. A medium effect size is one that is noticeable to the layperson's eye. If, for example, after running an ANOVA it is determined there are not significantly different groups, but there is a large effect size, it might be beneficial to rerun this ANOVA with a larger sample size. A large effect size without statistical significance could be an indication that significance can be reached with a larger sample.

The ANOVA method was run in order to either accept or reject the following null hypotheses:

#1- H_0 . *Student differentiation between images of filmed and actual geographic features **does not** vary with level of **formal** geographic education.*

The intent of the first one-way ANOVA was to examine whether the number of credits (Questions 3 and 4 on the survey) influences student differentiation.

If the null hypothesis (**#1- H_0**) is accepted, then the results should indicate that geographic recognition does not vary as your level of formal geographic education increases. However, if the null hypothesis is not upheld, then the next candidate is an alternative hypothesis of variance by level of formal geographic education. The number of geography credits either completed or in progress represented formal education for the overall purpose of this survey.

The intent of the second one-way ANOVA was to examine whether the number

#2- H_0 . *Student differentiation between images of filmed and actual geographic features **does not** vary with level of **informal** geographic education.*

of viewing hours as a measure of informal geographic education (Question 5 on the survey) influences student differentiation. If the null hypothesis (**#2- H_0**) is accepted, then the results should indicate that geographic recognition does not vary as your level of informal geographic education increases. However, if the null hypothesis is not upheld, then the next candidate is an alternative hypothesis of variance by level of informal geographic education. A number of examples of informal learning, such as newspapers and knowledge acquired from one's community, exist. For the overall purpose of this survey, informal learning was represented by the number of viewing hours a student watched filmed entertainment, regardless of the venue or device.

The intent of ANOVA #3 was to examine whether those students who have completed or are currently taking Introduction to Physical Geography (Questions 6 and 7 on the survey) have higher student differentiation. If the null hypothesis (**#3- H_0**) is accepted, then

#3-H₀: *Students who are currently enrolled or have completed physical geography will not have better differentiation than students who have not enrolled in or completed physical geography.*

the results should indicate that geographic recognition does not vary according to whether or not have taken Introduction to Physical Geography. However, if the null hypothesis is not upheld, then the next candidate is an alternative hypothesis of variance by completion or enrollment in Introduction to Physical Geography.

The survey asked a total of seven questions speaking to demographic factors. The primary questions tested from that segment of the survey were Questions 3, 4, 5, 6, and 7. Question 3 asked the student how many credits have they completed up to this point. In order to account for the fact that a healthy number of students have taken geography courses at other institutions before arriving at Texas State, the question asked the student to include those courses. Question 4 asked the students the number of credits they are currently taking. The distributions found within Question 3 were based upon the fact to earn a minor in geography at Texas State you need a minimum of 19 credits to earn a minor in geography, and dependent upon your chosen field you need between 30-36 credits (minimum) to earn a major in geography (Texas State Undergraduate Catalog 2013). The distributions for Question 4 were based upon the estimated number of credits a student requires to maintain their respective semester status at Texas State.

Question 5 asked the student to give the amount of viewing hours per week they spend watching filmed entertainment. The distributions within this question were based upon figures from A.C. Nielsen Co. (2013) stating that the

average American spends approximately four hours each day watching television, or approximately 28 hours per week. Questions 6 and 7 asked each student to state which class they are taking the survey in and whether or not they have completed (or are currently taking) the other choice. This is based on the enrollment distributions for Spring 2013 listed in Table 1.

The rationale for using the ANOVA test is to determine if the population distribution functions are identical or if there is actually a significant statistical variance between the means. Finding the clarification at this stage of the research will determine whether the original null hypothesis (H_0) on student differentiation is proven or unproven, whereupon there would be a reversion to the alternative hypothesis (H_A). The other questions will still serve a critical importance, even though they are not being tested for the purposes of this research.

The answers to Questions 1 (age) and 2 (gender) were evaluated as *future research baselines*. The research hourglass principle states that quality research will lead further into more quality research, much like sands in an hourglass will keep narrowing in order to go down the narrow tube into the next chamber, where it widens out again. The intent of the research in this dissertation is to determine the effect on geographic recognition of TV shows and movies, and whether that differs with exposure to formal geographic education. While an ANOVA was run on age and gender, the overall research as constructed did not factor in age or gender. Nevertheless, when this research is widened beyond the pages of this dissertation the answers from these questions and their results after testing, when compiled with new

findings, will go towards broadening research into the factors influencing geographic education and comprehension (Figure 37).

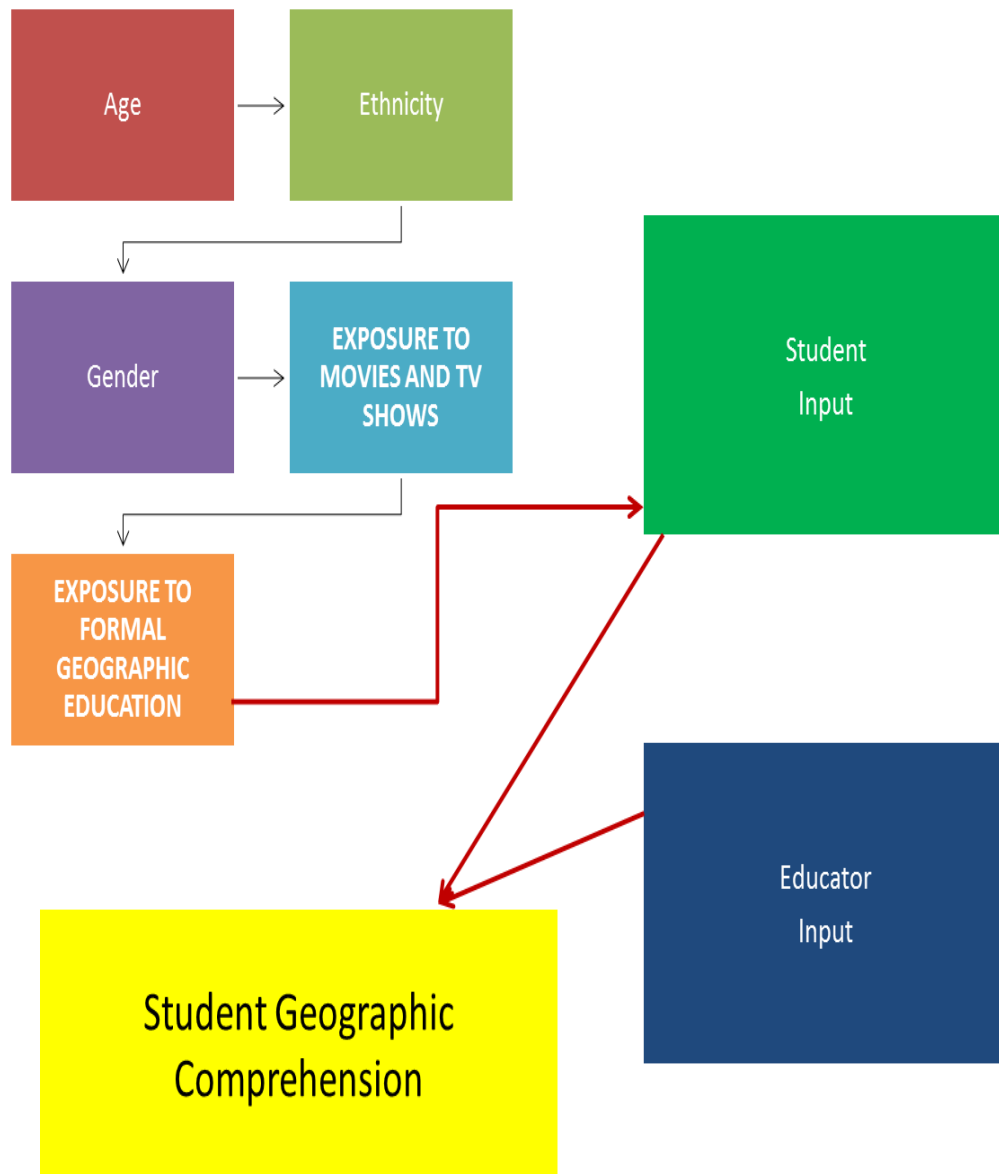


Figure 37: Conceptual charting of elements of geographic comprehension (Kleitches 2013)

CHAPTER FIVE

CASE STUDIES

*"A rock is a rock, a tree is a tree--shoot it in Griffith Park!"
— Old Hollywood saying, purportedly first told to director
King Vidor by Abe Stern, film producer and uncle of Universal
Pictures founder Carl Laemmle.*

5.1 Parameters for Case Studies

How much does the willing suspension of disbelief featured in entertainment viewing carry over into informal learning? Informal learning, by its common usage, is distinctive through the acquisition of knowledge when one is not trying to intentionally learn, as opposed to picking up a textbook or journal. For willing suspension of disbelief to be effective, the major component is simply for the vehicle to be believable and internally consistent.

The mere title of the NBC western *The High Chaparral* (Figure 38) and its representation in the desert led a generation of people to think that “chaparral” is desert vegetation whereas it is actually a dense shrubland (Figure 39) characteristic of subhumid Mediterranean regions and subhumid montane regions that experience frequent disturbance—fires, mass movement, etc. (R. Earl, personal communication, October 27, 2013). An Introduction to Physical Geography professor at a U.S. university noted how, numerous times, he had to overcome the grievous error that the title prolonged, and that the error was significant because the mere title led to geographic misinformation (R. Earl, personal communication, October 27, 2013)

A noteworthy example of the suspension of disbelief is the classic BBC series *Doctor Who*. Doctor Who, a Time Lord, goes on many adventures while



Figure 38: Cast of *The High Chaparral* at their Arizona shooting location, with the local vegetation (Ted Markland 2013)



Figure 39: Actual California chaparral (U.S. Forest Service 2003)

travelling in a TARDIS (Time and Relative Dimension in Space), a combination time machine and spacecraft. This feature has been in place for long time, so devoted viewers have come to willingly suspend the reality that the device was designed to look like a British police call box (Figure 40) by the show's producers as a budgetary necessity. This example can be shifted to TV shows such as *NCIS* and movies such as *Fistful of Dollars* and *For A Few Dollars More*: they have been viewed so many times that, to the people watching them, the San Gabriel Mountains *are* the Appalachian Mountains and the desert in Almeria, Spain *is* the American Southwest.

To continue the research beyond this point, authentic geographic locations need to be examined. Because there are numerous movies and TV shows, parameters will need to be set in order to select specific productions for inquiry.

First, the production must have received widespread distribution throughout the United States, either on a television network or movie screens. Familiarity will also need to be a factor. For instance, *Battle of the Bulge* [WB 1965] was notorious for being filmed in the Sierra de Guadarrama mountain range outside Madrid, Spain (IMDb 2013), which in no way resembled the densely-wooded Ardennes Forest of Belgium where the actual Battle of the Bulge took place. Nevertheless, because many people 18-49 years of age possess little knowledge of this movie, we will not be examining it. The second parameter will eliminate productions that are either not produced as entertainment features or scripted real-life (*Lincoln* [Fox 2012]) features. The following, although a part of the discussion, will not be utilized as candidates by applying this parameter:



Figure 40: 'Doctor Who' bifold panel: the interior and exterior of the TARDIS (BBC 2013)

- Documentaries
- News Programs
- Films specifically made for the classroom, such as those produced by Coronet Films.
- A vast quantity of the programming found on PBS.
- “Actuality”. This is a term used by the TruTV network to represent their programming, meaning that what is being shown actually happened, but not in genuine unedited, unscripted time. For this research, the term will be further extended to represent similar programming found on MTV, DIY, HGTV, Destination America, and comparable networks.

The next parameter involves shooting locations. When discussing shooting locations, the major element will be principal photography (where the bulk

of the filmed final product was shot). These locations will principally consist of standing outdoor physical surroundings and man-made structures. The cases selected must contain a large quantity of outdoor scenes and not be indoor-based tales such as *The Mary Tyler Moore Show*, *Frasier*, or *The Big Bang Theory*. Because of the parameter of standing outdoor settings, the following genres will also not be brought into play on a significant scale for this dissertation although they are definitively entertainment produced for widespread consumption:

- Animated Features: the *Shrek* and *Toy Story* series, *Beowulf*
- Films extremely reliant upon CGI or other special effects: *Avatar* and *The Matrix* series

The location where the movie is set must be fifty-percent an actual location, not a totally fictitious one. This would rule out movies such as *Slap Shot* [Univ. 1977] and *City on Fire* [Avco Embassy 1979] from examination. *Slap Shot* was a hockey motion picture starring Paul Newman and filmed in and around the city of Johnstown, PA (Figure 41), representing in the movie the fictional city of Charlestown. No specific state was ever mentioned, but with the other actual cities mentioned in the film (Syracuse and Binghamton, NY; Hyannisport, MA; Peterborough, ON) and the primary mode of transportation (the team bus), a safe presumption can be made that it is located in the northeastern United States or southern Canada. *City on Fire*, a disaster movie starring Barry Newman, Leslie Nielsen, and Henry Fonda, was filmed in Montreal (Figure 42) but set in an unnamed ‘major Midwestern city’ in an unnamed state.



Figure 41: Bridge Street heading past the Franklin Borough plant of Bethlehem Steel, one of the Johnstown-area filming locations for *Slap Shot* (Doug Foreback 2002)



Figure 42: Montreal, Canada- filming location for *City on Fire* (University of Massachusetts 2013)

5.2 Components of Case Studies

After the preceding parameters were met, cases were then selected. The components of the case studies will be the connecting element (TV show or movie), the locations where they are set, and the actual shooting locations. The final categorization of the areas was not determined by media but by type of location filming. The first area represented TV shows or movies filmed in California and representing California. The second area represented TV shows or movies filmed in Southern California and set somewhere else. The next area represented TV shows/movies that could be filmed in Southern California yet were filmed somewhere else. The final area represented TV shows/movies capable of being filmed in its screen setting but filmed elsewhere.

In addition to the material noted in the inline citations, data for climate, topography, and vegetation was employed where appropriate, with the information compiled from:

- The William and Barbara Leonard University Transportation Center at California State University San Bernardino
- California Department of Fish and Wildlife
- CIA World Factbook
- U.S. Department of Agriculture
- U.S. Environmental Protection Agency
- U.S. Forest Service
- U.S. Geological Survey
- U.S. National Park Service

- Statistics Canada
- Texas A&M Forest Service
- World Wildlife Fund

In one of the case studies, the actual and filmed settings deal more with urban surroundings than natural ones (beyond temperature and precipitation). For this study, data and observations relating to urban architecture were employed. The data and observations were compiled from the written research of:

- Reyner Banham
- Eric J. Brock
- R. Stephanie Bruno
- Marianne Elliott
- Alan Hess
- Michael Hough
- Ari Kelman
- John Klingman
- Amos Rapoport and Robert E. Kantor
- Barbara Rubin

In addition to an internal examination of geographic elements and reasons for the particular filming choices, attention was paid to possible effects on geographic comprehension.

5.3 Case Study 1: California as ‘California’

California has portrayed many places, both foreign and domestic, over

the years, including itself. San Francisco has portrayed itself in movies and TV shows for many years, including *Bullitt* [WB 1968], the four films in the *Dirty Harry* series [all WB: *Dirty Harry* [1971]; *Magnum Force* [1973]; *The Enforcer* [1976]; *Sudden Impact* [1983]; *The Dead Pool* [1988]], *Streets of San Francisco* [ABC], *McMillan and Wife* [NBC], *The Rock* [BV 1996], and *The Pursuit of Happyness* [Col. 1996]. The Los Angeles area, in addition to housing the film industry, has also performed the role of Los Angeles many times over as well, including *Double Indemnity* [Par. 1944], *Sunset Blvd.* [Par. 1950], *The Graduate* [Embassy 1967], *Columbo* [NBC], *Pulp Fiction* [Miramax 1994], and *The Fast and the Furious* [Univ. 2001]. However, although locations in California are fully capable of playing themselves onscreen, in numerous instances they have not.

5.3.1 San Francisco

The driving distance from Los Angeles, California to San Francisco, California is approximately 382 miles (615 km); it would therefore seem logical to film San Francisco-set movies *in* San Francisco. Nevertheless, filmmakers often have reasons for not doing so. One is the budget. Even with that relatively short distance, the production unit must troop crew and performers up the coast, feed them, house them somewhere, and so forth, all of which can significantly dent the budget. If the individual movie or TV show had a large number of interior scenes capable of being filmed in Los Angeles (*The Maltese Falcon* [WB 1941]; *The Lineup* [CBS]) and could get by on stock shots of the city or with second unit photography, then they did.

Another reason is weather conditions. San Francisco and Los Angeles

share the same Mediterranean climate, generally characterized by moist mild winters and dry summers. San Francisco's climate, however, is further shaped by its direct location on the Pacific coast. This location brings it under the influence of the cool currents of the Pacific Ocean, moderating its annual temperature and more consistent precipitation (NOAA 1995). This also frequently produces accompanying fog (Figure 43) for the Bay Area (Nolte 2005). This can wreak havoc with film shoots, as when *Star Trek IV: The Voyage Home* (Par. 1986) had to shift modern-day scenes set in Golden Gate Park to Will Rogers State Park outside Los Angeles because of rainfall making the ground too soft for shooting (Nimoy 1995).



Figure 43: San Francisco's Golden Gate Bridge swathed in a summertime fog (Frederic Larson 2005).

Although both Los Angeles and San Francisco have been known for

seismic activity, the historic reputation of the Bay Area for violent activity makes some filmmakers nervous, even when the subject of the film is the San Francisco Earthquake of 1906. This was the unifying plot device for *San Francisco* [MGM 1936] starring Clark Gable, Jeannette MacDonald, and Spencer Tracy. Alongside a love story and musical numbers, the pinnacle of the movie was a recreation of the actual 1906 earthquake (Figure 44).

Thirty years had passed since the 1906 earthquake, and it would have appeared that the movie could have been filmed on location (Figure 45). The

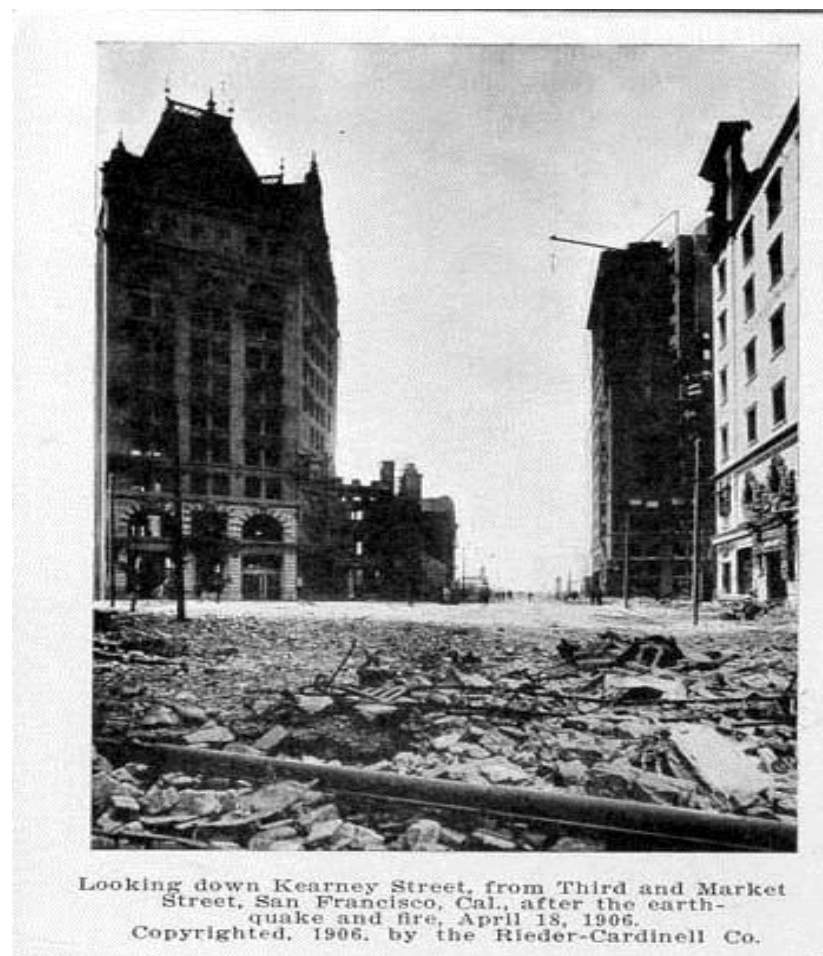


Figure 44: A view of San Francisco after the 1906 earthquake and subsequent fire (USGenWeb Project 2013)



Figure 45: San Francisco, CA during the 1930s (National Archives and Records Administration 2013)



Figure 46: The MGM backlot-the shooting location for the movie *San Francisco* (Bingen, Sylvester and Troyan 2010)

mitigating factors against filming on location were the three leads and the intricate (for the 1930s) special effects required for the onscreen depiction of the earthquake. The money to be spent on the special effects and three major stars (Gable, MacDonald, and Tracy) meant the movie would be shot on the MGM backlot in Culver City, outside Los Angeles (Figure 46). The only scenes of the actual city came with the ending montage of the city as it looked at the time the movie was filmed, with the Golden Gate Bridge still under construction.

5.3.2 *Lethal Weapon*

As previously discussed, Los Angeles has done a steady job of portraying itself in numerous genres of movies over the course of many years. *Lethal Weapon* [WB 1987] is an action tale about veteran Los Angeles police detective Roger Murtaugh (Danny Glover) being partnered with young suicidal detective Martin Riggs (Mel Gibson). Their first case is a seemingly routine one about a prostitute's death in Century City. Eventually, the case turns increasingly violent as the first death evolves into a battle to stop a gang of drug smugglers.

All of the principal characters, both good guys and bad guys, are Vietnam War veterans, explaining the tactics used throughout. A key segment of the movie is the kidnapping of Sergeant Murtaugh's eldest daughter. The villains arrange a meeting at a dry lake in Victorville. This is not a studio recreation; this *is* actually a dry lake in Victorville, in this instance the El Mirage Lake outside Victorville, CA (Figure 47). The sequence ends with everyone involved being captured and taken to the back of a nightclub for excruciating torture. Murtaugh, Riggs, and Murtaugh's

daughter eventually escape and the action spills out into the streets of Hollywood.

Except for the indoor scenes of Murtaugh's family at home, *Lethal Weapon* was filmed on real locations in and around the city of Los Angeles, providing a better view of the physiography around Los Angeles. According to comments made over the years by director



Figure 47: El Mirage Lake outside Victorville, CA, the actual shooting location *and* the actual on-screen location for a pivotal scene in *Lethal Weapon* (Tony Hoffarth 2010)

Richard Donner, this was his way of accentuating the authenticity of the movie purely for cinematic value. This carries on into others movies in the series. In *Lethal Weapon 2*, when Riggs uses his truck to tear a house away from the hillside, it is an actual property in Valencia, CA (cost for the shot according to IMDb: reportedly \$500,000). *Lethal Weapon 3* climaxed with the burning of a housing development owned by the principal villain. The site was not a set built for the film but an actual real estate project near Lancaster, CA. The developers went broke before the homes could be

completed, and the production company was allowed to film there after agreeing to demolish the site completely after the shoot

5.4 Case Study 2: California as Somewhere Else

California has portrayed many places, both foreign and domestic, over the years. It has portrayed the Midwest, the Northeast, and the Deep South, not to mention many foreign locations. *Cimarron* [RKO 1931] cast Bakersfield, Venice, Inglewood, Encino, and the outskirts of Los Angeles as Oklahoma at the time of its great land rush. The same studio used their studio grounds as France in 1935 for *Roberta* and, for 1939's *Gunga Din*, utilized the Alabama Hills of the Sierra Nevada mountain range as a cost-efficient substitute for the Himalayas. *Halloween* [Compass International 1978] utilized South Pasadena as the filming location for the frightening Illinois-set tale of Michael Myers. California to this day is still a popular performer cast in the role of other locations, as noted by a popular TV show of the present and popular filmed entertainment of the more recent past.

5.4.1 NCIS

The current TV show is *NCIS*, broadcast Tuesday nights at 8:00 EST on CBS. *NCIS*'s ratings routinely rank the series among the top three scripted shows weekly. The series in its current incarnation relates the weekly adventures of Special Agent Leroy Jethro Gibbs (Mark Harmon), the leader of a four-person team of special agents belonging to the Naval Criminal Investigative Service (the *NCIS* of the title) Major Case Response Team. His Senior Field Agent is Anthony DiNozzo (Michael Weatherly), a womanizing, movie-quoting former Baltimore Homicide Detective. The

team also consists of Ziva David (Cote dePablo), a former Mossad officer and naturalized U.S. citizen who is a skilled fighter, as well as Timothy McGee (Sean Murray), a computer-savvy agent. Assisting the team are Abby Sciuto (Pauley Perrette), the energetic-but-Goth lab tech, and the Scottish-born Dr. Donald Mallard (David McCallum), nicknamed Ducky, the eccentric medical examiner full of unusual stories.

NCIS is set in Washington D.C., the environs of Virginia and Maryland, and adjacent sections of the Appalachian Mountains, in particular the Blue Ridge Mountains. The climate found in this area features average annual temperatures ranging from below 50°F (10°C) in the north to about 64°F (18°C) at the south end of the highlands, and averages of 60° to 70°F (16° to 21°C) in the lowland and coastal areas (NRCC 2013). Average annual precipitation varies from 35 in (890 mm) in the valleys to up to 80 in (2,040 mm) on the highest peaks in the Appalachian region, with precipitation ranges from 40 to 60 in (1,020 to 1,530 mm) per year in the lowland and coastal areas (NRCC 2013). The average length of the frost-free period ranges from 100 days in the northern mountains to about 220 days in the low southern parts of the Appalachian Highlands (NRCC 2013).

An assortment of vegetation is present with the temperature and precipitation variations. Common species close to the coast include evergreen oaks and members of the laurel and magnolia families (Grossman *et al.* 1998; University of Idaho 2010). A well-developed lower stratum of vegetation may variously include tree ferns, small palms, shrubs, and herbaceous plants. Lianas and epiphytes are

abundant. Between the coastal plain and the Appalachian Mountains loblolly pine, shortleaf pine trees, and other southern yellow pine species, singly or in combination, are present (Grossman *et al.* 1998; University of Idaho 2010). Their common associates include oak, hickory, sweetgum, blackgum, red maple, and winged elm. The main grasses are bluestem, panicums, and longleaf uniola. Dogwood, viburnum, haw, blueberry, American beautyberry, youpon, with abundant woody vines.

Mixed oak-pine forest can be found in both the valleys of the southern Appalachian Mountains and coastal plains (Grossman *et al.* 1998; University of Idaho 2010). Above this zone in the higher elevations lies the Appalachian oak forest, dominated by a dozen species each in the white oak and black oak groups, with scatterings of chestnut trees (Grossman *et al.* 1998; University of Idaho 2010). Above this zone lies the northeastern hardwood forest, composed of birch, beech, maple, elm, red oak, and basswood, with an admixture of hemlock and white pine. Spruce-fir forest and meadows are found on the highest peaks of the Allegheny and Great Smoky Mountains. Mixed mesophytic forest extends into narrow valleys (coves) of the southern Appalachians, where oak vegetation predominates (Grossman *et al.* 1998; University of Idaho 2010).

However, the series is actually filmed in and around Santa Clarita, CA. The area, located in the San Gabriel Mountains approximately 35 miles (56 km) northwest of downtown Los Angeles, has been a longtime filming location, especially for Westerns, going back to the silent film era (Worden 2003; Menefee 2007; Reid 2010).

In the San Gabriel Mountains, the mean annual temperature is 45°-60°F (7°- 15°C) and annual precipitation is between 20-30 in (508-762mm), much of it falling during the winter months (WRCC 2013) as is representative of a Mediterranean climate. The surface water is marked by rapid runoff and rain except at higher elevations. Crucially, all but the larger streams are dry during summer (WRCC 2013) and sag ponds (bodies of water collected in the lowest parts of a depression formed either near the head scarp of rotational landslides or between two strands of an active strike-slip fault) exist along the San Andreas Fault (Aydin and Nur 1982).

The rainfall and temperature patterns of the San Gabriel Mountains have resulted in the flourishing of sclerophyllous plants (Grossman *et al.* 1998; University of Idaho 2010). These plants generally resist dry conditions well, making them successful in areas of seasonally variable rainfall (Grossman *et al.* 1998; University of Idaho 2010). The flora is dominated by chamise chaparral and mixed chaparral. Also present but less common are Jeffrey Pine Forest, Juniper Woodland, Montane Hardwood Conifer Forest, Montane Hardwood Forest, Grassland, Montane Chaparral, Coastal Oak Woodland, Pinyon-Juniper Woodland, and Wet Meadow vegetation (Grossman *et al.* 1998; University of Idaho 2010).

The discernible differences are readily visible. The Blue Ridge Mountains, and other ridges in the Virginia-Maryland-West Virginia corridor (Figure 48), tend to feature a bluish tint arising in part from the vegetation present in that area. The San Gabriel Mountains feature more of a brownish-green backdrop to the surroundings, arising from the region's precipitation patterns and resultant vegetation.



Figure 48: The Blue Ridge Mountains of Virginia, popular onscreen setting for *NCIS*'s numerous outdoor scenes (Bristol University 2011)



Figure 49: The actual *NCIS* shooting location in the San Gabriel Mountains outside Santa Clarita, CA (California State University, Northridge 2006)

The Appalachian Mountains have a gentler, sloping topography as a result of their advanced age, whereas the San Gabriel Mountains (Figure 49) are younger and are more pronounced in appearance. The query is whether or not these readily visible differences impact geographic comprehension of the two areas.

5.4.2 *MASH/M*A*S*H*

MASH is an acronym for Mobile Army Surgical Hospital, in Robert Altman's 1970 film *MASH*. MASH 4077th is where three young surgeons, John "Trapper John" McIntyre, Benjamin Franklin "Hawkeye" Pierce, and Duke Forrest end up during the Korean War. The movie relates their antics during the conflict and their interactions with other doctors and staffers. The movie proved to be a box office smash and was eventually adapted into the TV series *M*A*S*H* on CBS, starring Alan Alda as Hawkeye and Wayne Rogers as Trapper John, which after a slow start would eventually have a long and profitable run from 1972-1983.

The movie and TV show were set during the Korean War (1950-1953) in the south-central portion of the Korean Peninsula, which extends south-southeast from the northeastern part of the China mainland. The peninsula is dominated by mountains which are not high, rarely exceeding 3,937 ft. (1,200 m), but found almost everywhere and, consequently, creating a rugged terrain. Receiving abundant summer precipitation with warm, humid weather, the Korean Peninsula is part of the East Asian monsoonal region (Ou and Qian 2006; Yancheva *et al.* 2007). Annual precipitation exceeds 39 inches (1,000 mm) throughout most of the peninsula, with about two-thirds falling between June and September. During winter, the movements

of air from the Asian continent bring cold temperatures and generally dry conditions, although some snowfall occurs (Korean Meteorological Administration 2011). Spring and autumn are mild and of short duration.

The vegetation of the peninsula's more temperate middle includes a deciduous hardwood forest that varies floristically from south to north (Yi 2011; Ma *et al.* 2013). As in the hardwood forests of northeastern North America, conifers occur in places that are especially cold or recently disturbed. The warmer southern part of the peninsula includes the hornbeam and other species including pine, maple, oak, and snowbell (Yi 2011). This section of the Korean Peninsula is also home to the bamboo plant (Kong 1984; Bystriakova *et al.* 2003).

Although actors such as Wayne Rogers, and their respective characters, would come and go throughout the show's run, with the series diverging farther and farther from the original premise of the movie, one thing stayed the same: the shooting location. Both *MASH* and *M*A*S*H* were filmed at the Fox Ranch (Figure 50) in Calabasas, California, now Malibu Creek State Park. This location is situated in the Santa Monica Mountains of southern California. The mean annual temperature here is 54°-62°F (12°-16°C) and with annual precipitation measuring 15-25 in. (381-635mm) (NCDC 2013). The water flows are marked by rapid runoff, with streams running dry in summer, and no natural lakes (WRCC 2013).

The major vegetation here is coastal scrub, chamise chaparral, and mixed chaparral. Other forms of vegetation are the Coastal Oak Woodland; grassland, Valley Foothill Riparian Woodland, Montane Riparian Forest, and Valley Oak



Figure 50: Malibu Creek State Park, prior to 1976 the Fox Ranch, actual shooting location for *MASH* and *M*A*S*H* (Malibu Creek Docents 2011)

Woodland (Grossman *et al.* 1998; University of Idaho 2010).

The features of this Mediterranean climate (vegetation, landforms, and weather conditions) for over a decade would stand in for the Korean Peninsula. The differences between these features and the physical features of the Korean Peninsula and the vegetation (Figure 51) prevalent in its humid, East Asian monsoonal climate are seemingly palpable to the naked eye. Many tales of the filming of *M*A*S*H* talked about how the filming of episodes set in the Korean winter required the performers to wear heavy winter clothing on days when the temperature was well above the mean for the Santa Monica Mountains. With events on the Korean Peninsula making recent headlines, could these portrayals manipulate comprehension of the area?



Figure 51: Indigenous Korean vegetation: Korean fir (*Abies koreana*) (Jan Maksymilian Mehlich 2013)

5.5 Case Study 3: Somewhere Else Beyond California

With the long existence of the movie and television industries in California, it would seemingly be more convenient to shoot all movies and TV shows there. This is not the case, however, as many filmmakers lens their projects in other locales as the relatively low production costs that drew producers to California after World War I no longer exist (Koppes and Black 1990), even if the balmy climatic conditions still do. Entertainment set *in* Los Angeles is not spared relocation because of artistic or financial considerations, either. *The Big Sleep* [WB 1946] was filmed between October 1944 and January 1945, when World War II was still in progress and wartime restrictions on building supplies, gasoline, and night activities were entrenched, necessitating the filming of the movie (and its many Los Angeles-area

settings) on Warner Brothers soundstages and backlots.

Because of production costs in the late 1950s and early 1960s, the ABC series *77 Sunset Strip* was filmed, except for establishing exterior shots, on soundstages and backlots. 1964's *The Last Man on Earth* [AIP] starring Vincent Price was set in Los Angeles but filmed in Rome with minimal effort to match up similar buildings in the two cities. *The Glitter Dome* [HBO 1984] was set primarily in Hollywood but filmed in its entirety in Vancouver, British Columbia. This relocation is still commonplace today.

5.5.1 Common Law

In the aftermath of Hurricane Katrina, a new, more generous entertainment tax incentive program was put into place by the State of Louisiana to boost filmmaking (McDonald 2007). Popular recent movies such as the Los Angeles-



Figure 52: The Los Angeles setting for the TV series *Common Law* (University of Southern California 2006)



Figure 53: New Orleans, LA, actual shooting location for the series (Big Skyline 2011) set *Battle: Los Angeles* [Col. 2011] and the Washington D.C. political actioner *Olympus Has Fallen* [Millennium Films 2013] were predominantly filmed in and around Baton Rouge and the Shreveport-Bossier City MSA. The USA Network series *Common Law*, a TV show about mismatched detectives, was set in Los Angeles (Figure 52) but, to take advantage of tax breaks, filmed in New Orleans instead (Figure 53).

In order to film New Orleans as Los Angeles, the producers had to avoid the more scenic structures including the United States Custom House (Egyptian Revival style), the Immaculate Conception Church (Moorish Revival) and Creole architecture found throughout the city, particularly the French Quarter. New Orleans is also famous for its stone elaborate European-style cemeteries, among them Metairie

Cemetery (Figure 54), with stone tombs as the norm due to the city's location below sea level. All of these would have to be avoided in order to pull off an identity switch.



Figure 54: An above-ground tomb at Metairie Cemetery, New Orleans, LA (National Center for Preservation Technology and Training 2008)

Rather than the unique parcels of buildings in New Orleans, recent New Orleans architecture such as the W New Orleans Hotel, the Lavin-Bernick Center for Student Life at Tulane University and the Ogden Museum of Southern Art at the University of New Orleans are utilized instead to capture the more modern elements of Los Angeles. This identity switch also necessitates that producers ignore Los Angeles's vibrant Googie (a futuristic style influenced by car culture, jets, the Space Age, and the Atomic Age) architecture, first found in drive-in restaurants but soon

spread to larger buildings (Figure 55). Producers also had to ignore trend- breaking modernist architecture, Spanish Colonial missions and Frank Lloyd Wright houses in favor of the more common denominator architectural designs in the two respective cities. This causes the casual spectator to forego the notable historic, cultural, and physical identities of urban development (Hough 1992).



Figure 55: An example of Google architecture: the Theme Building at the Los Angeles International Airport, built in 1961 (Todd Lapin 2012)

5.5.1 The Dollars Trilogy

Common Law was developed and funded by two American production companies and aired by a U.S. cable network. However, movie and TV show production has become a truly worldwide industry to take advantage of lower production costs and other benefits. As a consequence many projects, even if they are intended for U.S. distribution, have originated outside the borders of the United

States.

A Fistful of Dollars (on-screen title: *Fistful of Dollars*), released in the U.S. by UA in 1967, was intended by director/co-screenwriter Sergio Leone to reinvent the western genre in Italy and to capitalize on the still-profitable market in Europe for Westerns (Frayling 2000). To do this, he took advantage of a combination of German/Italian/Spanish financing, much lower labor costs, and inexpensive locations in the desert in the Spanish province of Almeria (Figure 56). Leone took an international cast and crew headlined by American Clint Eastwood, costar of the television Western *Rawhide*, into Spain to make his movie.

A Fistful of Dollars did not initiate place substitution in frontier tales. The motion picture industry first relocated to California to take advantage of the Mediterranean climate for movies set in the outdoors. The majority of the Westerns of director John Ford after 1939 were lensed in Monument Valley along the Utah-Arizona border, regardless of the particular movie's setting. *Winchester '73* was set in Kansas and the Texas Panhandle but filmed in Mescal and Tucson, Arizona, accounting for the large amount of incongruous saguaro cacti and mountains. The musical *Oklahoma!* was actually filmed in the San Rafael Valley along Arizona's border with Mexico because, according to the producers, Oklahoma of the 1950s had become too modernized.

The mean average temperature for Leone's choice of Almeria is 51 to 53 °F (11 to 12° C) and the mean average precipitation is between 7-10 inches (200 and 250 mm) (Llorens and Domingo 2007; Frot *et al.* 2008). The vegetation resulting

from the existing conditions is distinguished by the domination of open high-shrub communities featuring many North African plant species and the presence of dry grasslands. There is an almost complete absence of tree species except intermittent xeric conifer species, such as pine, juniper, and a population of North African conifer (Mota, Valle, and Cabello 1993). White poplar and oleander trees are found in the seasonally dry riverbeds.

The first film is set somewhere along the U.S.-Mexico border, where the



Figure 56: Almeria Province, Spain, the shooting location for the entire *Dollars* trilogy (Go Walking in Spain 2012)

climate features mean annual temperatures range from 50° to 65°F (10° to 18°C), with annual precipitation often less than 9 in (221 mm) (WRCC 2013). In July, summer rains usually begin, torrential storms that are mostly local and continue through October (WRCC 2013). The vegetation ranges from thorny shrubs to extensive arid grasslands cover most of the high plains of the region. Honey mesquite

and cacti are also abundant (NRCS 2010).

The desert floor of the actual setting along the U.S.-Mexico border is characterized by yuccas. A few cottonwoods and other trees grow beside the widely separated rivers. Creosote bush, which covers great areas in characteristic open stands, is especially common on gravel fans. Other abundant species include the lechuguilla and the candelilla, or wax plant (USDA 2013). On rocky slopes, the ocotillo is conspicuous. Juniper and pinyons, limited to rocky outcrops, are prominent around the Stockton Plateau in the western Texas section of the region (NRCS 2010).

In the instance of Leone's production, the arid climate and the shrublands and dry grasslands emblematic of the filming location seemed to provide enough visual similarities to make the portrayal of the southwestern United States by southeastern Spain plausible, even if the terrain still does not match flawlessly. The movie was popular across Europe but surprisingly also caught on in the United States, where audiences sought a diversion from the existing standards of American television and film westerns (Frayling 2000). The success led to the creation of the other two films in the trilogy, *For a Few Dollars More* and *The Good, the Bad, and the Ugly*, all three of them released through UA in this country.

For a Few Dollars More was more geographically specific, taking place in a 326 mi. (524 km) length of territory extending from Tucumcari, NM to El Paso, TX (Figure 57) along the U.S.-Mexico border; both municipalities were mentioned by name in the dialogue. Here, the on-screen geographic portrayal becomes hazier. First, during the time of the movie's setting there was no Tucumcari, NM. Next, that stretch

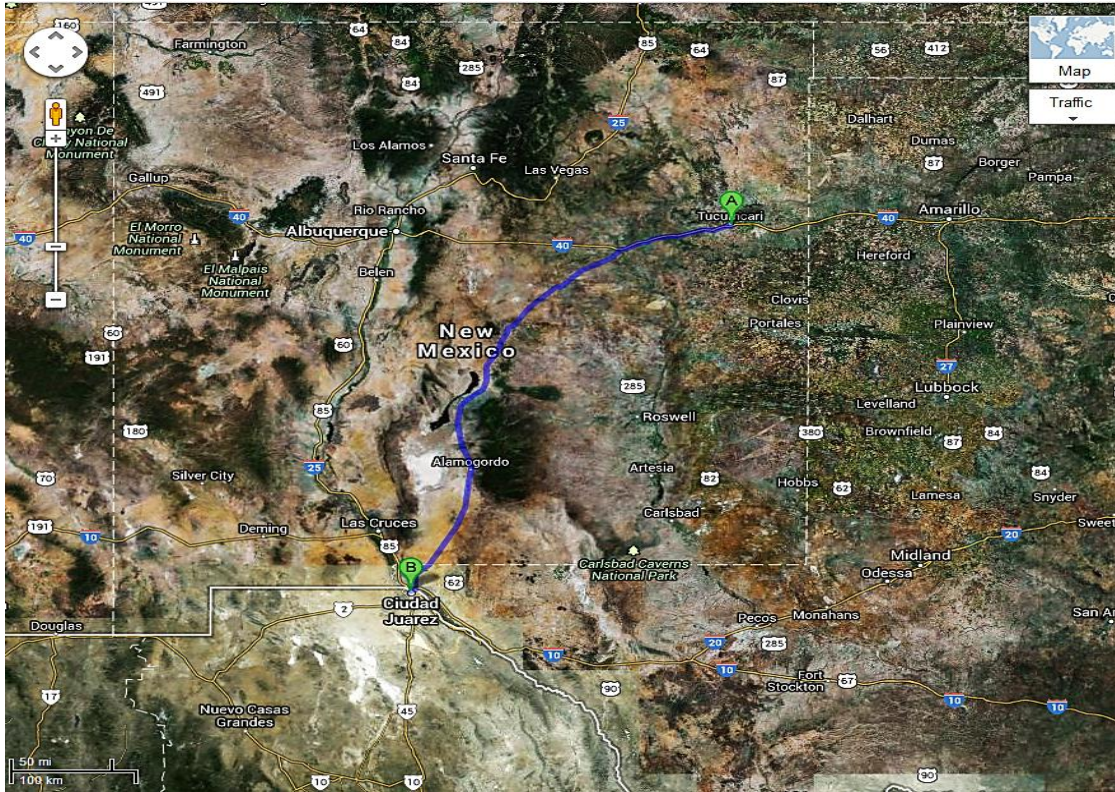


Figure 57: The route from Tucumcari, NM to El Paso's border twin, Ciudad Juarez, Mexico (Google Earth 2013)



Figure 58: White Sands National Monument, the southern part of a field of white sand dunes composed of gypsum crystals (U.S. National Park Service 2013)



Figure 59: The countryside outside El Paso, TX, the setting of *For a Few Dollars More*, the second in the Sergio Leone *Dollars* Trilogy starring Clint Eastwood (Michael Davis 2007)

should have taken the characters through the Tularosa Basin, in or near the southern part of a 710 sq. km. (275 sq. mi.) field of white sand dunes composed of gypsum crystals (Figure 58). Upon arriving in El Paso (Figure 59), the visitors should have been greeted with the Franklin Mountains, a mountain range with summits over 7,000 feet (2,100 m) (Texas Parks and Wildlife 2013), not the smaller hills on film. Finally, El Paso sits on the Rio Grande, yet there is no sight of any major waterway.

Leone was not seeking to create documentaries on the American West. The director has been oft-quoted as saying he was seeking to create *his* version of the cinematic American West (Cumbow 2008). He sought to do this not through an ideal geographic recreation of the American West, but by beginning with the standard

depiction of uniform expanses of shrublands and dry grasslands and then taking it from there.

5.6 Case Study 4: Other Places for Other Reasons

TV shows and movies are capable of being filmed in their screen settings but are often filmed elsewhere for a number of reasons. *Commandos Strike at Dawn* [Col. 1942] was filmed in British Columbia because of the dangers of trying to truly film in Norway, the wartime restrictions on building supplies in the U.S., and the availability of actual Canadian regiments (the Canadian Scottish, the Royal Rifles, the Sault Ste. Marie and Sudbury, and the Rocky Mountain Rangers) for battle sequences (Fristoe 2013). *The Greatest Story Ever Told* [UA 1965] was filmed in Arizona, California, Nevada and Utah. According to director George Stevens, the reason was artistic splendor (Medved and Medved 1984):

"I wanted to get an effect of grandeur as a background to Christ, and none of the Holy Land areas shape up with the excitement of the American Southwest"

In the Heat of Night [UA 1967] was adapted from a novel by John Ball dealing with a murder in a small Mississippi town and the friction between a white police chief and a visiting black detective during the case. Mississippi was ruled out as the filming location because of existing racial tensions in the state. The city of Sparta, Illinois, was eventually chosen as a safer alternative, although there were clues to that alternative. The giveaways included people wearing jackets and autumn leaves present in what is supposed to be a hot Mississippi summer. By the time the movie was revised into a TV show in 1988, tensions had apparently eased enough for first

Hammond, Louisiana, and then Conyers and Covington, Georgia to become the filming locations for the seven seasons the show ran.

The Only Game in Town [Fox 1971] was a romantic comedy-drama starring Warren Beatty and Elizabeth Taylor and set in Las Vegas. At the same time, Taylor's husband Richard Burton was filming a movie in Paris, France. Taylor coerced the studio into filming the movie in Paris, necessitating the building of very expensive Las Vegas-style streetscapes and structures (Medved and Medved 1984). Almost ninety-percent of the movie would ultimately be filmed in Paris, with the remainder filmed in the actual Las Vegas.

The Deer Hunter [Univ. 1978] is an examination of the way that the Vietnam War affects the lives of people in a steel town, in particular three buddies played by Robert DeNiro, Christopher Walken, and John Savage. The director and co-writer, Michael Cimino, was aiming more for the myth than real life in his restaging, in both the Vietnam scenes and the predominant stateside scenes (Brown 1979; Rushing and Frentz 1980; Chong 2005). These intentions are demonstrated by his portrayal of an actual steel town (Clairton, PA) with a composite of eight separate locations spanning from Cleveland to Pittsburgh (Hellman 1982).

For the hunting scenes, Cimino substituted the smooth, rolling range of the Allegheny Mountains (Figure 60) with Mount Baker (Figure 61), a glaciated andesitic stratovolcano in the Cascade Mountains of the Pacific Northwest. The intent, paraphrasing the director, was to create a more powerfully symbolic landscape than you could get from using the authentic setting (Hellman 1982).



Figure 60: The Allegheny Mountains of western Pennsylvania (IKM-Manning Community Schools 2013)



Figure 61: Mount Baker, in the Cascade Mountains of the Pacific Northwest (USGS 2003)

5.6.1 *Doctor Zhivago*

Doctor Zhivago was the classic MGM-distributed 1965 epic directed by David Lean, starring Omar Sharif as Doctor Zhivago and Julie Christie as Lara. The film was loosely based on the famous novel of the same name by Boris Pasternak. The story takes place in Russia from the time period of World War I through the Bolshevik-White Army conflict of the early 1920s.

The controversial reception to the original novel in the Soviet Union meant that even if producer Carlo Ponti and director David Lean had wanted to, filming within Soviet territory was out. As a result, the boreal forests (or taiga) of the Soviet Union (Figure 62) were replaced by the Mediterranean climatic conditions of Spain where most of the indoor filming took place, with the bulk of the outdoor filming occurring in the boreal surroundings of Finland (Figure 63) and Canada. Because Finland is located in the zone of prevailing westerlies where tropical and polar air masses meet, the temperature range in Finland is -58°F to 77°F (-50° to 25°C), with the mean temperature being as much as 10°C higher than that of other areas in the same latitudes, including Siberia (Finnish Meteorological Institute 2013). The average annual precipitation is 17 - 30 in. (450 - 750 cm), with the majority falling during the spring and summer months (Finnish Meteorological Institute 2013).

Taigas are thick forests. Coniferous trees conditioned to the long, cold winters and short summers, such as spruce, pine, and fir, are common. The soil beneath the taiga often contains permafrost, a layer of permanently frozen soil. In other areas, a layer of bedrock lies just beneath the soil. Both permafrost and rock



Figure 62: The Russian boreal forest (taiga) setting for *Doctor Zhivago* (Mikhail Dronov 2008)



Figure 63: Joensuu, Finland, one of *Doctor Zhivago*'s outdoor shooting locations (Flickrriver 2012)

prevent water from draining from the top layers of soil. This creates shallow bogs known as muskegs (Zach 1950; Kummerow *et al.* 1983). These characteristics are standard throughout the boreal forests. Therefore, this makes it difficult to tell which country you are seeing onscreen *if* you are working under the long-lasting belief that all of Russia is cold and snow-covered.

5.6.2 *Texas Rangers*

Canada has long served as a reasonably-priced place filming substitute for other locations. Alberta's Jasper National Park (Figure 64) represented late 1890s Alaska in *The Far Country* [Univ. 1954]. For *Silver Streak* [Fox 1976], exterior shots of the eponymous train, running in the western U.S. between Los Angeles, were instead filmed on the Canadian Pacific line from the Crowsnest Pass to Lethbridge,



Figure 64: Jasper National Park, in the Canadian province of Alberta (GP Network 2012)

Alberta because of resistance from Amtrak. The city of Toronto has stood in for a variety of American cities including Minneapolis, New York City, Detroit, and even Wichita, Kansas [USA Network's *Certain Prey* in 2011]. The province of British Columbia regularly stood in for U.S. locations on Fox TV's *The X-Files* for a number of seasons.

Texas is a large state with a long, colorful history and a larger domestic product than numerous nations, and miles of unspoiled terrain. Owing to that status, the state has long been the on-screen setting for many productions over the years dating back to the silent era (Jones 1980; Langman 1992). Nevertheless, for every *Giant* [WB 1956] and *Friday Night Lights* [Univ. 2004], you have *Written on the Wind* [Univ. 1956] and *Laredo* [NBC] not filmed on location in Texas. In addition to several of the other movies already mentioned, *Boom Town* [MGM 1940], with Clark Gable and Spencer Tracy, was filmed in Bakersfield and Taft, California. The movies in Howard Hawks's unofficial Western trilogy with John Wayne, *Rio Bravo* [WB 1959], *El Dorado* [Par. 1966], and *Rio Lobo* [National General 1970] were each predominantly filmed in Arizona. The John Wayne-Dean Martin Western *The Sons of Katie Elder* [Par. 1965] was filmed in Durango and Mexico City, Mexico.

Texas Rangers was a 2001 Dimension Films release starring James Van Der Beek and Ashton Kutcher. The movie was about a ragtag group of youngsters who decide to join the legendary Texas Rangers, a mounted fighting force first organized in 1835 during the Texas Revolution, disbanded, and then officially reorganized for good during the 1870s.

The film is supposed to take place in Texas's Nueces Strip (Figure 65) along the coast of the Gulf of Mexico from present-day Corpus Christi to Brownsville. The Strip, with its overall size, encompasses two distinct Köppen classification classifications. Directly along the coast the Nueces Strip is characterized by the humid subtropical climate moderated by the Gulf of Mexico. The northernmost city, Corpus Christi, has yearly average temperatures ranging from highs of 81°F (27°C) to lows of 62°F (16°C), with annual average precipitation of 30 in. (762mm) (SRCC 2013). Brownsville features yearly average highs of 83°F (28°C), lows of 65°F (18°C) and average annual precipitation of 27 in. (696mm) (SRCC 2013). Palm trees (Figure 66) are found in many spots in Brownsville and the surrounding localities.



Figure 65: The Nueces Strip, the setting for *Texas Rangers* (University of Texas at San Antonio 2011)



Figure 66: Palm trees in Brownsville, TX (National Oceanic and Atmospheric Administration 2010)



Figure 67: Outskirts of Brooks, Alberta-the *Texas Rangers* shooting location (Robert Taylor and Nadia Taylor 2010)

Farther south and inland is characterized by the hot semiarid climate. The climate here is affected by the Sierra Madre Oriental Mountains to the west and the Chihuahuan Desert of Northern Mexico and remotely by the Gulf of Mexico to the east. Because it is drier, the landscape is epitomized by thick, spiny brush and grasslands, with ranches dominating the area. The average high temperature is approximately 85 °F (29° C), and an average low of approximately 60 °F (20° C), with approximately 20 in. (510 mm) of precipitation per year (SRCC 2013).

The movie however does not display these variations throughout the course of the onscreen activities. It does frequently show hills and mountains not found within 200 miles (322 km) of the Nueces Strip. In addition, in scenes featuring the crossing of the Rio Grande, you can clearly see the water flowing left to right looking from Texas to Mexico. The river, of course, flowing from west to east all along the Texas-Mexico border should be seen flowing from right to left if you are actually viewing Mexico from Texas.

The divergence from the actual Nueces Strip is produced by the fact that despite the size of Texas and its many still-open spaces, the film was made in Alberta, primarily in and around the community of Brooks (Figure 67). The area is under the control of the cold semiarid climate, with average annual highs of 51°F (10.7°C), lows of 27°F (-2.6°C), and average annual precipitation of 13.4 in. (341.6mm) (Alberta Ministry of Agriculture and Rural Development 2009).

Around Brooks, the foothills of the Rocky Mountains are much closer (less than 100 mi (161 km) and more readily visible to the naked eye. If you are

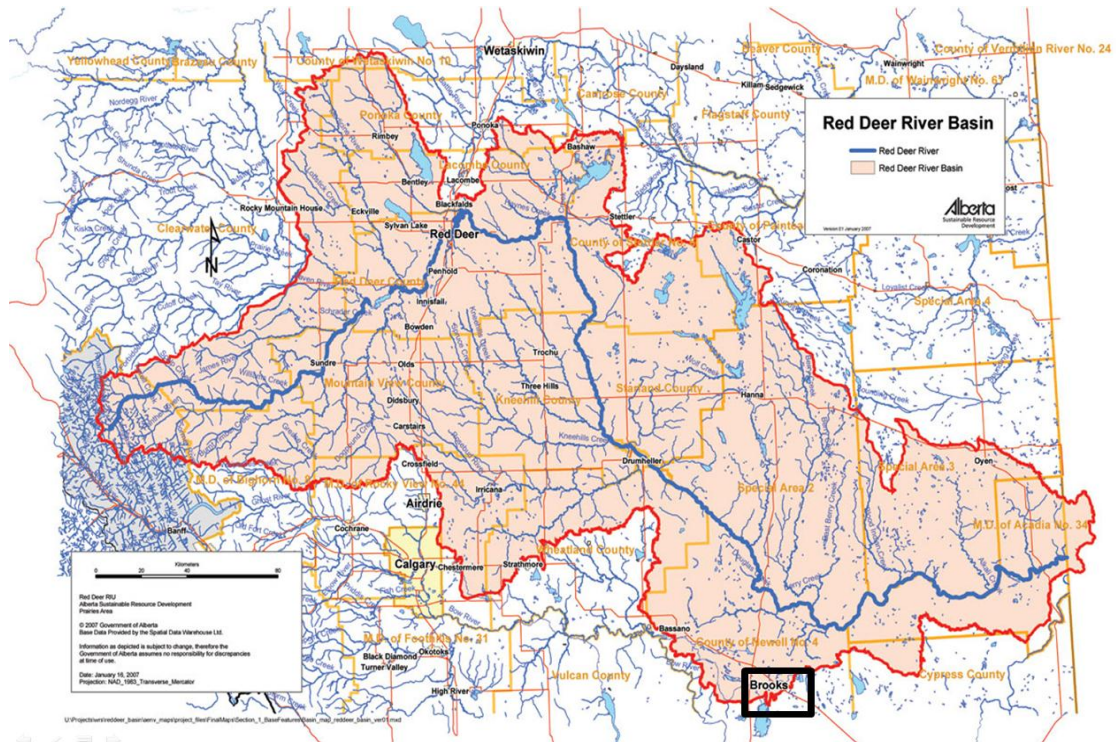


Figure 68: The location (thick black square) of Brooks, Alberta, relative to the Red Deer River (thick blue line) (Red River Watershed Alliance 2008)

radiating out from Brooks northward towards the Red Deer River (Figure 68), any substitution for the Rio Grande would involve the river flowing in the ‘wrong’ direction.

The corporate structure of the production company, Dimension Films, is why Canada was selected as the principal filming location (there was also minimal filming done in Durango, Mexico). The niche of the production company, Dimension Films, a sister company to Miramax Films, was producing youth-oriented horror films, comedy films and action films at a reasonable cost. This slant towards the younger market is what inspired the casting of Ashton Kutcher from *That 70's Show*, *Dawson Creek*'s James Van Der Beek, and rap star Usher (Figure 69) in major roles, leading critics to dub the movie as “hunks on horses” (Gleiberman 2001) and “Dude,



Figure 69: *Texas Rangers* at home on the Canadian range-Usher (left) and James Van Der Beek (*Entertainment Weekly* 2001)

Where's My Horse?" (Ingram 2001). With the focus on youth and action, the intent of the producers was to film in amenable areas containing panoramic, picturesque outdoor locations that did not cost a lot of money, even if they did not match the authentic location. This is where Brooks, Alberta and the adjacent communities of Claresholm and Drumheller came onto the scene.

The objective was to create an awe-inspiring backdrop to use as a canvas to relate the onscreen story. The discernible differences in terms of vegetation and general physiography were intended to be unnoticeable. If they were noticeable, the expectation was for them to be swallowed up by the breadth of action and characters being shown, minimizing the impact of any inconsistencies.

CHAPTER SIX

RESULTS

*"Forget it; it's good enough for the 25-cent customers."
—Raoul Walsh, director*

The final number of surveyed students fell short of the total enrollment numbers for GEO1310 and GEO2410. This occurred because one instructor directly said no to participation in the survey; this removed two of the largest sections of GEO1310 (129 and 127 students respectively) from the total. Another instructor for GEO1310 did not provide a response to the email, so that removed another large section (69 students) from the original total. One GEO2410 instructor, after an initial discussion, did not come back with a response, but this instructor's section actually had an enrollment of only 17 students, so although the total still dropped it was not by that a large a figure. The remaining pool of students was then further reduced by normal student absenteeism.

In the end, approval was received from seven instructors and 230 students (144 GEO1310 students and 86 GEO2410 students) were surveyed out of the beginning pool of 718 students. The survey was conducted over the course of two weeks in April 2013 in five sections of GEO1310 and three sections of GEO2410 (one instructor taught a section of each). The survey consisted of a series of seven demographic questions and twelve pairs of images, all of which were to be answered by filling in the appropriate bubble on a Scantron sheet (Appendix E). For each pair, you had to correctly select which image best matched the location given.

6.1 One-Way ANOVA Testing

The number of incorrect answers provided the dependent variable for ANOVA testing because as constituted the number of incorrect answers was hypothetically dependent upon the independent prime variables (formal education, informal learning, age, and gender) expressed in the demographic questions. The responses for the questions representing the independent variables were assigned numeric values (ranging from A=1 to E=5 depending on the question) to provide an equivalence for testing with the dependent variable, where the number of incorrect answers per student *was* the numeric value.

Among the 230 students who took the survey, the average was 4.93 incorrect answers. There were no surveys that were totally correct or totally incorrect; the highest number wrong was 10 (one student) and the lowest number of incorrect answers was 1 (seven students), with one student electing not to answer the paired images section. Forty-seven students missed more than half of the answers, whereas forty-two students missed exactly half of the answers. Out of the remaining 140 students, forty-six students missed five answers, thirty-seven students missed one-third of the answers, and forty-two students missed one-fourth of the answers.

6.1.1 Formal Geographic Education

For the purposes of the survey, formal geographic education was indicated by the number of postsecondary geography credits taken and passed by the student prior to the Spring 2013 semester (Question 3) and the number of geography credits taken and passed during the Spring 2013 semester (Question 4). Because only

one factor across these groups was under consideration, a one-way ANOVA for the first series of tests involving these variables was utilized.

The null hypothesis stated that the results should indicate that geographic recognition does not vary as your level of formal geographic education increases. The predetermined probability that the observed data would occur by chance in a given single null hypothesis, or p value, was 0.05 for each test, and each possessed four degrees of freedom.

According to the test result for the number of postsecondary geography credits taken and passed by the student prior to the Spring 2013 semester, $F = 0.236$ and the p value was 0.918 (Table 2), and effect size η^2 (sum of squares between the

Table 2: One-way ANOVA of number of incorrect answers (dependent variable) by number of completed post-secondary geography credits

ANOVA

of Incorrect Answers

	Sum of Squares	df	Mean Square	F	p value ($p < 0.05$)
Between Groups	3.052	4	.763	.236	.918
Within Groups	695.130	215	3.233		
Total	698.182	219			

Table 3: One-way ANOVA of number of incorrect answers (dependent variable) by number of Spring 2013 geography credits in progress

ANOVA

of Incorrect Answers

	Sum of Squares	df	Mean Square	F	p value ($p < 0.05$)
Between Groups	43.739	4	10.935	3.693	.006
Within Groups	657.319	222	2.961		
Total	701.057	226			

groups divided by the sum of the squares total) = .004. Therefore, since the p value was greater than 0.05 with minimal $\eta^2=.004$, there is a failure to reject the null hypothesis.

According to the test result for the number of geography credits in progress during the Spring 2013 semester, $F = 3.693$ and the p value was 0.006 (Table 3), with $\eta^2=.062$. The p value was less than 0.05 with medium $\eta^2=.062$, so there is preliminary rejection of the null hypothesis. In order to provide elucidation as to whether or not the means of the existing groups were all equal (a key factor for an ANOVA), post-hoc testing was performed using the Tukey HSD. It was determined after running the Tukey HSD that at least one group was different from the other groups, casting a shadow on the original rejection of the null hypothesis.

6.1.2 Informal Geographic Education

Informal learning, as previously explained, is learning that takes place outside formal academic settings and often when learning is not the planned intent. For the purposes of the survey, informal geographic education was indicated by the number of viewing hours of filmed entertainment per week for each student. Because only one factor across these groups is under consideration, a one-way ANOVA for the first series of tests involving viewing hours was utilized.

The null hypothesis stated that the results should indicate that geographic recognition does not vary as your level of informal geographic education increases. The preset level of significance (the risk you are willing to accept in the rejection of the null hypothesis at this introductory stage), or *alpha (a) value*, was 0.05.

Table 4: One-way ANOVA of number of incorrect answers (dependent variable) by number of filmed entertainment viewing hours

ANOVA

of Incorrect Answers

	Sum of Squares	df	Mean Square	F	<i>p</i> value (<i>p</i> <0.05)
Between Groups	18.286	4	4.571	1.457	.216
Within Groups	699.447	223	3.137		
Total	717.732	227			

According to the test result, $F = 1.457$ and the p value was 0.216 with four degrees of freedom (Table 4) and $\eta^2 = .025$. Therefore, since the p value is greater than 0.05 with minimal $\eta^2 = .025$, there is a failure to reject the null hypothesis.

6.1.3 Physical Geography Education

For the purposes of the survey, enrollment in or completion of physical geography was indicated by each student in the class (GEO1310 or GEO2410) they were currently taking the survey in (Question 6) and whether they had either already taken and passed, or were currently taking, the other course (Question 7). Because only one factor across these groups is under consideration, a one-way ANOVA for the first series of tests involving viewing hours was utilized.

The null hypothesis stated that the results should indicate students who have already completed or are currently taking physical geography do not have better differentiation than students who have not enrolled in or completed physical geography. The preset level of significance (the risk you are willing to accept in the rejection of the null hypothesis at this introductory stage), or *alpha* (α) value, was 0.05 for each test with one degree of freedom for each. According to the test result for the class (GEO1310 or GEO2410) the student was currently taking the survey in, $F =$

Table 5: One-way ANOVA of number of incorrect answers (dependent variable) by which course (GEO1310 or GEO2410) student took survey in.

ANOVA

of Incorrect Answers

	Sum of Squares	df	Mean Square	F	<i>p</i> value (<i>p</i> < 0.05)
Between Groups	8.740	1	8.740	2.786	.096
Within Groups	708.992	226	3.137		
Total	717.732	227			

Table 6: One-way ANOVA of number of incorrect answers (dependent variable) by whether they had either already taken and passed, or were currently taking, the other course.

ANOVA

of Incorrect Answers

	Sum of Squares	df	Mean Square	F	<i>p</i> value (<i>p</i> < 0.05)
Between Groups	2.005	1	2.005	.633	.427
Within Groups	715.728	226	3.167		
Total	717.732	227			

0.633 and the *p* value is 0.427 (Table 5) and minimal $\eta^2 = .003$, meaning there is a failure to reject the null hypothesis. According to the test result for whether or not the student had already completed or was currently taking the other course, $F = 2.786$ and the *p* value is 0.096 (Table 6) and $\eta^2 = .012$. Therefore, since the *p* value is greater than 0.05 and minimal $\eta^2 = .012$, there is failure to reject the null hypothesis.

6.1.4 Future Research Baselines

Age and gender were not tested against a null hypothesis, but rather to establish baselines for future research; more on provisional null hypotheses for each is available in Chapter 7. The number of incorrect answers was the dependent variable.

For age, the level of significance (the risk you are willing to accept in the

rejection of the null hypothesis at this introductory stage), or *alpha (a) value*, was set at 0.05. Four degrees of freedom existed for age. According to the test result, $F = 3.341$ and the p value was 0.011 (Table 7) and minimal $\eta^2 = .012$. The a value was less than 0.05, so there is preliminary evidence of age difference in this study.

Table 7: One-way ANOVA of number of incorrect answers (dependent variable) by age

ANOVA					
# of Incorrect Answers					
	Sum of Squares	df	Mean Square	F	Level of significance ($\alpha = 0.05$)
Between Groups	40.691	4	10.173	3.341	.011
Within Groups	675.882	222	3.045		
Total	716.573	226			

Table 8: One-way ANOVA of number of incorrect answers (dependent variable) by gender

ANOVA					
# of Incorrect Answers					
	Sum of Squares	df	Mean Square	F	Level of significance ($\alpha = 0.05$)
Between Groups	48.924	1	48.924	16.539	<0.001
Within Groups	659.636	223	2.958		
Total	708.560	224			

For gender, the level of significance (the risk you are willing to accept in the rejection of the null hypothesis at this introductory stage), or *alpha (a) value*, was set at 0.05. One degree of freedom existed for gender. According to the test result, $F = 16.539$ and the p value is less than 0.001 (Table 8) and $\eta^2 = .069$. The p value was less than 0.05 and medium $\eta^2 = .069$, so there is preliminary evidence of gender difference in this study.

CHAPTER SEVEN

DISCUSSION OF RESULTS AND FUTURE RESEARCH

"Believe only what you see. No, believe half of what you see"
—Burt Lancaster as *The Crimson Pirate* [WB 1952]

This research sought to explore the relationship that existed between the viewing of movies and TV shows and landscape comprehension. Specifically, does the depiction of landscape in movies and TV shows have an adverse effect on landscape comprehension when the depictions are inaccurate? The research was guided by the fact that, according to existing literature:

- The most recent findings by the NCES, students were continuing the trends of recent years showing poor performances on assessments of geographic expertise and many Americans staying geographically unschooled.
- Many people obtain their information outside of a formal educational setting.
- Movies and TV shows have been and remain widespread entertainment options, even if the places they are viewed have changed throughout the years.

7.1 Present Research

The dominant question this research sought to answer is: *Do inaccurate geographic portrayals in filmed entertainment affect student recognition of landscape features?* This question led to the subordinate question: *Does geographic recognition change with more exposure to formal geoeducational settings?* Because these were the questions, the discussion of informal geographic education was listed first, out of

sequence from the order used in the chapter on results.

7.1.1 Informal Geographic Education

The null hypothesis stated that student differentiation between images of filmed and actual geographic features does not vary with level of informal geographic education. In layman's terms, the capability or incapability to differentiate between actual and filmed geographic features has nothing to do with the amount of movies or TV shows one watches.

The number of viewing hours of movies and TV shows was the independent variable and the number of incorrect answers was (as throughout the entire process) the dependent variable. With ANOVA testing, anything below the preset value of $p = 0.05$ insinuates that results are happening through a connection and not through happenstance, and the null hypothesis would then be rejected. Analysis for filmed entertainment showed $F = 1.457$ as one test result and 0.216 as the p value, with four degrees of freedom and $\eta^2 = .025$. With the p value being greater than 0.05 with minimal $\eta^2 = .025$ for filmed entertainment, there was a failure to reject the null hypothesis, with the minimal effect size implying that the results would essentially be unchanged even with a larger sample size.

This does not equate to acceptance of the null hypothesis. What this is stating is that not enough evidence exists to reject it *at this time*. This is in the face of a long litany of research dating back at least as far as Peterson and Thurstone in 1933 (Appendix F) stating that a connection *does* exist between filmed entertainment and acquisition of knowledge. An important item to remember is that they were not looking at

physical identification in this and other research. The literature previously mentioned throughout this dissertation looked at the social and cultural influences from viewing filmed entertainment. The research also involved younger age cohorts (elementary and high school students) with far more commonalities in their ages than found within a cohort taking classes at a university.

Another potential reasoning for the dissonance is that the research can not account for whether or not the responses were truthful in terms of the number of viewing hours. In related reasoning, it can not be gauged whether or not the students only counted what they actually viewed on a movie or TV screen and did not count movies and TV shows they viewed on their computers, cell phones, or other electronic devices.

7.1.3 Formal Geographic Education

With the dependent variable remaining unchanged, the independent variables were now the number of postsecondary geography credits taken and passed by the student prior to the Spring 2013 semester and the number of geography credits being taken during the Spring 2013 semester. The null hypothesis for formal geographic education stated that the results should indicate that geographic recognition does not vary as your level of formal geographic education increases.

The test result for the number of postsecondary geography credits taken and passed by the student prior to the Spring 2013 semester stated that $F = 0.236$ and the p value was 0.918. Therefore, since the p value was greater than 0.05 with minimal $\eta^2 = .004$, there was a failure to reject the null hypothesis. The minimal effect size implied that the ANOVA results would essentially be unchanged even with a larger sample size. This

does not mean that the null hypothesis for this variable was accepted; only an inability to reject it exists at this time.

According to the test result for the number of geography credits in progress during the Spring 2013 semester, $F = 3.693$ and the p value was 0.006 with medium $\eta^2 = .062$. The p value was less than 0.05, indicating a connection beyond random chance, so there was preliminary rejection of the null hypothesis prior to more testing. The results were then further tested using the Tukey HSD test. This test was performed in order to provide clarification as to whether or not the means of the existing groups were all equal, a crucial factor in the running of an ANOVA. It was determined after running the Tukey HSD that at least one group was different from the other groups, casting a shadow on the original rejection of the null hypothesis.

7.1.3 Physical Geography Education

With the dependent variable remaining unchanged, the independent variables were now based on enrollment in or completion of physical geography, indicated by each student through which class (GEO1310 or GEO2410) they were currently taking the survey in and whether they had either already taken and passed, or were currently taking, the other course. The null hypothesis for physical geography posits students who are currently enrolled or have completed physical geography will not have better differentiation than students who have not enrolled in or completed physical geography.

The preset p value (the probability that the observed data would occur by chance in a given single null hypothesis), or p -value, was 0.05 for each test with one

degree of freedom for each. According to the test result for the class (GEO1310 or GEO2410) the student was currently taking the survey in, $F = 0.633$ and the p value was 0.427. According to the test result for whether or not the student had already completed or was currently taking the other course, $F = 2.786$ and the p value was 0.096 with minimal $\eta^2 = .003$. Therefore, since the p value is greater than 0.05, there was a failure to reject the null hypothesis for both questions. The minimal effect size for each implied that even with a larger sample the ANOVA results would essentially be unchanged. This does not mean that the null hypothesis has been accepted in either scenario, only that the testing was unable to reject it at this time with the available evidence.

7.2 Future Research

The dominant question this research sought to answer is: *Do inaccurate geographic portrayals in filmed entertainment affect student recognition of landscape features?* The answer at this stage of the research would seem to be *no*. This question led to the subordinate question: *Does geographic recognition change with more exposure to formal geoeducational settings?* The answer to this question at this stage of the research also would seem to be *no*. Remembering the hourglass principle of research, this is only the ‘sands into the bottom portion’ stage of the research.

7.2.1 Modifications to the Existing Methods

The major modification would be to better elucidate what is meant by ‘viewing’ for the informal education variable. Viewing hours encompasses more than just what the viewer sees on a movie or TV screen. The question has to be structured in a way that emphasizes that point, even though that will not be a guarantee against imprecise

responses or non-responses.

The variables for formal geographic education and physical geography education would appear to be straightforward. You have either taken the classes or you have not, although it is extremely possible to do arithmetic errors when figuring out how many credits you have taken. Which particular course you are in at the moment would also appear to be straightforward; this did not prevent ten percent of one course section (four out of 38) and 45 percent (19 out of 42) in another section from marking down the wrong section. This is a certainly a correctable error when running an analysis, but one that does bring into question the student's focus.

The variable in the end that can be best controlled for the future dispensing of this survey (or similar surveys) is informal education and TV shows. Popular print media feasibly could be added in addition to movies and TV shows. The admonition here would be the inclusion of print media available on a computer, cell phone, or other electronic device in addition to actual paper media. The other variables, although possessing their own unique hurdles, are based on transpired/transpiring events that are not alterable.

For the distribution of the actual survey, it would be better for future research if more than one educational entity participated. An example would be the pairing of two (or more) universities, or a university and a high school, to provide stronger comparisons. If one does not wish to leave the grounds, conducting the survey among multiple departments would be a good thing to do. More varieties of educational entities could provide varieties of findings, and if they do not, then that in itself could be

an important finding.

7.2.2 Future Research Baselines from the Current Research

The baselines for this written research were informal, formal, and physical geography education. While they were asked as part of the survey, age and gender were not tested against a particular null hypothesis. They were tested to establish their viability for future research. They were each tested with the number of incorrect answers as the dependent variable.

The provisional null hypothesis for age would state that older students will not have better differentiation than students who are younger. The provisional null hypothesis for gender would state that gender does not affect differentiation. Preliminary analysis of the collected data indicates both gender and age as candidates for extended future research.

7.3 Epilogue

With the completion of this round of testing, there was a failure to reject the null hypothesis involving the number of filmed entertainment hours. Also at this stage, there was an initial rejection of the respective null hypotheses involving the independent variables of the number of in-progress Spring 2013 geography credits and the future baselines of age and gender, suggesting the probability of a relationship. The effect sizes for in-progress Spring 2013 geography credits and gender suggest a more resolute answer if the sample size for surveying is enlarged.

In addition to testing the independent variables from the current research separately, testing has been and is continuing to be conducted on these independent

variables in pairs, including age and gender as part of the testing. This analysis is being performed to examine if the combination of two or more variables plays a significant role in geographic comprehension, and if any such combination plays a more important role than one acting on its own.

When discussing the place of this research, including the ongoing analysis, the question of how it is pertinent in the field of geographic education is omnipresent. The preference is for students to enter college with a strong base of geographic thinking (including critical thinking skills) already existing or at least in the formative stages. As has been constantly stated and restated in journal articles, this has not been the reality for many years, and a reversal under current conditions does not appear to be viable.

Does the failure to reject the relevant null hypothesis necessarily eliminate filmed entertainment as a player in the comprehension of landscapes? Many questions need answers before filmed entertainment can be reduced to the fine print or edited from the field of candidates altogether.

Determining and then addressing the realities of where people obtain their information from is imperative. Filmmakers have readily admitted over the course of many years that in the creation of movies and TV shows, they are entertainers and not teachers, and their concerns in selecting a location (or a backlot) is tied into artistic visions and budgetary guidelines, not the truthfulness of the surroundings. The landscape is simply another actor being cast, along with the leading man, the leading lady, and the plucky comic relief. Consumers readily separate the human actor (Daniel Day-Lewis)

from the onscreen character (Abraham Lincoln), but in numerous instances appear to be either unwilling or incapable of doing the same for the landscape actor (Southern California) and character (South Korea) being depicted. The inquiry thus needs to shift to how the viewer creates his own open system, receiving the onscreen depictions as inputs, what type of output is produced in terms of knowledge and comprehension, and how their feedback loop operates.

This brings to the forefront the psychology of perception, expounded by Franz Brentano, William Dember, and others, and the connection to critical thinking. The consumer is presented with an instrument of learning via what is shown on the screen. From these instruments, a judgment is then made about the image, and a feeling of pleasure or displeasure which we feel towards the image is created. The situation then becomes about whether the learning is carried from purely instrumental thinking (merely taking in and repeating what you see) to critical thinking (exploring it in greater detail). How do educators get the public to better understand that what they are seeing onscreen is not necessarily the 'real deal'?

Physical geography as a discipline relies on accurate visual depictions in order to observe changes that could signal significant changes in the tangible environs. How can physical geography be taught and learned in order to act and react in the face of inaccurate illustrations? A noteworthy example of one of these is the unswerving typecasting of Russia as being cold and snowy the year round. This typecasting consistently ignores that the fact that Russia, even after the dissolution of the Soviet Union, is still a very large country encompassing many different climate (Figures 70

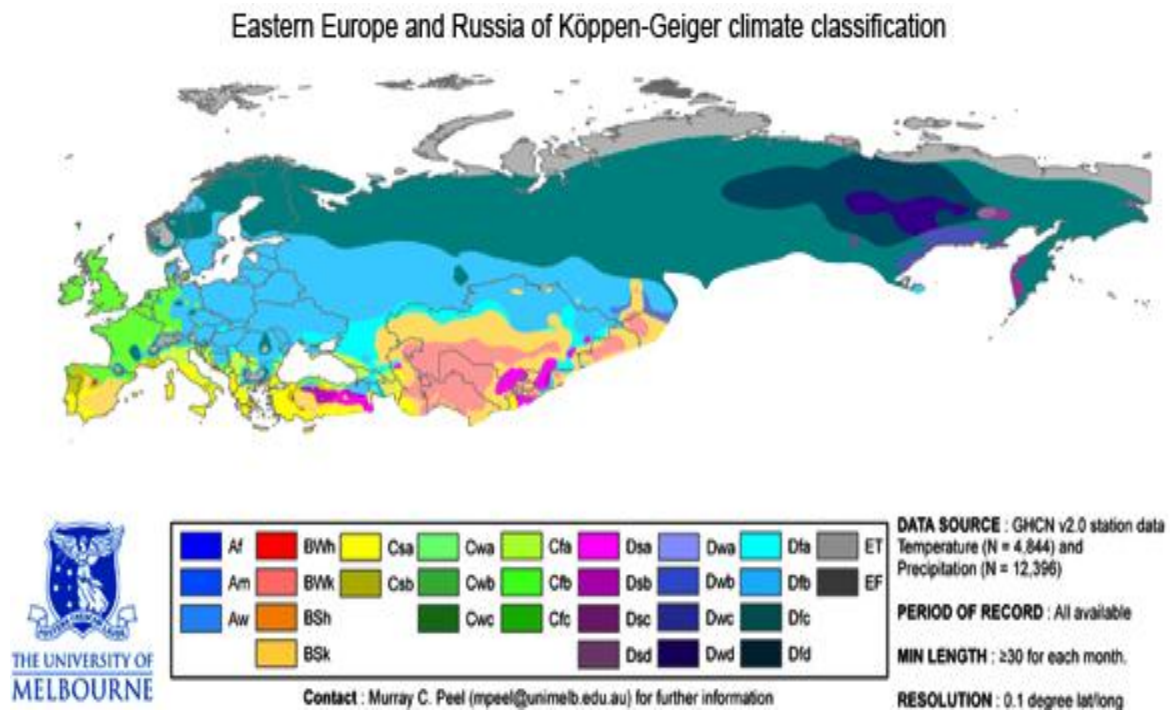


Figure 70: Köppen-Geiger Climate Map of Eastern Europe and Russia (Peel 2013)



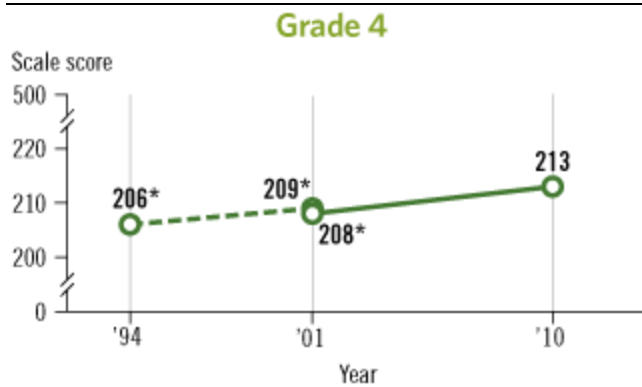
Figure 71: The beaches of Sochi, Russia, popular for the adjacent waters that are considered to possess healing properties (Alamy photo per Martin 2010)

and 71) and vegetation types. In the discussion about climate change (*not* restricted to global warming), how many people potentially misunderstand *if* climates are changing when they have an erroneous vision of *what* the climate looks like in the first place?

The research is pertinent because future investigations emanating from this research will explore what can be done to either overcome or alter what students are bringing into the classroom before they are formally educated in geography at the university level (R. Dixon, personal communication, November 4, 2013). By extension, this can be carried into the area of curriculum development for the postsecondary educator. Curriculum and course materials could possibly be fostered to better channel preexisting student input. Practicums and other venues in the realm of educator training could be established to direct preexisting student input towards improved geographic thinking. The eventual objective is to develop as many of the students *as realizable* into those well-rounded, contributing members of the world at large people consistently talk about.

APPENDICES

APPENDIX A: NAEP EXECUTIVE SUMMARY PT. I: GRADES 4, 8, AND 12

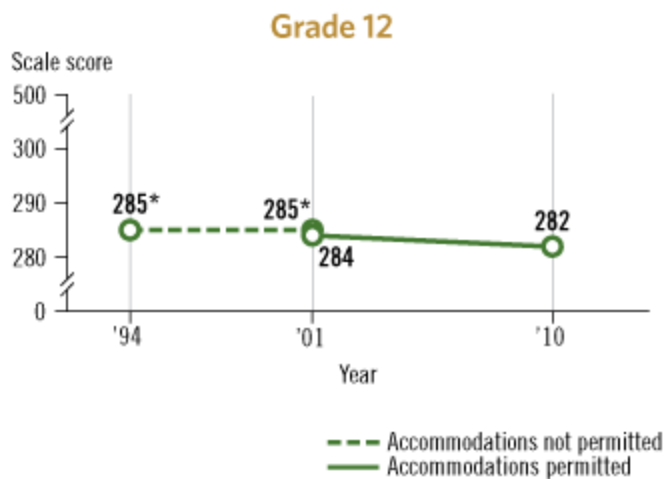
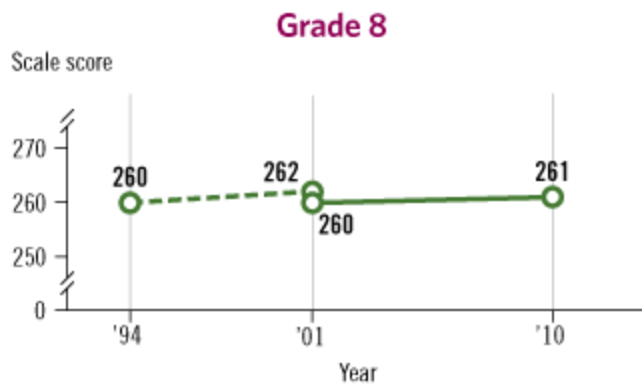


Trend graphs of fourth-, eighth-, and twelfth-grade NAEP geography average scores (at left)

Students make progress in geography at grade 4 but not at grades 8 and 12

In comparison to earlier geography assessments in 1994 and 2001, the average score in 2010 was

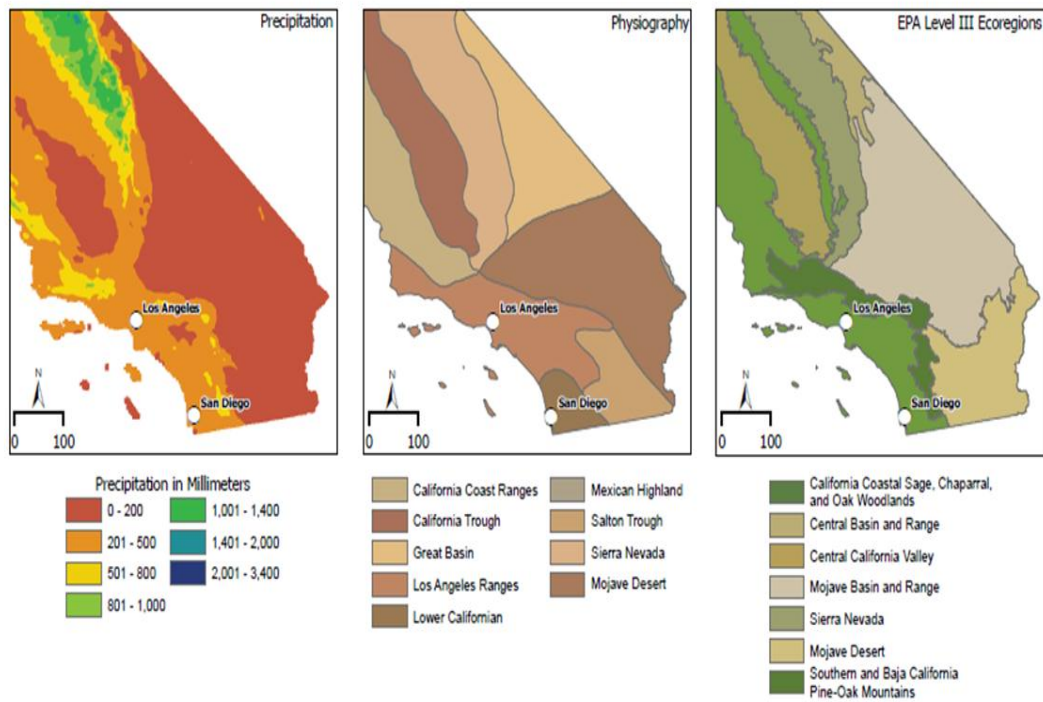
- higher than the scores in both years at grade 4,
- not significantly different from the score in either year at grade 8, and
- not significantly different from the score in 2001 (accommodated sample) but lower than the score in 1994 at grade 12.



SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1994, 2001, and 2010 Geography Assessments

**APPENDIX B: 'BALMIER SURROUNDINGS'--ArcGIS VISIBLE
ENVIRONMENTAL COMPONENTS MAP OF SOUTHERN CALIFORNIA**

Environmental Components of Southern California



Bar measurements in kilometers

Warden/Kleitches 2013

APPENDIX C: SURVEY

Mark all answers on the bubble sheet provided. For Question 1, Circle in the first letter of your gender by using the appropriate bubble in the “Your Last Name” section.

1. *Gender* _____
2. *How old are you?*
 - a. <18
 - b. 18-22
 - c. 23-27
 - d. 28-32
 - e. >32
3. *How many post-high school geography credits have you successfully earned prior to this semester, including those you completed at another institution?*
 - a. 0
 - b. 1-4
 - c. 5-8
 - d. 9-13
 - e. More than 13
4. *How many geography credits are you taking this semester?*
 - a. 3-5
 - b. 6-8
 - c. 9-11
 - d. 12-14
 - e. More than 14
5. *How many hours per week do you spend watching filmed entertainment, regardless of the venue or device?*
 - a. 4 or less
 - b. 5-13
 - c. 14-20
 - d. 21-27
 - e. 28 or more
6. *In which class are you currently taking this survey?*
 - a. World Regional Geography
 - b. Introduction to Physical Geography
7. *For your selection in Question 4, have you already completed (or currently taking) the other course selection?*
 - a. yes
 - b. no

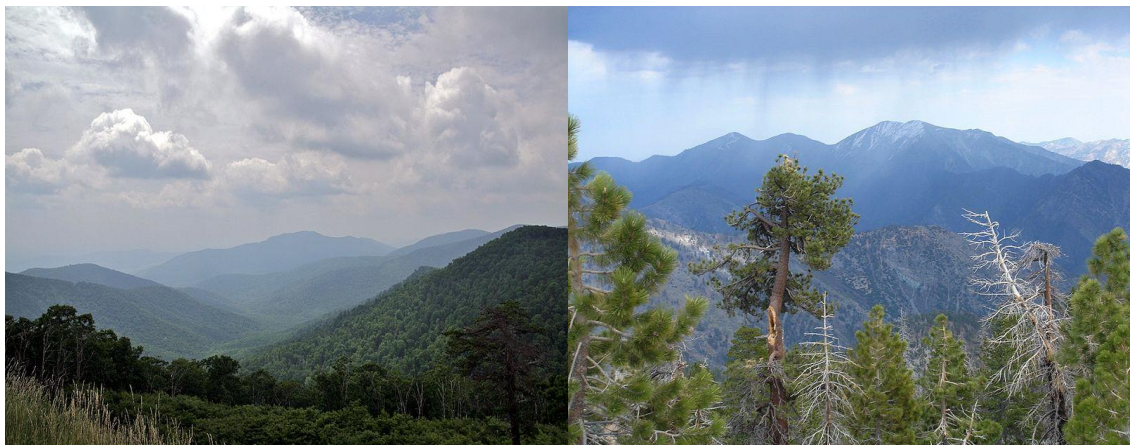
Based on geographic features (manmade structures, landforms, vegetation, weather conditions), identify which image matches the location given on your bubble sheet by filling in “A” or “B” as your selection....DO NOT FILL IN YOUR NAME



8: Blue Ridge Mountains -B



9: Russia-A



10: Shenandoah National Park-A



11: Los Angeles, CA-A



12: Countryside outside El Paso, Texas-B



13: Korean Peninsula-A



14: Glacier National Park-B



15: Southern California-A



16: Monument Valley, Utah-B



17: Nueces Strip, TX-A



18. Studio Backlot, Burbank CA-B



19: Detroit, MI-B

APPENDIX D: “Research Participation Invitation: Geoeducational Agents”- E-MAIL REQUEST FOR SURVEY PARTICIPATION

This email message is an approved request for participation in dissertation research [GEOEDUCATIONAL AGENTS: THE INFLUENCE OF MOTION PICTURES AND TELEVISION PROGRAMS ON GEOGRAPHIC RECOGNITION] that has been approved or declared exempt by the Texas State Institutional Review Board (IRB). It is asking permission to schedule (through instructors of record and PhD-holding faculty) a survey of students in World Geography and Introduction to Physical Geography. The background behind this research follows.

Ideally, the geographic knowledge possessed by students would be acquired and transmitted through formal components of education, such as textbooks, journals, and classroom instruction. However, for a number of students a great deal of geography and other forms of information are actually obtained through more accessible sources, for instance movies and television. These accessible sources are not designed or intended for conveying information, but instead for entertainment (by the audience) and greater profit (the makers), with the audience’s willing suspension of disbelief anticipated to fill in any gaps. This leaves the following questions:

- Do inaccurate geographic portrayals in filmed entertainment affect student recognition of physiographic features?
- Does geographic recognition change with more exposure to formal geoeducational settings?

A critical component of this research is a survey to investigate whether or not the willing suspension of disbelief needed for television and motion picture viewing carries its way into informal learning, and by extension into formal geographic education, affecting recognition of geographic features. The overall research, in tandem with other research, will provide an insight into the improvement of geographic education by addressing potential deficiencies student comprehension through curriculum offerings better designed to meet these deficiencies.

This survey is to be conducted among students in what are structured to be cornerstone geography courses at Texas State: World Geography and Introduction to Physical Geography. The survey will consist of a series of demographic questions followed by twelve pairs of images where the students need to correctly match the image with the given place. This survey should take no longer than it would for a student to complete a teaching evaluation. ***This is not mandatory: you as an instructor of record/PhD-holding faculty member do have the right to decline.***

This project [Exemption Number EXP2013Z27] was approved by the Texas State IRB on March 29, 2013. Pertinent questions or concerns about the research, research participants' rights, and/or research-related injuries to participants should be directed to the IRB chair, Dr. Jon Lasser (512-245-3413 - lasser@txstate.edu) and to Becky Northcut, Director, Research Integrity & Compliance (512-245-2314 - bnorthcut@txstate.edu).

Questions about this research should be addressed to Larry Kleitches, PhD Candidate, at 512.216.5921 or lk1163@txstate.edu/lpkleitches@gmail.com.

APPENDIX E: SCANTRON ANSWER SHEET FOR SURVEY

COURSE ID

SECT. #

TEST #

STUDENT ID

YOUR LAST NAME (M)

YOUR FIRST NAME (M)

MARKING INSTRUCTIONS

Make heavy dark marks.
Use No. 2 pencil only.
Make no stray marks.

Correct Marks

● ● ● ●

Incorrect Marks

⊗ ⊘ ⊙ ⊖

ANSWER SHEET

1	A	B	C	D	E
2	A	B	C	D	E
3	A	B	C	D	E
4	A	B	C	D	E
5	A	B	C	D	E
6	A	B	C	D	E
7	A	B	C	D	E
8	A	B	C	D	E
9	A	B	C	D	E
10	A	B	C	D	E
11	A	B	C	D	E
12	A	B	C	D	E
13	A	B	C	D	E
14	A	B	C	D	E
15	A	B	C	D	E
16	A	B	C	D	E
17	A	B	C	D	E
18	A	B	C	D	E
19	A	B	C	D	E
20	A	B	C	D	E
21	A	B	C	D	E
22	A	B	C	D	E
23	A	B	C	D	E
24	A	B	C	D	E
25	A	B	C	D	E
26	A	B	C	D	E
27	A	B	C	D	E
28	A	B	C	D	E
29	A	B	C	D	E
30	A	B	C	D	E
31	A	B	C	D	E
32	A	B	C	D	E
33	A	B	C	D	E
34	A	B	C	D	E
35	A	B	C	D	E
36	A	B	C	D	E
37	A	B	C	D	E
38	A	B	C	D	E
39	A	B	C	D	E
40	A	B	C	D	E
41	A	B	C	D	E
42	A	B	C	D	E
43	A	B	C	D	E
44	A	B	C	D	E
45	A	B	C	D	E
46	A	B	C	D	E
47	A	B	C	D	E
48	A	B	C	D	E
49	A	B	C	D	E
50	A	B	C	D	E
51	A	B	C	D	E
52	A	B	C	D	E
53	A	B	C	D	E
54	A	B	C	D	E
55	A	B	C	D	E
56	A	B	C	D	E
57	A	B	C	D	E
58	A	B	C	D	E
59	A	B	C	D	E
60	A	B	C	D	E
61	A	B	C	D	E
62	A	B	C	D	E
63	A	B	C	D	E
64	A	B	C	D	E
65	A	B	C	D	E
66	A	B	C	D	E
67	A	B	C	D	E
68	A	B	C	D	E
69	A	B	C	D	E
70	A	B	C	D	E
71	A	B	C	D	E
72	A	B	C	D	E
73	A	B	C	D	E
74	A	B	C	D	E
75	A	B	C	D	E
76	A	B	C	D	E
77	A	B	C	D	E
78	A	B	C	D	E
79	A	B	C	D	E
80	A	B	C	D	E
81	A	B	C	D	E
82	A	B	C	D	E
83	A	B	C	D	E
84	A	B	C	D	E
85	A	B	C	D	E
86	A	B	C	D	E
87	A	B	C	D	E
88	A	B	C	D	E
89	A	B	C	D	E
90	A	B	C	D	E
91	A	B	C	D	E
92	A	B	C	D	E
93	A	B	C	D	E
94	A	B	C	D	E
95	A	B	C	D	E
96	A	B	C	D	E
97	A	B	C	D	E
98	A	B	C	D	E
99	A	B	C	D	E
100	A	B	C	D	E
101	A	B	C	D	E
102	A	B	C	D	E
103	A	B	C	D	E
104	A	B	C	D	E
105	A	B	C	D	E
106	A	B	C	D	E
107	A	B	C	D	E
108	A	B	C	D	E
109	A	B	C	D	E
110	A	B	C	D	E
111	A	B	C	D	E
112	A	B	C	D	E
113	A	B	C	D	E
114	A	B	C	D	E
115	A	B	C	D	E
116	A	B	C	D	E
117	A	B	C	D	E
118	A	B	C	D	E
119	A	B	C	D	E
120	A	B	C	D	E
121	A	B	C	D	E
122	A	B	C	D	E
123	A	B	C	D	E
124	A	B	C	D	E
125	A	B	C	D	E
126	A	B	C	D	E
127	A	B	C	D	E
128	A	B	C	D	E
129	A	B	C	D	E
130	A	B	C	D	E
131	A	B	C	D	E
132	A	B	C	D	E
133	A	B	C	D	E
134	A	B	C	D	E
135	A	B	C	D	E
136	A	B	C	D	E
137	A	B	C	D	E
138	A	B	C	D	E
139	A	B	C	D	E
140	A	B	C	D	E
141	A	B	C	D	E
142	A	B	C	D	E
143	A	B	C	D	E
144	A	B	C	D	E
145	A	B	C	D	E
146	A	B	C	D	E
147	A	B	C	D	E
148	A	B	C	D	E
149	A	B	C	D	E
150	A	B	C	D	E

APPENDIX F: Ruth C. Peterson and L. L. Thurstone-The first experiments in a series of experimental studies on the effect of motion pictures on social attitudes

The first experiment was conducted in April, 1929, with the co-operation of Hyde Park High School and the Tower Theatre of Chicago. The experiment was set up to study the effect of motion pictures on the children's attitudes toward race and nationality. A paired comparison of nationalities was given to the students of Hyde Park High School on April 22, 1929. The directions and a sample of the schedule appear below.

AN EXPERIMENTAL STUDY OF RACIAL ATTITUDES

Write your name here

Boy or girl

Father born in (Name of country)

Mother born in (Name of country)

This is an experimental study of attitudes toward races and nationalities. You are asked merely to underline the one nationality, or race, of each pair that you would rather associate with.

For example, the first pair is:

Englishman-South American

If, in general, you prefer to associate with Englishmen rather than with South Americans, underline Englishman. If you prefer, in general, to associate with South Americans, underline South American

If you find it difficult to decide for any pair, simply underline one of them anyway. If two nationalities are about equally well liked, they will have about the same number of underlinings in all of the papers. Be sure to underline one of each pair even if you have to make a sort of guess.

Englishman-South American

Negro-Pole

Japanese-Jew

Hollander-Scotchman

Swede-Belgian

Irishman-Russian

Russian-Armenian

Austrian- Pole

Belgian-Negro

Greek-Jew

Japanese-Spaniard

Frenchman-Russian

Spaniard-Chinaman

Austrian-Japanese

Jew-Hindu

Jew-Italian

There were 23 nationalities in the list and a total of 237 comparisons of the type indicated above.

During the following week, which was the week of spring vacation, four motion pictures were shown at special matinees at the Tower Theatre. The children had been given tickets which were to be signed and presented for admittance to the theatre. The films shown were:

(1) "The Jazz-Singer", chosen as a picture which might affect the children's attitudes toward the Jews, was shown on April 29.

(2) "Michael Strogoff", chosen as a picture which might affect the children's attitudes toward the Russians, was shown on April 30.

(6)

(3 & 4) "Four Sons" and "The Emden", two pictures which might affect attitude toward the Germans, were shown on May 1 and May 2 respectively.

The paired comparison schedule was given again at the school the following Monday, May 6. As indicated in the directions, the children were asked to underline the nationality of each pair which they preferred to associate with. The results were tabulated; and the proportion of students who preferred nationality A to nationality B was calculated for each pair. With these proportions, the scale value of each nationality was calculated by the law of comparative judgment. These scale values, representing the attitudes of the children toward each nationality before they saw the motion pictures, were compared with scale values similarly calculated for the group after they saw the motion pictures. The shifts in attitude were in general in the expected direction, but the differences were not statistically significant.

Considering the fact that it was difficult to obtain pictures which had not previously played in theatres which were available to the students in a Chicago High School, it was thought advisable to carry on the subsequent experiments in small towns where the children are less sophisticated as far as motion pictures are concerned and where the population is more homogeneous. With the exception of the study at Thomas Aquinas High School, the rest of the experiments were carried on in small towns in Illinois.

(7)

In the second experiment, a group of children from Thomas Aquinas High School were invited to the Burton Holmes lecture on Italy which was given in Orchestra Hall,

Chicago, on March 15, 1930. A paired comparison of nationalities, of which the following is a sample, was given in the school the week previous to the lecture and was given in Orchestra Hall immediately after the lecture. In this case each of the 14 nationalities was paired with every other, making a total of 91 comparisons.

A STUDY OF NATIONALITY PREFERENCES

Write your name here

Boy or girl

Father born in (Name of country)

Mother born in (Name of country)

This is a study of attitudes toward nationalities. You are asked to underline the one nationality of each pair that you would rather associate with. For example, the first pair is:

Englishman-Armenian

If, in general, you prefer to associate with Englishmen rather than with Armenians, underline Englishman. If you prefer, in general, to associate with Armenians, underline Armenian. If you find it difficult to decide for any pair, be sure to underline one of them anyway. If two nationalities are about equally well liked, they will have about the same number of underlinings in all of the papers. Be sure to underline one of each pair even if you have to guess.

Englishman-Armenian	Greek- Pole
Swede-Belgian	German-Austrian
Russian-Armenian	Irishman-German
Armenian-Italian	Irishman-Belgian
Armenian-Irish	Swede-Armenian
Swede-Russian	Greek-Irishman
Russian-Austrian	Irishman-Frenchman
Armenian-Spaniard	German-Armenian

The experiment showed a slight change in attitude favorable to Italians, but the change was not statistically significant. The experiment was incidental, but was carried on because the subjects and lecture were readily available.

WORKS CITED

- Abelman, Robert. 1999. Preaching to the choir: Profiling TV advisory ratings users. *Journal of Broadcasting and Electronic Media* 43(4): 529-550.
- Abramson, Albert. 2007. *The History of Television, 1942-2000*. Jefferson, NC: McFarland and Company.
- A.C. Nielsen Co. 2013. Number of hours of television watching for the average American. http://blog.nielsen.com/nielsenwire/online_mobile/americans-watching-more-tv-than-ever/ (last accessed 29 January 2013).
- Adams, Paul. 2009. *Geographies of Media and Communication*. Malden MA: Wiley-Blackwell.
- Adams, Percy G. 1988. *Travel Literature through the Ages*. New York: Garland.
- Agnew, Jeremy. 2012. *The Old West in Fact and Film: History Versus Hollywood*. Jefferson, NC: McFarland and Company.
- Alaska State Society. 2013. Photo of the Alaskan frontier. <http://alaskastatesociety.com/photos.html> (last accessed 6 August 2013).
- Alberta Ministry of Agriculture and Rural Development. 2009. Climate data for Alberta, Canada. [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/sag6299](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/sag6299) (last accessed 30 October 2013).
- Albrecht, Donald. 1999. New York, Olde Yorke: the rise and fall of a celluloid city. In D. Neumann (Ed.) *Film Architecture: Set designs from Metropolis to Blade Runner*. Munich, Germany: Prestel, 39-43.
- Algeo, Katie. 2007. Teaching cultural geography with *Bend It Like Beckham*. *Journal of Geography* 106(3): 133-143.
- American Heritage Dictionary (4th Ed.). 2009. Definition of "content analysis". New York, NY: Houghton Mifflin Company.
- American Movie Classics. 2013. *She Done Him Wrong* poster for bifold panel. <http://www.filmsite.org/shed2.html> (last accessed 6 May 2013).
- Appalachian Views Photography. 2013. Photo of the Shenandoah River and Massanutten Mountain in the Shenandoah Valley. https://www.facebook.com/?sk=welcome#!/AppalachianViewsPhoto?hc_location=stream (last accessed 6 August 2013).

- Arnold, Edwin T., Tyler Blethen, Amy Tipton Cortner, Anna Creadick, John Crutchfield, Silas House, John C. Inscoe, Gordon B. McKinney and Jack Wright. 2004. APPALJ Roundtable Discussion: "Cold Mountain", the Film. *Appalachian Journal* 31(3/4): 316-353.
- Aydin, Atilla., and Amos Nur. 1982. Evolution of pull-apart basins and their scale independence. *Tectonics* 1(1): 91-105.
- Balkin, J.M. 1996. Media filters, the V-chip, and the foundations of broadcast regulation. *Duke Law Journal, Twenty-Seventh Annual Administrative Law Issue* 45 (6): 1131-1175.
- Banham, Reyner. 1971. *Los Angeles: the Architecture of Four Ecologies*. London, UK: Penguin Books.
- Barnes, Trevor J. and Matthew Farish. 2006. Between regions: science, militarism, and American geography from World War to Cold War. *Annals of the Association of American Geographers* 96(4): 807-826.
- Barron, Hal S. 2006. Rural America on the silent screen. *Agricultural History* 80 (4): 383- 410.
- Basinger, Jeanine. 2003. *The World War II Combat Film: Anatomy of a Genre*. Middletown, CT: Wesleyan University Press.
- Beeton, Sue. 2005. *Film-induced tourism (Aspects of Tourism: 25)*. Clevedon, UK: Channel View Publications.
- Berelson, Bernard, and Patricia J. Salter. 1946. Majority and minority Americans: An analysis of magazine fiction. *Public Opinion Quarterly* 10(2): 168-190.
- Berggren, Glenn. 2004. The evolution of the cinema lens—Part 1. *Society of Motion Picture and Television Engineers Motion Imaging Journal* 113(12): 430-442.
- Berry, Gordon L. 1981. Children, television, and social class roles: The medium as unplanned educational curriculum. In E.L. Palmer and A. Dorr (Eds.) *Children and the faces of television : teaching, violence, selling*. New York, NY: Academic Press, 71-81.
- Big Skyline. 2012. Photo of New Orleans, LA. <http://www.bigskyline.com/New-Orleans-Louisiana-city-skyline-pic-in-USA.html> (last accessed 30 July 2012).

- Bingen, Steven; Stephen X. Sylvester; and Michael Troyan. 2010. *MGM: Hollywood's Greatest Backlot*. Santa Monica, CA: Santa Monica Press.
- Black, Gregory D. 1994. *Hollywood Censored: Morality Codes, Catholics, and the Movies*. Cambridge, UK: Cambridge University Press.
- Blake, Kevin. 2014. Making mythic landscapes. In C.E. Colten and G. L. Buckley (Eds.) *North American Odyssey*. Lanham, MD: Rowman and Littlefield-in final edits.
- Boddy, William. 1986. "Operation Frontal Lobe" versus the "Living Room Toy": The Battle over Program Control in Early Television. International Television Studies Conference. July 10-12, 1986: London, UK.
- Bogart, Leo. 1956. Magazines since the rise of television. *Journalism & Mass Communication Quarterly* 33(2):153-156.
- Brentano, Franz. 1874. *Psychology From An Empirical Standpoint*. Leipzig, Germany: Duncker & Humblot (original); New York, NY: Routledge (1995 reissue).
- Bristol University. 2011. Photo of Blue Ridge Mountains, Virginia. http://www.chm.bris.ac.uk/motm/isoprene/Blue_Ridge_NC.jpg (last accessed 1 March 2012).
- British Broadcasting Corporation. 2013. Images of the exterior and interior of the TARDIS. <http://www.bbc.co.uk/schools/teachers/doctorwhocompetition/> (last accessed 29 October 2013).
- Brock, Eric J. 1999. *New Orleans Cemeteries (Images of America: Louisiana)*. Charleston, SC: Arcadia Publishing.
- Brown, Joshua. 1979. *The Deer Hunter*. *Radical History Review* 1979(20): 245-255.
- Bruno, R. Stephanie. 2011. *New Orleans Streets: A Walker's Guide to Neighborhood Architecture*. Gretna, LA: Pelican Publishing.
- Buckingham, David. 2003. *Media Education: Literacy, Learning and Contemporary Culture*. Cambridge, UK: Polity Press.
- 2000. *The making of citizens: young people, news, and politics*. New York, NY: Routledge.

- Burnett, Katherine. 2013. Edible Spaces: Culinary Geography in the Built Environment. Association of American Geographers Annual Meeting. April 9-13, 2013: Los Angeles, CA.
- Butler, David R. 1995. *Zoogeomorphology: Animals as Geomorphic Agents*. Cambridge, UK: Cambridge University Press.
- Butler, David R., and Forrest D. Wilkerson, 2000. In praise of off-season field trips. *Journal of Geography* 99(1): 36-42.
- Butzer, Karl. 2002. The Rising Cost of Contestation. *Annals of the Association of American Geographers* 92 (1): 75-78.
- Bystriakova, Nadia, Valerie Kapos, Igor Lysenko and C.M.A. Stapleton. 2003. Distribution and conservation status of forest bamboo biodiversity in the Asia-Pacific Region. *Biodiversity and Conservation* 12 (9): 1833–1841.
- California Department of Fish and Wildlife. 2013. Rainfall, precipitation, and vegetation information. http://www.dfg.ca.gov/biogeodata/cwhr/wildlife_habitats.asp (last accessed 1 February 2013).
- California State University, Northridge. 2006. Photo of San Gabriel Mountains. <http://www.csun.edu/~hcgeo007/sgmhikeday1.htm> (last accessed 1 March 2012).
- Cantor, Joanne. 1998. Ratings for program content: the role of research findings. *The Annals of the American Academy of Political and Social Science* 557(1): 54-69.
- Carleton University. 2013. Photo of Castle Geyser, Yellowstone National Park. <http://serc.carleton.edu/details/images/39177.html> (last accessed 1 May 2013).
- Cavallero, Jonathan J. 2004. Gangsters, *Fessos*, Tricksters, and Sopranos: The historical roots of Italian-American stereotype anxiety. *Journal of Popular Film and Television* 32(2): 50-63.
- Central Intelligence Agency. 2013. Rainfall, precipitation, and vegetation information. <https://www.cia.gov/library/publications/the-world-factbook/> (last accessed 3 April 2013).
- Chisholm, Darlene C. 1993. Asset specificity and long-term contracts: The case of the motion-pictures industry. *Eastern Economic Journal* 19(2): 143-155.
- Chong, Sylvia Shin Huey. 2005. Restaging the war: *The Deer Hunter* and the primal scene of violence. *Cinema Journal* 44(2): 89-106.

- Cohen, Jacob. 1988. *Statistical power analysis for the behavioral sciences* (2nd Ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Columbia Ranch. 2010. Image of Columbia Pictures Brownstone Set. <http://www.columbiaranch.net/history.html> (last accessed 19 January 2012).
- Conant, Michael. 1960. *Antitrust in the Motion Picture Industry*. Berkeley, CA: University of California Press.
- Comstock, George A. and Marilyn Fisher Freemon. 1975. *Television and Human Behavior: A Guide to the Pertinent Scientific Literature*. Santa Monica, CA: RAND Corporation.
- Cooke-Jackson, Angela, and Elizabeth K. Hansen. 2008. Appalachian culture and reality TV: The ethical dilemma of stereotyping others. *Journal of Mass Media Ethics* 23(3): 183- 200.
- Coombs, Phillip. H. and Manzoor Ahmed. 1974. *Attacking Rural Poverty: How non-formal education can help*. Baltimore: John Hopkins University Press.
- Couvares, Francis G. 1992. Hollywood, Main Street, and the Church: Trying to censor the movies before the Production Code. *American Quarterly* 44 (4): 584-616.
- Craig, Steve. 2006. Out of Eden: The Legion of Decency, the FCC, and Mae West's 1937 appearance on *The Chase & Sanborn Hour*. *Journal of Radio Studies* 13(2): 232-248.
- Cresswell, Tim. 2004. *Place: A Short Introduction*. Malden MA: Blackwell Publishing Ltd.
- Cumbow, Robert. 2008. *The Films of Sergio Leone*. Lanham, MD: Scarecrow Press.
- Curry, Ramona. 1991. Mae West as Censored Commodity: The Case of "Klondike Annie". *Cinema Journal* 31(1): 57-84.
- 1996. *Too much of a good thing: Mae West as cultural icon*. Minneapolis, MN: University of Minnesota Press.
- Davis, Michael. 2007. Photo of countryside outside El Paso, TX. http://farm4.staticflickr.com/3495/4056891873_e88e741bbd.jpg (last accessed 15 November 2012).
- Davis-Monthan Aviation Field Register. 2002. Nogales Airport, Nogales AZ. http://www.dmairfield.org/places/nogales_az/index.html (last accessed 20 June 2013).

- Dember, William N. 1960. *The Psychology of Perception*. Oxford, UK: Henry Holt.
- Dickens, Dennis. 2008. Photograph of 1950s-era Universal backlot. <https://picasaweb.google.com/104482634983173280149/UniversalCityHistory#> (last accessed 20 June 2013).
- Deutsches Filminstitut. 2012. Photo of a scene from the trailer for *The Big Combo*. <http://deutsches-filminstitut.de/filmmuseum/ausstellungen/sonderausstellung/film-noir/die-ausstellung-film-noir/> (last accessed 8 August 2013).
- di Palma, Maria Teresa. 2009. Teaching geography using films: A Proposal. *Journal of Geography* 108(2): 47-56.
- Dirr, Peter J. 1981. The future of television's teaching face. In E.L. Palmer and A. Dorr (Eds.) *Children and the faces of television: teaching, violence, selling*. New York, NY: Academic Press, 99-108.
- Doherty, Thomas P. 1999. *Pre-Code Hollywood: Sex, Immorality, and Insurrection in American Cinema, 1930--1934*. New York, NY: Columbia University Press.
- Donaldson, Daniel P. and Olaf Kuhlke. 2009. Jules Verne's *Around the World in Eighty Days*: Helping teach the National Geography Standards. *Journal of Geography* 108(2): 39-46.
- Donnelly, Gerald B. 1938. The Motion Picture and the Legion of Decency. *The Public Opinion Quarterly* 2 (1) Special Supplement: Public Opinion in a Democracy: 42-44.
- Dorr, Aimee. 1983. No shortcuts to judging reality. In J. Bryant and D.R. Anderson (Eds.) *Children's Understanding of Television*. New York, NY: Academic Press, Inc., 199-220.
- Dronov, Mikhail. 2008. Photo of Russian boreal forest. http://www.windows2universe.org/earth/taiga_ecosystem.html (last accessed 15 May 2013).
- Duncan, James S. 1990. *The City as Text: The Politics of Landscape Interpretation in the Kandyen Kingdom*. Cambridge, UK: Cambridge University Press.
- Earl, Richard A. and Steve Pasternack. 1991. The role of television weathercasts in geographic education. *The Journal of Geography* 90(3):113-117.
- Edgerton, Gary. 2009. *The Columbia History of American Television*. New York, NY: Columbia University Press.

- Elliott, Marianne. Example of fifties architecture. 2002. <http://www.westerncape.gov.za/text/2005/1/46-48.pdf> (last accessed 4 May 2013).
- Eron, Leonard D., L. Rowell Huesmann, Monroe M. Lefkowitz, Leopold O. Walder. 1972. Does television violence cause aggression?. *American Psychologist* 27(4): 253-263.
- Fernett, Gene. 1988. *American Film Studios: An Historical Encyclopedia*. Jefferson, NC: McFarland and Company.
- Ferri, Anthony J. 2007. *Willing Suspension of Disbelief: Poetic Faith in Film*. Lanham, MD: Lexington Books.
- Finnish Meteorological Institute. 2013. Climate data on Finland. <http://en.ilmatieteenlaitos.fi/climate> (last accessed 27 October 2013).
- Flickriver.com. 2013. Joensuu, Finland. <http://www.flickriver.com/photos/saminkuvat/tags/pyh%C3%A4selk%C3%A4/> (last accessed 5 November 2013).
- Focus Features. 2012. *She Done Him Wrong* vintage postcard for bifold panel. http://www.focusfeatures.com/article/_quot_if_he_swallows_it__i_ll_buy_it__quot___the_mae_west_legend_ (last accessed 9 May 2013).
- Foreback, Doug. 2002. Photo of Bridge Street, Franklin Borough, PA. <http://www.coalcampusa.com/rustbelt/pa/pa3.htm> (last accessed 15 September 2011).
- Frayling, Christopher. 2000. *Sergio Leone: Something to Do with Death*. New York, NY: Faber and Faber.
- Friedman, Jane M. 1973. The Motion Picture Rating System of 1968: A Constitutional Analysis of Self-Regulation by the Film Industry. *Columbia Law Review* 73(2): 185-240.
- Fristoe, Roger. 2013. Turner Classic Movies story on *Commandos Strike at Dawn*. <http://www.tcm.com/tcmdb/title/71330/Commandos-Strike-At-Dawn/articles.html> (last accessed 2 April 2013).
- Frot, Elisabeth, Bas van Wesemael, A. S. Benet, and Margaret A. House. 2008. Water harvesting potential in function of hillslope characteristics: a case study from the Sierra de Gador (Almeria province, south-east Spain). *Journal of Arid Environments* 72 (7): 1213-1231.
- Fujita, Masahisa. 2012. Thünen and the new economic geography. *Regional Science and Urban Economics* 42: 907-912.

- Gallagher, Tag. 1986. *John Ford: The Man and His Films*. Berkeley, CA: University of California Press.
- Gasher, Mike. 1995. The audiovisual locations industry in Canada: Considering British Columbia as Hollywood North. *Canadian Journal of Communication* 20(2):231-254.
- Georges, Annie. 2009. Relation of instruction and poverty to mathematics achievement gains during kindergarten. *Teachers College Record* 111(9): 2148-2178.
- Gersmehl, Phil. 2008. *Teaching Geography, Second Edition*. New York, NY: Guilford Press.
- Gleiberman, Owen. 5 December 2001. Review of *Texas Rangers*. *Entertainment Weekly*. <http://www.ew.com/ew/article/0,,187103,00.html> (last accessed 11 August 2013).
- Gomery, Douglas. 1985. The coming of television and the 'lost' motion picture audience. *Journal of Film and Video* 37(3): 5-11.
- Grossman, Dennis H., D. Faber-Langendoen, A. S. Weakley, M. Anderson, P. Bourgeron, R. Crawford, K. Goodin, S. Landaal, K. Metzler, K. D. Patterson, M. Pyne, M. Reid, and L. Sneddon. 1998. *International classification of ecological communities: terrestrial vegetation of the United States. Volume I. The National Vegetation Classification System: development, status, and applications*. Arlington, VA: The Nature Conservancy.
- Go Walking in Spain. 2012. Photo of Almeria Province, Spain. <http://gowalkingin spain.om/9.html> (last accessed 1 October 2012).
- GP Network. 2013. Jasper National Park in the Canadian province of Alberta. <http://gloriousphu.com> (last accessed 8 August 2013).
- Grube, Joel W. 1995. Television alcohol portrayals, alcohol advertising, and alcohol expectancies among children and adolescents. In S. Martin and P. Mail (Eds.) *Effects of the Mass Media on the Use and Abuse of Alcohol* 28. Bethesda, MD: U.S. Department of Health and Human Services.
- Guyot, Arnold. 1885. *Physical Geography*. New York, NY: Ivison, Blakeman, Taylor, and Company.

- Harriss, Chandler. 2011. The evidence doesn't lie: Genre literacy and the CSI Effect *Journal of Popular Film and Television* 39(1): 2-11.
- Hayes-Bohanon, James. 2009. Quote on geographic education. <http://webhost.bridgew.edu/jhayesboh/> (Last accessed 1 September 2010).
- Heath, Shirley B. 1993. Inner city life through drama: Imagining the language classroom. *TESOL Quarterly* 27 (2): 177–192.
- Hellmann, John. 1982. Vietnam and the Hollywood genre film: Inversions of American mythology in *The Deer Hunter* and *Apocalypse Now*. *American Quarterly* 34(4): 418-439.
- Herr, Norman. 2008. *The Sourcebook for Teaching Science, Grades 6-12: Strategies, Activities, and Instructional Resources*. San Francisco, CA: Jossey-Bass.
- Hess, Alan. 2004. *Googie Redux: Ultramodern Roadside Architecture*. San Francisco, CA: Chronicle Books.
- Hoffarth, Tony. Photo of El Mirage Lake, Victorville, CA. <http://www.flickr.com/photos/hoffarth/4712383821/> (last accessed 20 June 2013).
- Holmes, Grayson, Leo Zonn, and Altha J. Cravey. 2004. Placing man in the New West: Masculinities of *The Last Picture Show*. *GeoJournal* 59(4): 277-288.
- Hough, Michael. 1992. *Out of Place: Restoring Identity to the Regional Landscape*. West Hanover, MA: Halliday Lithograph.
- “Ich bin ein Cowboy”. 24 May 2001. *The Economist*. <http://www.economist.com/node/630986> (Last accessed 1 July 2012).
- IKM-Manning Community Schools. 2013. The Allegheny Mountains of western Pennsylvania. <http://www.ikm-manning.k12.ia.us/manningelem/teachers/cast/castprojects/Northeast2010/Landforms/ImagesLandforms/alleghenyMtn.jpg> (last accessed 10 August 2013).
- Ingman, Marrit. 7 December 2001. Review of *Texas Rangers*. *Austin Chronicle*. <http://www.austinchronicle.com/calendar/film/2001-12-07/texas-rangers/> (last accessed 11 August 2013).
- Internet Movie Database. 2013. Information on *Battle of the Bulge* and *Lethal Weapon 2*. <http://www.IMDb.com> (last accessed 30 June 2013).
- 2012. Posters of *Deliverance* and *Wrong Turn* for ‘Appalachian’ bifold panel. <http://www.IMDb.com> (last accessed 9 September 2012).

- Internet Movie Poster Database. 2013. Poster for *Bwana Devil*. <http://www.movieposterdb.com/movie/0044462/Bwana-Devil.html> (last accessed 18 June 2013).
- Jacobs, Christopher. 2013. Course materials on the Hollywood Production Code. <http://und.edu/instruct/cjacobs/ProductionCode.htm> (last accessed 5 February 2013).
- Jarvis, Arthur R. 1991. The Payne Fund Reports: A discussion of their content, Public reaction, and affect on the Motion Picture Industry, 1930–1940. *The Journal of Popular Culture* 25(2): 127–140.
- Jorgenson, Jay. 2010. *Edith Head: The Fifty-Year Career of Hollywood's Greatest Costume Designer*. New York, NY: Lifetime Media.
- Karl May USA. 2012. German release poster for *Old Surehand-Part I*. <http://karlmayusa.com> (last accessed 15 October 2012).
- Katz, Elihu and Paul F. Lazarsfeld. 1955. *Personal Influence: The Part Played by People in the Flow of Mass Communications*. Glencoe, IL: The Free Press.
- Kelman, Ari. 2003. *A River and Its City: The Nature of Landscape in New Orleans*. Berkeley, CA: University of California Press.
- Kirby, Lynne E. 1989. *The railroad and the cinema, 1895-1929: Institutions, aesthetics and gender*. University of California, Los Angeles. *ProQuest Dissertations and Theses* <http://search.proquest.com/docview/303781305?accountid=5683> (Last accessed 22 June 2012).
- Kirk, William, August Lösch, and Isaiah Berlin. 1963. Problems of geography. *Geography*. 48(4): 357-371.
- Kleitches, Larry, 2012. Redirecting the puck: Cultural misinformation about Texas reflected in attitudes about hockey and film and television portrayals. *Journal of the American Studies Association of Texas* 43: 29-36.
- Klingman, John. 2012. *New in New Orleans Architecture*. Gretna, LA: Pelican Publishing.
- Kohanski, Tamarah. and C. David Benson. 2007. *The Book of John Mandeville*. Kalamazoo, MI: Medieval Institute Publications.
- Kong, W. S. 1984. A distribution of bamboo in Korea and its affecting factors. *The Kyung Hee Geographical Reviews* 12: 1-12.

- Koppes, Clayton R. and Gregory D. Black. 1990. *Hollywood Goes to War: How Politics, Profits and Propaganda Shaped World War II Movies*. Berkeley, CA: University of California Press.
- Korean Meteorological Administration. 2011. Climate data on South Korea. <http://kma.go.kr>.(last accessed 30 October 2013).
- Kosarski, Richard. 2000. 'A Lion in Your Lap - A Lover in Your Arms': Arch Oboler and "Bwana Devil". *Film History-Oral History* 12(1): 17-28.
- Kummerow, Jochen, Barbara A. Ellis, Susan Kummerow and F. Stuart Chapin, III. 1983. Spring growth of shoots and roots in shrubs of an Alaskan muskeg. *American Journal of Botany* 70(10): 1509-1515.
- Lambert, David, and John Morgan. 2010. *Teaching Geography 11-18: A Conceptual Approach*. London, England: Open University Press, a division of McGraw-Hill.
- Lapin, Todd. 2012. Photo of the Theme Building at the Los Angeles International Airport. <http://blogs.smithsonianmag.com/paleofuture/2012/06/googie-architecture-of-the-space-age/> (last accessed 16 June 2012).
- Larson, Frederic. 2005. Photo of summertime fog enwrapping the Golden Gate Bridge. <http://www.sfgate.com/bayarea/article/FOG-HEAVEN-The-sun-will-come-out-tomorrow-Or-2615710.php#photo-2102422> (last accessed 16 January 2013).
- Lasswell, Harold. 1948. *Power and Personality*. New York, NY: Norton.
- Lewis, Judith. 1994. *Uncommon Knowledge*. New York, NY: Pocket Books.
- Listal. 2013. *Scarface* French release poster for bifold panel. <http://www.listal.com> (last accessed 6 August 2013).
- Llorens, Pilar, and Francisco Domingo. 2007. Rainfall partitioning by vegetation under Mediterranean conditions. A review of studies in Europe." *Journal of Hydrology* 335 (1):37-54.
- Livingstone, David. (1999). Exploring the icebergs of adult learning: Findings of the first Canadian survey of informal learning practices. *Canadian Journal for the Study of Adult Education* 13(2):49-72.

- Lukinbeal, Christopher. 2012. "On Location" filming in San Diego County from 1985–2005: How a cinematic landscape is formed through incorporative tasks and represented through mapped inscriptions. *Annals of the Association of American Geographers* 102(1): 171-190.
- 2005. Cinematic Landscapes. *Journal of Cultural Geography* 23 (1):3-22.
- 2002. Teaching historical geographies of American film production. *Journal of Geography* 101(6):250-260.
- Lukinbeal, Christopher, and Christina Kennedy. 1993. Dick Tracy's cityscape. *Yearbook of the Association of Pacific Coast Geographers* 55: 76-96.
- Ma, Di, ZhengYu Liu, ShiHua Lü, Notaro Michael, XinYao Rong, GuangShan Cheng, FuYao Wang. 2013. Short-term climatic impacts of afforestation in the East Asian monsoon region. *Chinese Science Bulletin* 58 (17): 2073-2081.
- MacGowan, Kenneth. 1956. The screen's "New Look": Wider and deeper. *The Quarterly of Film Radio and Television* 11 (2): 109-130.
- Malibu Creek Docents. 2011. Photo of Malibu Creek State Park. <http://www.malibucreekstatepark.org/ANIMALS.html> (last accessed 2 October 2012).
- Maltby, Richard. 2003. More sinned against than sinning: the fabrications of pre-code cinema. *Senses of cinema*. <http://dspace.flinders.edu.au/dspace/> (last accessed 2 February 2013).
- Mandeville, John and C.W.R.D. Moseley (Translator). 1984. *The Travels of Sir John Mandeville*. New York, NY: Penguin Classics.
- Markland, Ted. 2013. Cast photo for *The High Chaparral*. http://www.tedmarkland.com/high_chaparral.htm (last accessed 28 October 2013).
- Mars Hill College. 2012. Early twentieth century homestead in Fannin County, GA. http://www.aca-aca.org/cdm4/item_viewer.php?CISOROOT=/Mars43&CISOPTR=8&CISOBX=1&REC=3 (last accessed 12 February 2012).
- Martin, Daniel. 2010. "Yearning for Yalta: An epic voyage of the Black Sea through Russia and Ukraine" with Alamy photo. *The Daily Mail*. 8 September 2010. <http://www.dailymail.co.uk/travel/article-1310114/Yearning-Yalta-An-epic-voyage-Black-Sea-Russia-Ukraine.html> (last accessed 4 November 2013).
- Martin, Geoffrey J. 2005. *All Possible Worlds: A History of Geographical Ideas, Fourth edition*. New York, NY: Oxford University Press.

- Martindale, David. 1991. *Television Detective Shows of the 1970s*. Jefferson, NC: McFarland and Company.
- Mast, Gerald and Bruce F. Kawin. 2011. *A Short History of the Movies, 11th edition*. Boston, MA: Longman.
- Matthews, John A. and David T. Herbert. 2008. *Geography: A Very Short Introduction*. New York, NY: Oxford University Press.
- Mayhew, Robert J. 1998. Was William Shakespeare an eighteenth-century geographer? Constructing histories of geographical knowledge. *Transactions of the Institute of British Geographers* 23 (1): 21-37.
- McCarthy, Todd. 2000. *Howard Hawks: The Grey Fox of Hollywood*. New York, NY: Grove Press.
- McDonald, Adrian H. Through the Looking Glass: Runaway productions and “Hollywood economics”. *University of Pennsylvania Journal of Labor and Employment Law* 9(4): 878-949.
- McLuhan, Marshall. 1964. *Understanding Media: The Extensions of Man*. New York, NY: McGraw- Hill.
- Medved, Harry and Michael Medved. 1984. *Hollywood Hall of Shame: The Most Expensive Flops in Movie History*. New York, NY: Perigee Trade.
- Mehlich, Jan Maksymillian. 2013. Photo of Indigenous Korean vegetation: Korean fir (*Abies koreana*) <http://www.britannica.com/EBchecked/media/116745/Korean-fir> (last accessed 13 August 2013).
- Mellinger, Michael. 2011. Photo of South Korean countryside. http://farm7.staticflickr.com/6182/6119098055_36d9202267_z.jpg (last accessed 1 February 2013).
- Menefee, David W. 2007. *The First Male Stars: Men of the Silent Era*. Albany, GA: Bear Manor Media.
- Merriam-Webster Collegiate Dictionary (11th Ed.). 2008. Definition of “place”. Springfield, MA: Merriam-Webster.
- Meyer, William R. (1979), *The Making of the Great Westerns*, New York, NY: Arlington House.

- Miller, Judy. 1980. Photo of loess plain in the southeastern Nebraska section of the Great Plains. In Donald E. Trimble, *The Geologic Story of the Great Plains*, U.S. Geological Survey Bulletin 1493. Washington, D.C.: Government Printing Office.
- Minow, Newton N., and Craig L. LaMay. 2008. *Inside the Presidential Debates: Their Improbable Past and Promising Future*. Chicago, IL: University of Chicago Press.
- Mitchell, Rick. 2004. The tragedy of 3-D cinema. *Film History-3-D Cinema* 16 (3): 208-215.
- Mittell, Jason. 2009. *Television and American Culture*. New York, NY: Oxford University Press.
- Mordden, Ethan. 1988. *The Hollywood Studios*. New York, NY: Alfred A. Knopf.
- "Morons & Happy Families". 19 June 1950. *Time Magazine*. <http://www.time.com/time/magazine/article/0,9171,858841,00.html?internalid=ACA> (last accessed 1 May 2013).
- Morton, Frederic. 24 January 1987. Tales of the Grand Teutons: Karl May Among the Indians. *The New York Times*. <http://www.nytimes.com/1987/01/04/books/tales-of-the-grand-teutons-karl-may-among-the-indians.html> (last accessed 30 June 2012).
- Mota, Juan F. Francisco Valle, J. Cabello. 1993. Dolomitic vegetation of South Spain. *Vegetatio* 109 (1): 29-45.
- Myers, James M. 1998. *The bureau of motion pictures: Its influence on film content during World War II and the reasons for its failure*. Texas Christian University. *ProQuest Dissertations and Theses*. <http://search.proquest.com/docview/304460405?accountid=5683> (last accessed 1 March 2012).
- National Archives and Records Administration. 2013. Photo of San Francisco, CA during the 1930s. <http://www.archives.gov/research/american-cities/images/american-cities-049.jpg> (last accessed 20 June 2013).
- National Oceanic and Atmospheric Administration. 2013. Photo of the Colorado Rockies. <http://www.photolib.noaa.gov/htmls/wea03058.htm> (last accessed 1 July 2013).
- 2004. Photo of palm trees in Brownsville, TX. http://www.srh.noaa.gov/bro/?n=2004_event_christmasreport (last accessed 11 June 2013).
- 1995. Description of the climate for San Francisco, CA. http://www.wrh.noaa.gov/mtr/sfd_sjc_climate/sfd/SFD_CLIMATE3.php (last accessed 1 July 2013).

- National Center for Educational Statistics. 2011. The Nation's Report Card: Geography 2010- National Assessment of Educational Progress at Grades 4, 8, and 12. Washington DC: Institute of Education Sciences, U.S. Department of Education.
- National Center for Preservation Technology and Training. 2008. Photo of Metairie Cemetery, New Orleans, LA. <http://www.flickr.com/photos/ncpttmedia/4702731827/in/photostream/> (last accessed 16 June 2012).
- National Resources Conservation Service. 2010. Information on vegetation along the U.S. - Mexico border. <http://plants.usda.gov/core/profile?symbol=prgl2> (last accessed 28 October 2013).
- Nimoy, Leonard. 1995. *I Am Spock*. New York, NY: Hyperion Books.
- Nolte, Carl. 2005. "FOG HEAVEN: The sun will come out tomorrow. Or maybe not. It's summer in the city, and that means gray skies." *San Francisco Chronicle*. 19 August, 2005. <http://www.sfgate.com/bayarea/article/FOG-HEAVEN-The-sun-will-come-out-tomorrow-Or-2615710.php> (last accessed 16 January 2013).
- Northeast Regional Climate Center. 2013. Temperature and precipitation data for the Appalachian region. http://www.nrcc.cornell.edu/page_summaries.html (last accessed 30 October 2013).
- Old West Gallery. 2013. Photo of cowboys on an 1879 cattle drive. <http://www.theoldwestgallery.com/servlet/the-4005/Cowboys-On-Cattle-Drive/Detail> (last accessed 7 August 2013).
- Ou, Ting-Hai, and Wei-Hong Qian. 2006. Vegetation variations along the monsoon boundary zone in East Asia. *Chinese Journal of Geophysics* 49(3): 627-636.
- Painter, Judith. 2012a. Mapping Panem. *The Geography Teacher* 9(2): 53-55.
 -----2012b. Alliances in *The Hunger Games*. *The Geography Teacher* 9(2): 56-59.
- Parish, James Robert. 1976. *The Tough Guys*. New York, NY: Arlington House.
- Patrick, Kevin J. 2012. Great Lakes Odyssey: 2 Nations, 12 Geographers, 2,200 Miles, Twice. Pennsylvania Canadian Studies Consortium Annual Meeting. March 30-31, 2012: Indiana University of Pennsylvania, Indiana, PA.
- Pattinson, Dave. 2012. Photo of area outside Brooks, Alberta. <http://www.davepattinson.com/return-to-dinosaur-provincial-park/> (Last accessed 2 October 2012).

- Patton, Donald J. 1972. Preparing Classroom Materials. In A.M. Gunn (Ed.) *High School Geography Project: Legacy for the Seventies*. Montreal, Canada: Centre Educatif et Culturel Inc., 51-69.
- Peel, Murray. 2013. Köppen-Geiger Climate Map of Eastern Europe and Russia. http://aventalearning.com/courses/GEOGx-HS-A09/b/Unit06/GeoHS_6.B.7.htm (last accessed 3 November 2013).
- Peterson, Ruth C. and Louis L. Thurstone. 1932. *The Effect of Motion Pictures on the Social Attitudes of High School Children*. Ann Arbor MI: Edwards Brothers.
- Phillips, David P. 1982. The impact of fictional television stories on US adult fatalities: new evidence on the effect of the mass media on violence. *American Journal of Sociology* 87(6):1340-1359.
- Prasad, B. Devi. 2008. Content analysis: A method in social science research. In D.K. Lal Das, and V. Bhaskaran (Eds.) *Research Methods for Social Work*. New Delhi, India: Rawat, 173-193.
- Public Domain Pictures. 2013. Photo of rider on a horse in Monument Valley. <http://publicdomainpictures.net/view-mage.php?image=11661&picture=monument-valley&large=1> (last accessed 1 August 2013).
- Quigley, Martin. 1938. The function of the motion picture. *The Public Opinion Quarterly* 2(1) Special Supplement: Public Opinion in a Democracy: 47-49.
- 1947. Importance of the entertainment film. *Annals of the American Academy of Political and Social Science* 254 (1947): 65-69.
- Rapoport, Amos and Robert E. Kantor. 1967. Complexity and ambiguity in environmental design. *Journal of the American Institute of Planners* 33(4): 210-221.
- Reeves, Hazard. 1999. This is Cinerama. *Film History- Film Technology* 11 (1): 85-97.
- Red Deer River Watershed Alliance. 2008. Base map of the Red Deer River (Alberta, Canada) Watershed. <http://www.rdrwa.ca/location> (last accessed 11 February 2013).
- Reid, John Howard. 2010. *Movie Westerns: Hollywood Films the Wild, Wild West*. Raleigh, NC: Lulu Press, Inc.
- Reilly, Rick. 2013. A shock to the system. http://espn.go.com/espn/story/_/id/9120769/intro-wichita-state-shockers. (last accessed 7 April 2013).

- RetroWeb. 2012. Image of the 40 Acres Lot in 1965. <http://www.retroweb.com/40acres.html> (last accessed 19 January 2012).
- Rogers, Alan. 2004 'Looking again at non-formal and informal education - towards a new paradigm', *The encyclopaedia of informal education*. http://www.infed.org/biblio/non_formal_paradigm.htm (last accessed 12 April 2011).
- Rubin, Barbara. 1977. A chronology of architecture in Los Angeles. *Annals of the Association of American Geographers* 67 (4): 521-537.
- Rushing, Janice Hocker, and Thomas S. Frentz. 1980 “*The Deer Hunter*”: Rhetoric of the warrior. *Quarterly Journal of Speech* 66(4): 392-406.
- Sadler, William J. and Ekaterina V. Haskins. 2005. Metonymy and the metropolis: Television show settings and the image of New York City. *Journal of Communication Inquiry* 29(3): 195-216.
- Sargent, James D., Thomas A. Wills, Mike Stoolmiller, Jennifer Gibson, Frederick X. Gibbons. 2006. Alcohol use in motion pictures and its relation with early-onset teen drinking. *Journal of Studies on Alcohol and Drugs*. 67(1): 54-65.
- Saveland, Robert N. 1993. School Geography. In V.S. Wilson, J.A. Litle, and G.L. Wilson (Eds.) *Teaching Social Studies: Handbook of Trends, Issues, and Implications for the Future*. Westport, CT: Greenwood Press, 131-145.
- Sawyer, Carol F. and David R. Butler. 2006. The use of historical picture postcards as photographic sources for examining environmental change: Promises and problems. *Geocarto International* 21(3): 73-80.
- Schwartz, Lloyd. 2013. Cinerama brought the power of peripheral vision to the movies. National Public Radio. <http://www.npr.org/2013/03/04/173061060/cinerama-brought-the-power-of-peripheral-vision-to-the-movies> (last accessed 6 March 2013).
- Shay, Alex. New York City's Central Park. <http://www.alexshay.com> (last accessed 6 August 2013).
- Shelton, Brad. 2007. Vazquez Rocks outside Los Angeles, CA. <http://www.flickr.com/photos/b88gator/2470654047/> (last accessed 6 March 2013).
- Sekeres, Diane Carver and Sr. Madeleine Gregg *fcJ*. 2008. The stealth approach: Geography and poetry. *Journal of Geography* 107(1): 3-11.

- Slocum, Terry A., Matthew D. Dunbar, and Stephen L. Egbert, 2007. Evaluating the potential of the GeoWall for geographic education. *Journal of Geography* 106(3): 91-102.
- Southern Regional Climate Center. 2013. Temperature and precipitation data for Corpus Christi and Brownsville, TX. http://www.srcc.lsu.edu/station_search.html (last accessed 30 October 2013).
- Speer, Jean Haskell. 1993. From stereotype to regional hype: Strategies for changing media portrayals of Appalachia. *Journal of the Appalachian Studies Association* 5: 12-19.
- Stanley, Robert H. 1978. *The Celluloid Empire: A History of the American Movie Industry*. New York, NY: Hastings House, Publishers.
- "Stars of "Texas Rangers" Usher Raymond and Van Der Beek go vest". 5 December 2001. *Entertainment Weekly*. <http://www.ew.com/ew/article/0,,187103,00.html> (last accessed 11 August 2011).
- Statistics Canada. 2013. Climate data for Brooks, Alberta. http://climate.weather.gc.ca/climate_normals/ (last accessed 11 February 2013).
- Stroman, Carolyn A. 1984. The socialization influence of television on black children *Journal of Black Studies* 15(1): 79-100.
- Sullivan, Jeffrey. 2008. Photo of Countryside along Going-to-the Sun Road, Glacier National Park. <http://www.flickr.com/photos/jeffreysullivan/2763770750/> (last accessed 20 June 2013).
- Taras, Howard L., James F. Sallis, Thomas L. Patterson, Philip R. Nader, Julie Nelson. 1989. Television's influence on children's diet and physical activity. *Journal of Developmental and Behavioral Pediatrics* 10(4): 176-180.
- Taylor, Robert and Nadia Taylor. 2010. Photo of countryside outside Brooks, Alberta. <http://www.flickr.com/photos/nadiabob/4689375189/in/gallery-albertaonflickr-72157625151204553/> (last accessed 15 November 2012).
- Texas A&M Forest Service. 2008. Rainfall, precipitation, vegetation, and topography information. <http://texastreeid.tamu.edu/content/texasEcoRegions/WesternGulfCoastalPlain/> (last accessed 2 June 2012).
- Texas Educational Agency. 2011. How to interpret effect sizes. http://www.tea.state.tx.us/Best_Practice_Standards/How_To_Interpret_Effect_Sizes.aspx (last accessed 14 August 2013).

- Texas Parks and Wildlife. 2013. Information on the Franklin Mountains.
<http://www.tpwd.state.tx.us/state-parks/franklin-mountains> (last accessed 29 October 2013).
- Texas State University-San Marcos Office of Curriculum Services. 2013.
 Undergraduate Catalog 2012- 2014. <http://www.txstate.edu/curriculumservices/catalogs/undergraduate/catalogs/2012-14.html> (last accessed 29 January 2012).
- Theobald, Lewis. 1733. *The Works of Shakespeare in Seven Volumes*. London, UK:
 A. Bettesworth and C. Hitch, J. Tonson, F. Clay, W. Feales, and R. Wellington.
- Tsafos, Kristin. 2009. Photograph of Topanga Canyon. <http://www.flickr.com/photos/kristintsafos/4103974508/> (last accessed 20 June 2013).
- United States Geological Survey. 2011. Topographic information on Appalachian and San Gabriel Mountains. <http://www.usgs.gov> (last accessed 18 September 2012).
 -----2003. Photo of Mount Baker in the Cascade Mountains of the Pacific Northwest. <http://pubs.usgs.gov/fs/2000/fs059-00/images/baker.jpg> (last accessed 18 January 2013).
- University of Idaho. 2010. USGS Land Cover map for information on the Appalachian region and California. <http://www.gap.uidaho.edu/landcoverviewer> (last accessed 28 October 2013).
- University of Massachusetts. 2013. Photo of Montreal, Canada. http://www.ipo.umass.edu/index.cfm?FuseAction=programs.ViewProgram&Program_ID=10220 (last accessed 4 May 2013).
- University of Southern California. 2012. Photo of Los Angeles, CA. http://farm5.staticflickr.com/4077/4743466257_816f892af7_z.jpg (last accessed 1 February 2013).
- University of Texas at San Antonio. 2011. Center for Archaeological Research photo of Nueces Strip, TX. <http://www.texasbeyondhistory.net/st-plains/images/lw9.html> (last accessed 15 November 2012).
- University of Toronto. 2012. Photograph of Toronto, Canada. <http://medieval.utoronto.ca/events/ICMCL/visiting.html> (last accessed 6 July 2013).
- University of Virginia. 2013. *Scarface* American release poster for bifold panel. <http://xroads.virginia.edu/~UG02/gangsters/images/scar2.gif> (last accessed 6 August 2013).

- U.S. Department of Agriculture. 2013. Information on lechuguilla and the candelilla. <http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?5454> (last accessed 29 October 2013).
- U.S. Environmental Protection Agency. 2010. Rainfall, precipitation, and vegetation information. <http://www.epa.gov/wed/pages/ecoregions/ecoregions.htm> (last accessed 2 June 2012).
- U.S. Forest Service. 2012. Rainfall, precipitation, vegetation, and topography information. <http://www.fs.fed.us/rm/ecoregions/descriptions/> (last accessed 2 June 2012).
- 2003. Photo of California chaparral. <http://www.fs.fed.us/outernet/r6/aq/fetm/anf.htm> (last accessed 30 October 2013).
- USGenWeb Project. 2013. Postcard of First National Studios. <http://www.usgwarchives.net/ca/losangeles/postcards/1natl.jpg> (last accessed 10 June 2013).
- 2013. Postcard of San Francisco after the 1906 earthquake and fire. <http://www.usgwarchives.net/ca/sanfrancisco/postcards/1906eq/kearst.jpg> (last accessed 10 June 2013).
- U.S. National Park Service. 2013. Rainfall, precipitation, vegetation, and topography information. <http://www.nps.gov/whsa/index.htm> (last accessed 1 May 2013).
- Vaughn, Stephen, and Bruce Evensen. 1991. Democracy's guardians: Hollywood's portrait of reporters, 1930–1945. *Journalism & Mass Communication Quarterly* 68(4): 829-838.
- Walsh, Francis R. 1990. “The Callahans and the Murphys” (MGM, 1927): a case study of Irish-American and Catholic Church censorship. *Historical Journal of Film, Radio and Television* 10(1): 33-45.
- Weaver, Warren and Claude E. Shannon. 1963. *The Mathematical Theory of Communication*. Champaign, IL: University of Illinois Press.
- Western Regional Climate Center. 2013. Temperature and precipitation data for California and along the U.S. Mexico border. <http://www.wrcc.dri.edu/narratives/> (last accessed 30 October 2013).
- Wheeler, Kip. 2013. Definition of ‘suspension of disbelief’. http://web.cn.edu/kwheeler/lit_terms_W.html#willing_suspension_anchor (last accessed 15 August 2013).

- William and Barbara Leonard Transportation Center at California State University San Bernardino. 2013. Rainfall, precipitation, vegetation, and topography information. <http://leonard.csusb.edu/research/documents/GT70764Final2.pdf> (last accessed 20 January 2013).
- Worden, Leon. 2003. Melody Ranch: Movie Magic in Placerita Canyon. <http://www.scvhistory.com/scvhistory/sg032903.htm> (last accessed 15 November 2010).
- World Wildlife Fund. 2013. Rainfall, precipitation, vegetation, and topography information. <http://worldwildlife.org/ecoregions> (last accessed 3 June 2012).
- Yancheva, Gergana, Norbert R. Nowaczyk, Jens Mingram, Peter Dulski, Georg Schettler, Jörg F. W. Negendank, Jiaqi Liu, Daniel M. Sigman, Larry C. Peterson, and Gerald H. Haug. 2007. Influence of the intertropical convergence zone on the East Asian monsoon. *Nature* 445: 74-77.
- Yi, Sangheon. 2011. Holocene vegetation responses to East Asian monsoonal changes in South Korea. In Juan Blanco (Ed.) *Climate Change - Geophysical Foundations and Ecological Effects*. Shanghai, CN: InTech.
- Youngs, Yolonda. 2014. Shaping tourism. In C.E. Colten and G. L. Buckley (Eds.) *North American Odyssey*. Lanham, MD: Rowman and Littlefield-in final edits.
- 2012. Editing nature in Grand Canyon National Park postcards. *The Geographical Review* 102 (4): 486-509.
- Zach, Lawrence W. 1950. A northern climax, forest or muskeg? *Ecology* 31 (2): 304-306.
- Zerbi, Maria Chiara 1993. *Paesaggi della Geografia (Geography Landscapes)*. Torino, IT: Giappichelli.
- Zimmermann, Stefan. 2007. Media geographies: Always part of the game. *Aether: the Journal of Media Geography* 1: 59-62.