

THE CULTURE OF A CHANGING LANDSCAPE: A CASE STUDY OF THE  
MID-ATLANTIC REGION OF THE UNITED STATES

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## Table of Contents

I. Framing Question .....	2
II. Background .....	2
III. <b>Situated context</b> .....	9
IV. Focus question .....	19
V. Methodology.....	19
VI. Quantitative Results .....	23
VII. Critical Analysis of Selected Films .....	30
VIII. Discussion .....	55
IX. Conclusion.....	57
X. Works Cited .....	60

## I. Framing Question

*How is land cover and land use change reflected in culture?*

This frames my examination of land change processes from an interdisciplinary approach. That is, it combines a cultural component into the often quantitative studies of land change. It stems back to the ultimate question of humanity: nature vs. nurture? How much does environment shape individuals' preferences, desires, morals, affiliations? A deeper look at space and land cover change is the first component required to tackle this question before diving deeper into the cultural realm.

## II. Background

### Land Cover Change

The dynamic nature of landscape is a result of combined effects of nature and society; change is an inherent characteristic of landscapes (Burgi et al. 2004). Resulting changes are examined through studies of Land Use and Cover Change (LUCC). Ellis (2010) defines LUCC as “a general term for the human modification of Earth’s terrestrial surface” (Ellis 2010). In essence, the term refers to direct and indirect influences of human actions on land. Since the dawn of the human race, humans have modified land for survival. However, rates and trends of LUCC during the past century have intensified far greater than ever before (Ellis 2010).

Ellis goes on to distinguish between land cover and land use. “Land cover refers to the physical and biological cover over the surface of land, including water, vegetation, bare soil, and/or artificial structures” (Ellis 2010). Land use, on the other hand, is more complicated and difficult to define. Ellis describes the Natural Scientists’ definition of land use as “syndromes of human activities such as agriculture, forestry and building construction that alter land surface processes including biogeochemistry, hydrology and biodiversity” (Ellis 2010). Social Scientists and land managers define land use in broader terms “to include the social and economic purposes and contexts for and within which lands are managed (or left unmanaged), such as subsistence versus commercial agriculture, rented vs. owned, or private vs. public land” (Ellis 2010).

To an extent, LUCC is inevitable. However, extreme rates seen today drive “unprecedented changes in ecosystems and environmental processes at local, regional and global

scales” (Ellis 2010). Negative consequences of LUCC include biodiversity loss, pollution, and climate change. In fact, LUCC is a major player in global environmental change (Dale et al. 1993; McDonnell and Pickett 1993; Meyer and Turner 1994) (Burgi et al. 2004). Long-term threats to future production of food and other livelihoods result from transformation of productive land to non-productive uses, e.g. conversion of agricultural land to residential use (Ellis 2010). This could have serious consequences for human life on Earth. Therefore, it is not surprising policy makers and researchers around the world are making monitoring LUCC a top priority (Ellis 2010).

In order to study the multifaceted nature of LUCC, an interdisciplinary approach is needed, combining natural and scientific methods. Methods often used for tracking LUCC include remote sensing and geospatial analysis and modeling. Yet alone, these methods are not sufficient for the overall picture. Ellis argues that the “scientific investigation of the causes and consequences of LUCC requires an interdisciplinary approach...which has emerged as the new discipline of land-change science” (Ellis 2010). An interdisciplinary approach diving deeper beyond examining physical land change, behind many layers of landscape, is essential to fully grasp its complexity. Perhaps this approach will provide new insight on potential solutions to consequences of LUCC.

How we study LUCC is critical; exclusionary methods do not provide accurate data. “A distinction between different spheres and topics where culture becomes relevant in the interaction between societies and their environment, as proposed by Nassauer (1995), facilitates the integration of culture in studies of landscape change” (Burgi et al. 2004, 865). Culture shapes and drives society, dictating how society interacts with its environment. Therefore it is necessary to consider how culture impacts change on the land.

Studying the drivers of change is key to monitoring LUCC. The importance of driving forces in LUCC studies is emphasized in both Burgi et al.’s (2004) article, and Ellis (2010). Drivers are defined as “influential processes in the evolutionary trajectory of the landscape” (Burgi et al 2004, 858). Knowledge of drivers can shed light on past patterns of LUCC and help predict the future. Ellis broadly suggests drivers “can include almost any factor that influences human activity, including local culture (food preference, etc.), economics (demand for specific products, financial incentives), environmental conditions (soil quality, terrain, moisture availability), land policy & development programs (agricultural programs, road building,

zoning), and feedbacks between these factors, including past human activity on the land (land degradation, irrigation and roads)” (Ellis 2010). Burgi et al. formalize this sentiment by referring to the five major types of driving forces outlined in (Brandt, Primdahl and Reenberg 1999); these are: socioeconomic, political, technological, natural, and cultural driving forces (Burgi et al. 2004, 859).

### Relation to Population

The human-environment relationship is of key importance in studies of LUCC. Population trends help illustrate the dynamic relationships between people and land. In my work, before drawing further connections between landscape and the cultural dimension, a deeper look at population is necessary (Burgi et al. 2004). Burgi et al. propose the “way how humans cope with landscape changes is best studied with appropriate methods from social sciences” (Burgi et al. 2004, 862). They note, “fast, abrupt changes might result in a loss of sense of place and a decline in people’s identification with the landscape” (Burgi et al 2004, 862). It is reasonable to extrapolate that a regional population reflects its land use. Therefore regional population trends provide a foundation for interpreting popular perceptions and indications of land. Steinitz et al. (1996, 2003) use population forecasts to predict “a range of scenarios of land-use change” (Burgi et al. 2004, 864).

Cultural driving forces are particularly important to my study of the dynamic relationship between land and culture. Influence of culture on landscape has increasingly gained attention among scholars Rockwell 1994; Nassauer 1995, 1997; Naveh 2001” (Burgi and Russell 2001). Burgi et al.’s procedure for approaching study of driving forces emphasizes the importance of culture as a driving force of landscape change, while cultural dimensions are often missing from landscape studies. Their procedure combined analytical and systematic approaches, aiming to increase the “relevance of studies of landscape change for science as well as for the solution of real world problems” (Burgi et al. 2004). In essence, their approach aimed to further integrate studies of culture and landscape change—just as my study looks to put into action. Climate change occurs just as LUCC occurs: change is a static of life. Creation is just that, constantly occurring. Yet, while humanity is constantly adjusting the environment by its actions, one cannot attribute causality of culture on environment (Proctor 1998). Studying the driving forces of landscape change helps to address Burgi’s proposed challenges to said change. While drivers are

the most distinct causation of LUCC, it is important to note the inherently dynamic nature of landscapes, as they are subject to change regardless of driving forces (Burgi et al. 2004, 861). Landscapes themselves are not the only dynamic factor in land change studies, but the actors and drivers are also subjects of change. The next portion of my research will focus on cultural change.

### Cultural Landscape

In one article, Jianguo Wu outlines approaches to studying cultural landscapes. The term cultural landscape is a fundamental concept of geography, first coined in the 1890s by Friedrich Ratzel as “landscape modified by human activity” (Wu 2010). Over time, the usage of the term has broadened. In 1992 the term was adopted by the International Convention by the UNESCO, sparking a major burst in interest in the 90s. Wu articulates the fluidity of such term in that there is no singular understanding cultural landscape; there is generally a connectedness of culture and environment. Its definition is explicitly not ‘black and white’ as it stresses the gradient of factors involved in landscape relationships. This definition is useful in the context of landscape modification gradient (Wu 2010). Cultural landscape has grown increasingly relevant in LUCC with the rise of anthropogenic influences on the biosphere. Different degrees of the functioning landscape mosaic result in “multi-scaled ecotone and ecosystems with different degrees of human modification” (Wu 2010). In other words, if we imagine our present environment and measure change, we can hypothesize the ability to maintain our ecology and nature’s medley of species is dependent upon human harmony with nature.

### Landscape and Popular Culture

Cultural landscape is a component of popular culture. Trends in popular culture evidence common beliefs and attitudes held by groups of people over time. Cinema is one form of popular culture where cultural landscape is very relevant. As one of the most popular and influential cultural mediums in 20<sup>th</sup> century America, cinema evidences implications of physical and cultural landscape change. This is not to say it is the *only* media where cultural landscape is relevant; it may not even be the *best*. But it is one of several forms of tracking American cultural landscapes. As in Robert Sklar’s words in his book, *Movie Made America*, “under slightly different circumstances the motion-picture camera and projector might as easily have become

primarily instruments of science, like the microscope, or of education and family entertainment, like the lantern slide, or amateur photography, or of amusement-park diversion” (Sklar 2012, 3). Essentially, the power of this technology to capture movement and record change was a significant advance. Further distinguishing film from other mediums was its development “during critical years of change in the social structure of American life when a new social order was emerging in the modern industry” (Sklar 2012, 3). Essentially, the popularity of film in America can be rooted back to art and the creative expression of beauty or a reflection of everyday culture, trends and beliefs.

Popular culture in landscape can be represented in a variety of ways. Art is one of the easiest expressions to quantify. For example, the LOVE statue in Logan Circle, Philadelphia is a famous representation of the city and has become part of the permanent landscape. “Robert Indiana’s iconic LOVE statue was not installed until the bicentennial in 1976, only to be removed two years later. Due to its immense popularity, the sculpture was purchased by the Chairman of the Philadelphia Art Commission, F. Eugene Dixon, Jr., and permanently returned to the plaza” (Visit Philadelphia 2016). The Orange Line Bridge in Portland, OR is another, in this case, a new, yet functional, piece of landscape architecture. “Tilikum Crossing, of course, is the beautiful new cable bridge built by TriMet that opens today, Saturday, Sept. 12, 2015. It’s a transit, pedestrian, bike bridge across the Willamette River, between the Marquam Bridge and the Ross Island Bridge at the south end of downtown Portland. It should soon take its place as one of the most beautiful and most loved bridges in Oregon” (Richard 2015).

International environmental artists Christo and Jeanne-Claude have realized more ephemeral landscape art. Pieces such as *The Umbrellas* or *The Gates* have decorated cities in Japan, California and New York City. Seeking merely to spread a message of joy in the beauty of art and how it can enhance the natural landscape, the couple used recyclable materials and employed local people to set up and ultimately break down their artwork (Christo and Jeanne-Claude 1991; 2005).

Landscape in popular culture can be represented in a variety of milieus. Public art as discussed above is one. Advertising makes use of landscape. “Some empirical evidence suggests that consumers’ concerns for the environment, coupled with their concerns for their overall personal health and nutrition, are dominant factors driving organic food-related attitudes and purchase intent” (Sheehan and Atkinson 2016, 22). They further concluded, “In our study, when

participants were exposed to environmental appeals and primed to be interdependent, they may have focused more on global collaboration as a way to address environment concerns” (Sheehan and Atkinson 2016, 30). Likewise even the simple postcard can have a bearing on the collective American consciousness and ideas of LUCC. “The National Park Service used the advent of color postcards to highlight park amenities—not to mention the newly paved roads that wound their way through the established photo spots—as a way to encourage more tourism to help pay for conservation efforts” (Mansky 2016).

Measures of popular culture are important because it gives us a lens into societal development and its positive or negative impact on land usage. “On U.S. campuses, and half century or so after Henry Nash Smith’s classic study *Virgin Land*—in many ways a foundational work—American Studies is still not a clear-cut and fenced-in area of research. It is, instead, a highly productive and malleable field of inquiry traversing vast facets of American endeavors, experiences, and identities across centuries and in the process skirting multiple disciplines” (Olsson and Bolton 2010, 9). They continue, “...busy, modern people needed a new type of entertaining, condensed, and well-written information to keep abreast with the national and world affairs of the time. In the eyes of the public, traditional newspapers like the *New York Times* were long-winded and dull. *Time* was not the first news magazine to be published in the U.S., but its streamlined digest of topical events was to be successful beyond expectations” (Olsson and Bolton 2010, 12). Moreover, they make the argument for cinema being the primary repository for popular culture. “At the point in time when the American feature film became conspicuous after years in the shadow of Europe, Hollywood simultaneously emerged as the epicenter of American cinema. This chain of events leading up to the prominence of the American feature film” (Olsson and Bolton 2010, 13). LUCC is important through the eyes of American cinema. As they further argue, “Globalization is open to debate and interpretation, but for many it is unequivocally steeped in the shimmering light of U.S. brands. Coca-Cola, Nike, and McDonald’s are among the most symbolic global brands, along with Disney, DreamWorks, Paramount, and the other Hollywood studios” (Olsson and Bolton 2010, 15). In the public eye, seeing is believing.



## Tracking Popular Culture

In tracking and quantifying trends in popular culture, movies are one medium that is indicative of popular culture by providing insight on the cultural landscape at a specific time. Films may be historically important though not necessarily historically accurate. “Arguably, the figure of the gangster is the most prominent American fiction character alongside the cowboy. The fictional versions of these mythical figures survive and sometimes thrive in the grey area between lily-white idealism and dark cynicism” (Olsson and Bolton 2010, 19). Of note, the authors mention, “The American variety of language has also been harnessed with a whole range of sound-based American popular culture, from jazz to pop and rap” (Olsson and Bolton 2010, 20).

While films may be historically important, they may not necessarily be historically accurate. “The American resentment of the authorities and affection for the underdog—combined with a missing historical tradition—conspired to celebrate such characters in mass-market literature and Wild West shows” (Olsson and Bolton 2010, 22). Idealization of history is nothing new, especially in America. According to James Truslow Adams who coined the term ‘American Dream’, “The American Dream is that dream of a land in which life should be better and richer and fuller for everyone, with opportunity for each according to ability or achievement” (Adams 2012).

## Areas Requiring Greater Scholarly Attention

While authors begin to challenge the separateness of the cultural and physical realms, further study provides a link between the dynamic relations between culture and landscape. Various scholars call for the need to diversify the approach to landscape studies. Wu calls for the need to “incorporate the different dimensions of landscapes” into landscape ecology, “especially those concerning human-environmental relationships” (Wu 2010). He continues with “we need to develop a deeper understanding of cultural landscapes, and connect culture with nature more consciously and more effectively in landscape ecological research” (Wu 2010). Interdisciplinary connection to LUCC involves “studying cause and effect relation requires an integrative approach, in which quantitative data is used together with qualitative information and narrative elements” (Burgi et al. 2004, 864). Yet at the same time, causality does not equal correlation—I propose to look at the correlation while not concluding anything about causality.

“To define and evaluate a system of driving forces, it is crucial to find ways to combine qualitative and quantitative data” (Burgi et al. 2004, 865). My research compares the quantitative to the qualitative and tries to link the two together regarding LUCC. In regard to cinema reflecting LUCC in particular, I consider the cultural aspect of landscape change. “However, we consider the study of driving forces as a means to foster the integration of culture and cultural change in landscape studies. The fact that we included culture as a core dimension in our framework for the study of driving forces of landscape change stresses the need to consider cultural aspects” (Burgi et al. 2004, 865)

If we consider culture as an adjective and not a noun we begin to see “cultural processes are implicated in all relevant human practices. In his understanding, culture can be seen as a means of making sense of reality” (Burgi et al. 2004, 865) (Proctor 1998). Thus the studying of culture benefits empirical research. Both realms influence change in the other. Quantitative results give us a window into the qualitative.

I studied a total of 9 movies all set in the Mid-Atlantic States filmed between 1970 and 2000. Five movies are set in New York City, an iconic American city. The urbanization we will discuss is a central theme to the American experience. Two films are set in Philadelphia, the bedrock of American independence, and two films are set in suburban and forested areas. The notable thing about the last two films is that they were horror genre, a genre that has a unique relationship with LUCC.

### **III. Situated context**

This project focuses on the Mid-Atlantic region of the United States during the years of 1970-2000. While there are various ‘definitions’ of Mid-Atlantic region, this paper refers to Delaware, Maryland, New Jersey, New York, Pennsylvania, and Washington D.C.

#### **LUCC of the Mid-Atlantic**

The U.S. Geological Survey (USGS) conducted a study of land cover trends throughout the United States during the time frame of 1973-2000. The project is split into four different reports, categorized by region; the Eastern U.S. report is of primary concern in this project. Within the Eastern U.S., the report identifies 20 ecoregions. The report “summarizes aggregate change in the Eastern United States and specific characteristics of change occurring in each of 20 Eastern U.S. ecoregions” (USGS 2015).

The Land Cover Trends Project aims to track “rates, causes, and consequences of contemporary land use and land cover change” (USGS 2015). Their methods combined “a probability sampling approach” with satellite imagery and supporting aerial photography from 1973-2000. The goal was “to measure National land change on an ecoregion-by-ecoregion basis” (USGS 2015).

The average overall “amount of Eastern U.S. land change between 1973 and 2000 was 12.5 percent” (USGS 2015). While the synthesis summarizes general results for the Eastern U.S., ecoregionality within the greater region plays an important role in determining Land Cover outcomes. Biotic and abiotic characteristics of different ecoregions determine “resource potential and probable responses to natural and anthropogenic disturbances” (USGS 2015). Characteristics also influence the range of possible land use patterns, and can determine the types of land cover change occur within an ecoregion. For example, “the highest amounts of change were generally in ecoregions with active timber harvesting, while the lowest amounts of change were in ecoregions where urbanization was the leading land change” (USGS 2015).

From 1973-2000, Forest Cover remained the majority of land cover. However, since 1973 forest cover has decreased by 2.3%—the most dramatic decrease of all the classifications. Agriculture—the second most prevalent land cover classification throughout the time period—also decreased, this time by 1.7%. While these two most abundant classifications steadily declined, developed land increased by 2.2%, accounting for 10.6% of land cover by 2000.

As will be exemplified later in this paper, development is of particular focus in this project. This study classifies developed land as “the built-up surfaces of the East,” mostly associated with urban and exurban growth (USGS 2015). The development land cover change classification also includes transportation systems and many other dispersed built-up lands. Table 1 shows net changes in land cover per classification.

Table 1

	Period				Total
	1973-1980	1980-1986	1986-1992	1992-2000	
Land-use/land-cover class	km <sup>2</sup>	km <sup>2</sup>	km <sup>2</sup>	km <sup>2</sup>	km <sup>2</sup>
Forest	-12,098	-9,395	-7,103	-7,670	-36,946
Developed	7,218	6,949	9,274	13,358	36,799
Agriculture	-566	-4,819	-12,032	-7,605	-25,022
Mechanically disturbed	2,681	5,636	8,160	3,594	20,271
Grassland/Shrubland	2,244	2,904	2,754	248	8,149
Wetland	-1,237	-1,643	105	-3,308	-6,083
Water	452	792	-25	1,151	2,371
Non-mechanically disturbed	-43	318	-302	1,004	1,007
Mining	1,120	-38	-795	-810	-478
Barren	-3	-13	4	39	27

Source: USGS 2015

This table breaks the 1973-2000 timeframe into 5 different segments, which could be particularly helpful later on in my research as I look at popular culture. Developed land steadily increased over all time segments.

The net increase of development was almost equal to the net loss of forestlands. This net increase was 9.4%, with similar gross change in developed lands—which the study attributes to the “unidirectional nature of urban growth” (USGS 2015). Figure 1 illustrates the connection between cities and developed land growth.

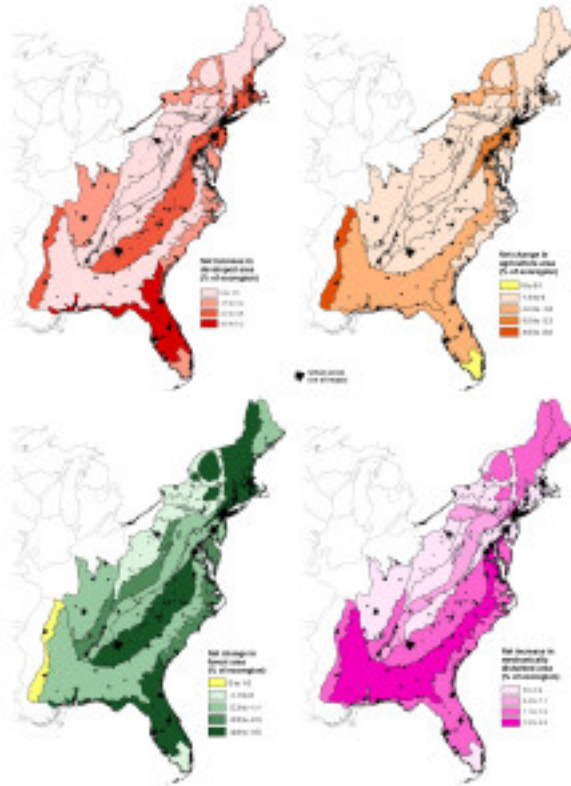


Figure 1: Land Change Occurrences by Type. Source: USGS 2015

Figure 2 displays the types of land converted to developed land, with no net losses of developed land occurring during the 27-year timeframe (USGS 2015). Ultimately, the study gathers from the development data:

*Developed land increased at an accelerating rate over the 27-year period. The percentage of increased urban land grew every period with average annual developed land increases of 0.06 percent, 0.07 percent, 0.09 percent, and 0.10 percent for each period between 1973 and 2000. While the overall percent gains in developed land are relatively small in relation to the overall area, the increasing rate of development may alter hydrological processes, contribute to urban heat island effects, threaten biodiversity, and result in many other environmental consequences. (USGS 2015)*

The study concludes that overall land change in the Eastern U.S. is connected primarily to timber harvesting and urban growth.

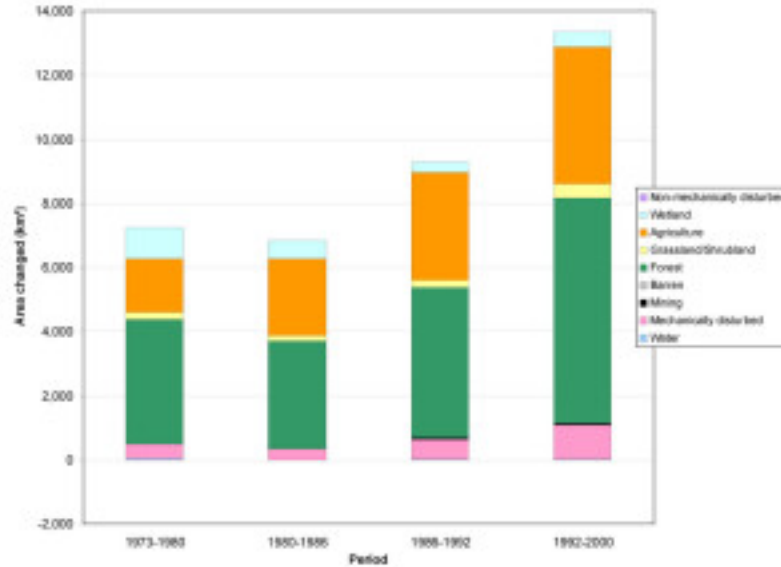


Figure 2: Types of Land Developed. Source: USGS 2015

Their classification system (see Table 2) defines land use land cover (LULC) into 11 classes, which provides grounding for my later data collection. The LULC classes paralleled the Anderson Level I classification system, with modifications to include two transitional disturbance categories. Their decision to use general, Level I classes was “made to achieve high interpretation accuracy and consistency using moderate resolution imagery” (USGS 2015).

Table 2

Water	Areas persistently covered with water, such as streams, canals, lakes, reservoirs, bays, or oceans.
Developed/Urban	Areas of intensive use with much of the land covered with structures (e.g., high density residential, commercial, industrial, transportation, mining, confined livestock operations), or less intensive uses where the land cover matrix includes both vegetation and structures (e.g., low density residential, recreational facilities, cemeteries, etc.), including any land functionally attached to the urban or built-up activity.
Mechanically Disturbed	Land in an altered and often non-vegetated state that, due to disturbances by mechanical means, is in transition from one cover type to another. Mechanical disturbances include forest clear-cutting, earthmoving, scraping, chaining, reservoir drawdown, and other similar human-induced changes.
Barren	Land comprised of natural occurrences of soils, sand, or rocks where less than 10% of the area is vegetated.

Mining	Mining Areas with extractive mining activities that have a significant surface expression. This includes (to the extent that these features can be detected) mining buildings, quarry pits, overburden, leach, evaporative, tailing, or other related components.
Forests/Woodlands	Tree-covered land where the tree-cover density is greater than 10%.
Grassland/shrubland	Land predominately covered with grasses, forbs, or shrubs. The vegetated cover must comprise at least 10% of the area.
Agriculture	Cropland or pastureland in either a vegetated or non-vegetated state used for the production of food and fiber. Note that forest plantations are considered as forests or woodlands regardless of the use of the wood products.
Wetland	Lands where water saturation is the determining factor in soil characteristics, vegetation types, and animal communities. Wetlands are comprised of water and vegetated cover.
Non-Mechanically Disturbed	Land in an altered and often non-vegetated state that, due to disturbances by nonmechanical means, is in transition from one cover type to another. Nonmechanical disturbances are caused by wind, floods, fire, animals, and other similar phenomenon.
Ice/Snow	Land where the accumulation of snow and ice does not completely melt during the summer period.

Source: USGS 2015

### Population of Mid-Atlantic States

Between 1970 and 2000, population in the counties corresponding to the 20 eastern ecoregions increased by 32.6 percent, from 93.3 million to 123.8 million people (USGS 2015). That's an addition of almost *a third* of the original population—pretty significant, considering it is only a 30-year time frame. As USGS data suggests, this happened while the lowest amounts of change occurred in ecoregions where urbanization was the leading land change (USGS 2015). *What does this suggest about development and urbanization patterns? Do more people inhabit less space?* I next dive deeper behind these questions using Census population and housing data. It provides a comprehensive foundation to critically analyze the significance of land cover change in my situated context of the Mid-Atlantic coast.

Population trends can provide insight to why certain land changes occur. One might imagine an increase in population would lead to increase in development; however, it is not quite

that simple. While an increase in population *may* lead to an increase in developed land, this does not mean it definitely *will*. Other potential outcomes of an increased population are higher population density, higher demands for agriculture or other natural resources, etc. In essence, the effect of population on landscape is complex—shows up in a multitude of ways. It is important to note the relationship is dynamic. Just as population affects LUCC trends, land can also influence population trends. Because the complexity of various factors makes it hard for just one component to influence LUCC everywhere. However, with this in mind, population trends can signify to land use patterns. People are drawn to settle in certain landscapes, but also certain landscapes are difficult to settle in.

As seen in Table 3, average trends in the residential population of the United States indicate a gradual increase from the 1970s to the 1990s, with a higher jump occurring from 1990 to 2000 with an increase of 13.15% (US Census Bureau 1980; 1990; 2000).

Table 3: Average Residential Population by State

	1970-80	1980-90	1990-2000
US	8.40%	9.78%	13.15%
Delaware	8.40%	12.85%	17.60%
District of Columbia	-15.60%	-4.90%	-5.70%
Maryland	7.50%	13.40%	10.77%
New Jersey	2.70%	4.96%	8.85%
New York	-3.70%	2.46%	5.48%
Pennsylvania	0.59%	0.15%	3.36%
Mid-Atlantic average	-0.02%	4.82%	6.73%

Data adapted from: US Census Bureau 1980; 1990; 2000

Average population increases for Mid-Atlantic States in each decade are much lower than the nation's average. This significantly low trend, however, is largely due to Washington D.C. Even regardless of D.C.'s incredibly low rates, most of the states trended on the lower side of the nation's average. Exceptions include Maryland from 1980-1990 with a 13.40% increase and Delaware (US Census Bureau 1980; 1990; 2000).



## Average Trends in Residential Population over Three Decades

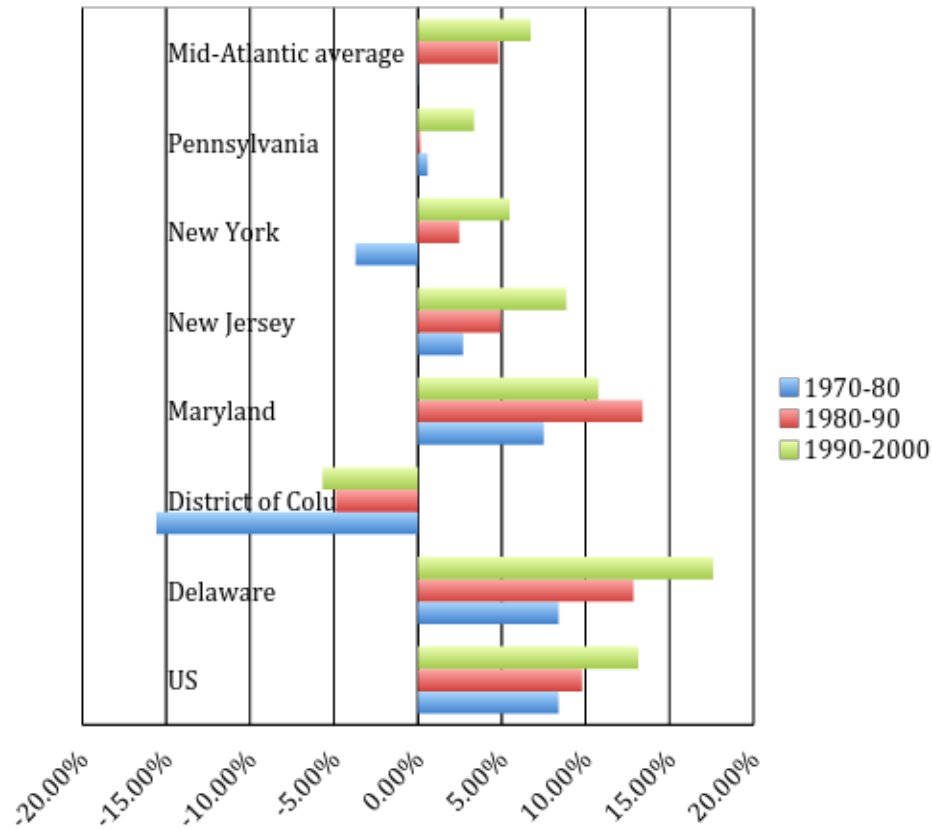


Figure 3. Data adapted from: US Census Bureau 1980; 1990; 2000

States representing a range of sizes, drastic variation in numbers is not surprising. What is significant is the percent increases. Clear variation among Mid-Atlantic States speaks to the diversity of this region, which is especially significant considering the region’s relatively small area compared to other regions of the United States. Certain trends are more universal within the region than others.

Housing trends are another indicator of land use of the times. Types of housing also suggest whether more people are living in urban, suburban, or rural areas. For example, we will likely find a greater concentration of row homes in the city than in a rural area where detached single family homes are more common (though spread out). The types of spaces people live greatly affect their relationships with land. Housing trends connect to other Census data such as population, economic, social, etc—all of which helps to paint the larger picture of human relationship with land. Housing units are classified in six distinct categories: detached single

family homes, attached single family attached homes (row homes), apartment housing with 2-4 units in the building, units in larger apartment buildings of 5 or more units, mobile homes and Other (US Census Bureau 1980; 1990; 2000).

While detached single family homes represented the highest percentage of housing units in the Mid-Atlantic states, with the exception of D.C., the average percentage of detached single family homes in the Mid-Atlantic states was less than the nation's average between the years of 1970-2000 (US Census Bureau 1980; 1990; 2000). All states except New York experienced a decrease the percentage of detached single family homes in 1980, while all states except Pennsylvania increased the percentage of detached single-family homes by 2000 . More interestingly, the percentage of single attached family homes in the Mid-Atlantic region was significantly higher than the nation's average, with the exception of New York. And, again, all states except Pennsylvania experienced an increase in the percentage of row homes from 1970-2000. New York and New Jersey both had significantly higher percentages of apartment housing with 2 to 4 units than the nation's average, while DC, Maryland, and Pennsylvania were both within 2% of the nation's averages between 1970-2000. Delaware was the only state below the nation's average for this category. Delaware and Pennsylvania fell below the nation's average for 5 or more units for each decade. While the other states all fell above, with particular emphasis on DC and NY who were significantly above average for all years. Consistent with the US average, all states (except NY) experienced their highest increase from 1970-1980. The mobile homes and other categories proved to be the lowest percentage of housing type for most states except Delaware, where the percentage of mobile homes was higher than the percentage of 2 to 4 unit apartments from 1980-2000. Delaware has also seen an increase in mobile homes since 1970, though its peak occurred in 1990 (US Census Bureau 1980; 1990; 2000).

To further illustrate density and tightness of living quarters, I turn to percentages of crowded households of each state. Census defines a crowded household as "occupied housing units with more than one person per room" (US Census Bureau 2011). I wonder if crowding tends to impact the amount of time people spend out of their homes and if this is reflected in the cinema of the time frame.

Another important distinguisher between households is whether or not they are occupied full time. Knowing percentage of vacation homes in each state can potentially help us pinpoint

typical ‘idyllic’ landscape. Though it is important to note that people may chose vacation homes in urban settings or wherever they want to, as well, I use these vacation home statistics as a general point of reference. Areas with a high concentration of vacation homes may see a larger population at different times of the year.

Table 4

	1970	1980	1990	2000
US	2.90%	3.20%	3.00%	3.10%
DE	4.20%	6.80%	6.70%	7.60%
DC	0.40%	0.30%	0.60%	0.80%
MD	2.00%	2.20%	2.20%	1.80%
NJ	4.50%	3.80%	3.30%	3.30%
NY	3.30%	3.10%	3.00%	3.10%
PA	2.10%	2.70%	2.90%	2.80%

Percent Vacation Homes. Source: US Census Bureau 2012

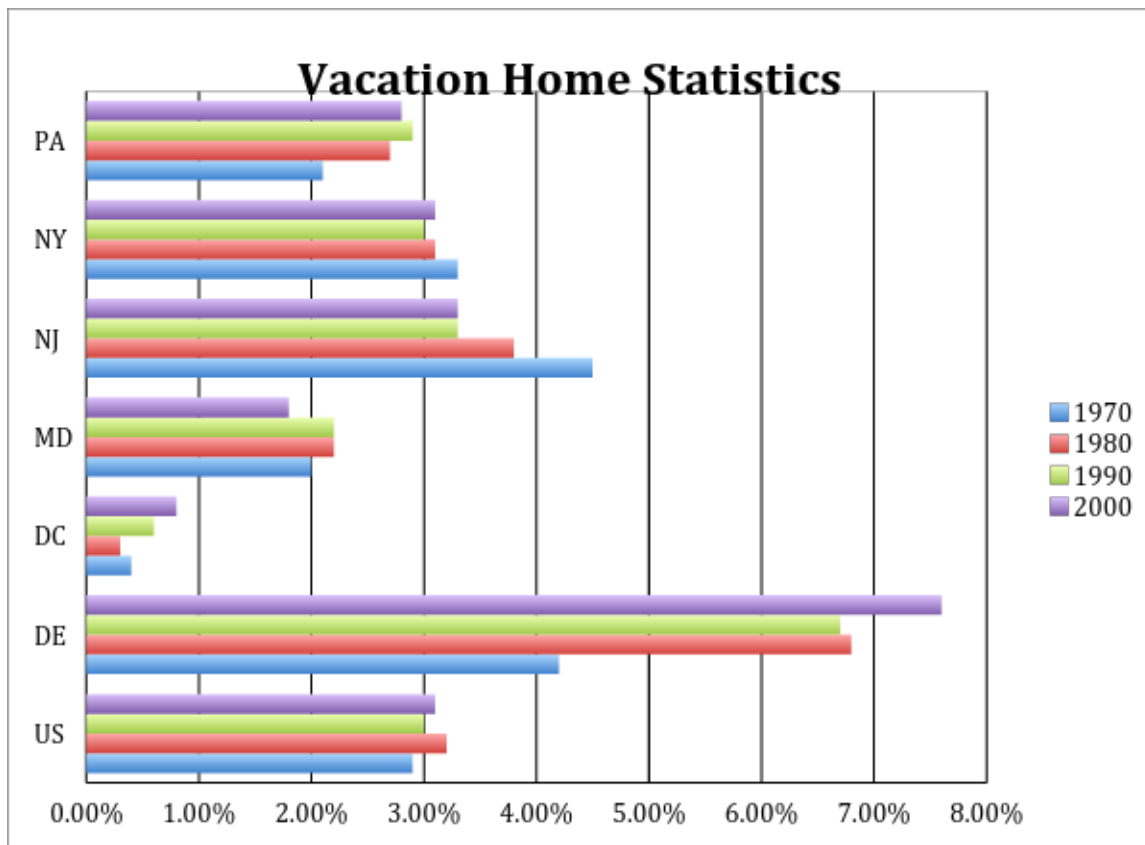


Figure 4: Percent of Vacation Homes. Data adapted from: US Census Bureau 2012.

Though Mid-Atlantic States varied among each other, the average percentage of all Mid-Atlantic States for the year 2000 was 3.23%--not far off from the nation's average (US Census Bureau 2012). My research looks for connections between the LUCC that occurred within 1970-2000 to popular films of these years that are set in the Mid-Atlantic.

#### IV. Focus question

*Is Land Cover Change reflected in popular film set in the Mid-Atlantic Region during 1970-2000? If so, how?*

Film is a reflection of culture through the filmmaker's eyes. Film shows a particular character set and thus a particular population's morals, desires and preferences. The time period a movie is shot in, especially if shot in the present day of the movie, provides a perfect snapshot of landscape at that time. To explore how Land Cover Change happened and is reflected in popular film set in the Mid-Atlantic Region during 1970-2000, I examined the role of landscape in popular film set and filmed in this time frame and analyzed potential linkages to the LUCC of the time period.

#### V. Methodology

Data falls into two overarching categories. The first group, Mid-Atlantic regional land and population change, made up the Situated Context section of this paper. Land cover trends data was gathered from the USGS Land Cover Trends Project. Population data was compiled from Census data archives. Such region-specific trends not only make up a large portion of my quantitative data, but also provide a foundation for tracking land cover trends in film and influencing later qualitative analysis. The second overarching category is the role of landscape in popular film, consisting of data gathered from watching designated films. I used a combined qualitative and quantitative methodological approach to film analysis. In each film, I looked for LUCC as reflected in the landscapes filmed. I looked for natural background as well as artificial background, i.e. interior plants and landscape use in art on the walls. Comparing and contrasting the movie choices as portrayed in the Mid-Atlantic States could delineate an overall trend of LUCC. Results include my own interpretations and critical analysis, therefore do not reflect a neutral stance.

Using both quantitative and qualitative methods is essential to this project. The quantitative data is not only necessary for measuring land cover change, but it also provides a clear outline for tracking land cover change in selected films. It allows for direct comparison between the films. Qualitative analysis is necessary for a comprehensive understanding of the relationship between land cover change and culture. Content of the movies evidences attitudes and reflections of land cover in popular culture. Below is a comprehensive summary of all methods used.

### Analyze Existing Data

Utilizing the USGS Land Cover Trends Project, it is possible to track LULC in popular films set in the Mid-Atlantic region to determine the impact, if any, LUCC has on culture and people's, in this case the filmmakers and their characters, perception of. Filmmaking is a reflection and celebration of culture, therefore it is through this lens of films corresponding to the same time frame studied by the USGS that changes in land use may be seen.

### Film Selection

Using the IMDb web page's list of most popular films from each decade, I picked the top films set in the Mid-Atlantic region (IMDb.com). IMDb gathered box office statistics, setting the basis of their classifications. In selecting the top grossing films of the selected era, it is reasonable to extrapolate that more people saw these films thereby exposing more people to the ideas and images contained in these films. As more people see these films, they are subject to the impressions left behind by the films, including how the environment, both natural and otherwise, are portrayed. Criteria of selected films include: set in the Mid-Atlantic region, and ranked as one of the top 50 most popular movies of its decade. Selected films must also take place during the 1970-2000 time frame or in the future but filmed in this time frame. I have chosen to exclude "historical" films, such as the Exorcist, as they do not explicitly represent this set time frame. While movies taking place in the future also do not depict this time frame, they are more indicative of attitudes of the time as the future has yet to happen; we already know what happened in the past, leaving little room for adjustment of landscape.

This paper analyzes *Rocky* (1976), a film about an underdog boxer trying to make meaning of his life in inner Philadelphia, and *The Sixth Sense* (1999), a psychological thriller

also set in Philadelphia 23 years after *Rocky*. Five movies take place in New York City, significant because it is the most populous city in the region. These are *Ghostbusters* (1984), a screwball comedy about three paranormal scientists who need to clean up the mystical and bizarre occurrences infringing on everyday life in the Big Apple, *Kramer vs. Kramer* (1979), a drama about child custody seen sympathetically through the eyes of the father, a role reversal for its day, *Crocodile Dundee* (1986), a fish out of water tale of an Australian outback man who falls in love with a New York magazine photographer, and finally *Saturday Night Fever* (1979) which detailed the lifestyle of disco-loving youth. To round out the entrees, I have also included two films from the horror genre with their unique perspective on Lucc, *The Amityville Horror* (1979) set in Amityville, Long Island but filmed in Tom's River, NJ, about a possessed house that overtakes its occupants and *The Blair Witch Project* (1999), taking place in the empty forested areas of Maryland, about three film students who set off to find the truth about the myth of the Blair Witch and ultimately disappear never to be heard from again.

#### Film Observation/Land Cover Classification Scale

Using the USGS Land Cover Classifications, I quantified the times a particular land cover type is shown in each film to help determine the significance of landscape in the film and to help determine if length of time dictates weight and consequence or if the reverse is true. Using a table, I tracked whether each occurrence happened in the presence of humans (characters, or non-characters). I calculated the total time of the film shots only of the landscape, no humans. Lack of human presence is significant as the director forces viewers to focus on the landscape with no distractions.

Furthermore, I ranked each land cover classification on a scale of 0-5 based off of its presence and importance in the film. My ranking is a combination of the extended evidence (e.g. time landscape is shown), and the emphasis of landscape in dialogue or other non-direct representations during the film. The ranking system is as follows:

0--No significance or occurrence whatsoever

1--No direct representations, but a minor presence in dialogue or other reflections (e.g. art within the film)

2--Minor presence, at least 1-2 physical appearances

3--Often occurs but not critical or critical but rare occurrence (1-3 times)

4--Highly relevant in direct representations, but not dialogue

5--Extremely relevant in dialogue, direct representations, and other representations

As I watched and rewatched films, I trained myself exactly what to look for. Something to consider in quantifying relevance of a given land type is the question of whether or not the story could have occurred in a different setting. That is, would the overall message be significantly altered if the setting were different? To illustrate how I used this scale in action, I have three examples as follows.

The documentary series *Planet Earth* is a clear example where landscape is incredibly important to the content. However, not all land cover classifications occur in each episode. Episode 6, "Ice Worlds," would rank a 5 for the snow/ice classification, yet a 0 for mining classification.

In John Ford's iconic western, *Stagecoach* (1939), landscape is central. The film follows a group of passengers from Arizona to New Mexico in the late 1800s. Featuring panoramic shots of Monument Valley, the film exemplifies power of the environment over people, as well as America's "manifest destiny" ideals. Largely set in the desert, water bodies are not central to the film. However, the few scenes containing water stress importance of these water bodies. Therefore, water is ranked a 3 because it is a rare but significant occurrence.

My third example is the movie *Clue* (1985), based off of a board game murder mystery set inside a Gothic Revival mansion. The plot is largely concerned with events happening within the mansion, though few exterior shots of the mansion occur. The mansion exterior represents developed land; while secluded, the land does contain built-up man-made structures. Landscape's rare occurrence and lack of significance to the plot suggest landscape is not fundamental to the content of this film. Therefore, developed land ranks a 2, and all other classifications a 0.

### Critical Analysis

General observations and evidence (e.g. quotes) from each film provided the information required for critical analysis. I applied evidence to the quantitative results measured, and theorized potential connections between the two. This section includes summaries of trends found (or not found) within selected films, including various themes and motifs. This allows for discussion and explanation of possible contradictions found between the land cover trends and the quantitative film data.

## Potential Limitations

One potential limitation is the need to study multiple aspects of culture in order to draw conclusions about overall shifts in culture. Each film provides a snapshot of the time frame it was shot in. None of the films spanned multiple years. Time and space limit the scope of this paper, however, the inherent problem about making general claims about culture is that though they may be perceived to be accurate, unless they stand the test of the manifold lenses used to properly study culture, they may, indeed, be inaccurate. Further, as a person born in 1994, I am looking at most, if not all, the movies as snippets of history, my personal cultural memory not fully formed and limited to things such as *Powerpuff Girls* (1998) and *SpongeBob Squarepants* (1999). The pre-Smartphone age is quaint to me. Finally, the scale I have chosen is subjective and open to the interpretation of the viewer.

## VI. Quantitative Results

### *Rocky* (1976)

<b>Classification</b>	<b>Ranking</b>
Water	2
Developed/Urban	4
Mechanically Disturbed	either 2 or 0
Barren	0
Mining	0
Forests/Woodlands	0
Grassland/shrubland	0
Agriculture	0
Wetland	0
Non-Mechanically Disturbed	0
Ice/Snow	0

*Rocky* is two hours and two minutes long. Total non-human landscape time in the film was 20 seconds out of 122 minutes. While just a mere 20 seconds featured landscape without



humans, many of the shots were focused on landscapes with humans present—rather than focusing in on the humans. Two shots of transitional land classify as developed or mechanically disturbed. *Rocky's* quantitative results tell us there are more people inhabiting less space.

*The Sixth Sense* (1999)

Classification	Ranking
Water	0
Developed/Urban	3
Mechanically Disturbed	0
Barren	0
Mining	0
Forests/Woodlands	0
Grassland/shrubland	0
Agriculture	0
Wetland	0
Non-Mechanically Disturbed	0
Ice/Snow	0

*The Sixth Sense* has a running time of one hour fifty minutes. Total non-human landscape time during this film was 1:01 minutes, while total outdoor footage (including humans and non-human time) was 8.316 minutes. It is not entirely surprising that the only landscape type depicted was developed/urban, as the movie took place in Philadelphia (though not quite as inner city as *Rocky*). Unlike *Rocky*, however, there are also more suburban scenes like the funeral reception scene. The quantitative results here imply that this movie could have taken place anywhere; the setting was incidental to the story.

*Ghostbusters* (1984)

Classification	Ranking
Water	0

Developed/Urban	4/5
Mechanically Disturbed	0
Barren	0
Mining	0
Forests/Woodlands	0
Grassland/shrubland	0
Agriculture	0
Wetland	0
Non-Mechanically Disturbed	0
Ice/Snow	0
Other	3

*Ghostbusters* comes in at 2 hours 5 minutes. Total time outside was approximately 49:14 minutes. Of this time, there was approximately 3 seconds non-human landscape time total. This brief time accounts for the shots of the ‘alien’ realm. The rest of the time included humans. Quantitatively, we can see that the urban setting was crucial to this movie, and the supernatural elements were important to moving the storyline along.

*Kramer vs. Kramer* (1979)

<b>Classification</b>	<b>Ranking</b>
Water	0
Developed/Urban	3
Mechanically Disturbed	0
Barren	0
Mining	0
Forests/Woodlands	0
Grassland/shrubland	0
Agriculture	0

Wetland	0
Non-Mechanically Disturbed	0
Ice/Snow	0

*Kramer vs. Kramer* has a total running time of 1 hour 45 minutes. Total time spent outside was 660 seconds or 11 Minutes total time. Though time outside was minimal compared to some of the other movies, this does not suggest that the urban setting is any less significant as is further explored in critical analysis. Quantitatively, it appears this movie is similar to *The Sixth Sense* and perhaps could take place in any urban setting.

*Crocodile Dundee (1986)*

<b>Classification</b>	<b>Ranking</b>
Water	2
Developed/Urban	5
Mechanically Disturbed	0
Barren	4
Mining	0
Forests/Woodlands	5
Grassland/shrubland	0
Agriculture	0
Wetland	2
Non-Mechanically Disturbed	0
Ice/Snow	0

Of the total running time 1 hour 44 minutes of *Crocodile Dundee*, 3662 seconds, approximately 61.0333 minutes were spent outdoors. Given all the various land use classifications seen in this film, a conclusion can be reached that the interaction with the landscape was extremely important. Though much of the action takes place outside the chosen realm of the Mid-Atlantic states possible arguing for disqualification of this movie, the contrast is a valuable one and sheds light upon the characters' interaction with landscape as will be

further discussed in critical analysis. Quantitatively, this film demonstrates land use in multiple milieus.

*Saturday Night Fever (1979)*

<b>Classification</b>	<b>Ranking</b>
Water	4
Developed/Urban	5
Mechanically Disturbed	0
Barren	0
Mining	0
Forests/Woodlands	0
Grasslands/shrublands	0
Agriculture	0
Wetland	0
Non-mechanically disturbed	0
Ice/Snow	0

Of the 2 hour running time of *Saturday Night Fever*, 132 seconds were non-human. Of those non-human scenes, only 3 seconds take place in a park. The entire rest of the move consists of humans in an urban setting. 23.69 minutes are spent inside the disco club. Clearly the urban setting is crucial to the story and the characters. However, the editor did a poor job with continuity in regard to the natural environment. Though the action takes place only over a few weeks, scenes fluctuate between barren winter trees and trees in full leaf. These scenes had no natural progression but often took place in the same day. 7.73 minutes are spent focusing on water or the bridge. Though these scenes do not take up much screen time they are an essential part of the characters' lives and their story. Quantitatively, landscape is important to this film. A different setting would not work.

*Ghost (1990)*

<b>Classification</b>	<b>Ranking</b>
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Water	0
Developed/Urban	4
Mechanically Disturbed	0
Barren	0
Mining	0
Forests/Woodlands	0
Grassland/shrubland	0
Agriculture	0
Wetland	0
Non-Mechanically Disturbed	0
Ice/Snow	0

*Ghost* takes place in NYC and clocks in at 2 hours 9 minutes. There are 2 minutes of shots without humans in them. All other frames include humans. The entire story takes place in an urban setting with few trees. The only grass we see is at the cemetery or in a landscape painting and even that is blurry or a television story about an airplane crash. An important part of the story has the characters running down fire escapes thereby necessitating the story take place in an urban setting.

*The Amityville Horror (1979)*

<b>Classification</b>	<b>Ranking</b>
Water	2
Developed/Urban	5
Mechanically Disturbed	0
Barren	0
Mining	0
Forests/Woodlands	0
Grassland/shrubland	0
Agriculture	0

Wetland	0
Non-Mechanically Disturbed	0
Ice/Snow	0

Though the action of *The Amityville Horror* took place in Amityville, Long Island, the film was actually shot in Tom’s River, NJ. Its running time is 118 minutes. 5.9 minutes shots of non-human. Many of the non-human shots were of the house during varying times of day with the mature trees surrounding it. The house is a “character” all its own. 25.86 minutes takes place with humans outside. There are 3 water areas, the river next to the house, the river in the park the priests visit, and the river Kathy drives over. They all appear to be the same river. There are 5 urban areas though more suburban than city. They are the house, the priest’s house/church, the highway the priests and George drives along, the highway Kathy drives along, and the place along the road where the nun vomits. Because this is a supernatural tale about a possessed house, the urban/suburban setting is crucial. The fact that the house could be your next-door neighbor’s raises the creepiness. This story would not have worked as well if the environment were isolated. The use of weather and insects (flies) portrays menace.

*The Blair Witch Project (1999)*

<b>Classification</b>	<b>Ranking</b>
Water	5
Developed/Urban	2
Mechanically Disturbed	0
Barren	0
Mining	0
Forests/Woodlands	5
Grassland/shrubland	0
Agriculture	0
Wetland	0
Non-Mechanically Disturbed	0

Ice/Snow	0
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Though only clocking in at 81 minutes, *The Blair Witch Project*, makes a statement for land use in a movie in the horror genre. It is difficult to calculate the exact number of non-human minutes because so many scenes quickly flip to a human and not, but there are approximately 42 minutes, or roughly half of the movie, with no humans in the picture though of that 42 minutes, probably closer to 40 of those minutes humans can be heard in the scene. The beginning of the film takes place in a small town so as to set up the story and create the documentary style. This is important only to give a framework and to contrast to the greater part of the movie that includes the forest, which is also portrayed as a sinister force. Water becomes important as the characters become increasingly lost in the wood and cross and recross the same body of water.

In looking over the films as a whole, it is clear sometimes LULC is a key piece. For example, the down-on-his-luck boxer in *Rocky* is patently a product of his urban environment as is the disco-crazed Tony of *Saturday Night Fever*. Though the non-human percentage in these films are far less than one percent of screen time, the interaction the characters have as a result of their city life is significant and will be discussed in the critical analysis section. Likewise the two films that fit the horror genre, *The Amityville Horror* and *The Blair Witch Project* both rank a 5 for relevancy in dialogue and the depth to which the landscape is integral in the plot and subject of the movies. Indeed, as we will see later, the landscape itself is capable of becoming a character. Certainly, we can see in *Crocodile Dundee* the importance of LULC as it impacts the characters. Setting clearly makes a difference in how they deal with each other. As with *The Blair Witch Project* 50% or more of the movie is devoted to the outside environment, which as we will see, is demonstrably impactful upon the characters. Even in movies such as *Kramer vs. Kramer* and *Ghost* where the Mid-Atlantic setting and land use takes a back seat, we can still extrapolate information and gain insight. Quantitative analysis can only take us so far. We must explore under the critical microscope.

## VII. Critical Analysis of Selected Films

### *Rocky* (1976)

Landscape in *Rocky* exposes the unruliness of urbanization as contrasting humanity's perceived control over the land. This suggests a lack of harmony or coexistence of humanity and the natural world. Unruliness of the urban environment is emphasized with large quantities of

trash floating around unkempt streets. For example, Rocky kicks a piece of garbage as he walks along his street of row homes (*Rocky*, 0:07:08). Also notable here is that Rocky does not have a yard—nor do any of his neighbors. A negative portrayal of the South Philly neighborhood is suggested as Rocky informs Adrian “every other block there’s a creep” (*Rocky*, 0:21:54). Another aspect of unruliness is lack of containment. The constant motion of the trains throughout the film emphasizes the lack of containment.

Perceived control is the viewpoint that as humans, we can control and tame the natural world. This viewpoint is illustrated by a lack of naturally occurring plant life and scarcity of nature in general, except for in “tamed” settings like indoors, gardens, and artwork. While a great portion of the film is set outside on the streets of Philadelphia, the first tree of the movie does not appear until about a quarter of the way through (*Rocky*, 0:27:20). This small evergreen tree stands alone in a parking lot, and is likely planted there by the city. It is entirely surrounded by pavement and urban infrastructure; not only does it look out of place, but it looks weak in comparison. Similar instances of taming nature appear throughout the film, such as plants in front yards, flowers in homes and on porches (*Rocky*, 0:35:06, 0:35:00, 0:39:23). The only appearances of plant life occur in tamed settings such as these.

Human control over nature is further alluded to through the theme of domestication. Early on this is shown as Rocky visits his eventual lover, Adrian, in the pet store where she works (*Rocky*, 0:20:36). Pets are the quintessential example of domestication, and the pet theme recurs throughout the film. For example, it comes up as Rocky introduces his “exotic” pet turtles to Adrian (*Rocky*, 0:48:30). Later, Rocky’s friend, Mick, remarks how domestic turtles “make good soup,” further establishing human control over animals (*Rocky*, 1:04:00).

Shots looking outside from the inside, through windows, capture a disconnect between humans and their surrounding environment. This is further suggested as the majority of the film takes place indoors. The director often stages shots like these; for example, outside the pet store window (*Rocky*, 0:20:27). It is as if we are domesticated animals looking out from our cages.

Nods to American nationalism underscore the film. Bicentennialism was in full swing in 1976, and where better for this movie to take place than in the birthplace of America? Time and locale have such an integral part of the story; the movie could never have been told elsewhere. When tapped to be Apollo’s opponent, Apollo’s manager asks, “Rocky, do you believe America is the land for opportunity?” (*Rocky*, 0:57:00). Apollo talks about the “beautiful city of



Philadelphia” making him feel patriotic (*Rocky*, 0:57:40). He enters the match in a boat dressed as George Washington crossing the Delaware, and we see Uncle Sam as well (*Rocky*, 1:42:40). The ring itself is designed to look like the original Betsy Ross American flag (*Rocky*, 1:44:03). During the fight, we see lots of flag imagery and a girl dressed as the Statue of Liberty (*Rocky*, 1:51:34).

The art chosen for display within personal spaces reflects values and idea. Art is brought indoors, kept in frames to be observed thus similar to domestication. There is a landscape painting behind Creed’s promoter’s desk (*Rocky*, 0:30:01). Perhaps nature is associated with class. We see Apollo’s manager wearing a rose corsage (*Rocky*, 1:24:35). Artificial landscapes can be seen with the ice skating rink (*Rocky*, 0:40:29). In a touch of irony, there is a snowy scene painted inside the skating rink (*Rocky*, 0:43:18). Later, we see a snowing old town scene on a Christmas movie with a Christmas tree in the house (*Rocky*, 1:26:08). There is an image on wall: ‘GOD BLESS OUR HOME’ with a picture of a house on it, significant because it is not a row home (*Rocky*, 1:27:05).

### *The Sixth Sense* (1999)

Just as in *Rocky*, the theme of human control over the natural world comes up throughout *The Sixth Sense*. However, unlike *Rocky*, this film does not expose the unruliness of the urban/developed world; in fact, one might argue that developed land is idealized in this film. Upon Dr. Malcolm Crowe’s introduction to the film, we are immediately made aware of his status as the city of Philadelphia’s “son” for his Doctor’s Award of Excellence (*The Sixth Sense*, 0:04:50). Dr. Crowe and his wife admire the award in their living room, placing the award above their fireplace while it burns wood. His wife notes “finally someone is recognizing all the sacrifices you’ve made” (*The Sixth Sense*, 0:04:50). This is ironic as neither of them seemingly pay attention to the sacrifices nature makes in order for them to live in such comfort. As one of the first moments, their burning of wood for their own comfort sets the stage for characters’ relationships to nature throughout the rest of the film. It is clear that the city is embedded in Dr. Crowe’s identity as its “son”.

Similar to *Rocky*, the recurrence of nature and landscape in art emphasizes themes of human control throughout *The Sixth Sense*. Particularly prevalent is the taming of plants. Flower wallpaper is found at the doorway (*The Sixth Sense*, 0:06:22). We will see the wallpaper motif again in *The Amityville Horror*. There is also an image of pink leaves wallpaper (*The Sixth*

*Sense*, 0:29:32). This commonality express a human need for nature to be brought inside and into a tame life. A photograph on the wall of a group of friends in front of a body of water reveals how nature can be conquered (*The Sixth Sense*, 0:06:31). A picture of a fern framed on a bedroom wall puts nature inside a box (*The Sixth Sense*, 0:07:25). Later we see nature dwarfed when trees are overtaken by a towering church (*The Sixth Sense*, 0:12:33). Given the spiritual nature of the film, perhaps this is a statement of nature's place in that all life ends, but where does it go? In the same church, we see flowers on the altar and landscape art in the back of the church (*The Sixth Sense*, 0:12:38 and 0:12:50). A fancy Italian restaurant has lots of plants and flowers everywhere as well as a wall of windows, giving us a connection to outside (*The Sixth Sense*, 0:26:14). Lots of flowers at a birthday party convey the idea of celebration (*The Sixth Sense*, 0:43:09). Ironically, the walls in a children's hospital are painted with a town scene, while significantly, a farm scene is painted on the wall behind Malcolm (*The Sixth Sense*, 0:45:30 and 0:45:38). As if it were a spectacle, autumn leaves decorate a bulletin board (*The Sixth Sense*, 0:57:15). Cole's picture of a home on the fridge reminds us of Paulie's image of the house in *Rocky*. Home is the ultimate idealization for humans, a source of comfort and security.

Images of the urban lifestyle give us a window into culture. Chuck E. Cheese is viewed as a place to have fun or celebrate (*The Sixth Sense*, 0:42:21). A bedtime story involves lots of driving (*The Sixth Sense*, 0:47:40). The car theme will resonate again in *Kramer vs. Kramer*. Yet we can still see the natural landscape in the form of a park as a desired place. Mom says to Cole, "I ate a big picnic in the park with lots of chocolate mousse pie" (*The Sixth Sense*, 0:21:02). Though this is an idealized park, the fact that dessert was the paramount impression aligns with the human desire to control nature. Finally, we have the pristine developed landscape, an apt oxymoron. At a funeral in the suburbs we have single family, detached homes, large with nice yards (*The Sixth Sense*, 1:19:00). Contrast this to the dirtiness and lack of yards or natural plant life in the row homes of *Rocky*.

M. Night Shyamalan often frames the outside world shot from indoors. Perhaps this speaks to the majority of human experience with the outside world; people often experience the outside from within. A shattering early statement gives a clue to the reveal at the end of the film. We see a view outside the broken window from within (*The Sixth Sense*, 0:07:02). Later, Mom is looking outside from within, yet another clue to the denouement (*The Sixth Sense*, 0:19:17). Significantly, much later we are outside looking in a broken window (*The Sixth Sense*, 1:07:26).

This begs the question, why can we not experience indoors from outside but we can experience outside from within? Again, if we look back after we realize the person telling the story is actually dead, we have our answer, and this speaks to the spiritual and underlying supernatural aspect of the film. Nature is always a force in supernatural movies as we will later experience in *Ghostbusters*, *The Amityville Horror* and *The Blair Witch Project*.

Nature is seen as a type of special treat. A guy is on his way out to the “flea market in the Amish country” says “I just figured maybe you’d want to get out and get some air, because you’d seemed kinda down lately” (*The Sixth Sense*, 0:33:25). From Cole, we get this interaction, Doctor: “How do you draw now?” Cole: “people smiling, dogs running, rainbows—they don’t have meetings about rainbows” (*The Sixth Sense*, 0:25:29) Rainbows could be the ultimate natural beauty, fleeting, ephemeral, and the perfect metaphor for Cole. Cole’s drawings on the wall are filled with outdoor images of rainbows (*The Sixth Sense*, 0:31:19). Leaving the Acme parking lot with a pumpkin, a happy moment takes place on a sunny day (*The Sixth Sense*, 0:59:38). Finally, a little girl in a video says, “Can I go outside if I eat this?” (*The Sixth Sense*, 1:25:50). Going outside is a reward. Yet at the same time there is the contrast between the ideal and reality. The schoolhouse building used to be a legal building only now repurposed, but the kid seems to know truth; people were hanged there (*The Sixth Sense*, 0:36:06). This suggests history as we learn it has been idealized, not reality. Interestingly, we can think back to the Tracking Popular Culture section of the paper to see how film many not be historically accurate. Perhaps it is human nature to idealize memory whether captured by neurons in the brain or frames of film.

Though many shots depict the landscape, the general storyline could have occurred in another setting with some variation. Location is critical in many ways because ghosts haunt these places where they have unfinished business, though you could argue that different ghosts that occur in a different setting would fulfill the same job.

### *Ghostbusters* (1984)

Contrast is an underlying theme in *Ghostbusters*. Set in an urban landscape, throughout the movie we see the human endeavor to constantly control the environment and in doing so, affect LULC. Construction beams outside the public library suggest renovation of sorts (*Ghostbusters*, 0:6:40). There is always an undercurrent of new city architecture and old city architecture. For example, a banner over city hall reads “Furnishing the streets: 1902-1922

September 22-November 30, 1981” (*Ghostbusters*, 1:14:40). Every generation has had an urban plan in this city, and the city is celebrating those plans. This further exhibits the human struggle to achieve change and control on the environment, to change or indeed, improve the existing environment. However, as we saw in *Rocky*, change does not always occur, and entropy and malaise can take over. The Ghostbusters find the elevator broken and have to walk up the stairs to get to the apartment. Venkman says, “I’m gonna throw up” (*Ghostbusters*, 1:22:27). These stairs are not actually intended to be walked up. In the ultimate contrast between new and old, the Stay Puft Marshmallow man wrecks havoc on the city streets. At one point he steps on a church, leaving destruction in his wake, causing Peter to remark, “Nobody steps on a church in my town,” continuing with, “He’s a sailor, he’s in New York” (*Ghostbusters*, 1:32:26) This remark conveys New York as a harbor town. Could it be that the Stay Puft Marshmallow man is merely “looking for a good time”? Yet in the context of LUCC, New York has become so much more.

In modern New York City, people take risks and play the odds to hold onto what they have. According to Venkman, “You’re not going to lose the house, everybody has three mortgages nowadays” (*Ghostbusters*, 0:15:23). Right after this, we do see a building for sale and garbage lining the sidewalk outside the building (*Ghostbusters*, 0:15:48). If there is one common thread that links urban movies, it is litter in the street. We see this in *Rocky*; we will see it again in *Saturday Night Fever* and *Ghost*. It is obvious from the collage of shots about the city that landscape is important. A shot of the park below the city skyline shows us lots of trees, grounding the audience in the natural environment and giving relief to the concrete and steel of the city. At the same time we get another shot of civilization of a statue, possibly presaging the supernatural element in the movie. While below, cars and fleets of taxis stream by (*Ghostbusters*, 0:16:46). Indicative of the urban area, a woman walks right in front of traffic, as if no danger. We will see this same kind of blithe disregard to danger from cars in *Kramer vs. Kramer*. The skyscraper shot (*Ghostbusters*, 0:24:00) speaks to the ultimate LULC. In this most populated city of the Mid-Atlantic States, we see this type of building typifying the skyline and showing a use of how so many people can live and work in a relatively small area.

Along with life in modern New York comes increased governmental regulation, even if the business in question is supernatural. There is humor inherent within this concept. “We want to assess any environmental damage from your operation, for instance the presence of noxious,

possibly hazardous waste chemicals in your basement” (*Ghostbusters*, 0:47:36). Later, our protagonists continue to argue with Walter Peck, the EPA agent, he tells them, “[there is a] ban on the use of public facilities for non-licensed waste handlers” and “[the Ghostbusters are] facing federal prosecution for at least half a dozen environmental violations” (*Ghostbusters*, 1:05:39; 1:06:02). Dr. Egon Spengler notes turning off their electrical system would “be like dropping a bomb in the city” (*Ghostbusters*, 1:06:16); meaning shutting down the protection grid would cause problems as we see when shutting it off causes things to burst and go out of control inside the building that then erupts like a volcano (*Ghostbusters*, 1:07:37; 1:08:00). This primal image shows that nature, whether real or supernatural, has the ultimate control over humans, and our paltry efforts at LULC may all be for naught. Walter Peck wants them arrested because they are “in direct violation of the environmental protection act, and this explosion is a direct result of it” (*Ghostbusters*, 1:08:53). Again, there is humor in that despite shutting down a containment field and allowing the environment to return to a natural state with all its explosive force, the government agent wants to exert the ultimate control and hold someone responsible while not even realizing he is the actual one with the responsibility. Later, we see Louis Tully emerging from the rubble. His first thoughts are indicative of humans losing control over the environment. “Somebody turn on the lights!...Boy the superintendent is going to be pissed” (*Ghostbusters*, 1:36:59).

As seen in *Rocky* and again in *Kramer vs. Kramer* and *Saturday Night Fever* hometown pride is part of the urban experience, connecting people together. This is even seen to a slight extent in *The Blair Witch Project*. When things come to a head with the supernatural force, Dr. Peter Venkman remarks, “let’s show this prehistoric bitch how we do things downtown” (*Ghostbusters*, 1:28:03). Later, Winston Zeddemore says, “I love this town!” (*Ghostbusters* 1:30:05). These remarks show a unity of location the people of New York are involved in. The remarks are a reflection of the culture and pride of place, and give us a window into how culture is entwined with landscape.

Domesticated nature is something we see recurrent in urban movies. Because so much of nature is paved over, it is necessary to create islands of nature amidst the concrete. A university in the city has manicured plants, trees, hedges (*Ghostbusters*, 0:12:40). Framing of nature occurs for our pleasure. As Dana watches the Ghostbusters commercial, we see sundry plants inside her apartment and windows with greenery right outside (*Ghostbusters*, 0:18:44). Plants represent a

status symbol. In a high-end apartment building, flowers are central on the banquet table (*Ghostbusters*, 35:00). A view from inside a fancy restaurant looking out at Louis includes numerous flowers (*Ghostbusters*, 0:54:26). In a key scene, Peter brings flowers to Dana. Realizing that she is possessed by Zuul, the supernatural force, he remarks, “I guess the roses worked, huh?” (*Ghostbusters*, 00:55:27; 00:57:07). Domestication applies to animals as well. At one point, Louis remarks, “Help, there’s a bear loose in my apartment...I’m going to have to bring this up with the Tenant’s Association. You’re not supposed to have pets in the building” (*Ghostbusters*, 00:53:55-00:54:17). A horse driver refers to his horse tied up to the curb, “He pulls the wagon; I make the deals” (*Ghostbusters*, 0:59:37). The horse is domesticated enough to have a job, once again portraying man’s dominance over the natural world. The characters can even make jokes about domestication. With Dana clearly out of control, Peter remarks, “I think we can get her a guest shot on wild kingdom” (*Ghostbusters*, 1:02:28). Plants and animals become a unifying theme between all the movies. In fact, the domestication of plants and animals allows the humans to feel control over their environment. In the two movies with greater time spent outdoors, *Crocodile Dundee* and *The Blair Witch Project*, we will be able to contrast domestication with wilderness.

Art gives us another framework for viewing possible LUCC. The painting in the kitchen looks outside from within a window (*Ghostbusters*, 0:19:10). This connects to the ‘ideal home’ images depicted in *Rocky*, *The Sixth Sense* and *Ghost*. We also see a framed picture of a duck in Louis apartment as well as plants and a pasture picture (*Ghostbusters*, 00:52:55; 00:53:10). The art that a character chooses to put in his home is a reflection of his personality and perhaps a longing for an ideal place in landscape.

The role of the supernatural and attempts to control it mimic the human attempt to control the natural environment. We see Dana open the fridge into an alternative paranormal world (*Ghostbusters*, 0:20:09), and while this is funny, it also reminds us of the old joke if there is little elf inside the fridge that turns the light on and off. We fear what is out of or appears to be out of human control, an idea we will explore more in the horror films, *The Amityville Horror* and *The Blair Witch Project*. This innate fear leads Stantz to say to Gozer, “As a duly designated representative of the city, council and state of New York, I order you to cease any and all supernatural activity” (*Ghostbusters*, 01:26:30). In many ways, we can appreciate nature if it’s framed but not otherwise—a fence can act as a frame.

Forces of nature are depicted as supernatural. Central park underneath a stormy sky with ominous music and a building repeatedly electrocuted (*Ghostbusters*, 0:48:41) resonate with the storm images we will see in *The Amityville Horror*. Electricity zapping statues atop the building brings them to life (*Ghostbusters*, 0:49:20). When dealing with the supernatural, elements of religion are bound to creep in. As the dead rise from grave, Zedmore says, “I remember revelations 7:12...’behold there was a great earthquake, and the sun became as black as sackcloth and the moon became as blood...and the seas boiled and the skies fell...judgment day” (*Ghostbusters*, 01:03:52). Egon tells us, “Something terrible is about to enter this world and this building is obviously the door...After the First World War Shandor decided society was too sick to survive” (*Ghostbusters* 01:12:05; 01:12:28). A few minutes later, Stantz says to the mayor, “Old testament...real wrath-of-God type stuff.” The city is headed for “fire and brimstone coming down from the skies, rivers and seas boiling.” To which Egon responds, “40 years of darkness, earthquakes, volcanoes” (*Ghostbusters*, 1:16:56-1:16:59). Peter adds his own take, “human sacrifice. Dogs and cats living together. Mass hysteria” (*Ghostbusters*, 1:17:03).

Thunder and dark clouds mix with lightning atop building, and winds and darkness overtake the building. Earth breaks beneath streets, cracking, and a car is swallowed half way by the ground (*Ghostbusters*, 01:20:10). Dana’s and Louis’ bodies are used to conduct electricity and turn into beasts (*Ghostbusters*, 01:24:54). Eventually we see that the destroyer is the Stay Puft Marshmallow Man, interesting because he was created by human society, but now he has the power to destroy it. In a role reversal, Stantz says, “We used to roast stay puft marshmallows by the fire at camp...” (*Ghostbusters*, 01:31:03; 01:31:56).

### *Kramer vs. Kramer* (1979)

*Kramer vs. Kramer* spends significantly little time outdoors in comparison to the other films. Despite minimal appearances of the environment, the urban setting is critical to the plot. Such little time spent outdoors speaks to the status of Mid-Atlantic urban development in 1979. A deeper reading of character’s habits and lifestyles suggests the profound effect of urban status on day-to-day life. Children specifically illustrate change as direct representations of the future generation. The young Billy provides a point of comparison illustrating relations between LUCC and cultural change. In one scene Billy plays with toy cars, entertaining himself by making the two cars crash (*Kramer vs. Kramer*, 00:20:43). In reality, a head on collision akin to Billy’s representation would be a tragedy—likely fatal. Yet Billy’s non-challant attitude suggests this

scenario is not uncommon; it's likely something he has seen before, whether in reality or on television. This connects to the woman oblivious to motor vehicles in *Ghostbusters*. Traffic conditions in New York City are infamous. Busy traffic conditions appear several times; for example, the busy street scene is reflected off of windows as the camera looks inside a coffee shop from the outside (*Kramer vs. Kramer*, 01:02:38).

Billy's use of technology signifies an increasing prevalence of technology as development continues. He uses television as an escape from reality, which his father is never seen doing. This is exemplified as Ted reads Billy a letter from his mother explaining she has left and "[will not] be [his] mommy in the house" (*Kramer vs. Kramer*, 00:24:05). Understandably, this is incredibly hard for a child to hear. At that moment, instead of showing emotion (as we have seen Billy show plenty of), Billy drowns out his father's voice by turning up the volume of the television. For this younger generation, television can be a coping mechanism or a means of getting to a different place, a connection to the theme of desire to be elsewhere.

Billy as a signifier of generational change is clear in a later conversation with his Dad. Billy is curious about "what did [Ted] do when [he was] little," following up by asking if "[he] watch[ed] the *Brady Bunch*?" (*Kramer vs. Kramer*, 01:24:08). Watching the *Brady Bunch* is the first thing that comes to Billy's mind when brainstorming potential activities of his father's youth, poking at its current importance in Billy's life. He is in disbelief when his father responds "no, [they] didn't have any television," but rather they mostly "listened to the radio" (*Kramer vs. Kramer*, 01:24:11). The need for an escape from reality remains consistent cross-generationally, however the means of delivering such escape is shifted with technological development. This generational shift makes sense considering the urban setting. Technological advances tend to occur in urban settings where there is a concentration of people. Billy's dumbfoundedness demonstrates his inability to imagine life without modern conveniences, such as television. Intrigued by the generational difference, Billy continues to ask "what else didn't [his father] have when [he] was little?" (*Kramer vs. Kramer*, 01:24:15). Excited by the question, Ted claims "[they] didn't have lots of things" (*Kramer vs. Kramer*, 01:24:15). For each thing his generation lacked, he provided something comparable that they did have. For example, they "[did not] have diet soda, [they] had egg creams" and they "[did not] have Mets but Brooklyn Dodgers" (*Kramer vs. Kramer*, 01:24:16). His excitement in reminiscing is increasingly noticeable as he notes they also "had the Polo Grounds and [they] had Ebbets Field," sighing, "oh boy those were the days"



(*Kramer vs. Kramer*, 01:24:30). Ted focuses on the things that his generation *did* have, while Billy is more focused on what they did not have. Interestingly though, at the end of his reminiscing Ted makes a point to mention that they “[did not] have Volkswagens” (*Kramer vs. Kramer*, 01:24:48). Perhaps he emphasizes this point as a world without foreign cars because it may be difficult for Billy to imagine in this day and age.

Art continues to serve as an indicator of values and ideals in *Kramer vs. Kramer*. Much of the art shown is concerned with travel or destinations. Such focus on travel or other locations suggests a desire to be elsewhere, possibly serving as an escape from reality. Opening shots of the film show several works of art in the Kramer’s apartment that fits into this category, such as an image of a ship next to the entryway and an image with the caption “Monaco” in large lettering (*Kramer vs. Kramer*, 00:05:22; 00:09:20). Cactus is a foreign plant (*Kramer vs. Kramer*, 00:03:20).

### *Crocodile Dundee* (1986)

The ‘au natural’ environment of the Australian Outback serves as the perfect juxtaposition to New York City. The Outback lacks the effects of significant anthropogenic influence, which are a defining characteristic of the built environment of New York City. In *Crocodile Dundee*, director Paul Faiman uses the opposite appearances of the two environments to ultimately expose their similarities. The film opens up with a shot of the NYC skyline, showing immediate signs of human activity with the constant blare of sirens (*Crocodile Dundee*, 00:00:26). Within the first two minutes of the film we are taken to the seemingly polar opposite setting of the Australian Outback—also referred to as ‘the bush’—no signs of human life or influence on the landscape are initially evident, until a helicopter flies in (*Crocodile Dundee*, 00:01:58).

The film harps on the natural beauty with characters often noting the “beautiful country out [there]” (*Crocodile Dundee*, 00:12:01). The contrast between city life and those who live it is evident in their views on nature. According to Sue, “Despite the rugged beauty of this land, there’s a sort of strange emptiness about it. A feeling of being so alone” (*Crocodile Dundee*, 00:27:00). Perhaps this is because she is from the city—not used to a life not surrounded by people and buildings.

Another key difference between urban and rural lifestyles is the interaction with other people. The Outback not only lacks the population to support constant human interaction, but it also lacks the modern technology found in NYC. Such technology allows easier, consistent streams of information to flow and communication. Sue talks with Mick about her former husband, “Gotta have an opinion, gotta have a voice.” To which Mick quips, “Who’s going to hear it out here?” (*Crocodile Dundee*, 00:20:40)

Being in the bush is associated with a more simplistic lifestyle. As Walter informs Sue upon arriving in Australia, “[they are] pretty informal in the bush” (*Crocodile Dundee*, 00:03:58). That is, the lack of the modern amenities associated with development breeds a lifestyle less cluttered. With less people around, whom do they need to impress with formality? The featured “town” is tiny, no developed roads, few buildings and few trees. The name of the town is, appropriately, “Walkabout Creek”. A walkabout would take you through the entire “town” (*Crocodile Dundee*, 00:04:44). Further on, Mick does not even know the day of the week. His friend Walter responds, “Doesn’t know. Doesn’t care. Lucky bastard” (*Crocodile Dundee*, 00:17:30). When Mick arrives in a New York hotel, there is a humorous scene in the bathroom where he is perplexed by the bidet (*Crocodile Dundee*, 00:50:00). Why would you need such a thing in the bush? This is definitely a contrast between cultures and environments.

Director Faiman uses Aboriginal culture as a point of reference throughout the film. Just as we see with plants and nature, Faiman is commodifying Aboriginal culture for our entertainment. Mick describes Walkabout as “an aboriginal habit” that means to “wander around and discover new places” (*Crocodile Dundee*, 00:13:30). This is a highly simplified, over generalized definition of a sacred practice of Aboriginal culture. Faiman uses this, and other aspects of Aboriginal culture, to represent the potential relationship between humans and the land. This contradicts the capitalist ideals of owning property—or even more basically, the idea of humans owning land—an ideal which NYC would not exist without. Sue asks Mick what he “think[s] about [Aboriginal] claims to take their land back?” (*Crocodile Dundee*, 00:21:43). Mick corrects her, noting, “the Aborigines don’t own the land; they belong to it” (*Crocodile Dundee*, 00:21:46). He points to 600 million year old rocks as examples, which will “still be here when [he] and [she] are gone. So arguing over who owns them is like 2 fleas arguing over who owns the dog they live on... Aborigines, like all God’s creatures, they just want the right to roam across the earth and be left in peace.” When introducing an Aborigine, Mick says, “See Nev’s a

real city boy, but his dad is a tribal elder.” (*Crocodile Dundee*, 00:35:15). Nev crosses the line between cultures, but it’s clear from the father reference there is a distinction.

In contrast, the developed urban setting of New York City is characterized as a bustling, hectic environment; humans are always on display to each other. As they fly into the city, Sue points out it is home to seven million people. Mick is astonished, speaking his thoughts, “Imagine seven million people. All wanting to live together. Yep NY must be the friendliest place on earth” (*Crocodile Dundee*, 00:45:00). Initially, viewers from an urban setting could take a cynical view of that, which is probably more comical to people from these areas than people who are not. As we see trees lining street, we also see an American flag shot (*Crocodile Dundee*, 00:51:00). Just as in *Rocky*, *Saturday Night Fever* and *Ghost*, human-produced garbage is a common sight within the city. It is particularly concentrated in back alleys, away from the public eye in the higher end districts. Like many of the films, trash is concentrated in lower-income areas. That is, trash is less often spotted in the higher-class neighborhoods or tourist destinations. For example, in *Crocodile Dundee* trash lines a back alley frequented by several prostitutes (*Crocodile Dundee*, 01:25:08). Notably, these prostitutes are wearing animal printed garb, alluding to the ‘wild’. In the same scene, a car is utilized as a weapon in an altercation between Mick and a pimp. The car represents a weapon of choice in urban society, and we will see it again in *Saturday Night Fever* as a car is used to start a racial fight; that’s NOT to say guns don’t exist in the city and cars don’t exist in the Outback. The subway station equals a sea of people. A whole conversation is held between Sue and Mick as people shout over people to help her talk to him. (*Crocodile Dundee*, 01:31:00). At one point a construction worker says, “It’s too crowded. We’re jammed in like sheep.” Mick walks on top of crowd of people to get to her, and people cheer (*Crocodile Dundee*, 01:33:30).

As the previous two paragraphs illustrate, physical differences between the Outback and New York City are obvious. Faiman further differentiates the two contexts by stereotyping urban and rural lifestyles. These stereotypes are initially believed by the characters, and are later challenged as characters realize the two lifestyles actually have more in common than thought. Walter is in disbelief, “Mick in a big city? Not a chance. ...well a man should broaden his horizons,” and the scene cuts to the airplane (*Crocodile Dundee*, 00:42:50). Initially, Mick derides Sue when he meets her in the bush, “You? Out here alone? That’s a joke. A city girl like you... you wouldn’t last five minutes, love. This is a man’s country out here” (*Crocodile*

*Dundee*, 00:27:30). A few minutes later, Sue responds, “Well you were right. Definitely no place for a city girl.” Mick says, “I don’t know, from what Wal’s told me, living in the city can be just as dangerous.” Sue: “Haven’t you ever lived in a city?” Mick: “Never been to a city...” cities are crowded, right? If I went and lived in some city, I’d only make it worse” (*Crocodile Dundee*, 00:33:40). Mick is sure his lifestyle is the best, but he expresses a wistful anxiety about development. Later, in NYC, Sue tells Mick at a fancy restaurant, “This will be quite a novelty for you, Mick. Eating something without having to kill it first” (*Crocodile Dundee*, 00:54:00). A guest at the hotel asks Mick, “...and how are you finding NY?” Mick: “Bit of a lunatic asylum, eh?...That’s why I love it cause I fit right in.” The guest remarks, “what a strange fellow” (*Crocodile Dundee*, 01:20:35-01:20:43). We see two cultures in collision. In a more humorous exchange a girl says to Mick, “Suppose you don’t have any shrinks in Walkabout Creek?” Mick responds, “NO. Back there if you got a problem, you tell Wally. And he tells everyone in town, brings it out in the open, no more problem” (*Crocodile Dundee*, 01:21:20). Here is a definite clash of cultures on the surface. Though the two appear to be polar opposites on the surface, further analysis shows the two actually have a lot in common. Unlike the obvious, more visually based differences between the land cover types, the similarities require further comparison.

The domestication of nature continues in the film *Crocodile Dundee*. As in *The Sixth Sense*, *Kramer vs. Kramer*, *Ghost* and *The Amityville Horror*, we see plants in office and flowers on table when Mick arrives in NYC (*Crocodile Dundee*, 00:01:15; 00:47:50). As Mick traverses the city, there is a police officer riding a horse (*Crocodile Dundee*, 00:52:30). More importantly, we see the triumph of man over the dangers of nature, and there is humor apparent, unlike the sinister underpinnings of *The Amityville Horror* or *The Blair Witch Project*. A conversation at the beginning of the movie involves fishing, “There he was out there doing a quiet spot of fishing, when all of a sudden BANG! This giant crocodile came up, turned him over, bit half his leg off dragged him down under” “Killed it of course” (*Crocodile Dundee*, 00:06:22). Contrast this scene to the fishing scene in *The Blair Witch Project* that involves supernatural storytelling. Much later when Mick is in NYC a thug asks Mick for his wallet and pulls knife. Mick laughs, “Ha. That’s not a knife...that’s a knife.” as he pulls a machete and chases the thugs away (*Crocodile Dundee*, 01:14:00). As in *The Sixth Sense*, we can see the outdoors put in a separate box or indeed, commodifying it. A window view of the city, river and bridge is shot outside

Sue's apartment (*Crocodile Dundee*, 00:01:03). Later, Mick gets photos taken with skyline as a tourist (*Crocodile Dundee*, 01:06:00)

One way of asserting dominance over the natural world is to turn it into entertainment. Humans typically are interested in worlds completely different from their own, being some place outside of a comfort zone. On the phone with her boyfriend, Sue describes the story of a man getting attacked by crocodile who runs a safari business—she is very excited about this story (*Crocodile Dundee*, 00:01:40). Right away the emphasis is on the two worlds as separate. Sue asks Mick, “Why crocodile?” Mick: “Wal’s idea. He reckons it makes me more colorful for the tourist business” (*Crocodile Dundee*, 00:12:48). In a bizarre twist, humans are driving around, shooting at kangaroos in the night. Mick says, “Dangerous bastards. Its those city cowboys.” Sue replies, “They’re shooting these poor kangaroos for fun!” Mick: “There’s no law against that.” Then the kangaroo appears to have a gun and shoot the shooters. They speed away—really, it is just Mick using the dead kangaroo as a prop (*Crocodile Dundee*, 00:24:00-00:25:45).

### *Saturday Night Fever* (1977)

Urban landscape is part of the underlying life in *Saturday Night Fever* and is also central to the characters lives. The natural world is, for the most part, paved over with trees popping up along streets in planters that either the city provided or the buildings such as banks, hotels and other customer service places planted and maintained. This environment will be repeated in *Ghost*, another film set in NYC. The fact that people live in such close proximity of other people in multi-person dwellings such as apartment buildings and mingle so densely on the streets may account in part for the lack of courtesy with which they treat each other, just as we have seen in *Rocky*. At the same time, the characters show a lack of care for their natural surroundings, clearly preferring the artificial and electric inside of their disco club culture. Outside of the club are scrubby evergreens just barely surviving along the side of the cement building housing the disco that is awash in red, blue and white lights. An alley scattered with trashcans neighbors the building (*Saturday Night Fever*, 00:12:31). This is akin to the trash strewn streets we see in *Rocky* or *Ghostbusters*, suggesting a lack of care certain city dwellers have in common. Contrast to the vibrant inside of the disco where spinning colored lights spill an artificial rainbow (*The Sixth Sense*) reflecting off a disco ball, and boys in silky shirts and tight pants dance to throbbing loud music with girls in swirly skirts showing off their legs (*Saturday Night Fever*, 00:15:52). Again, a connection may be made to Rocky and his gym being more real, or certainly more

important to him than the natural world. Adjacent to the disco floor is a quieter bar where the characters go to talk and is in fact a stripper bar (*Saturday Night Fever*, 00:22:12). The entire atmosphere of the club is one of sexual desire where the men are constantly speaking down to the women but also looking to score.

Reflected in the disco culture once again is the need for humans to control their environment. The shots of the interior of the disco where Tony lives as a king compared to his real life of menial labor in a paint store mimic nature in parody as mist rises from the dance floor and creates simulated fog (*Saturday Night Fever*, 00:25:10), or Tony is dancing with Stephanie spinning around to the song, "More Than a Woman" creating the illusion of wind in her hair (*Saturday Night Fever*, 00:56:04-00:56:35). Clearly the characters enjoy this man-made environment compared to their natural environment. Even when Tony takes Stephanie to the park where a man is fishing in the river and is one of the only times in the movie birds and insects can be heard. Fishing here acts as a bridge between *Crocodile Dundee* and *The Blair Witch Project*. Fishing in the Outback or Maryland's state parks might yield dinner, but it is hard to imagine anything edible coming out of the Narrows. At the same time the fisherman is connected to nature as all the fishermen in each movie, but he is neither humorous nor telling scary stories; he's simply about his task. All Tony can think about in the park is the Verrazano Narrows Bridge. He tells Stephanie, "Look how tall that bridge is. That tower goes up 690 feet. Forty million cars cross each year. 127,000 ton of steel.  $\frac{3}{4}$  million yards for concrete. 2- $\frac{1}{2}$  mile on ramp. I know everything about the bridge" (*Saturday Night Fever*, 01:23:45).

Though only comprising just over seven minutes in the movie, the bridge and river do play key parts in the movie. Tony and his friends use the bridge to scare Annette, a girl with a serious crush on Tony whom Tony looks down on. He tells her earlier in the movie she can decide to be a nice girl or a cunt. Later he and his friends play a cruel trick on her by driving to the bridge and climbing out on to it. One of the boys jumps down onto a ledge she can't see, and she thinks he fell. They laugh at her and tell her she is "a stupid bitch" (*Saturday Night Fever*, 01:11:19). Much later in the movie Tony's friends take turns raping Annette in the back seat of the car. As the rape is happening, they all drive to the bridge again. The last rapist gets out of the car and walks to the edge of the bridge. He shouts into the night, "Fuck you Manhattan, come to Brooklyn." In the meantime, Tony asks Annette if she is proud of herself now because now she's a cunt (*Saturday Night Fever*, 01:46:48). He is resting the blame for the rape on the victim. In

this concrete environment, the towers of the bridge become phallic symbols of masculine power over feminine.

The inability to reach harmony is reflected more tragically by what follows as the natural world exerts its own dominance as humanity loses its bid for control. Bobby, a teenage boy who looks up to Tony, continually tries to ask Tony's advice on abortion and what to do about his pregnant girlfriend, but Tony never has time for Bobby. In the aftermath of Annette's heartbreak, Bobby makes a bid for Tony's attention and climbs up the steel cables of the bridge (*Saturday Night Fever*, 01:47:17). Ultimately he falls to his death in the river below. All we see is the splash of water as he breaks the surface of the water followed by the swift current of the river (*Saturday Night Fever*, 01:47:32). This is one of the few non-human shots in the movie and emphasizes the power nature still exerts over humanity. A ten second shot of the bridge follows immediately, top to bottom, a stark reminder that despite the human desire to control nature, life is by definition fragile. Even the phallic male symbol must yield some of the time.

Tony's grief over his friend and his guilt over Annette are captured as the action segues to Tony walking through the subway completely cut off from the natural world (*Saturday Night Fever*, 01:50:46). Graffiti and fluorescent lights epitomize Tony's isolation and loss in this dirty man-made environment, connecting him to Rocky's isolation and hopelessness in gritty South Philly. Finally, Tony experiences a resurrection of a sort. Sunrise over the city skyline with the Twin Towers presents an even more dramatic image because it, too, is one of the few non-human scenes (*Saturday Night Fever*, 01:52:15). The movie ends with Tony in Stephanie's apartment, embracing her by the window. Mature trees with full foliage are seen through the window sparkling with sunlight, and a small evergreen grows in a planter as well as a wandering jew in the frame. For the first time, the characters experience more of a connection to the natural world, providing a sense of healing and leaving the movie on a hopeful note.

The bulk of the movie takes place in Bay Ridge, Brooklyn. The tight-knit community has their own accent that serves to give them an identity just as South Philly does in *Rocky*. A recurrent theme in this identity is the need to feel socially superior to others. There is a great deal of sexism not only in the way that the characters speak to each other, but also in the roles they take on, i.e., men are better than women. Tony's dad tells him as he is clearing the table, "Put those dishes down. That's a girl's job" (*Saturday Night Fever*, 00:29:38). Tony and his friends engage in gay bashing because in their minds that puts them above someone else (*Saturday Night*

*Fever*, 00:27:06). Racism is also a part of their daily lives. Tony and his friends start a bar fight in a Latino club by crashing their car through it (*Saturday Night Fever*, 01.28.34). Later, when Tony sees two Latinos dance at the disco in a contest, he says, “Jesus Christ. They’re so fucking good. Look at them. They’re Spics” (*Saturday Night Fever*, 1.38.29). Tony can admit to the dancers being talented, yet he looks down on their heritage thus reinforcing the desire for superiority. The neighborhood Tony lives in with his family is a detached single family home. There is a tiny patch of lawn with mature sycamore trees lining the street between cement sidewalk slabs and shrubs brushing up against the porch. Contrast this to where Stephanie lives across the Brooklyn Bridge with a nice manicured yard, blooming rhododendrons and trimmed hedges. She looks down on her former neighborhood. She tells Tony early on, “What I think is this. There’s a world of difference between us. Not just chronologically but emotionally, culturally, physically, every which way, and this world would get that much bigger and that much worse with every passing week” (*Saturday Night Fever*, 00:40:41) Tony responds, “Bay Ridge ain’t the worst part of Brooklyn. (Birds can be heard in the background, and skeletal, winter trees line the street.) It ain’t like a hellhole or nothing” (*Saturday Night Fever*, 00:41:48). Stephanie returns, “Well it ain’t Manhattan. Isn’t. You got no idea how it changes, you know, just right across the river. Everything is different. Completely different. (Now there are no trees in sight.) Beautiful. Just beautiful” (*Saturday Night Fever*, 00:41:55). Stephanie clearly has an opinion that the more opulent, richer neighborhood that also coincidentally has prettier, more natural features is the better place. By expressing this view even to the extent of self-correcting her grammar, Stephanie personifies one of the recurrent themes of the movie.

### **Ghost (1990)**

Once again, *Ghost*, takes place in an urban environment, but unlike *Rocky* and *Saturday Night Fever* this is an upscale urban environment with the main characters are people of means able to afford Manhattan, New York. Although the streets are paved and the milieu is under human control, these characters clearly want to feel part of their natural world. This is evidenced by the trees in evenly spaced planters along the streets but mainly the background plants and paintings they bring into their home and place of work. A significant scene early in the movie is an angel statue attached to a rope being brought into the main characters’ apartment, one of the few non-human sequences. (*Ghost*, 00:7:00). The scene takes up 15 seconds, a significant



amount of time to serve as foreshadowing. Though much of the action takes place inside, and the majority of the movie involves humans in the scene, the main character, Molly, is constantly surrounded by plants and flowers in the background. This serves to express Molly's artistic side: she is a pottery artist thus making her more sympathetic by making her seem more feminine and softer yet at the same time more resilient. She has to deal with the death of her lover, Sam, who is trying to contact her with the help of a medium, Oda Mae, whom Molly thinks of as a charlatan.

Sam's death scene takes place in a dirty, litter-covered alley with graffiti all over the walls (*Ghost*, 00:17:43), a visual clue something bad will happen and once again resonating with the trashy streets of *Rocky*, *Ghostbusters* and *Saturday Night Fever*. After Sam is shot, ghost Sam sees himself in a wet, dark alley over 48 seconds. The dankness of the environment serves to emphasize the bleakness of Sam's fate: he is parted from his love. The angel statue crashes to the ground outside the window in a dreamlike sequence as death claims Sam (*Ghost*, 00:22:05). As an audience, we are exposed to one of the few natural environment scenes, and it takes place in a graveyard, a touch that is ironic, sad and funny all at the same time. There are trees, grass, flowers, and birds in the background. We have no idea if this is the city or the country. We only know this real estate is peaceful while the characters are either sad (Molly) or angry (Sam) at death. In trying to find closure, Sam goes on a journey traveling on the subway through various landscapes, underground, outside with trees until he finally arrives inside his murderer's apartment (*Ghost*, 00:36:50). Eventually he arrives at a spiritual advisor. He sees her sign on a storefront lit up in neon (*Ghost*, 00:38:15). The neon typifies her as a fraud. But when Sam enters Oda Mae's apartment, we find her (though trying to swindle people) with plants in the foreground and background (*Ghost*, 00:44:00) and flowers in the background (*Ghost*, 00:45:37). These touches of nature make us want to trust her.

Fire escapes and windows are also a recurring motif. One of the longest early non-human shots, 25 seconds, is of the fire escape outside Molly and Sam's apartment window (*Ghost*, 00:15:32). The end of the movie involves Molly and Oda Mae racing down the fire escape to flee from Sam's murderer and former best friend, Carl. Both parties use windows to continue the chase and eventually Carl winds up impaled by the glass of a window. Fire escapes and windows can be viewed as bridges from one place to another, a transition of sorts, just as Sam is stuck

transitioning from life to death. It is not until Carl's death that he achieves closure and a sense of safety for Molly that enables him to move on.

Finally, even in the highly urban setting, it is easy to see the socioeconomic disparity between neighborhoods. Clearly Sam and Molly live and work in an upscale part of Lower Manhattan where the city or businesses make an effort to have tree lined streets or large planters outside their buildings. The residents bring plant life into their homes and in the landscape artwork in the background shots. In contrast, Oda Mae and her sisters live and work in a less affluent neighborhood. The city does not spend money to have planters or trees lining the walkway. The sisters' home has less spacious rooms and arguably, less natural light in their apartment. However, they, too make an effort to connect to nature with the plants and flowers in their apartment.

### *The Amityville Horror (1979)*

It is interesting to note that while the events of the movie take place in Amityville, Long Island, the movie itself was filmed in Toms River, NJ. For purposes of discussing land use cover in the movies taking place in the Mid-Atlantic States, this certainly qualifies. The genre of this movie is horror, a genre that uses the natural world to convey degrees of scariness and menace. The very beginning of the movie uses multiple scenes of the outside of the house surrounded with mature trees as twilight descends interspersed by gunshots through each window of the house as family members are killed in their beds, cutting back to rain, thunder, lightning and heavy wind (*The Amityville Horror*, 0:00:29-0:02:55). The natural elements of a rainstorm convey havoc and a lack of control over circumstances. It also sets the mood of terror. Much of the movie takes place outside over 32 minutes, and there are about 38 minutes of non-human scenes. Many of the non-human scenes are taken up with shots of the house, the actual horror of the title, so that it becomes almost as much of a character as the people. While the environment of the movie is not as urban as a city, it is definitely developed land in the suburbs with the house located along the riverfront. The riverfront is depicted as desirable real estate with boathouses, docks and moors. The family enjoys taking a boat out on the water in one of the rare calm moments (*The Amityville Horror*, 0:16:11). In an interesting juxtaposition, the fun of the family on the river contrasts to their priest come to bless the house who seems to become possessed by an evil spirit inside the house. Evil is shown as first one fly then dozens of flies cover an inside window and finally the face of the priest. In this instance, the flies are not in their natural habitat,

and a close up of a fly head is grotesquely suggestive of perception being skewed in the house (*The Amityville Horror*, 0:16:28). This sequence reverses the order of the beginning of the film by showing nature as something to be enjoyed outside where it belongs and something to be feared when it interferes with human territory.

The use of flies to portray evil suggests death, waste and decay since the fly is useful in its ecologic purpose to help break down organic matter. Because of the association with rot and stench, the fly in this film is a harbinger of foul intentions, particularly when appearing in a swarm outside their normal behavior. In a non-human moment, a fly on the windshield of the priest's car reminds us that an evil spirit possesses the priest, and he eventually crashes his car off the road (*The Amityville Horror*, 00:43:30). Later in the movie, as it becomes clear the house either wants the family to leave or to possess them, flies again become portends of evil. As another storm is happening outside, a fly sounds inside the house. Flies again cover the window inside the house, and once again, a close up of a fly head is shown, raising the creep factor (*The Amityville Horror*, 01:05:20). Right after this, nature invades the home as the wind breaks down the front door. George, the dad, decides he needs to research the house and rides his motorcycle through the countryside to town to the public library. Coincidentally, as George is researching the library, he unconsciously passes a large scientific drawing of a fly hung on a bookcase (*The Amityville Horror*, 01:12:49). There is more malevolence to come.

A character, Carolyn, a person described as sensitive, implies land use cover changes. Her words suggest that the land does not forget or forgive past wrongs. "You're living on some sort of special ground. Devil worship. Death. Sacrifice. George, there's one simple rule. Energy cannot be created or destroyed. It can only change forms." (*The Amityville Horror*, 01:20:35). A few moments later she adds, "There was a tribe of Indians called the Shinnecock, and they used this land as a sort of exposure pen. They put crazy people here, and they left them to die. There are people buried here." (*The Amityville Horror*, 01:24:03) Of course satanic worship is not synonymous with a misunderstanding of mental illness in an age where medical science did not exist, so the two explanations by the same character appear disjointed, but they do serve to show humans have continued to use land and by extension, abuse land whether literally or spiritually.

Storms also bring the natural world into conflict with the human world. Though set in an urban region where human control over the environment is evident, storms are not subject to human control. Indeed, they exert their own destructive influence over humans. In the horror

film genre, they express circumstances beyond our control and a feeling of helplessness. From the beginning of the movie until the end, thunder, lightning, wind and rain serve as markers of vulnerability and powerlessness. As the movie builds to climax, George can be seen outside his house nailing the windows shut as the wind picks up (*The Amityville Horror*, 01:45:56). The dog, in the meantime, is barking in the basement at the earth quaking, while outside the house, the rain sheets down, and Karen, the mom, slips in the mud as she attempts to get back to her husband and family (*The Amityville Horror*, 01:46:59) The characters have lost control over the natural forces even as they try to deal with supernatural forces that may or may not be real. Finally, the earth explodes in the basement while lightning strikes a tree outside, and it shatters the upstairs window as it falls inside the house (*The Amityville Horror*, 01:50:05) The family escapes the house into the stormy night, though there are a few nervous moments as George has to run back to the house through the storm again to search for and rescue the dog. Ultimately, the character of the house wins the day as we are left with the family fleeing. The house is empty as it stands alone against the storm, the rain and the wind (*The Amityville Horror*, 01:53:22-01:56:09).

#### *The Blair Witch Project* (1999)

Filmed entirely in Maryland, this horror film shows us land use cover in woodlands. The natural elements are used effectively to highlight the spookiness of the tale. Three film students go in search of the Blair Witch, a local legend from the town of Burkittsville, MD, population 189, for a documentary they are shooting. They go into the woods to track down the legend and disappear never to return, leaving only their raw footage behind. The very beginning of the movie suggests human discomfort with the natural world. Heather says, “This is my home which I am leaving the comforts of to explore the Blair Witch. (shot of books) Some very important reading, ‘How to Stay Alive in the Woods’ because you never know what will happen.” (*The Blair Witch Project*, 00:01:23). This effective foreshadowing demonstrates the human need for control over the environment, the potential power of nature over humans and the destructiveness that lies within.

The students coincidentally decide to film at Halloween time. We see plastic skeletons on the doorframe of Mike’s house as he is being picked up to begin the project (*The Blair Witch Project*, 00:02:35). Just as seasons are important to the natural world, the human delineation of time by holidays shows the need for control and order. Heather makes the comment as they are

speaking with townspeople, setting the background for their attempt to track down the Blair witch, “The woods around Halloween time are a creepy enough phenomena.” (*The Blair Witch Project*, 00:03:26). Humans have imposed their set of ideas and superstitions about certain times of the year, and for the students to chose to film a witch story at Halloween while chasing after her in the deep woods suggests a primordial fear straight out of the Brothers Grimm. Continuing along this theme, one of the townspeople being interview tells them, “They say the woods are all haunted.” (*The Blair Witch Project*, 00:07:17). We, as the audience, are being set up to believe nothing good will come of this trek into the woods.

Day 2 begins as the students drive down a one-lane road and into the forest. They stop along a stream to speak to two fishermen. One of the fishermen says, “Damn fool kids. You never learn.” (*The Blair Witch Project*, 00:11:43) The sounds of water rushing by as the men fish seem peaceful and mundane, yet the men are telling the students pieces of ghost stories and superstition. The students leave their car behind to hike to a place with the ominous name of Coffin Rock. Heather asserts, “I know exactly where we are.” (*The Blair Witch Project*, 00:14:20). Once they find Coffin Rock, Heather reads from a book describing a past scene of torture that happened at the Rock while the camera focuses on non-human scenes of the trees, fallen branches, leaf cover and rocky outcrops. In the background, birds are chirping. It appears nature does not remember the gruesome past. As the students continue on, it becomes increasingly clear that they are ill prepared for the experience of camping out. They are not prepared to budget their daylight hours and have to rush to set up camp in the rain. They did not think ahead that they are a party of two men and one woman and have to share a tent. Heather says, “It’s pouring rain right now and we can’t even get a fire going” (*The Blair Witch Project*, 00:16:25). The natural world is working against them. And despite the fact that they have a map, they argue with each other about being lost.

As the group dynamic begins to break down, elements of superstition begin to take a toll on their minds and tempers. Josh swears he hears voices in the night outside their tent as he tries to sleep. Later, they find a dead mouse, and Heather asks as part of the documentary, “What killed this dead mouse? Witchcraft?” (*The Blair Witch Project*, 00:18:27). They find a pile of rocks in a tree with twigs wrapped around it, holding it in the tree. They hear twigs snapping in the woods around them at night. Instead of thinking it is a nocturnal animal and dismiss it, they fight with each other, letting a primordial fear of the dark take over. The next day is rainy and

miserable, heightening the discord between the characters and their interaction with the natural world. They continue to wonder about the night noises. Heather says, “Nobody knows we’re out here.” Josh responds, “Ever see Deliverance?” (*The Blair Witch Project*, 00:26:00). The reference to the film about a camping trip gone badly wrong portends the malevolence that is to come. Mike is clearly uncomfortable with the thought that they may be getting played by a group of unknown people or worse, something supernatural. The wet and damp and the physical exertion of hiking wear the trio down making them more vulnerable and testy as they continue to argue about the way out of the woods. After being forced to spend another night in the woods, they wake up to find piles of rocks outside their tent. Mike says, “We’re obviously not wanted here, so let’s get the hell out.” (*The Blair Witch Project*, 00:33:07). Shortly after this, they realize that no one has the map, and they are lost. Ultimately, Mike confesses that he tossed the map into the stream because he believes it is useless.

Forced to continue on, the woods begin to take on a sinister personality, which despite the open space becomes claustrophobic. The trio discovers twig figures hanging from trees (*The Blair Witch Project*, 00:42:43). Heather wants to stop and tape their discovery, and while the men agree to a few quick shots, they want to leave and beg her to stop. Mike begins to scream for someone to help them despite the fact that they are alone with no other humans around for miles. The next 10-15 minutes of the film involve a desperate attempt to find their way out of the woods without the aid of the map. They continue to film the surroundings and continue to be plagued at nighttime by sounds that frighten them. Despite wanting to exit the woods and get back to civilization, they can’t let go of their filmmaking purpose even when frightened to the extreme thereby still needing to control the environment in however flimsy a way. Scared as they gear up to find and film whatever is making the creepy noises around their tent at night, Heather screams, “What the fuck is that?” over and over as she runs through the woods with the men filming and chasing her. Trees pop up in their way and the sound of leaves crunching under their boots as they run provide eerie backdrop. The view is through a hand held lens, jumping and shaky. It is shot in black and white, giving a grainy and ghostly feel to the woods and lending to the terror the students’ experience (*The Blair Witch Project*, 00:45:00-00:46:46). Eventually they realize they are walking in circles, and they despair over the sameness of the surroundings. Heather says, “Mike, just please stop. It’s not the same log. It’s not.” Mike responds “It is! Open your eyes!” (*The Blair Witch Project*, 00:51:31) As the group dynamic continues to deteriorate,

Josh adds, “We walked for fifteen hours today and ended up in the same place!” (*The Blair Witch Project*, 00:54:10) In the background, we see the sun setting and lazy cricket sounds, suggesting normalcy in the midst of the mind games the students have become involved in.

The next day Mike and Heather wake up to find Josh missing (*The Blair Witch Project*, 00:56:24). The camera shows us the weeds growing thick and strangling around trees and leaf debris thus contributing to the overwhelming helplessness, frustration and suffocation of the situation. Every twig snap leads the remaining two to feel like prey being stalked. As they lay down their camp again for another night in the unfriendly woods, they talk of comfort foods or random good thoughts. Insect noises underline the deepening twilight and evoke a memory of pleasanter childhood evenings spent perhaps catching fireflies, lending a tranquil prelude to the terror of the unknown dark night. The audience is kept in the dark as much as the students are as the screen is completely black and we hear the sounds they hear of a man’s voice echoing through the woods. We feel their dread as they light one camera against the stark images of tree bark and naked branches reaching almost as fingers into their (and our) imaginations. Weeds clog the path, choking the way as they try to blindly find the source of the noises in the night, wondering if something dreadful has happened to their friend (*The Blair Witch Project*, 00:59.48-01:01:57). The natural world is fighting against them as much as their own ideations of the supernatural world.

At daylight, they continue to walk through the woods, more and more hopeless and scared until they discover a bundle of twigs tied around a gruesome packet of blood and hair only to find Josh’s jacket in center (*The Blair Witch Project*, 01:03:51-01:05:01). Twigs have become symbolic of the supernatural witch taking control of the situation. Once again, they need to spend the night, and we see a long shot in black and white of the sunset through the trees. The sinking light of the sun takes their hope with it as the woods swallows it up in the foreground. Heather’s bleak outlook and anguish are captured as her face is lit in close up in the dark and a single tear sparkles from one eye. The complete black of the woods surrounds her, pressing and suffocating her with fear (*The Blair Witch Project*, 01:07:45-01:08:10). The movie ends with Heather and Mike discovering a decrepit, deserted house in the middle of the woods. This expression of abandonment furthers their alienation and sublimation into madness. They enter the house, leaving the natural world outside, yet the house offers no comfort or control that humans seek, but rather expands the horror of their experience. They run through the trashy, beat

down house driven by sounds of male moaning and suffering and their own screams for their lost friend. The last frames of the movie show us a man standing facing a wall in the basement shot by Heather as someone or something attacks her from behind. She drops her camera and goes silent. All we see are the flickering images of the broken basement floor, leaving us to wonder if the Blair Witch was real, did someone use the legend to draw all the students to their deaths, is the next person who finds the film canister destined to suffer the same fate, or did Josh and Mike collude to lure Heather to an evil fate (*The Blair Witch Project*, 01:14:39-01:15:10)?

## VIII. Discussion

If we consider all the movies set in New York City, *Saturday Night Fever*, *Kramer vs. Kramer*, *Ghostbusters*, *Crocodile Dundee*, and *Ghost*, we see so much of the movies set in interior environments rather than exterior. An argument could be made that except for weather, there is not much difference in the two environments. Much of the natural landscapes, especially in Lower Manhattan are paved over and indeed, just as artificial as the buildings the characters occupy. Through the three decades of films, the city does not seem to change all that much. The skyline of New York has changed with the loss of the World Trade Centers, and while the loss is a stain on the American psyche, in an ecologic sense and timeline, the lack is less profound given that it was due to a terrorist attack and not a planned change or a natural disaster. One could make the argument that it is still a manmade change in land use, however, that is beyond the scope of this paper. We do see urban planning celebrated in *Ghostbusters*. Buildings go up and buildings are torn down. But the evolution of a city takes place over a broader span than the thirty years that are covered in this paper. Even the banner in *Ghostbusters* speaks to that fact. In the streets of Philadelphia, we see urban decay as Rocky runs through its streets. But if we were to visit the city today, we could find the same Italian Market that Rocky high-fived people through and the same steps of the Philadelphia Art Museum the movie made famous. Ben Franklin's statue still sits atop City Hall as you look down JFK Boulevard. Sure, there are more high-rises. There is always concrete and steel. Nature tries to regain a foothold in weeds in the cracks of the pavement or the sad, pathetic tree in *Rocky*. Humans try to build their own nature in the cement tree boxes, the landscape art they bring into their homes, workplaces and leisure spots. They mimic it in drawings (*The Sixth Sense*) or wallpaper (*The Sixth Sense*, *The Amityville Horror*). The changing play habits of children in *Kramer vs. Kramer* as we see children



transition more to technology tells us that the more crowded living spaces become, perhaps the more distant people become. *Crocodile Dundee* approaches this with humor and the idealization that someone from outside the urban world brings a naivety and friendliness lacking in everyday urban life. *Ghost* shows us the ultimate tragedy of random acts of violence, resulting perhaps from the too close proximity of so many people.

All of the movies shot in an urban area still tell us that cities are made up of neighborhoods with defining characteristics. Bay Ridge in Brooklyn is defined by the accent and the way sexes, races and gender preferences interact with each other (*Saturday Night Fever*). Likewise in South Philly, Philadelphia (*Rocky*), people have their own particular defining characteristics of accent and interaction with fellow man. Lower Manhattan (*Ghost*, *Ghostbusters*, *Crocodile Dundee*) shows us a more refined area where people express open space in the open areas of their apartments and import plants to create a connection to the natural world. Even the poorer neighborhoods that the city does not care for shows the residents bringing plant life into their homes, attempting to connect to nature. The better-heeled class in Philadelphia is reflected in the idealization of parks and reflected in rainbow images (*The Sixth Sense*). It is here more than anywhere else we see Adams' American Dream and how hollow it becomes with the death of a child. In all of these varying neighborhoods, we can see the environment of building, respect or lack of respect for nature, ethnicity, and time shape people's preferences, morals and desires. The Bay Ridge reality of 1979 of Tony and Stephanie is far removed from the Lower Manhattan reality of 1990 of Sam and Molly in the way they interact with each other and respect each other. Yet each set of characters is a reflection of the environment that created them.

In all of the urban movies, we see more people inhabiting less space. A higher population density could reflect in the way people treat each other. In *Rocky* and *Saturday Night Fever*, it is important for the characters to feel superior to another group, whether it's racial, athleticism, age or gender preference. However, in the case of Mick in *Crocodile Dundee*, we see an outsider easily crossing lines and making friends, whereas Sue's boyfriend, the native New Yorker, has to put Mick down in sarcastic, subtle ways to make himself feel superior to Mick. Even in *Ghost* we see Sam's best friend engineer his death ultimately to make more money at Sam's expense and in the end, to feel more superior. *Kramer vs. Kramer* is perhaps the saddest of cases, where

two parents are fighting for superiority over their child, one of the most vulnerable class of person.

The horror genre also gives us a window into LUCC. If *The Blair Witch Project* was a film about three documentary makers who took a trip into the backwoods of Maryland in search of the scenic beauty or three clumsy film students who didn't plan a camping trip very well, the natural background, while the same, would have had a different feel and appeal to the audience. What could have been beautiful or humorous instead became sinister and menacing. Weeds are choking. Twigs are metaphors for evil intent. Rain is inhibiting instead of nourishing. Though an argument could be made that the wild wooded areas are rapidly shrinking in the Mid-Atlantic, it is still possible to find untamed areas in the state parks of Maryland where the movie was filmed. Landscape does everything to impart a sense of dread and unease to fit in with the supernatural storyline; it would be just as easy to tell the story in the Pine Barrens of New Jersey with the Jersey Devil legend instead of the Blair Witch. Myrick and Sanchez went to great lengths to present their story as "true." They created "documentaries" about the Blair Witch, false websites devoted to deep background stories, even inventing a child molester story and court case about missing children in the area. At its time of release, many people believed the film students really did disappear mysteriously. The same is true in *The Amityville Horror* where a story of homicide in a home becomes the "true" story of a house possessed. Flies become the evil metaphor in this film. Thunder and lightning instead of being a natural weather occurrence caused by meteorological conditions are primordial forces of fear striking a chord deep in human limbic memory. The original homicides are shown taking place on a rainy night, and this becomes a recurrent theme until the family ultimately needs to escape on a rainy night. Thunder and lightning is seen in *Ghostbusters* as well, presaging the arrival of the supernatural. Nature's most fantastic display becomes an element of the paranormal.

## IX. Conclusion

When considering only the quantitative analysis—strictly the numbers—I must conclude there is no significant change seen in land use through the culture of cinema in the Mid-Atlantic States in the time frame of 1970-2000. The number of minutes spent outdoors varies widely from movie to movie, from a mere 8:19 minutes in *The Sixth Sense* to a whopping 61:20 minutes in *Crocodile Dundee*. Most of the films have a limited number of non-human scenes. *Rocky* for

instance, only has 20 seconds. However, for fictional films, this is to be expected. After all, the stories are all character driven. If we look at the various types of land use, we see that overall, the vast majority of films feature an urban environment, *The Blair Witch Project* standing out as an exception. Does this tell us that the Mid-Atlantic region is highly urbanized? Perhaps. In 1970, the Mid-Atlantic region had the number 1 most populated city, New York and the number 4 most populated city, Philadelphia. By the year 2000, New York was still number 1 and Philadelphia had dropped to number 5 (biggestuscities.com). Of course, we would not expect to see barren landscapes nor we would we expect a strictly ice and snow topography; this is not surprising. It is significant we see no agricultural land in these top-grossing films. There is agricultural land in the Mid-Atlantic States. As stated above, agriculture accounts for the second most land use in the region. However, also as stated above, it is the second most disappearing or changing type of land use in the region. We could extrapolate and postulate that the fact that we see no agricultural land use in the top grossing films is a significant cultural reflection.

It is from the qualitative, critical analysis that I can conclude there is a definite relationship between culture and landscape. People interact with their landscape based on whether it is urban or forested in different ways. It is possible to become lost in a city, but that is different from being lost in a forest where finding food and dry shelter may be more difficult. Danger in an urban area does not equate to danger in a natural area. From my observations in film, danger in a city is more likely to result from bad interactions with people, whereas danger in a natural area can be due to poor planning, noxious plants, insects and wild animals, inhospitable ground cover or weather elements. These findings can be generalized from the Mid-Atlantic region to the world as a whole. Certainly, elements of culture such as neighborhood and upbringing can influence how a person will interact with their environment. Culture could be seen as a driver of land use in urban planning and decay, even to how humans choose to interact with the natural environment when left on their own in its wildest parts. Film may not necessarily be historically accurate, but when recording images of landscape, it is hard to argue with the images and sounds captured. Cinema as an indication of culture succeeds in its purpose of helping us “to make sense of reality.”

Overall I must conclude that culture seen through the lens of film over thirty years elicits no significant change in LUCC. Cities still exist much as they did in 1970. Housing may have increased as well as the density of population, but driving forces outside of culture such as

increased immigration, increased public health, and lower mortality rates may have more to do with the pressures to exert LUCC. In order to draw full conclusions about culture it is essential to study other aspects of said culture. While film, as an artistic expression, is a key indicator of shifting cultural attitudes and reflections, it is not all encompassing. In order to see more fully how land use and land cover change is reflected in culture and in film in particular, it is probably necessary to expand the time frame. Seventy-five or even fifty years might have given us a bigger window to see the impact. Within my frame of thirty years, we can see how culture through film influences LULC. This study focuses on a particular context of land change. It would be interesting to compare and contrast a similar study in an area where different patterns of land change occur.

## X. Works Cited

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