

WHAT CHANGES IN MEDIA RISK FRAMES REVEAL ABOUT CHANGING  
ATTITUDES TOWARD MODERN LIFE: THE CASE OF THE GREEK PRESS, 1977-2004

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by  
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The undersigned, appointed by  
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WHAT CHANGES IN MEDIA  
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CHANGING ATTITUDES TOWARD MODERN LIFE:  
THE CASE OF THE GREEK PRESS, 1977-2004

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Abstract

Some social scientists note that Westerners have become disenchanted with their society, which they see as promoting industrial development and a soulless consumerism that are out of control and destroying the natural environment. The same social scientists also note that ambivalent attitudes towards institutions and people accompany the disenchantment and weaken bonds of trust among people. The result is an acute anxiety about uncertainty, which predisposes people to view human activity and the future through the prism of vulnerability and risk.

Some sociologists see this predisposition as constituting a new global paradigm of understanding society and social experience, which they sum up with phrases like “world risk society” (Beck) and the “culture of fear” (Furedi). According to these sociologists, concern about risk – negative consequences of human activity – now heavily colors perceptions of social issues, individual behavior, and expectations of humanity’s future.

This study examined what precisely the sociologists mean by risk and risk awareness, and tested their claim that a risk paradigm has emerged and consolidated over the past three decades, by seeing if such a trend was apparent in the Greek press. Content analysis of news and editorials in two Greek newspapers over a thirty-year period found no evidence of a shift toward risk as a dominant frame of social experience.

What changes in media risk frames reveal about changing attitudes toward modern life: the case of the Greek press, 1977-2004

Some social scientists note that Westerners' increasingly tend to see their society as promoting an excessive, industry-fed consumerism that is unhealthy, inhuman, and damaging to the environment (Beck, 1999; Giddens, 1998; Furedi, 1997; Hollander, 1995; Thompson, 1995; Thompson, 1998). The same social scientists also note that an ambivalence regarding the trustworthiness and reliability of institutions and people accompanies the disenchantment. The result is an acute anxiety about uncertainty, which predisposes people to view human activity and the future through a prism of vulnerability and risk. This acute consciousness of the risks of modern life has largely replaced the Enlightenment-inspired faith in science and social progress in shaping people's attitude toward themselves, each other, and society as a whole, and their expectations of humanity's future. This set of perceptions is what sociologists attempt to capture with the terms "world risk society" (Beck, 1999), "manufactured uncertainty" and "manufactured risk" (Giddens, 2003), or the "culture of fear" (Furedi, 1997).

If the sociologists' sweeping claims are correct, then they should be verifiable by studying the media, which constitute a forum for the airing of views, reflect social attitudes, and provide individuals and leaders with some of the information they use to form their opinions about society (Thompson, 1995). This function of the news media has become more important as the media's ability to bring into people's realm of experience events that are distant from them in space and time has expanded. Individual media users are invited to form views on issues the media choose to present, and perhaps even take responsibility for events that happen far away (Thompson, 1998).

The object of this thesis is twofold: to examine precisely what sociologists mean in referring to a "world risk society" or a "culture of fear", and the importance they attach to the concept of risk today; and to use content analysis and framing theory to test the claims

regarding the emergence and nature of such a risk-aware society. Specifically, content analysis and framing theory are used to try to answer the following questions:

1. Has the way mainstream Greek daily newspapers frame risk changed over the past three decades, and, if so, how?
2. If there is evidence of the consolidation of a powerful risk consciousness in newspapers, does it co-exist with other frames that contradict it, like a strong faith in technological progress?

Frames emphasize certain pieces of information and downplay or omit others. Frames define problems, identify their causes, make judgments, and suggest remedies. In this way, they lend salience to a piece of information, that is, they make it “more noticeable, meaningful, or memorable” (Entman, 1993, p. 53).

Frames can emerge inconspicuously and evolve into paradigms; they can co-exist with other frames; and they can slowly, imperceptibly fade or transmute as they lose their relevance (de Vreese, Peter, & Semetko, 2001; Entman, 1993; Norris, 1997). Tracing the evolution of media frames can help explain why journalists and their organizations cover certain issues and cover them in a certain way, if those frames are read in the context of the “potentially profound influence of social structure on both journalists and their media organizations” (Dunwoody & Griffin, 1999, p. 139). Studying how media frames change over time can also shed light on how and why the perceptions of people in society as a whole change (Norris, 1997).

As a result, studying media frames can help scholars overcome one of the weaknesses of media research: its tendency to gather and study fragmentary data upon which only provisional conclusions can be based, conclusions which are of little use in helping researchers arrive at interpretive insights that can be generalized (de Vreese, Peter, & Semetko, 2001; Entman, 1993; McQuail, 2001). Frame analysis has untapped potential as an avenue of media research: “A growing literature has explored the nature of news frames, whether in coverage of election

campaigns, foreign policy, or social conflict. Yet remarkably little attention has focused on how news frames alter over time in response to external events” (Norris, 1997, p. 275).

Given the relationship between the media and “external events”, the study of changing media frames can thus also strengthen areas of research and theory beyond media studies. Thompson (1995) observes that when social theorists today think about how modern society has developed, they “generally do so in ways that are profoundly shaped by the legacy of classical social thought” (Thompson, 1995, p. 3) of the nineteenth century, which attached little, if any, importance to the media. Today, however, the importance of the media in framing information and issues is considered by many researchers to be manifest (Eldridge, 1999; Entman, 1993; Iyengar, 1990; Singer & Enderny, 1993). The media are important in a society dominated by the circulation of symbolic content; many actions are undertaken and words spoken with media coverage in mind (Anderson, 2000). Studying changes in media frames over time can assist social theorists by empirically testing their theories of how society defines issues and problems, theories which may be “highly abstract and generally unconnected to data” (Tierney, 1999, p. 216), and helping to reveal important social trends and the dynamic of social change, one of the core objectives of classical social thought. Kitzinger (1999) notes:

The media are central to theories about risk – whether that is conceptualized in terms of ‘moral panic’ ... ‘risk amplification’ ... or the ‘Risk Society’ (Beck). However, these grand theories neglect to provide a thorough analysis of processes of media production or to present empirical evidence of how media coverage develops (p. 67).

Understanding a complex and important area like social perceptions of risk requires the use of different investigative tools and an integration of the insights provided by various fields of study (Entman, 1993; Gamson, 2004; Short, 1984).

Greece has modernized rapidly over the past three decades. This makes the Greek media ideal for testing theories that framing social experience in terms of risk constitutes a new paradigm for understanding the world. The end of Greece’s seven-year military dictatorship in 1974 was a watershed for a country that had been crippled by constant bouts of war, civil war,

poverty, and oppressive rule throughout the twentieth century. Since 1974, Greece has joined the European Union. The standard of living has risen, and Greeks today have access to the same goods and services that any Westerner does. Greeks enjoy the same political liberties that other Westerners have: the monarchy was abolished by referendum in 1974, the Communist Party was legalized, freedom of the press is guaranteed much as it is in other Western countries, and there are free and regular parliamentary elections. On the social front, too, Greece has modernized: women enjoy the same rights and status as women in other Western countries; and young people have all the liberties of their Western counterparts. The waning influence of the once-powerful official Orthodox Church over public life indicates that the Church's moral authority over civil society is weak; and the Greek political parties have political platforms calling for inclusiveness and diversity. Finally, since the advent of private television 1989 and the spread of the Internet a decade later, there has been a media explosion, giving Greek homes the same direct access to information, ideas and viewpoints from around the world enjoyed by any American or German (Papathanassopoulos, 2001).

Studying the development of Greek society since the 1970s, through the prism of the media, can help researchers test their understanding of how Westerners' views of modern society have been changing since World War II and perhaps earlier. Modernizing tendencies that developed unevenly and over a long period in other Western countries, burst to fruition more quickly in Greece, where a ruling elite whose authority rested on political repression, social oppression, and American patronage had bottled up the dynamic for social change (Papandreou, 1969). Since social change has been relatively abrupt and dramatic in Greece, it may be easier for the researcher to identify significant shifts in social views and norms:

Like the development of all-pervasive social stereotypes, it is often difficult to study the origins and gradual evolution of frames.... Yet periods of sharp change - like the end of the Cold War - highlight consciousness of frames that seems to be out of touch with social reality" (Norris, 1997, p. 276).

Greece's history of convulsive left-right divisions, abrupt transition from military to parliamentary rule, and shared border with former communist countries mean that it has

experienced many “periods of sharp change” in three decades, as a result of which many frames of social experience became abruptly irrelevant even while they appeared to retain their force.

Finally, it is important to test the global, or at least pan-Western, claims of social scientists beyond the bounds of the experience of countries - the large industrial powers - from which the vast majority of their references are drawn. It is “the potential occurrence of a generic frame of reference with respect to the coverage of a specific event in the news of multiple countries” that “further substantiates the frame as generic” (de Vreese, et al., 2001, p. 110). This study does not compare specific-issue coverage in different countries. It does, however, work on the logical assumption of de Vreese, et al. It does this by testing to see if the general conclusions drawn by sociologists studying the specific event coverage of other countries can be empirically reproduced by examining coverage of other events, important in the Greek news market.

## I. The decline of Enlightenment principles parallels the rise of risk consciousness

What a piece of work is man! How noble in reason! How infinite faculties! in form and moving, how express and admirable! in action, how like an angel! in apprehension, how like a god! the beauty of the world! the paragon of the animals! And yet, to me, what is this quintessence of dust? Man delights not me – no, nor woman neither.

- Hamlet, Act II, Scene II

Even before the Enlightenment, modern thought housed both awed and uncharitable views of humanity's aspirations and achievements. Until World War I, however, positive outlooks predominated (Beck, 1992; Fukuyama, 1992). Western ruling elites were generally confident of their salutary, civilizing influence on the world. Socialists, for their part, looked forward to the realization of the humanistic Enlightenment promise of liberty, equality, fraternity and freedom from want and tedious, life-draining labor, and saw industrialization as an unproblematic and necessary precondition for achieving that (Marx & Engels, 1972 version). The War, however, and rest of the twentieth century, beleaguered by economic decay, conflict, and political exhaustion, placed in question the idea of the possibility of social progress and, by extension, the wisdom and authority of scientific and technological advance (Gillot & Kumar, 1997).

Today, some social scientists contend that Westerners' perception of their society has been changing slowly and unevenly, but significantly and in a specific direction, over the past century; so significantly, in fact, that we have now entered, or are entering, a new paradigm (Beck, 1999; Furedi, 1997; Giddens, 1998; Hollander, 1995; Thompson, 1995; Thompson 1998). Though they disagree about the causes and consequences of this change, there is a conviction among them that ways of understanding politics, progress, and what it means to be human handed down from the Enlightenment have been largely dismissed as being harmful, obsolete, or utopian. In the place of optimism about historically open-ended and liberating progress based on the application of reason to material and social problems, researchers now

routinely report, there is a state of anxiety about the perceived ill consequences of modernity and a permanent anticipation of bad things to come.

Some commentators, who can loosely be labeled postmodernists, tend to hail this change in perception insofar as it marks the collapse of what they define as the hegemonic, and thus intrinsically false, narrative of the Enlightenment (Heartfield, 2002; Klages, 1997). Others, like Furedi (1997), with roots in the far left, and Fukuyama (1992) and Hollander (1995) on the right, see it as negative, precisely because it undermines what they view as the important achievements or further potential of modernity. Still others (Beck, 1999; Giddens 1998), express ambivalence about the new paradigm, but share the postmodernist suspicion of universal ideas (Tulloch, 2000). They believe that the optimistic Enlightenment view of open-ended progress based on the advance of science, technology, and democracy as we know it is no longer tenable or desirable. They see the change in the way people view modern society as an opportunity to revitalize politics, forge new kinds of democratic pluralism, and build community and solidarity at the local and global levels.

These social scientists thus fall into two broad groups: one that defends Enlightenment views of progress, and another that sees the Enlightenment notion of progress, and the modern society it inspired, as highly problematic because of its moorings in science. These views, in turn, correspond to two views of the significance of the way people perceive risk in contemporary society.

*Two views of risk consciousness reflect conflicting attitudes toward modernity*

For Beck (1992, 1999) and Giddens (1998), the end of the Cold War is an important moment for understanding a century-long evolution of Westerners' pessimistic perception of their society and its potential. In 1989, the two-centuries-old left-right divide that had framed politics and social life domestically and internationally, and provided people with common aspirations and visions of the future, came to an end. The end of the Cold War was the *coup de grace* for the familiar world of stable values anchored in the existence of clear national,



political, and moral enemies, and ushered in a world of unpredictable, unquantifiable, human-generated, transnational threats and moral ambiguity (Beck, 1999; Giddens, 1998). In the emerging post-Cold War “world risk society” (Beck, 1999, p. 31), the primary concern of humanity is becoming the demarcation, defusing, and management of myriad risks - from global warming, to terrorism, to stock market crashes, to the weakening of family ties - generated by modern society. For both Beck and Giddens, this project of managing risk constitutes the new framework within which politics can become meaningful and a common global sense of responsibility and purpose can be fashioned, as people at all levels of global society have no choice but to work together in negotiating what Beck terms “endemic uncertainty” (1999, p. 12).

The emerging “world risk society”, however, is not simply a one-sided awakening to the need to manage risks inherent in science, industrialization, and the collapse of tradition. That consciousness is not new, says Beck. What is new is the enormity of the risks and, much more importantly, the fact that risks are “scientized” (Beck, 1992, p. 154), meaning that science and the emerging side effects of industrialization reveal to everyone the unintended and once invisible risks created by industrial society. This means the return to human existence of uncertainty and insecurity, which industrial society sought to eliminate by taming nature as an external, hostile force.

This self-consciousness of industrial society that it is creating risks, and is confronting those risks - what Beck refers to as “*reflexive* scientization” (Beck, 1992, p155) - is the new foundation upon which political conflict and power rest, for the way risks are defined will shape people’s response to them (Beck, 1999). The way risk is understood will both determine government decisions and be used to vindicate them. Significantly, because of its very self-knowledge, the risk society questions the wisdom of its faith in scientific knowledge and industrial production, and the subsequent unfair allotment of wealth to the few and the

unpleasant side effects of wealth production – pollution and economic marginalization – to the many:

The concept of the industrial society supposes the *dominance* of the ‘logic of wealth’ and asserts the compatibility of risk distribution with it, while the concept of risk society asserts the *incompatibility* of distributions of wealth and risk, and the *competition* of their logics’ (Beck, 1992, p. 154).

In Beck’s analysis, the risk society is characterized by competition and alliances among various groups to win acceptance for their interpretation of risks; “global threats cause, or will cause, people to act” (Beck, 1999, p. 37). Risk consciousness thus becomes the impetus behind a “subpolitics” (Beck, 1999, p. 91) of global communities and organizations that can pose alternative ways of understanding, and make suggestions for coping with, the risks and side effects of industrial society, which are one-sidedly borne by the poor and other excluded groups. Sub-political groups stand outside parliamentary politics, beyond the control of, or in opposition to, established institutions that merely rubberstamp technological innovation and try to impose their will on global communities that suffer the side effects of modernity.

“Post-national communities,” Beck writes, “could thus be constructed and reconstructed as communities of risk. Cultural definitions of appropriate types or degrees of risk define the community, in effect, as those who share the relevant assumptions” (Beck, 1999, p. 16). Beck sees “subpolitics”, at its best, as a dynamic counterweight to the hierarchical power of established state institutions and an antidote to their immobility and irrelevance to the task of helping humanity deal with the potential hazards it is manufacturing. Global risks affect everyone; they thus force all groups in society into dialogue. Rational risk perception is no longer a direct product of scientific understanding. Instead, “‘rationality’ *arises socially*” (Beck, 1992, p. 59). Science loses its privileged position as a source of objective knowledge.

Giddens (1998), though more convinced of the importance and durability of existing institutions than Beck, also considers the risk paradigm important to the rethinking of domestic and global relations: “Many of us feel in the grip of forces over which we have no power. Can we reimpose our will on them? I believe we can. The powerlessness we experience is not a

sign of personal failings, but reflects the incapacities of our institutions” (Giddens, 2003, p. 19). Focusing on risk is important as a guide to restructuring existing institutions or creating new ones. Ironically, Giddens sees heightening people’s sense of being at risk as a way of overcoming their sense of powerlessness. For example, he considers the possibility that exaggerating an identified risk can be positive: “Sometimes scaring people might be necessary in order to persuade them either to alter their behaviour, or to accept the steps that should be taken to avoid a particular danger” (Giddens, 2003, p. 53). In any event, he reasons in defending his apparent endorsement of scare-mongering, the fact that outcomes are unknowable makes it impossible to say for sure that someone is over-reacting to a risk.

Giddens urges political leaders to use risk consciousness itself as a rationale for state activity at the local and international levels, and as way of building links of cooperation between the central state and local communities, NGOs, and transnational organizations. Such an approach, he hopes, will restore the withered legitimacy of state, party, and other social institutions in the post-class, post-Cold War world, by establishing them on a different basis. “States without enemies,” he explains, “depend for their legitimacy more than before upon their capacity for risk management” (Giddens, 1998, p. 76).

Furedi (1997) also sees the end of the Cold War and the left-right political frame as being crucial to understanding a rapid acceleration in the growth of risk conscious. However, he finds the emergence of the risk-conscious society thoroughly unfortunate. Unlike Beck, Giddens and many other commentators, Furedi does not see what he calls the tendency to exaggerate risk as a natural, logical response to a growth of environmental hazards from the advance of industry and technology. Rather, he attributes it to the declining influence of traditional values and an attendant fragmentation of society, which became precipitous after the end of the Cold War, as the left’s socialist vision expired and the right lost the traditional enemy that had lent it coherence. For Furedi, the collapse of the left-right political framework has left society without

competing visions of the future that can maintain bonds of trust based on common interests, and provide people with a sense of collective purpose.

The collapse of politics has both resulted from and encouraged the collapse of confidence in the aspirations of modern society and the removal of the human subject from history. The political parties, allegiances, and visions that provided forums and contexts for people, as historical subjects, either to fight for major social changes or to preserve the status quo have become irrelevant. Politics has become managerial; values and beliefs are mere lifestyle choices that retain little, if any, authority and do little to link the individual to the world beyond them. This has left people unable to identify with something larger than their personal existence. Indeed, argues Furedi (1997), since they no longer see the collective potential of humanity for positive change and a better future, people tend to be suspicious of big plans and big ideas for change. Caution replaces choice as a guide to action.

The removal of the individual from the historical process has led to social fragmentation and a collapse of institutional moral authority, Furedi (1997) writes. The universal Enlightenment vision of humanity collectively bending nature increasingly to human ends and continually improving society has yielded to the view that individuals are passive objects upon which overwhelming and out-of-control social forces act. Rather than seeing themselves as subjects capable of fighting with others to shape their own destinies, Furedi argues, people see themselves, and others, as modern society's victims, whose main goal is survival.

*Skepticism of modernity increases risk consciousness and makes trust difficult*

The dynamic of fragmentation described by Furedi (1997) creates a "culture of fear" in which people who define themselves in terms of vulnerability tend to suspect the motivations of others. The low expectations people have of others and society as a whole nourishes political fatalism and a sense of impending doom. In the words of one grassroots environmental activist, "ecological collapse is not based on if but when: business as usual, growth economics, globalization, etc., (...) is all normal everyday activity, all leading to

collapse....There can be no long term strategy when there is no long term” (as cited in Anderson, 2000, p. 99 ). Feeling they have no control over a world where “business as usual” brings disaster ever closer, Furedi (1997) maintains, individuals are more inclined to search in their personal or group past to find the social basis of their present victimization, suffering, and powerlessness, than to plan and struggle for a brighter future, as socialists once did.

Moreover, in this climate, even scientists may justify scientific advance and exploration merely as an antidote to the destructive power of modernity, rather than as tools that can aid the realization of the humanistic aspirations of the Enlightenment. Thus, theoretical physicist Stephen Hawking reflected on the likely outcome of the modern project in ruefully: “Life on Earth is at the ever-increasing risk of being wiped out by a disaster, such as sudden global warming, nuclear war, a genetically engineered virus or other dangers we have not yet thought of” (Hawking, as cited on [www.cnn.com](http://www.cnn.com), 2006).

In a fragmented culture of vulnerable people, trust, a function of expectations (Short, 1984) predicated on a sense of common interests, becomes problematic and contingent at the level of both institutions and personal relationships. Surmises Giddens: “Relationships function best if people don’t hide too much from each other – there has to be mutual trust. And trust has to be worked at; it can’t just be taken for granted” (Giddens, 2003, p. 62). Trust, which traditionally implied untroubled assumptions about the competence or good intentions of others, giving someone the benefit of the doubt, or even people’s ability to protect themselves if others were to act against them in bad faith, now becomes primarily a form of risk: the inability to know for sure if others are competent, dependable, loyal, or honest, or whether it is in one person’s interests to remain loyal to another person. Since relationships are seen as being inherently problematic in both private and public life, trust becomes confessional and therapeutic: “Disclosure is the basic condition of intimacy....If one looks at how a therapist sees a good relationship...it is striking how direct a parallel there is with public democracy” (Giddens, 2003, pp. 61, 62). Since there can be no assumption of clearly defined common interests

cementing relationships, trust becomes a therapeutic ideal rather than a given, the object of constant negotiation, a continuous process of managing doubt rather than a stabilizing element in a relationship: “The pure relationship is based on communication, so that understanding the other person’s point of view is essential” (Giddens, 2003, p. 62). Giddens’s therapeutic - not to say bureaucratic - approach to personal relationships and politics seems to suggest low expectations of both. It seems to rest on the assumption that trust is important because people are vulnerable: the constant stream of “disclosure” and “communication” are tools of transparency, designed more to reassure insecure and ever-suspicious spouses and voters than to meet the needs of confident, independent individuals.

Furedi (1997) sees Giddens’s approach as disastrous. He argues that when people start seeing vulnerability as a defining characteristic of their existence, abuse comes to be seen as a normal feature of human relationships, which are perceived as being essentially toxic: “Once a preoccupation with safety has been made routine and banal, no area of human endeavor can be immune from it” (Furedi, 1997, p. 3). Today, for example, many Westerners are as likely to see the family as a hive of hypocrisy and patriarchal abuse as they are to see it as a healthy institution for nurturing moral values and shaping tomorrow’s responsible citizens. Similarly, people might just as well consider churches to be potential facilitators of sexual abuse as institutions promoting probity, faith, and community. The fear that others are abusive, claims Furedi, is the fear of environmental pollution expressed in the realm of human relationships.

The low regard of others as victims or victimizers, moreover, reflects a low regard of the self: the growth of the therapeutic and counseling professions indicates that people mistrust themselves as well as others to think and act independently. A low regard for the human subject, according to Furedi (1997), encourages a tendency to see people not as moral actors, but as patients. Social behavior once judged as moral or immoral, Furedi says, is increasingly viewed as healthy or unhealthy, and behavior deemed negative is increasingly treated as being

the result of an incurable addiction or emotional scarring, rather than as a human failing that can be atoned for and surpassed.

Beck (1999) and Giddens (1998) share Furedi's view that there has been a gradual but significant weakening of bonds of trust and the authority of traditional values and institutions over the past several decades. However, they see this as the direct result of the advance of knowledge – reflexive modernity – while Furedi (1997) sees it as the product of the collapse of collective aspirations across the political spectrum. Thus, whereas Beck and Giddens believe the growing consciousness of shared risks is providing new foundations for unity, more democracy based in openness and grass roots movements rather than the old, closed, hierarchical institutions of power, and a greater sense of responsibility at the institutional and individual levels, Furedi sees the sense of being “at risk” as encouraging demoralization. The product of a lack of a positive and realizable collective vision for the future, it can only further fuel a climate of apprehension and mistrust.

Though traditional forms of authority have collapsed, Furedi contends, and with them consensus about how to behave and conduct relationships, nothing has taken their place that could provide society with cohesion and a positive orientation toward the future. When “attitudes and ways of behaving can no longer be taken for granted, experiences which were hitherto relatively straightforward now become seen as risky” (Furedi, 1997, p. 68), and commitments must continually be clarified, renewed, and renegotiated. In the absence of a positive alternative, the decline of traditional values has thus led not to a greater sense of individual freedom and possibilities, but to insecurity, a crisis of meaning, and a sense of human limitations.

People at all levels of society, Furedi (1977) claims, experience the sense of being constantly at personal risk, not just from environmental pollution and modern lifestyles, but from other people, relationships, and even from their own shortcomings. The acute sense of risk further weakens bonds between people and contributes to ambivalence about the nature of

all kinds of social relationships. It also leads to increasing calls for regulation of people, activities, and institutions identified as risks (Slovic, 1992), which, however, only heighten worries. The process Furedi describes is a self-perpetuating and ever-growing tendency that leaves people feeling out of control of their destinies. Slovic observes this snowballing effect of concern about risk:

Ironically, as our society and other industrialized nations have expended this great effort to make life safer and healthier, many in the public have become more, rather than less, concerned about risk. These individuals see themselves as exposed to more serious risks than were faced by people in the past, and they believe that this situation is growing worse (Slovic, 1997, p. 22).

Similarly, Giddens (2003) notes that the problem with trying to provide behavioral and lifestyle guidelines in the context of manufactured uncertainty is that experts widely disagree about almost everything when it comes to assessing risks. Beck (1992) goes further, questioning whether scientists in the “world risk society” can ever hope to be trusted at all. In the very act of advancing its scientific knowledge, he says, industrial society has undermined its own confidence that rationalism can provide humanity with an ever-greater mastery over the world:

The concept of ‘world risk society’ draws attention to the *limited* controllability of the dangers we have created for ourselves. The main question is how to take decisions under conditions of manufactured uncertainty, where not only is the knowledge-base incomplete, but more and better knowledge often means more uncertainty (Beck, 1992, p. 6).

Furedi (1997) argues that a society that views itself and human action through the prism of risk - what Beck calls a “mathematicized morality” (1999, p. 147) that combines facts and value judgements - cannot promote social solidarity and provide people with a sense of security, for it defines uncertainty as the possibility of negative outcomes: the “*limited* controllability of the dangers” (Beck, 1992, p. 6). Despite that and the other negative consequences of a heightened risk consciousness, few have questioned the wisdom of turning safety into a cardinal social value, Furedi (1997) says, for two reasons. It is in tune with people’s feelings of being at risk from others; and it allows institutions and individuals, at least



provisionally, to unite around a new framework for regulating relationships and determining what kinds of behavior are acceptable, in what contexts, and to what extent. As it becomes increasingly difficult to apply old moral and other value standards to the acts of individuals and states, the consensus in society around what is right and wrong dissolves along with any sense of common goals and purpose. The principle of risk avoidance, says Furedi, has filled the vacuum:

The marginalization of traditional morality does not mean that society is without any system of values. On the contrary the space left by the marginalization of traditional morality has been filled by the system of values and notions of conduct associated with risk consciousness (Furedi, 1997, p. 150).

A morality based on risk consciousness, predicated on low expectations of humanity, according to Furedi (1997), is attractive to political leaders who have lost their traditional bases of support, because it allows them to relate to, and regulate the behavior of, the insecure individual in a fragmented society, through the provision of protection, advice, and counseling. In encouraging a bunker mentality, he maintains, leaders make low expectations seem like common sense, rather than the symptom of political exhaustion that they really are. Survival becomes the crowning human achievement, and the survivor the contemporary hero.

The sociologists presented here agree that the dominant concept of risk today turns on the view of modern society as a potential source of socially, geographically, and temporally uncontainable personal and global calamities. In this scheme of things, global warming, AIDS, and marital breakdown are so unpredictable and potentially devastating that risk is no longer something that can, or should, be assessed only in terms of mathematical probabilities. Beck's identification of contemporary society itself as the manufacturer of uncontrollable and historically unprecedented risks leads to the haunting conclusion that humanity is incapable of staving off disasters or managing them when they do occur:

There are no limits in our imagination to the horror scenarios that could bring the various threats into relationship with one another. Zürn speaks of a 'spiral of destruction', which could build up into one great crisis in which all other crisis phenomena converge (Beck, 1999, p. 36).

Risk, then, is a way people come to see the future when they lose their trust in industrial society, no longer understood as a locomotive of progress, but as a juggernaut threatening humanity:

The discourse of risk begins where our trust in our security ends and ceases to be relevant when the potential catastrophe occurs. The concept of risk thus characterizes a peculiar, intermediate state between security and destruction, where the *perception* of threatening risks determines thought and action” (Beck, 1999, p. 135).

Beck’s formulation, which defines the future predominantly as the site of catastrophe, makes trust in the present difficult, if not impossible: lack of trust springs from the perception that there is an inability or unwillingness of authorities to take seriously people’s fears of risks, and leads to ambivalence about progress and relationships. Furedi (1997), on the contrary, argues that the fear of manufactured uncertainty and risks implies a pre-disposition to mistrust other people, generated by social fragmentation.

Regardless, however, of the differing views of the sociologists on the origins of the predisposition to be suspicious of others, in a culture where bonds of trust are weak, the assignment of responsibility and blame, and the perception that guilty parties constantly evade taking responsibility, become crucial to making sense of problems. (Beck, 1999; Furedi, 1997). Politics becomes a debate over managerial accountability rather than a clash between competing views of what constitutes the good society. Social problems are interpreted as being the consequence of out-of-control and abusive individuals hiding in faceless institutions and the family fold, and are not subject to social solutions (Furedi, 1997).

Once society is defined as a source of myriad, unpredictable, uncontrollable, and perhaps invisible risks, there is little the authorities can do to inspire trust. Short (1984) and Slovic (1997) note that a lack of public trust in individual and institutional authorities accounts for the failure of technical risk assessments to inform public attitudes to risks. Instead, people’s reaction to risk is determined by “sensitivity to technical, social, and psychological qualities of

hazards” (Slovic, 1997, p. 23), including an “aversion to being exposed to risks that are involuntary” or “not under one’s control” (Slovic, 1997, p. 23).

The news media may perceive a manufactured risk in a government’s failure to contain a risk, to warn people of dangers, to react to them quickly enough, or to have taken sufficient preventive measures, and news reports involving tragedy may be framed around those failures. This was the case when the Greek state television channel, NET, reported in its evening newscast that human deaths from avian flu in Turkey were the result of people being inadequately informed of the risk from chickens (NET News, Sunday, 15 January, 2006). Or, when a private Greek TV station’s evening news showed irate residents of the island of Cephalonia threatening to sue the state electricity company because power had been out for a week after a unusually heavy snow storm (Mega Channel News, Saturday, January 28, 2006), risk was not located in the freak weather, but in the authorities’ failure to anticipate it. This is consistent with Beck’s (1999) view that the way people perceive risks today is not merely rational, but also socially rational. The argument that some investments for safety are not worth it from a society-wide point of view may be dismissed: when heavy snowfall in 2003 closed a new highway in Athens for two days, for example, some in the media lambasted the government for not having the equipment to clear the road immediately. The government pleaded that buying and maintaining expensive road-clearing equipment for the rare Athenian snowstorm would be a waste of social resources. This was a case of the “socially rational” assessment of risk – based in the media assigning blame on behalf of victims (people who could not use the highway) – coming up against a rational, cost-benefit assessment of risk and risk management.

Giddens (1998), who shares Beck’s view that modern society is a source of new risks so great that they make confidence in the Enlightenment concept of progress problematic, warns that optimism regarding environmental dangers, like global warming, that have not yet resulted in disaster would be extremely dangerous complacency. In his search for a way to negotiate the

potential hazards created by modern society, he is unwilling to reject scientific advance and technological development in the name of guaranteeing that future generations have adequate resources. He urges, however, “engagement with the ideas of sustainable development” (Giddens, 1998, pp. 55, 56). His recommendation reveals the ambivalence of globalization theorists toward modernity. It is also an expression of a key component of the contemporary concept of risk: the precautionary principle, which stipulates that people should act - or refrain from acting - in order to avoid possible future evils. In fact, Giddens advocates “active risk-taking”, because “it is a core element of a dynamic economy and an innovative society” (Giddens, 2003, p. 35), and pragmatically distances himself somewhat from the precautionary principle. However, given the overwhelming emphasis in his work on the dangers coiled up in the uncertainty of the outcomes of human actions, his defense of risk-taking seems too general to be useful, and inconsistent with the deeper logic of his understanding of contemporary society.

Furedi (1997) finds that the growing influence of the precautionary principle - a better-safe-than-sorry attitude to action - has far-reaching implications for people’s attitude toward scientific and social experimentation:

The importance of the so-called precautionary principle (is that it) suggests that we are not merely concerned about risks, but are also suspicious of finding solutions to our predicament. According to the precautionary principle, it is best not to take a new risk unless its outcome can be understood in advance. Under this principle, which is now widely accepted as sound practice in the sphere of environmental management, the onus of proof rests with those who propose change (Furedi, 1997, p. 9).

With its *a priori* demand for one hundred percent certainty of outcomes, of course, the precautionary principle undercuts the very rationale of science, which is based on the need to experiment precisely because outcomes cannot be known in advance.

In contemporary society, according to Short (1984), it is usually the negative potential of risk-taking that is stressed. Furedi (1997) says this is a largely ignored but noteworthy phenomenon, for it is not a timeless truth that insecurity leads a society in a conservative

direction regarding scientific experimentation and technological development. On the contrary, societies could actually look to science and technology to increase their security. A society's response to insecurity, like its attitude toward technology, Furedi maintains, will hinge on its view of people. Thus, the contemporary pre-occupation with safety is a conservative response to insecurity that "represents a profoundly pessimistic attitude towards human potential" (Furedi, 1997, p. 9). Unlike Beck, Giddens, and other sociologists, then, Furedi does not believe that the existence of an acute sense of risk among Westerners is a reaction to real risks; nor does he believe it should be cultivated and responded to on its own terms simply because it exists.

Beck and Giddens may be especially concerned with threats society poses to itself through environmental destruction, but their conception of risk goes far beyond the environment. The idea that people themselves manufacture serious potential threats to humanity is the crux of Beck's "world risk society". There is, however, a corollary to this of equal importance to Beck and Giddens: science and knowledge not only create risky technology, they also create perceptions of risk. Risk is real (in the form, say, of pollution), but also a social construct relevant to all social relationships:

The more knowledge it has available about itself and the more it applies this, the more emphatically a traditionally defined constellation of action within structures is broken up and replaced by a knowledge-dependent, scientifically mediated global reconstruction and restructuring of social structures and institutions (Beck, 1999, p. 110).

This helps explain Beck's argument that risk and the perception of risk are the same thing. Knowledge increases society's self-understanding of the dangers of science, simultaneously weakening the bonds of tradition and imposed roles, making contingency and uncertainty a pervasive condition of life, and trust difficult:

Consider marriage and family, for example. Up to even a generation ago marriage was structured by established traditions. When people got married, they knew, as it were, what they were doing. Marriage was formed to a large degree in terms of traditional expectations of gender, sexuality and so forth. Now it is a much more open system with new forms of risk. Everyone who gets married is conscious of the fact that divorce rates are high" (Giddens & Pierson, 1998, as cited in Beck, 1999,

p. 105).

Not only does this consciousness of high divorce rates make people feel vulnerable and unable to depend on, or make lasting commitments to, their mates, it creates risks regarding the future of the family and the rearing of children, according to Giddens (2003).

Furedi (1997) maintains that the pre-occupation with people as risk producers reflects not an attitude toward technology or the environment, but toward humanity and the possibility of progress. In Beck's (1999) "world risk society", on the other hand, it is scientific knowledge - one of the pillars of the Enlightenment - and all that it begets, which become problematic. In a manner that seems perversely Hegelian, Beck invests reason - scientific thought - with an autonomous power to posit a material, technology-driven world, which then, through its evolution into the reflexive society, negates itself. Risk in the contemporary context is not quantifiable, nor can it be isolated. Rather, all social production and interaction is pregnant with it. For that reason, "the *perception* of threatening risks determines thought and action" (Beck, 1999, p. 135).

Thus for Beck, as for Hegel (Solomon, 1988), thought - or perception - generates reality, so the two can be conflated: risk consciousness equals risk, and so risk itself is a social construct. Beck's attribution of extraordinary creative and domineering - and thus ultimately destructive - power to thought places him within the tradition of German idealistic philosophy. The difference is that while the conservative, yet optimistic, Hegel attempted to limit the transformational elements of modernity by chaining historical progress to the reification needs of the Absolute, the radical, yet pessimistic, Beck debunks modernity for reifying risk and turning it into a juggernaut. The latter approach seems to be a characteristic shared by much of the disillusioned left in the twentieth century: from the Frankfurt School, with its resigned belief in the ability of Enlightenment rationalism to annex and neutralize any criticism of capitalist society, to the postmodernists' attempt to dismiss social, and even material, reality by dubbing it a bogus, intellectually imposed grand narrative.

Disillusionment with, and the subsequent fear of, reason, of course, is not the exclusive preserve of the disappointed left. Interestingly, the left and right have become bedfellows on this matter. The social democratic Giddens (1998b), for example, notes with approval that none other than Karl Popper, whose growing skepticism of science paralleled his move from communism to an extremely conservative political and social outlook (Gillot & Kumar, 1997), debunked science: “The founders of modern science believed it would produce knowledge built on firm foundations. Popper supposes, by contrast, that science is built on shifting sands....Science is thus an inherently sceptical endeavor” (Giddens, 1998b, pp. 23, 24). Giddens’s latter remark is incontrovertible. However, “firm foundations” conceals an important difference between supporters and critics of science. Believing that scientific, or empirically-based, knowledge is always limited is not the same as believing that it lacks firm foundations, in that it may be perceived as leading always closer to the truth, as providing an ever-better picture of the world (Gillot & Kumar, 1997). Thus, science is not “built on shifting sands”. Rather, scientific opinion shifts as scientists gain a better understanding of the sands. The skepticism inherent in the scientific method is a tool for advancing knowledge, not an epistemological statement about the futility of trying to acquire knowledge. Like Beck, Giddens and Popper conflate reality and humanity’s perception of reality. The target of this relativistic outlook is science and the belief that the application of human reason can lead to historically open-ended progress.

Furedi (1997), in contrast to those who are skeptical of science, stands in the tradition of the Enlightenment and scientific Marxism. He argues that risk consciousness and risk are different. While humanity obviously produces problems and dangers, it has also, he says, displayed a remarkable ability to overcome them. As a result, advanced societies have become safer and safer over the past two centuries. Ironically, though, risk consciousness has grown over the past several decades. For Furedi, science and technology determine risk; social relations determine consciousness. Unlike Beck (1999) and Giddens (2003), Furedi does not

conclude that the hopes invested by humanity in science and technology are deluded because technology is dangerous. Rather, he finds the relativism and pessimism characteristic of their attitude toward science a projection of their low regard for the human potential.

The terms of this debate can clarify the debate within journalism about whether objectivity is possible. On one side of this debate are those who claim that journalists can be objective if they just stick to the empirical facts, report all sides of a story, and keep their feelings out of a story. On the other side stand those who say that there is no such thing as objectivity, since empirical knowledge is always limited and a reporter will always have a partial, subjective view of reality. The latter position in this debate is akin to Giddens and Popper's view that science is "built on shifting sands", in that it despairs of people's ability to arrive at an objective understanding of their world. When understanding is posed as an all or nothing affair, then any human effort to acquire knowledge and use it to make reasoned judgments is bound to appear futile, since human knowledge is always incomplete. Of course, once the pursuit of objectivity is seen as futile by nature, then fact and opinion become of equal value, and journalists can reasonably dispense with any need to try to be objective and be content to present any story any way they like (Hume, 1997).

Like Slovic (1997), Wildavsky (1998) notes the importance of the perceived voluntary or involuntary nature of a risk to people's decision as to whether or not that risk is acceptable. A person might choose to go rock climbing, and would consider the risk of falling not just acceptable, but even part of the attraction. However, if, while climbing, the person had to breathe air that contained coal dust, that would be an involuntary and, thus, unacceptable health risk. Despite the importance people attach to whether or not a risk is voluntary, in fact, the dichotomy, Wildavsky argues, is false. Living in Los Angeles, for example, may expose someone to air pollution, but simultaneously reduce the risk of unemployment. "Life's choices," writes Wildavsky, "come in bundles of goods and bads that have to be taken whole.



Unwanted it may be, but the known risk that comes with the expected reward can hardly be called involuntary” (Wildavsky, 1998, p. 18).

Wildavsky’s formulation suggests that if a society fragments, individuals will increasingly come to see more risks as involuntary, for they will perceive themselves as having less control over, or less of a stake in, their society and the social and physical environment and benefits it creates. They may even come to see themselves as having less self-control: less willpower. The changeable definition of voluntary and involuntary risk bears on how blame is assigned. If people are viewed as passive victims, then risks that were once considered voluntary - such as smoking – may be redefined as involuntary, and opened up to litigation (Wildavsky, 1998). Similarly, Furedi (1997) argues that defining a behavior as an addiction is a way of saying that those who engage in it are passive victims rather than active subjects.

A heightened consciousness of risk, for Furedi (1997), means that trustworthiness becomes identical with putting safety, in principle, above all else. Blame is assigned accordingly. This can even influence the way personal recreation is framed, making spontaneous enjoyment and abandon seem unjustifiable because they may be risky. The subjection of spontaneous enjoyment to the precautionary principle, for no good reason, in Furedi’s (1997) formulation, or to “scientifically mediated” (Beck, 1999, p. 110) forms of understanding, means activities that, at least superficially, represent carefree relaxation and pursuit of pleasure in the moment, become problematic. One study of sun-cream advertising texts illustrates the way getting a sun tan is defined as both fun and as a risky business. In promising protection from harmful sun rays while allowing a tan, sun tan lotion marketers blend hedonism and asceticism in the hope of assuaging fears raised by melanoma statistics. In contemporary society, the body is an important signifier of the self (Coupland & Coupland, 2000); it thus also becomes an important battleground for the regulation of risk (Furedi, 1997), which means that spontaneity will often have to yield to precaution.

*Social science needs a detailed, articulated definition of contemporary risk consciousness*

Risk and risk reporting have attracted considerable interest from social scientists for several decades; and the social scientists reviewed here rely to some extent on media presentation of issues in formulating their theories of risk (McRobbie & Thornton, 1995). Yet, the term “risk” is “an elastic and enigmatic word” (Kitzinger, 1999, p. 56); classifying risk reporting is not the same as classifying war reporting or consumer reporting. This means that any study of media frames and risk requires the development of a definition of risk consciousness that is precise, detailed, and comprehensive, a definition that goes beyond the observation of disparate phenomena and can garner wide acceptance.

From the analyses of sociologists who sharply disagree over the causes and consequences of risk consciousness, the contours of contemporary risk consciousness emerge, and it is possible to distill a meaningful and plausible definition of risk as it pertains to Westerners’ understanding of the threats and uncertainties they need to worry about and protect themselves against. The characteristics of this risk consciousness are:

1. Adoption of the precautionary principle. The impossibility of predicting with absolute certainty the outcome of an action creates fear of social and scientific experimentation. There are no longer good risks and bad risks, just risk itself. Uncertain outcomes constitute risks. Uncertainty is by its nature problematic (Beck, 1999; Giddens, 2003), and it becomes difficult for people to accept any level of risk. The impossibility of eliminating uncertainty makes confidence in science unjustified: “At this moment, scientists must above all reflect, respect and confess their ignorance” (Beck, 1999, p. 107).
2. A perception that people are vulnerable before anticipated calamities that can in some way be attributed to modern society (for example, “mad cow” disease being a product of mega-agriculture’s unnatural ways of feeding cattle, or of government negligence). In the “world risk society”, nature does not exist separately from society. Society has fully incorporated it, so risk

and perception of risk is the same thing (Beck, 1992). Manufactured threats have replaced natural threats to humanity (Giddens, 2003).

3. A heightened consciousness of the body's vulnerability, as the body becomes the most important expression of self-hood in a fragmented world (Coupland & Coupland, 2000; Furedi, 1997), or as science increases knowledge of threats to the health (Beck, 1999).

4. A feeling that people are exposed to risks involuntarily, thus becoming victims of their environment and other people (Beck, 1999; Wildavsky, 1998). Feelings of victimization shape people's identity and frame political activism in a culture of abuse (Furedi, 1997; Hollander, 1995).

5. A belief that advances in science and technology result in products that are bad for people's health, threaten to deplete indispensable natural resources, and may cause irreparable damage to the environment. This belief rests not on technical risk assessment, but on a belief that risk assessment is inadequate in a world of potential hazards of which humanity has no previous experience, on a feeling that the worst-case scenario will eventually occur (Beck, 1999), and that society cannot solve problems it creates (Furedi, 1997).

6. A mistrust of traditional sources of authority (e.g., the state, the family, the church, science), which are seen not only as being incapable of providing protection against risks, but are also implicated in creating them by design, indifference, or incompetence (Furedi, 1997). In the risk society, risk is a product of human decisions rather than acts of god or nature (Beck, 1999).

7. A more general mistrust of other people's motivations and the belief that abuse is a normal feature of human relationships. In a fragmented world, people become strangers whose motives are unfathomable. People are unsure of how to behave toward, and what to expect of, others (Furedi, 1997). The weakening of bonds of tradition without anything positive taking their place makes social relationships contingent, and therefore risky, as people cannot be trusted to fulfill promises or live up to commitments (Furedi, 1997; Giddens & Pierson, 1998, as cited in Beck, 1999).

8. A low estimation of people's ability to shape their personal destiny or manage relationships, problems, and daily life without therapeutic assistance (Furedi, 1997). A tendency to define social behavior as "healthy" or "unhealthy", and to treat behavior deemed "unhealthy" as the result of an "addiction" or some other weakness individuals cannot overcome alone.

9. A perception that threats are global, rather than local or national. Global threats are the universalizing element in human experience, and diminish the power of the nation state, which cannot manage transnational threats (Giddens, 1998).

10. A proclivity for using vulnerability and victim-hood to build bonds of shared experience and otherwise connect with others (Beck, 1992; Furedi, 1997). Victim-hood becomes important to self-identity.

*Risk culture influences the individual and the media*

The list is fascinating because of what it suggests about Westerners' understanding of themselves and their society, and, thus, of the human potential. Yet the suggestiveness raises issues that need clarification, for the imputed understanding and its significance are not clearly located either at the level of society or of heuristics (McRobbie and Thornton, 1995). For social scientists, a key reason for studying risk perception is to ascertain its impact on individual behavior, but there is no reason to assume that a simple, predictable link exists (Wahlberg & Sjoberg, 2000). Risk may be one of several elements that factor into expectations that influence an individual's behavior, which, in any event, may be inconsistent. Similar problems relate to the difference between the cognitive perception of risk in general and the individual experience or anticipation of it (Tulloch, 2000; Wahlberg & Sjoberg, 2000); and to intellectual perception of risk and the emotional reaction to it.

This study is an attempt to locate the risk culture at the level of society. Though it cannot fully address the issues raised in this section, it must assume, in accordance with the theoretical edifices of the sociologists, that the media both reflect and shape society-wide effects and individual heuristics, and that individual heuristics, which the media report, reflect society-

wide effects. As Pan and McLeod explain, “All theories of social change involve cross-level mechanisms” (1991, p. 151). Thus, “all theories of mass communication, regardless of their units of analysis, contain stated and unstated propositions about how both societies and individuals work” (Pan and McLeod, 1991, p. 153).

This study examines the news media as one of the sites where social discourse is shaped (Miller & Riechert, 2000) and the social parameters of debate are both set and revealed. In the risk culture theories under examination, either science (Beck, 1990; Giddens, 1998) or society-wide fragmentation (Furedi) - experienced at the institutional level as lack of coherence and direction, difficulty in making decisions, and a preoccupation with transparency as a way of winning public confidence - fuels a process of individualization (Beck, 1992; Giddens, 1994) or individuation (Furedi, 1997). This process would logically tend to make individuals more cautious, anxious, and untrusting than they were in the past. It is important to stress that this is an historical tendency, or inclination, not an absolute effect.

For Beck (1999) and Giddens (1998), the advance of knowledge creates a self-critical society - of which the media are a part - and individuals who are critical of society and cut free from the social bonds of tradition and the meanings they impart. This not only makes possible, it necessitates an intensely individual sense and experience of risk, and the close association of risk with personal lifestyle (Beck, 1999; Furedi, 1997; Giddens 1998). In the risk culture, the nexus between the social and individual levels is perception, or, more precisely, expectation, of risk: “The risk climate of modernity is thus unsettling for everyone; no-one escapes” (Giddens, as cited in Eldridge, 1999, p. 110).

Furthermore, the reflexive society is predicated on the fudging of the line dividing political and civil society, the public realm and the private, the social and the individual levels. This is the meaning of Beck’s “subpolitics”, his hoped-for displacement of traditional institutional power by new forms of diffuse, grassroots organization and incursion into decision-making processes by risk-conscious groups. Similarly, Giddens (1994) sees rational and emotional

communication as being complementary ingredients in successful personal and political relationships alike. He also posits what amounts to a blending of the individual and social levels of understanding and action:

In a post-traditional world order, individuals more or less have to engage with the wider world if they are to survive in it. Information produced by specialists (including scientific knowledge) can no longer be wholly confined to specific groups, but becomes routinely interpreted and acted on by lay individuals in the course of their everyday actions (Giddens, 1994, p. 7).

This vague formulation reveals the problem that stems from Beck's and Giddens's tendency to conflate the social and individual levels of analysis (Wilkins, private correspondence, 2006). When they assume that "reflexive modernity" will automatically prompt certain behaviors at the level of the individual, their theories appear to be contrived attempts to will into existence a positive new form of radical politics. Anderson (2000), for example, notes that Beck fails to go beyond generalizations in asserting the importance of new social protest movements in the "world risk society".

For Furedi (1997), the exhaustion of the old political visions has created a fragmented society of isolated individuals who feel vulnerable and anxious. The title of his book - *Culture of Fear* – makes clear that he sees the risk culture as irrational and panic-driven. He thus directly addresses the issue as one of heuristics, namely, a generalized tendency of society to promote safety as a fundamental value, and for individuals to worry unduly about the risks attached to a course of action. In a fragmented society, the individual fear of risk becomes a social dynamic. However, for Furedi, the heuristic is at the same time a direct product of developments at the level of society, and is encouraged by authorities who promote concerns by regulating, or constantly warning people about, behaviors – from smoking, to sun-bathing, to spanking children – that either have been proven to be, or are assumed be, harmful. Furedi sees this as an attempt by leaders and institutions of authority to create a therapeutic link

between themselves and citizens, who are defined, and encouraged to see themselves, as being incapable of deciding how to live their lives properly.

In this “culture of fear”, Furedi (1997) sees the media as amplifiers of risk, whose attempt to raise consciousness by inflating risks creates anxiety in individuals rather than clarity. Calling the inflation of risks “risk consciousness”, he contends, veils irrational, or, better, anti-rational and anti-humanistic, fear and anxiety. Because most people get information through the media rather than through direct experience (Singer and Endreny, 1993), Furedi attaches importance to the media’s “role in shaping society’s perception of risk” (1997, p. 51).

However, he also sees their role as secondary, for, in society there is a pre-existing

disposition towards the expectation of adverse outcomes, which is then engaged by the mass media. The result of this engagement is media which are continually warning of some danger. But the media’s preoccupation with risk is a symptom of the problem and not its cause. It is unlikely that an otherwise placid and content public is influenced into a permanent state of panic through media manipulation (Furedi, 1997, p. 53).

Because Beck (1999) sees the threat of manufactured risks as very real and tends to equate risk and risk perception, he ascribes greater importance than Furedi to the media’s role in framing risks for society. Risks, he writes, are “*open to social definition and construction*.” Hence the mass media and the scientific and legal professions in charge of defining risks become key social and political positions” (Beck, 1992, p. 23). Beck (2000) also acknowledges that, despite the great weight he attributes to the media role in framing risks, he has failed to investigate in detail the role of the media in the “world risk society”. The important role Beck assigns the media in the construction of meaning in society makes him interesting to many media researchers; but his failure to back up his general claims about the importance of the media as framers of social discourse also brings him in for criticism from those same researchers (Anderson, 2000; Cottle, 2000; Kitzinger, 1999; Tulloch, 2000). Giddens (2003), who assigns less of an important role to the media in interpreting and globalizing human experience, also tends not to go beyond general observations.

## II. How contemporary risk consciousness has evolved

The definition of risk compiled above requires empirical confirmation and assessment in terms of how media frame discourses reflect it. Many of the elements listed above can be present in different frames. The perceived global threat of communism during the Cold War, for example, does not make the Cold War frame a risk frame, according to the criteria established in this paper. Similarly, mistrust is hardly a new phenomenon; nor is contempt for authority or suspicion of science. It is thus important that attempts to assess whether these elements of contemporary risk consciousness constitute a new risk paradigm consider them in relationship to one another and in a historical context.

Since any theory of social change is necessarily a theory of history, then, this investigation must be historical as well as logical and empirical. It is necessary for researchers interested in the dynamics of social change to examine the risk frame, like any frame, in terms of its evolution through different historical periods. It is thus important not just to clarify the meaning of risk in contemporary Western society, but also to consider how meaning can change and how different frames take on growing weight, and how the media reflect that. Tracing the evolution of how the news media frame risk may enrich our understanding of social change and the role the media play in it (Norris, 1997).

### *Risk consciousness and its significance have changed throughout modern history*

Pearson (1983) finds continuity going back to the sixteenth century in British society's tendency to give itself up to periodic panics, particularly over the threat young people and popular culture pose to tradition and respectable society. The complaint heard in Elizabethan England that "popular songs too often presented criminals as heroes" (as cited in Pearson, 1983, p. 196) has a familiar ring half a millennium later. Pearson's account effectively questions the rationality of recurrent media panics about moral decline and social decay in general, and reveals the way ruling elites have used moral panics as a way of defining social



threats and problems and bolstering traditional values. However, it does so at the expense of showing that superficially similar panics can also mean very different things at different times, and at the expense of exploring the link between moral panics and contemporary risk perception. Risk and the way it is perceived are not timeless or undifferentiated phenomena that exist outside society, but evolving concepts that reflect and provide insight into the specific orientations, problems, and tensions within society (Beck, 1999; Furedi, 1997; Giddens, 1998; McRobbie & Thornton, 1995; Thompson, 1998).

Indeed, Giddens (2003) notes that in the Middle Ages the notion of risk was almost unknown. The word “risk” itself seems to have entered English “through Spanish or Portuguese, where it was used to refer to sailing into uncharted waters” (Giddens, 2003, p. 21). The notion of risk has meaning only when people believe they can make decisions about how safe they want, or need, to be. In medieval Europe, there was little scope for such decisions. The idea of human initiative in shaping society was restricted to the divine right of monarchs, and human control over nature was too limited for there to be a strong notion of what Wilkins and Patterson call “the consequences of choice” (1987, p. 90).

Thompson (1998) notes the importance of risk to understanding the modern moral panic, which he defines as the identification of someone or something as a threat to values or interests, featuring a fast build-up of public concern and a response from authorities or opinion-makers that result in some sort of social change. The use of the term “moral” in “moral panic”, he says, indicates that the perceived threat is a serious challenge to the cohesion and fundamental values of society.

While there is a relationship between terms like “moral panic”, on the one hand, and “risk” - and related words like “safety”, “health” and their derivatives - on the other, conflating them would conceal important recent shifts in the way threats are defined and values debated in society. The concept of moral panics originated in American sociologists’ theories of deviance and collective behavior in the 1960s (Thompson, 1988). In Britain, Pearson (1983) and others

debunked what they termed moral panics as they watched Prime Minister Margaret Thatcher rally conservatism around traditional law and order issues and Victorian values. British sociologists revisited the phenomenon in the 1990s, as a continuing rapid succession of such panics made researchers suspect they were of wider importance, rather than just “unrelated episodes of collective behavior” (Thompson, 1998, p. 140). Economic deregulation, immigration, and changing gender roles, Thompson argues, all had an unsettling effect on British society, generating fears that specific groups or behaviors were corroding traditional values and ways of life.

Thompson notes two significant changes in the panics of the 1990s. The first was the growing speed with which one panic story succeeded another in the media. The second was that, unlike earlier panics that had targeted a single, marginalized group - like drug addicts or young black muggers - panics were showing a growing tendency to

catch many more people in their net. For example, panics about child abuse seem to call into question the very institution of the family and especially physical relations between fathers and their children, perhaps reflecting a general sense of unease about masculinity and the role of the father (Thompson, 1998, p. 2).

Two observations can be appended to Thompson’s. First, whereas until the 1980s panics tended to depict moral decay as already doing evident harm to society (Pearson, 1983), today’s panics often focus more on fears of harm a risk may cause in the future. Uncertainty is the issue, for example, in the fear of industrialization leading to global climate change: “We don’t know what further changes will result, or the dangers they will bring in their train” (Giddens, 2003, p. 21). Second, whereas with earlier panics the issue was moral decline and the weakening of traditional ways of doing things, the risks people focus on today often have to do with pollution or health threats, particularly when contemporary lifestyles can be implicated (Furedi, 1997; Giddens 2003). Furedi (1997) identifies the AIDS panic of the 1980s as the advent of a new kind of moral panic, which mainly frames debate not in traditional terms of moral versus immoral behavior, but of healthy versus unhealthy behavior. This new kind of panic, Furedi argues, is not an attempt to defend traditional values, but, rather, a defensive

response to the lack of any consensus on values. Because it is a rearguard adaptation to a climate of moral relativism, he says, it takes on the appearance of being non-judgmental and value-free.

Eldridge (1999) provides empirical evidence of a replacement of the traditional moral frame by a technical health risk frame that is only superficially non-judgmental. He documents the way that the conservative British tabloids moved in the 1980s from presenting AIDS as a gay plague, and therefore a moral indictment of homosexuality, to presenting it as a universal health threat. In the space of a few years, conservative tabloids had abandoned the attempt to frame AIDS as an issue of traditional morality, and adopted the risk frame as the model for judging and regulating individual behavior.

The explanation that can be derived from the work of Furedi (1997) and Giddens (1998) for the growing frequency of panics and their growing tendency to implicate aspects of mainstream society, rather than marginalized elements seen to threaten it, lies in the importance they attach to the decline of traditional sources of authority. As those sources have lost their weight in of society, old-fashioned panics centering on perceived challenges to traditional moral values have not only lost their resonance with large sections of society; those traditional sources of authority have themselves become the focus of concerns. They are seen as bastions of risk implicated in the dangers produced by modernity. Thus, the media are more likely to focus their attention on what they perceive to be myriad unhealthy or otherwise dangerous aspects of modern social life. Whereas key threats to society were once perceived as being invasive and disruptive of established order, they are now often seen as emanating from mainstream society itself. This does not mean that the advocates of traditional values have entirely disappeared, but that they are now just one voice among the “plurality and divergences of opinion that characterize today’s (and probably yesterday’s) ‘moral panics’” (McRobbie & Thornton, 1995, p. 569).

McRobbie and Thornton are right to note that traditional values now operate in a relativistic framework, but, in attaching importance to the uncontroversial point that traditional values never had a total hold over society, they understate both the force traditional values once had and the importance of the consolidation of the relativistic outlook in the West, and perhaps around the world. In 2000, for example, the Greek Orthodox Church tried to resist the government's decision to align itself with European Union regulations and remove people's religious denomination from the identification cards all Greek adults must carry. The Archbishop, however, did not employ the Church's traditional nationalistic argument that being Greek means being Christian, and Christian equals Orthodox. He argued, instead, that in the multi-cultural tapestry of the European Union, Greeks have a right to their identity just like anyone else; and that, in a pluralistic society, individuals should have the right to choose whether they want to have their religious faith noted on their identification cards or not. Rather than asserting itself as the infallible and hegemonic moral leader of the Greek nation, the Church invoked its vulnerability in the face of the homogenizing forces of globalization and presented the matter of putting religious denomination on an ID card as a matter of individual lifestyle choice.

Though the retreat of traditional values, universal by impulse, into relativism may lend their remaining advocates an air of mainstream reasonableness, it also marks the defeat of those values as a regulating and cohering force in society and indicates a wider collapse of their moral integrity (Furedi, 1997; Giddens, 1998). The Greek government removed religion from the identification cards. Since then, the Church has featured in the news mostly in connection with a series of scandals involving money, sex, and the judiciary.

The fear that modern society is a destructive force may have become widespread relatively recently, but it has deep roots. Ceasar (2003) notes that for two centuries European intellectuals have often cast their anti-modernism as anti-Americanism. This anti-modernism went on the political offensive in the wake of the French Revolution, when worried conservatives tried to

dampen enthusiasm for change with the argument that “nothing created or fashioned under the guidance of universal principle or with the assistance of rational science...was solid or could long endure” (Ceasar, 2003, p.8).

It was, however, the United States, whose founders were confident, if inconsistent, advocates of Enlightenment principles, which would become the main target of anti-modernism. The German poet Heinrich Heine lamented that American society as a place where “the most extensive of all tyrannies, that of the masses, exercises its crude authority” (as cited in Ceasar, 2003, p. 9). Later nineteenth-century critics of the United States feared that its egalitarian principles were extinguishing the idea of racial purity, an idea Ceasar says would appeal, in revised form, to sections of the late twentieth-century left, which criticized American society for fostering cultural and ethnic blandness and homogeneity.

A more recent form of anti-Americanism as a reaction against the destructive rationalism of modernity emerged during the period of heavy industrialization at the end of the nineteenth century. Friedrich Nietzsche, later so influential with the Frankfurt School and the New Left of the 1960s, expressed revulsion at what he saw as Americans’ desire to reduce everything to “the calculable in an effort to dominate and enrich” (Ceasar, 2003, p. 12). In the early twentieth century, Germany’s Arthur Moeller Van den Bruck “proposed the concept of *Amerikanertum*, (Americanness)” (Ceasar, 2003, p. 12), a spiritually degenerate condition which marked ““the decisive step by which we make our way from a dependence on the earth to the use of the earth,”” (as cited in Ceasar, 2003, p. 12). The final form of anti-modernism expressed in terms of anti-Americanism was the view, expressed by Martin Heidegger, that the United States had spawned unbridled, alienating consumerism: ““Consumption for the sake of consumption is the sole procedure that distinctively characterizes the history of a world that has become an unworld”” (as cited in Ceasar, 2003, p. 14).

Focusing on the evolution of anti-Americanism within the United States in recent history, Hollander (1995) traces it through changes in the way the American media perceive problems

and threats. Since the 1960s, he argues, the American press has increasingly come to present American society as thoroughly depraved. Whereas once the press might have exposed a crooked official, now it is likely to see institutions themselves as being inherently corrupt. Hollander suggests that this reflects Americans' loss of faith in their country, which, however, reveals a deeper sense of malaise about modernity.

There is a polemical note of exasperation in Hollander at the refusal of the media to applaud America patriotically, but his work draws an interesting link between contemporary anti-Americanism and the emergence of concerns about modernity. The loss of faith in modernity, he writes, has accompanied a growing uncertainty and aversion to risk. He sees a relationship between a growth in the concern about environmental, nuclear, and other risks and the decline of the political movements of the 1960s. Similarly, the decline of political movements with agendas for fundamental social change parallels a growing focus on personal health and safety in what seems to be an irredeemably unhealthy industrial, consumerist – altogether “American” – society (Hollander, 1995).

Environmental degradation has been an area of risk concern in Western countries for the past several decades. Evidence of its emerging importance came with the blossoming of the Greens in Germany starting at the end of the 1970s (Giddens, 1998). However, a rapidly budding concern about humanity's impact on the natural environment, and thus on the prospects for the future of humanity itself, had already become evident in books like Rachel Carlsen's *Silent Spring*, published in 1962, and the Western news media in the late 1960s and early 1970s. According to some observers (Alan, Adam, & Carter, 2000), shots of the earth from the moon in 1969 created a sense that everyone was a global citizen, and the earth a fragile entity that needed care and protection. The same year, in the United States, *Time* magazine introduced an 'Environment' section. These phenomena were followed by the first attempts to institutionalize concern about the environment at the governmental level in the United States, with the creation of the Environmental Protection Agency and the Council on

Environmental Quality in the 1970s. The Hollywood films *No Blade of Grass* (1970), *Silent Running* (1972), and *Soylent Green* (1973) depicted, respectively, a mysterious crop virus, human disinterest in nature, and over-population leading to global food shortages and a wretched human existence in the not-too-distant-future, barely sustainable and hardly worth having.

These developments indicated a shift in the way the mainstream media, and the rest of society, framed the relationship between humanity and nature. The old emphasis of conservationists on protecting natural resources was expanded to include the idea of the environment as a social problem, and the prospect of human extinction as a result of environmental devastation was considered a possibility (Alan, Adam, & Carter, 2000). In the 1980s, the media interest in the risk that humanity posed to itself and the environment continued to grow. In a study of the American national press, Wilkins (1993) found a steady growth in the attention given to the greenhouse effect as a problem.

There were also concerns about other possible effects of industrialization. In the 1950s, the putative effects of food processing and pesticides on human health started receiving much attention in American society. The Delaney Clause of the 1958 Food and Drug Act prohibited carcinogenic additives in food, and the clause was retained for decades despite the emergence of scientific evidence that carcinogens were a threat only after reaching threshold levels in human beings (Gowda, 1999). Fears about pesticides on apples, “mad cow” disease, and dioxins in various industrially produced foods have been on the menu of concern for the media, policy-makers, and the public in different countries since the 1970s.

Fear of dietary fat became firmly established in the 1960s. In the United States, supporters of Ralph Nader, linking over-consumption of commodities with poor health, complained that purveyors of foods containing saturated fats were ruining the health of Americans for the sake of profit. Insiders, however, were also voicing concerns that affluence was the problem with modern society. Ironically, the Senate Select Committee on Nutrition and Human Needs,

initially set up in the 1960s to study hunger, was focusing, by the 1970s, on “what it called ‘diet related to killer diseases’” (as cited in Garrety, 1997, p. 748).

The cholesterol concern highlighted an important feature of many, though not all, of the risk issues raised in contemporary society: though they may be involuntary in terms of their genesis, individual responsibility is often held up as a factor in avoiding the risk, to both the individual and society. As Garrety notes regarding the consolidation of cholesterol concerns in the 1960s and 1970s: “The idea that chronic diseases could be prevented by eating a healthy diet was attractive to health-policy makers. An increased emphasis on individual responsibility and prevention was portrayed as an effective means of reducing health costs” (Garrety, 1997, p. 747). For Furedi (1997), not just healthy dieting, but healthy behavior in general, has become increasingly attractive to politicians because it provides them with a rationale for intervening in, and regulating, people’s lives.

Science, in Beck’s (1999) age of reflexive modernity, is not just an object of concern because of the side effects of technology. It has also become a tool for measuring the negative impact of contemporary lifestyles as personal health has emerged as a focus in the media and the rest of society. Indeed, science, or at least some scientists, contributed to an emerging consensus in the 1970s that preventive lifestyle choices could reduce health risks and medical costs.

Looking at phenomena like this in an historical context reveals that what merely appear to be monolithic frames are the product of complex social forces, and that they can develop slowly, even imperceptibly. The belief that high cholesterol diets, for example, play a role in coronary heart disease dates back at least to Tsarist Russia, where researchers asserted a link on the basis of experiments that consisted of feeding large numbers of eggs to rabbits. The scientific community dismissed those studies, largely because rabbits do not eat animal products by nature, and because they considered eggs to be a healthy part of humans’ natural diet.



The interest in cholesterol persisted nonetheless. Following World War II the cholesterol thesis was hotly disputed in the American medical community, but the view that high-cholesterol diets are deadly was on its way to becoming an indisputable fact in American society. In the 1950s, news reports reflected the seesaw battle between scientists who supported and rejected the cholesterol thesis. The food industry inevitably became involved. In 1958, advertisements celebrated the first margarines made with polyunsaturated fats as a protection against coronary heart disease, as marketers tried to tap into what they perceived as Americans' growing concern with dietary risks. In 1959, one member of the American Medical Association Council on Food and Nutrition grumbled that Americans' level of interest in possible links between food and heart disease was hysterical (Garrety, 1997), but, though science would not resolve the controversy, the view that diets high in cholesterol cause heart disease would prevail. Of particular interest to the present study on risk culture is the statement published in the American Heart Association journal *Circulation*, in 1984, by proponents of the low-fat diet:

Although there is incomplete proof that some of the recommended life style interventions will in fact lower the incidence of CHD, there is much evidence to suggest that they should. The skeptic can take comfort in the fact that what is recommended is not dangerous and is demonstrably hygienic. The huge burden of CHD does not permit awaiting definitive proof of the efficacy of the suggested modifications in life style (as cited in Garrety, 1997, p. 746).

It took three decades for the cholesterol thesis to become a strongly enough held belief, and the sense of urgency it generated so great, that its medical advocates could openly dismiss the absence of firm scientific evidence to support it as irrelevant and dangerous. The uncoupling of empirical evidence from recommendations regarding action is the foundation of the precautionary principle, which Beck (1999), Furedi (1997), and Giddens (1998) identify as a chief feature of the risk culture. Paradoxically, the assumption that a low-fat diet is harmless is not grounded in evidence either. One of the peculiarities of the precautionary approach to living is that it may counsel behavior the safety of which is unproven. Also striking in the

passage above is the authors' decision to throw in "hygienic" improvements - which refer more to morality than health - as an added benefit of adopting their recommendations.

*Factors that can confound the classification of risk consciousness in the news media*

The media are both gatekeepers and participants in the framing process (Gamson, 2004). They employ interpretive frames in selecting and covering news, and can amplify issues (Thompson, 1998) or omit information and concerns (Gamson, 1989). The media report lay and expert voices and viewpoints (Miller & Riechert, 2000), and, today, "most political strategies are media strategies" (McRobbie & Thornton, 1995, p. 571). Much of people's information about the world, then, including their information about risks, comes from the media (Singer and Endreny, 1993; Wahlberg & Sjoberg, 2000). Similarly, interpretations of risk feed into the media. Thus, the conclusions of some social scientists, that risk consciousness and the need to manage uncertainty have become central to how we experience, understand, and judge our world and orient ourselves to the future, make the study of how the media present risk important to media researchers and journalists.

Identifying and gauging the extent of risk consciousness in the news media, however, is not easy. Other frames and news considerations may exaggerate or conceal the media's propensity to frame news in terms of risk. In her study of the frequency of greenhouse stories in the American national press, for example, Wilkins (1993) found that over half the greenhouse stories appeared during the five hottest months of the year. This suggests that the news media's frame of risk is not autonomous, but can be mediated by other types of news frames or news values; in this case, immediacy and impact, or the need for at least an illusion of palpable consequences of the risk under discussion.

Since the media do not cover risks themselves, but the consequences of taking risks (Wilkins & Patterson, 1987), the risk frame can overlap other types of frames. Among these are conflict and economic consequences frames, for example, which are important because they reflect general news values (de Vreese, Peter, & Semetko, 2001). Given the importance of

human culpability - risky behavior - in the perception of risk, stories that can be framed in terms of conflict and economic consequences may equally be stories that frame risk. Similarly, the gradual emergence of concern about manufactured risks in the decades after World War II coincided with the Cold War, itself partly grounded in the perception of the threat of nuclear obliteration.

Alternatively, news stories that contain no reference to risk, such as a story about people recycling, may implicitly rely on a risk frame to make sense of the act of recycling and justify the decision to write and print the story. Such a story may also contain an important message about people working together. This might seem unrelated to the “world risk society”. Since, however, for Beck (1999) and Giddens (1998) the need to combat and manage risk is the single most important unifying human experience today, the recycling story would be a risk story.

Some stories, even those that feature risk, may receive no coverage at all, for reasons that have to do with how much news there is on a given day, or the whims of a news organization. For example, the *New York Times* apparently once decided against covering reported links between aerosol cans and ozone layer depletion, because “there was too much ‘doomsday reporting’ going on at the moment” (Wahlberg & Sjoberg, 2000, p. 34).

While it is beyond the scope of this paper to examine the effects of media presentations of risk on the individual, the kaleidoscope of individual concerns and perceptions are important in that they may find their way into the news, and thus the news frame of risk. Perceptions, and thus reports, of risk may reflect divisive moral, political, or lifestyle identities. People who find one kind of activity risky may not see another kind as risky. People who support the right to abortion, for example, may attribute to a conservative agenda claims that abortion is a health risk, and focus on the risks to a woman’s quality of life contained in an unwanted pregnancy. Conservatives, meanwhile, may laugh off, as liberally motivated, claims that nuclear energy is risky, arguing that it is cleaner, and thus less risky, than other energy forms (Furedi, 1997). Some people oppose American intervention in Iraq because it will increase the risk of terrorist

attacks; others argue that precautionary intervention reduces the risk from terrorists. Or, to take a more specific example: following the election of a member of the British National Party (BNP) to a local council in London in 1993, the BNP paper “wrote hysterically about the lost neighborhoods of the white working class”. In opposition to the BNP, the Socialist Workers’ Party’s paper “recounted how full-out Nazism was just around the corner” thanks to the protection the police were providing the BNP (McRobbie & Thornton, 1995, p. 568). This example is particularly interesting because it illustrates how the traditional conservative moral panic tends to bewail social decline that has already occurred (“lost white neighborhoods”), while the contemporary panic tends to focus on a risk that will inevitably result in disaster (“full-out Nazism was just around the corner”).

Alternatively, people may agree that a risk exists, but still interpret the source of that risk differently, within the context of their own pre-existing frames for understanding the world (Thompson, 1995). A study of the fears of elderly people in Australia, for example, found that some of them believed that unemployment was the cause of crime, while others put it down to television violence (Tulloch, 2000).

These examples show how disagreement about what is risky or the origins of a risk, and even the reason why a journalist or news organization decides to cover or not to cover a story, may conceal an underlying, consistent frame of risk consciousness (de Vreese, 2001; Furedi, 1997). In other words, while people may disagree about what constitutes or causes a risk, in a risk culture there is widespread agreement that socially produced risks are a pervasive threat to nature, the social fabric, and individuals. It is not the nature of a specific risk, but the general predisposition to view issues, people, and behaviors through the prism of risk, that is of importance in confirming the existence of a risk culture (Furedi, 1997).

Likewise, the challenge in studying dominant frames does not lie in finding evidence of their absolute nature, but in discovering them amid a variety of perceptions and influences over how society understands itself. The use of frames reflects a need to make easy sense of the

world (Norris, 1997) or to impose a certain interpretation of things (Entman, 1993). In drawing attention to certain facts and minimizing others, frames thus may not reflect unanimity in viewpoints or absolute clarity in judgment, but be an attempt to combat quite the opposite phenomenon, which is opposition, uncertainty, and complexity:

The importance of framing effects on public opinion is clear. Political stimuli are inherently ambiguous; in matters of principle or fact, political issues are characterized by a multiplicity of interpretations and perspectives.... ordinary people express considerable uncertainty and even stress when describing their political views and they often appear to offer what appear to be contradictory positions on related issues (Iyengar, 1990, p. 20).

Vagaries like those outlined in this section mean that a content analysis designed to identify a risk culture frame should not be exclusively concerned with calculating the frequency of risk stories on the basis of manifest countable criteria, such as the appearance of certain words. As Hansen (1998) notes, it is not repetition that is significant, but the repetition of significance.

Researchers need to ask, “When is a report *about* risk?” (Kitzinger, 1999, p. 57). Armed with a precise and detailed definition of risk, they can focus on studying if, and exactly how, news stories reflect perceptions of risk. Risk consciousness may come in many guises and be offset by other considerations, or frames. The risk reference may even be subtle or latent in a text (Entman, 1993). This study, however, does not try to siphon latent meaning from texts. Rather, guided by the view that latent and manifest meaning exist on a continuum rather than as clearly delineated entities (Riffe, et al., 1998), it rests on the application to texts of categories that are both articulated and specific in an attempt to catch as much empirical evidence – or counter-evidence – as possible without resorting to inconsistent judgments.

Answering Kitzinger’s question is not easy, but doing so is a necessary step in any attempt to identify and understand the significance of the way the news media frame risk. For, despite the existence of multiple framing opportunities and perspectives, “these frames should not be conceived as disembodied but as selected to support a way of life and to reject others” (Wildavsky, 1998, p. 273). Given the possible importance of media frames in reflecting, and perhaps in shaping, risk consciousness, this study tries, despite the confounding factors

discussed in this section, to answer the question: Is there a media frame that reflects the existence of a risk culture?

### III. Method: Constructed-week content sampling of two newspapers over three decades was used to test for the existence of a risk culture frame

The conclusion of Beck (1992, 1999), Furedi (1997), and Giddens (1998, 2003) is that, for better or worse, contemporary society has a strong tendency to see itself, human activity, and the future through the prism of manufactured risk. If their claims are correct, they should be observable in the media of different Western countries. Finding evidence in support of their claims in different countries would be a strong argument that researchers need to consider risk consciousness not just in terms of the specific contexts in which it appears and fuels controversy, but also as an important society-wide phenomenon with a powerful internal coherence and logic that exists independently of any specific issue.

The sociologists' theories are also theories of change, which is always accompanied by conflict. Therefore, there should be evidence that the risk culture has not been a permanent fixture of history, and that its emergence has been marked by controversy. This study therefore also asked the questions: Has the way Greek newspapers frame risk changed over the past three decades, and, if so, how? If there is evidence of the consolidation of a powerful risk frame in the way newspapers present stories and issues, does it co-exist with other frames, especially ones that contradict it, like a strong faith in technological progress?

#### *Media frame analysis can reveal changes in the way society perceives itself*

Frame analysis can examine the nature of frames in media or their effects on media users (de Vreese, et al., 2001). This study did the former, using a content analysis of Greek newspapers over three decades to identify media frames and detect any changes in them. It treated Greek newspaper framing of risk as a cultural artifact that could be used to test the validity of the claims of sociologists elaborated above.

Researchers can use issue-specific or generic frames in exploring economic and political issues (de Vreese, 2001). Issue-specific frame studies allow for detailed examination that can

provide nuanced insights, but generic frames “transcend issue, time, and space limits” (de Vreese, 2001, p. 109), and are therefore superior as a tool for building theories and making comparisons (de Vreese, 2001). Some generic frames cited by de Vreese are “human impact”, “powerlessness” and “moral values”. This study attempted to use “risk” as a generic frame tested over time, to see if such a frame has emerged and grown in importance for media as a way of understanding the world and determining what kind of human behavior and activity is acceptable. Risk can be an element of virtually any kind of story (Kitzinger, 1999), from disasters, to nutrition, to politics. Understanding how the news media frame risk means looking for similar messages about risk in different stories and in different kinds of stories. This can allow researchers to seek out general patterns in society’s understanding of itself: “By extending the idea of frames beyond the single story, more complicated layers of latent meaning can be tapped” (Gamson, 1989, p. 159).

Generic frames are also important in the context of globalization. The globalization of news is not merely about the international coverage of stories. That goes back at least to the nineteenth century, when the first translation and international news services were founded (Thompson, 1995). Today, however, in the theories of Beck (1999) and Giddens (2003), “globalization” derives its meaning from social phenomena - namely, the effects of industrialization and technology, the weakening of the authority of the nation-state and tradition, and the transnational nature of risk - that their authors argue are of far-reaching significance, summed up by Beck’s phrase, “world risk society”. The internationalization of social experience, to some extent through the conduit of the media, is central to Beck’s (1992) and Giddens’s (1998) understanding of, and proposed remedies for, the problems of the modern world. Furedi (1997) considers Beck’s and Giddens’s formulations of the world risk society more indicative of Western pre-occupations - particularly a narrow and unjustified sense that technological risks have the world spinning out of control - than of the true nature of



the risks that face most people on the planet. Yet, his culture of fear is certainly applicable to all Western, or developed, countries.

Thus, the interesting and important differences in the way that communities around the world treat similar domestic issues, or interpret and integrate international media stories, do not diminish the potential significance of the similarities in coverage. One of the assumptions of this study was that the theories of sociologists based primarily on examinations of Britain, Germany, and the United States can be tested fairly in the context of the Greek experience. The concern here was not to identify the sporadic, exceptional, and merely local, but to trace and analyze the changing media perception of the normal and widely resonant over several decades. Generic frames are better suited than issue-specific frames to a research project that aims to interpret the historical significance of media frames.

Finally, generic frames are particularly well suited to a study of the much-discussed, yet elusive, risk culture. Since Beck, Furedi, and Giddens identify fragmentation and individualization or individuation as key contributors to risk perception, it is reasonable to suppose that a risk culture frame would not appear in the media as a coherent frame in the way that the Cold War frame did. Thus, some researchers (Dunwoody & Griffin, 1999; Vasterman, 2000) look for structural, often local, explanations of the media's tendency to exaggerate risks. This approach, which produces valuable insights into risk-related issues and the way local media operate, contains a tendency to compartmentalize risk consciousness. Rather than seeing it as a pervasive frame of social discourse, such an approach explores it on a case-by-case basis, analyzing disparate issues and journalistic practices, a connection between which is by no means either obvious or accepted.

Despite the incoherent nature of risk consciousness, for the past few decades researchers across the social sciences have noted a growing importance of risk discourse in Western society. This study attempted to contribute to the debate by seeing if Greek newspaper

coverage confirms the view that growing concern with risk and uncertainty is a significant general, rather than a local, issue-related, phenomenon.

*Content analysis is a powerful empirical tool with which to test and build theories*

Content analysis has several strengths as a research tool. It is rigorous and systematic, which means that its results are open to methodological scrutiny and testing via attempts to replicate results. While researchers today often shy away from making claims of objectivity for content analysis (Hansen, 1998), amenability to reliability checks and replication remain important to anyone who believes that objectivity and theory building are a *sine qua non* for increasing humanity's cumulative knowledge, as opposed to just warehouses of information and observations.

Because it is a quantitative tool, content analysis is also good for mapping change and making longitudinal comparisons, and, therefore, for revealing trends. Counting co-occurrence and frequency - and changes thereof - can be meaningful in the context of analyzing theoretical relationships (Hansen, 1998). Riffe, et al. (1998) cite a 1985 study by Strodthoff, Hawkins, and Schoenfeld which found that, over time, "information about environmental issues became less abstract and moved from specialty magazines to more general interest magazines" (p. 55).

That study, the purpose of which was to study the diffusion of environmental movements, exemplifies the value of written text as research material. Not only does it remain unchanged through time; preserved texts are a potentially bountiful source of meaningful data for the researcher. Analyses of content can be conducted at quite sophisticated levels, as long as the theoretical framework of the researcher is clear. As Riffe, et al. (1998) point out, the meaning of a study derives from the theoretical framework, not the research instrument.

The fixed nature of texts makes content analysis attractive in other ways. It is an unobtrusive method of research. Unlike interviews and surveys, texts are communication artifacts not susceptible to distortion as a result of the process of data collection. Content

analysis is useful when the researcher has access only to documentary evidence, or when there is a large amount of material to be studied (Riffe, Lacy, & Fico, 1998).

Though content analysis is often criticized for merely counting without showing that frequency indicates significance, it is not limited to counting the frequency of words or length of articles, even though that - like the omission of words and articles - might be important. Researchers can also use explanatory and analytical text to compose a picture of important social trends and concerns (Riffe, Lacy, & Fico, 1998).

There are other criticisms of content analysis. Researchers may be influenced in their selection of content by bias or oversight. It is difficult to know how far it is safe, if at all, to extrapolate from texts to social conditions, or if, in the case of a study spanning many years, a comparatively tiny number of texts can be representative of an entire medium. Unmeasured inconsistencies, such as seasonal changes in news coverage or journalistic whim, may confound the data the researcher measures. Finally, it is not always possible or appropriate to use quantification in trying to classify, predict, or gauge the intensity or significance of human behavior. These criticisms have merit; however, they indict abuses of content analysis and not the method as such. Content analysis is a versatile tool. It is up to the researcher to use it appropriately (Hansen, 1998).

*This study was designed to test risk theories by analyzing Greek newspaper content over several decades*

If used properly, then, content analysis can be a good tool for describing changes in the way the Greek press has reported risk over the past three decades. It is especially well suited to a study the aim of which is to test for a growing trend toward risk consciousness over a long period of time, and its consolidation into a risk culture paradigm. Media frames can only be identified by studying the content of texts.

Testing for the evolution of the risk frame requires comparing the prevalence across years of the different characteristics of risk consciousness adumbrated earlier in this study (pp. 25, 26).

These characteristics can be summarized as:

1. the precautionary principle, and uncertainty as by its nature problematic;
2. sense of vulnerability before anticipated calamities attributable to modern society;
3. heightened consciousness of the body's vulnerability owing to scientific knowledge;
4. the involuntary nature of risks; blaming others;
5. the already occurring, adverse impact of science and technology on the environment, health, and quality of life, and perceived inability of society to solve problems it creates;
6. mistrust of traditional sources of authority; sense of incompetence and/or conspiracy;
7. mistrust of other people and the normalization of abuse;
8. a low estimation of people's ability to manage life and shape their destiny without intervention; the use of health metaphors and "addiction" to categorize behavior and relations;
9. the global, uncontrollable nature of threats; and
10. the use of risk, vulnerability, or victimization to build social cohesion, and the celebration of victim-hood, and blaming others for one's behavior.

(See Appendix B for final wording used to code categories)

In testing for the existence of a risk culture, none of these characteristics is indicative of much on its own. Because many of these phenomena have existed in isolation and in various contexts throughout modern history, this study paid particular attention to changes in the frequency with which they appeared, and any tendency for them to appear increasingly together. The increasing and consistent clustering of these characteristics in single texts and the growing size and prevalence of clusters of those characteristics - which are inter-related in the sociological theories under examination here - could indicate the emergence and consolidation of a specifically modern risk culture. Indeed, the specifically contemporary meaning of such

elements as “mistrust of other people” could become apparent in the context of the other risk culture elements cited in this paper, especially those elements that refer to the manufactured nature of risks and the limits of science, reason, and social institutions in creating an ever-safer world.

This study, then, attempted to use an articulated, theoretically specific anatomy of risk consciousness as its methodological guide (see Appendix A). The theoretical assumption was that an historical tendency for these characteristics to appear together in greater number within units of analysis and in greater frequency across units of analysis would suggest the emergence and growth of a media risk frame. Such phenomena would in turn reflect a similar emergence and growth of a risk culture. Because, then, the unit of analysis must be long enough to make possible the presence of multiple risk consciousness characteristics, and because the clear articulation of the risk culture characteristics is crucial to testing the sociologists’ theories, the unit of analysis in this study was the entire newspaper story. As clustering of risk factors could be a function, in part at least, of story length, stories were categorized according to how many words they contained.

While this paper did not make assumptions about the effects of newspapers, it did assume that the way they frame stories reflects debates and outlooks across society. Such a broad function justified sampling of both news stories and editorials. Sports, entertainment, and advertisements were excluded. Each story was classified as news or editorial and assessed for the number of risk culture characteristics it contains. Similarly, each article was assessed for the number of non-risk culture characteristics it contains. Thus, the following list of non-risk characteristics that mirror the list of risk characteristics was used:

1. untroubled support of scientific experimentation when there is no evidence to show that it could result in harm to human beings and a willingness to experiment in personal and social life;

2. confidence that human beings can avoid calamity or deal with it when it occurs; social optimism;
3. sense of bodily security unaffected by dietary, environmental, or other risk knowledge;
4. unconcern for the involuntary nature of risks facing oneself;
5. the positive impact of science and technology on the environment, health, and quality of life so far;
6. not criticizing traditional sources of authority, or criticizing them for reasons not related to trust or hypocrisy (instead, for example, criticizing them on the basis of policies or dogmas);
7. trust of other people and the view that abuse is not the norm;
8. a high estimation of people's ability to manage life without intervention; confidence in people's ability to manage risk, leading to confidence that risks are worth taking, and a disinclination to see behavior in terms of health or addiction;
9. seeing globalization as promoting technological advance and so minimizing risk; and
10. the rejection of using risk, vulnerability, or victimization to build social cohesion, reluctance to be classified as a victim, and taking responsibility for one's behavior.

(See Appendix B for final wording used to code categories.)

This study logged only manifest content, as latent content readings increase the risk of the coder imposing unintended meanings on a text, particularly when the text is thirty years old and may thus reflect considerations and pre-occupations unfamiliar to the coder or researcher. As Riffe, et al. (1998) point out, manifest content is important precisely because it is manifest to most people.

Researchers conducting longitudinal content analyses can choose to study the way certain issues or stories are covered at different times. This is a good way of locating evidence of changing perceptions. However, it also requires that the researcher scan large amounts of text to cull all the relevant stories falling within a given time span. In addition, issues may be important at one time and then become insignificant or absent altogether at another. This study,

an attempt to test the general predisposition to view things through the prism of risk, did not distinguish between news and editorial pieces on the basis of subject matter.

*Constructed-week samples provide comparatively high rates of reliability*

One of the problems in longitudinal newspaper studies spanning decades is ensuring that samples are of manageable size, but also representative of large amounts of material. Riffe, Aust, and Lacy (1993) note that simple random sampling fails to take into consideration that certain days of the week with peculiar characteristics, like a large news hole, could be selected several times in random sampling, leading to distortion in a sample. In a six-month newspaper population study they conducted to test the reliability of different sampling methods, they found that constructed-week samples were far more reliable than both random samples and consecutive-day samples. None of their one-, two-, three-, or four-week consecutive-day samples fell within the Central Limits Theorem requirement of 68% of all random sample means falling within one standard error of the population mean. Of the four random sample weeks, only one – the four-week sample – met that test. All of the four constructed-week samples, however, easily satisfied the 68% requirement: for one and four weeks, 85% of the sample means were within one standard error of the population mean; for two and three weeks, it was 90%. The authors concluded that two constructed weeks should provide the same results for a one-year period.

This study followed that constructed week approach in sampling content of newspaper content from the leading, mass-circulation left-leaning Greek daily, *Elevtherotypia*, and its broadsheet conservative counterpart, *Kathimerini*, at three junctures: 1977, 1994, and 2004. The point of the study was to test for the diffusion of risk consciousness in the news media, not its intensity at extraordinary moments. The years were selected in the hope that they would be representative not of extraordinary periods in terms of economic, political, or social crisis or natural disaster; and that they would reflect an equal distribution of time in government for socialist Pasok and conservative New Democracy.

Thus, while the researcher originally considered starting with 1974 – the year that democracy was restored in Greece – the need to avoid extraordinary historical moments led to the decision to move the starting point forward three years, to 1977, when the upheaval of the political transition period would have subsided. 1977 was an election year, but the researcher did not consider this to be an event extraordinary in the sense that it would somehow distort risk perception or coverage. This may, however, have accounted for one of the most surprising findings in the study, which was that almost half of the references to non-risk categories in 1977 came from “opposition” sources (see discussion of Table 20).

1994 was selected for three reasons: first, it was far enough away from the earthquake of the end of the Cold War and the less dramatic collapse of the conservative government in 1993 to be a non-extraordinary news year; second, it was roughly between the two end-points of the study (1977 and 2004); and, third, since the sociologists’ theories lend great significance to the end of the Cold War as a spur to the development of risk consciousness, the researcher considered it important that two of the three study years be post-Cold War, so that any tendency for such a development could be detected.

2005 was originally selected for the study, but was replaced by 2004 because of the need to equally distribute the time frames studied between the parties in power. New Democracy was in power throughout 1977 and Pasok throughout 1994. This meant that the final year should be divided between them and 2004 was split between the parties: Pasok held office through the spring, and New Democracy thereafter. 2004 was, of course, an extraordinary news year for Greece, given that Athens hosted the Olympics in the autumn of that year. However, the researcher concluded that 2004 was not an extraordinary year for social crisis or natural disaster, and so would not distort normal perceptions or coverage of risk. This might seem odd given the fact that fears of terrorist attacks at the Games concerned the American and British media and even some prominent athletes. However, perceptions in Greece of the terrorism issue were quite different, as indeed they had been throughout the 1970s and 1980s when the



American government and media often focused on the threat to American lives from terrorists – especially the notorious 17 November organization. Greeks have never felt particularly concerned about terrorism as a threat to their lives. Indeed, Greeks are much more likely to feel concern about what are perceived as the destabilizing impact of American foreign policy and military intervention in the region, as, for example, in the case of the Yugoslav conflicts of the 1990s.

All comparisons in the study were based on data extracted from the sample of 240 articles, which breaks down into 120 articles from each newspaper or 40 articles from each newspaper per year. The nationwide daily average circulation figures and sales rank for the two papers for the three years were:

	1977	1994	2004
<i>Elevtherotypia</i>	132,834	118,046	70,344
Rank among left papers	(3)	(2)	(2)
<i>Kathimerini</i>	30,011	36,814	46,984
Rank among conservative papers	(5)	(3)	(2)

(Athens Daily Newspaper Publishers Association). Comprehensive circulation tables for all Greek newspapers from the 1970s to the present are available in English on the A.D.N.P.A. Web site, at [www.eihea.gr](http://www.eihea.gr).

The picture is confusing for *Kathimerini*, since the figures quoted above for that paper include Sunday as well as daily newspapers. So, while its total sales figure for 1994 was 11,117,916, of those, 6,717, 724 were Sunday editions. Nonetheless, *Kathimerini* remains an important selection for this study, since it is the only conservative establishment broadsheet in the country, and certainly the most staid of all the newspapers.

*Elevtherotypia* has a tabloid format, but is broadsheet in content. No mainstream left-wing newspaper has had more credibility than this paper since the fall of the Junta in 1974. This, and

its sensitivity to, and identification with, political trends among social democratic parties in Europe and the Democrats in the United States, make it a good selection for the current study.

1977 and 1994 editions of both newspapers were available in original print form on microfilm at the Library of the Greek Parliament in Athens. The original hard copies of the 2004 editions were obtained from the Deree College Library in Athens. The researcher and co-coder who participated in the coding reliability test are both college professors of communication, are fluent in English and Greek, and have worked extensively as journalists in both languages. This helped to ensure that nothing was lost – or illegitimately gained – in translation during the coding process.

The objective of the researcher has been to identify the number of risk or non-risk elements found in each article. The study samples comprised the front-page lead story, the editorial, and two other news stories selected randomly with lots. Front-page and editorial stories were selected because of their importance in highlighting issues of concern for society. The other news stories ensured that as many types of news stories carried by the newspapers were represented in the samples as possible.

The different lengths of the newspapers from decade to decade – and sometimes even within the same year – created a sampling challenge. In 1977, *Elevtherotypia* was 16 pages long. In 1994 it was 64 pages, and in 2004 it was 72 pages long. *Kathimerini* presented a similar, if less extreme, picture: 8, 10, or 12 pages in 1977; 36 pages in 1994; and 32 pages in 2004 (with a longer business section swelling that figure on Saturdays). To compensate for the lack of news content and relatively large amount of space given over to commentary and analysis by *Elevtherotypia* in politically feverish 1977 editions, the researcher selected stories from the few pages given over to straight news coverage, and, where possible, of non-political events. The researcher selected the first news story on the upper-left-hand side of the page, and then the next one, moving to the right. If a story took up an entire page, then a second story

was selected from another page. In some cases, microfilm stories were illegible, so a story had to be discarded and the one following it selected instead.

Two constructed-week samples of five days were taken from each year. Sunday papers were excluded because they lack news articles and focus exclusively on reviews, analysis, and comment. Mondays were also excluded, since *Kathimerini* does not come out on Mondays. That left Tuesday-Saturday. The same sample dates were used for each of the two newspapers (except for a few dates that were available). The first week was constructed by starting with the third Monday of each year (even though Monday was later excluded), and then selecting each thirteenth date in the sample series thereafter (availability allowing), not counting Sundays. The second week was constructed the same way, beginning with the first Monday in June (availability allowing: for example, the August editions of the papers for 2004 were not available, since the College library discontinues its subscription service in August). 20 newspapers were thus sampled in each year (10 each of *Elevtherotypia* and *Kathimerini*); the three-year study comprised 60 newspapers, producing a total sample size of 240 articles.

The analysis units were classified not only according to date, newspaper, location, and length, but also according to article and news type and news peg, and according to whether or not a photo or graphic accompanied the article (see Appendix B). Finally, the researcher recorded not just risk and non-risk categories in each article, but also the sources of risk and non-risk references; and classified each story as being exclusively risk, non-risk, containing both elements, or containing elements of neither.

*Inter-coder consistency was greatest when category references were most abundant*

To test the coding process for reliability, the researcher selected 20 news articles and editorial pieces from 2004 editions of the two newspapers, coded them, and then asked Dr. Argyro Kefala, communication professor at Deree College in Athens, to code the same articles and went through the coding protocol (see Appendix A) and coding sheet (see Appendix B for

final version). The results (see Appendix C) were satisfactory overall, with a Scott's Pi of .7 or better taken as the lowest acceptable score (Riffe et al., 1998).

A Scott's Pi of .73 or better was obtained for eight of the ten risk categories. The test could not be applied with validity to one of the categories – “low estimation of people's ability to manage on their own” – because there were no instances of the category found by either coder in any of the articles. The remaining risk category – “adverse impact of science and technology already occurring” – produced a Scott's Pi of .47. This score was the product of the researcher, but not the other coder - coding one of the articles as containing risk category five: “adverse impact of science and technology already evident”. Upon re-examination of the article, which reported on research linking stress from overwork to health problems - the researcher decided that the category had been too narrowly defined, not in the mind of the researcher, but in terms of wording. Because the study had been conceived to detect broad factors that contribute to risk awareness, the researcher decided that it would be important to detect not just malaise with technology but also with modern habits and lifestyles. The wording of the category on the coding sheet, however, did not convey this to the co-coder. The researcher thus added the words “and modern lifestyle” to risk category five as it was used during the coding of the 240 study articles.

A Scott's Pi of .77 or better was recorded for two of the non-risk categories.

Non-risk category one – “embrace experimentation when no evidence of harm” – produced a Scott's Pi of .47. This was based on two coding cases:

First, the researcher found the category in reliability test sample article number five, but the co-coder found it in article number six. Re-examining article number five, the researcher concluded that the researcher had taken too liberal an approach to coding a statement as indicating a positive attitude toward experimentation. That liberal judgment had been based on the following statement in the article about socialist party (Pasok) voters: “It is precisely these people who are attracted by progressive ideas and attitudes, who want changes and have

visions for the future of the country. It is the dynamic section of society, which rejects stagnation and conservatism” (from “Progress and conservatism”, *Elevtherotypia* editorial, 16 January 2004). The researcher concluded upon review that the language lacked specific meaning, and that it had therefore been wrong to classify it as a reference to non-risk category one. References to experimentation, whether regarding science or social change, can only be interpreted in a risk or non-risk context if they refer to something specific. Indeed, “change” can refer to making society safer, by, for example, introducing regulations designed to make scientific experimentation more difficult to pursue. In such cases, embracing change can hardly be cited as a non-risk society reference. The researcher thus changed “experimentation” to “specific forms of risky experimentation” in the coding sheet description of non-risk category one, to ensure that the specific content of “embrace experimentation” would be understood in the later coding.

Second, upon re-examining article number six, the researcher again concluded that the co-coder had been correct. The article was about research in which scientists had discovered pathogens responsible for a series of illnesses. While the research had not led to any biomedical or other technological innovations, the research clearly led in that direction; the co-coder had been right in her interpretation. The researcher had been too rigid in applying non-risk category one. Social attitudes toward laboratory experimentation are formed not on the basis of lab work as such, but on the basis of possible real-world consequences – in terms of technological innovation – that such research might have.

A Scott’s Pi of .49 for non-risk category four was the result of the co-coder attributing it to article number 15 while the researcher found no such reference. The article was about politicians and prominent business figures receiving police protection without good reason at the taxpayers’ expense. One former minister said he would be willing to forgo the services of the policeman assigned to protect him. The researcher decided that this was not a strong or revealing enough statement to qualify as “unconcern for involuntary nature of risks facing the

self”, but the co-coder had wrongly coded it that way. The problem was that the wording of the category was imprecise, so the researcher rewrote it as: “displays no irritation or anger over the fact that a specific risk is involuntary”.

A Scott’s Pi of .64 emerged for non-risk category six, because the co-coder had attributed it to article number nine while the researcher did not. Reviewing the article, an editorial about two young party leaders bringing a new climate into politics in the run-up to the 2004 general election, the researcher decided that the co-coder had been correct in assigning non-risk category six - “not critical of authority, or critical only of political views; trust authority” – to the piece. The article praised the leaders of both parties for presenting a renewed political face and concludes that such renewal “may profit politics” (*Elevtherotypia* editorial, 12 January 2004). The researcher also concluded that there was no problem here with the wording of the category; rather, it was a judgment issue that will inevitably appear occasionally in a study of this sort.

The researcher and the co-coder were in full agreement on the other five non-risk categories, but the Scott’s Pi test could not be applied to these, since neither coder cited any instances of those categories in any of the test articles.

The reliability test scores revealed the greatest inter-coder consistency in cases where the coders had found the most instances of a risk or non-risk category and, contrarily, in instances where neither coder had found any instances. In the instances where Scott’s Pi was weakest, the coders had found only one or two citations of risk or non-risk categories.

*The longitudinal nature of this study limited its inferential reliability*

This study contained a practical weakness that stemmed from its longitudinal nature. As noted above, the apparent symmetrical consistency in studying the same newspapers over a long period belies the fact that those newspapers are very different today. Not only were the paper sizes very different from one decade to the next (see pp 57, 58). There could be imbalance in content, as the shorter and longer papers would have different formats and

structures. The larger newspapers obviously had more room to cover a greater variety of stories. At the same time, any given article may be of greater significance in the smaller paper, since it contains fewer articles overall. And a smaller newspaper means that a given article has a greater chance of being selected for study than a given article in a larger newspaper. The difference in sizes means there is an element of incommensurability between the newspapers from 1977, on the one hand, and 1994 and 2004, on the other.

There is also a methodological weakness in this study. Riffe, et al. (1993) used the constructed week to test for reliability in a single year. But how many constructed weeks are needed to ensure reliability in a study covering three decades? Lacy, et al. (2001) addressed the issue of long-term reliability in terms of thoroughness, in a study of a five-year newspaper population period. Of the four categories they examined, from 72-76% of the fifty sample means of seven constructed-weeks from the five-year period weeks fell within one standard error of the population mean.

While such an approach is attractive in that it reduces the chance of missing cyclical fluctuations or aberrations in trends over a long period, it would have required extensive time and personnel resources. In any event, the historical and theoretical dimensions of this paper lent chronological continuity and coherence to the period under study, attempting to compensate thus for the fact that most of the years under discussion remain unlit by data analysis. And years have been selected to avoid dramatic historical moments that would distort the study.

A further limitation of this study was that its descriptive nature meant that it is unhelpful in determining if, how, or how much the media influence individual perceptions of risk, their behavior, and their expectations of themselves, their society, and the future. It attempted to ascertain how the media frame risk, but did not provide any insight into how individuals interpret risk.

Finally, as Riffe, et al. (1998) note, content analysis is just an investigative tool. On its own, it cannot answer important, complex questions for social scientists, whose concerns extend far beyond the mere description of phenomena. There are obviously other types of research instruments that are useful in testing theories about changes in society-wide perceptions of risk. Polls can directly test climates of opinion. And surveys reveal trends; Furedi (1997), for example, cites the boom in private insurance in Britain as evidence that people are becoming more pre-occupied by the risks lurking in the uncertain future. Different research tools used in different studies can work together in providing a body of evidence to support or reject a theory.



IV. Results: The press examined provided no statistically significant evidence of a trend toward a growth, broadening, and consolidation of risk consciousness

The data from the 240 study articles was examined to see if there were any significant differences in the frequency of risk and non-risk categories by year or newspaper, if there were any clustering trends, or if any of the categories showed a tendency to appear together more often in the same articles as time went on. The data was broken down not just by year, but also by the other identifying characteristics, such as story type and news peg. This made it possible to see if there were any significant or otherwise interesting patterns in the data.

*Articles were classified as containing risk, non-risk, both, or neither of the categories*

Of the 240 articles, 111 contained at least one risk-category reference; 24 contained at least one non-risk-category reference; 25 contained at least one risk- and one non-risk-category reference; and 80 articles contained neither risk- nor non-risk-category references (Table 1). Overall, 104 articles contained no risk references and 191 contained no non-risk references. Table 1 breaks the classification down by paper and year.

The number of risk articles doubled for both papers from 1977 to 1994 and remained at the higher level in 2004 (Table 1). The number of non-risk stories decreased between 1977 and 1994 and remained at the lower level in 2004.

Table 1

	3-Year Total	1977			1994			2004		
		<i>E</i>	<i>K</i>	Total	<i>E</i>	<i>K</i>	Total	<i>E</i>	<i>K</i>	Total
Risk	<b>111</b> 46.3%	10 25%	11 27.5%	<b>21</b> 26.3%	20 50.0%	23 57.5%	<b>43</b> 53.8%	24 60%	23 57.5%	<b>47</b> 58.8%
Non-Risk	<b>24</b> 10%	10 25%	7 17.5%	<b>17</b> 21.2%	1 2.5%	3 7.5%	<b>4</b> 5.0%	1 2.5%	2 5%	<b>3</b> 3.7%
Both	<b>25</b> 10.4%	4 10%	7 17.5%	<b>11</b> 13.7%	6 15.0%	0	<b>6</b> 7.5%	3 7.5%	5 12.5%	<b>8</b> 10%
Neither	<b>80</b> 33.3%	16 40%	15 37.5%	<b>31</b> 38.8%	13 32.5%	14 35.0%	<b>27</b> 33.7%	12 30%	10 25%	<b>22</b> 27.5%
Total	<b>240</b> 100%	40 100%	40 100%	<b>80</b> 100%	40 100%	40 100^	<b>80</b> 100%	40 100%	40 100%	<b>80</b> 100%

Of the 111 risk articles, 32, or 29 percent, were on the first page (Table 2); 74 of the study articles - 31 percent - were on the front page. That means, then, that risk articles were statistically about as likely to appear on page one as on the inside pages. There was nothing significant in any of the distributions of the other three classification categories (non-risk, both, neither) in this regard, either. All were proportionately distributed among the front and inside pages. As Table 2 shows, however, 43 percent of the front-page articles chosen for the study fell into the risk category, suggesting that a story had a relatively strong chance of getting on to the first page if it contained risk elements.

Table 2

Story by classification as a percentage of front-page articles

	Frequency	Percent of front-page articles
Risk	32	43.2%
Non-risk	7	9.5%
Both	14	18.9%
Neither	21	28.4%
Total	74	100.0%

*Risk category frequencies were independent of year*

Risk categories showed a tendency to appear more in both 1994 and 2004, as Table 3 reveals; however, the chi square of 14.233 for all categories produced an extremely high p value of .714. In other words, there was no statistically significant difference in risk category by year. The following tables reveal the frequencies of the categories by year. The proportions are of interest, but, again, based on the chi-square for the risk categories by year, there is no support for the main hypothesis of this paper: that there should be a statistically significant increase in the frequency of risk categories from one study year to the next.

Table 3

Risk category (counted once per article) frequency by year

Risk category frequency by year	1977		1994		2004	
Risk 1 – precautionary principle	0		1	2%	3	3%
Risk 2 – anticipation of/vulnerability before modern problems	13	26%	14	19%	21	24%
Risk 3 – scientific knowledge as source of sense of body’s vulnerability body’s vulnerability	3	6%	3	4%	3	3%
Risk 4 – involuntary nature of risks	2	4%	4	5%	0	
Risk 5 – adverse impact of science, technology, modern life evident	3	6%	5	7%	4	5%
Risk 6 – mistrust of authority	19	38%	35	47%	33	39%
Risk 7 – mistrust of other people	0		4	5%	9	11%
Risk 8 – low estimation of people’s ability to solve problems/shape one’s destiny	1	2%	1	1%	3	3%
Risk 9 – global/uncontrollable nature of threats facing humanity	3	6%	5	7%	5	6%
Risk 10 – risk/vulnerability/victimization to cohere; blaming others for one’s actions	6	12%	2	3%	5	6%
Total = 210 references	50	100%	74	100%	86	100%

Chi-Square = 14.233 (df = 18);  $p > .05$ ; p value = .714

To ensure that significant findings on specific categories were not being clouded, a chi-square was calculated for the three risk categories – two, six, and seven - whose frequencies suggested they might vary most in relationship with year. Again, there were no statistically significant findings: the chi-square for risk categories two, six, and seven taken together were not significant at the .05 level: chi-square = 5.249 (df = 4);  $p > .05$ ; p value = .263. Separate tests on categories two and six, two and seven, and six and seven provided no significant

result; nor did a test on categories two and six for the years 1977 and 2004. Though categories two, six, and seven showed the greatest change in frequency, there was, for the most part, no consistency to this change indicating a consolidation of a risk frame in the media. Risk category two showed virtually no change between 1977 and 1994; and category six actually declined in frequency between 1994 and 2004. Only risk category seven consistently increased in frequency, but the numbers here were very small across the study years.

Finally, tests were conducted on two groups of five categories grouped on the basis of conceptual similarity: categories one, two, five, eight, and nine, which all reflected fear of the future; and the remaining categories, which reflected mistrust or a low regard for people's integrity or potential. Neither of these tests revealed statistical significance at the .05 level.

Of the 210 risk references made in the study articles, 75, or 35 percent, appeared in front-page stories (Table 4), which accounted for 74, or 30.8 percent, of the 240 study articles. This reveals, like Table 2, a proportionate distribution of risk categories among front and inside page articles. Risk did not seem to be a factor in determining whether a story got onto the front page or not.

Table 4

Total risk category references in front-page stories, by cluster

Number of risk references per article	Number of articles	Percent of articles making risk references (Total = 46 articles)
x0	28	0%
x1	28	61%
x2	12	26%
x3	4	9%
x4	1	2%
x7	1	2%
Total front-page articles	74	100%
Total risk category references (articles x 0-7)	75	

Table 5 breaks the risk data reported in Table 3 down by year and newspaper. Throughout the three years of the study, *Elevtherotypia* contributed 95 risk category references and *Kathimerini* contributed 115. There seemed to be no tendency of the papers to use risk as a

partisan weapon with which to attack the government. Conservative *Kathimerini* had more risk references in 1977, when conservative New Democracy was in power. Socialist *Elevtherotypia* had more risk references in 1994, when socialist Pasok was in power. One striking difference between the two papers lay in the 1977 frequency of risk category two – “anticipation of/vulnerability before modern problems”. Socialist *Elevtherotypia* contained three such references and conservative *Kathimerini* contained ten that year, even though the conservative New Democracy was in power. If the papers’ party loyalty influenced the framing of risk, inspection of the 1977 and 1994, the data from this study suggests that it does not do so in any straightforward fashion; that is, the papers did not frame risk directly, or only as a consideration of attacking the party in power. For example, though it held power in 1977, New Democracy supporters, including in the press, may have felt more insecure about the future than opposition party members, given that the left had the political momentum in the country in the 1970s. The socialist vision of socialist leader Andreas Papandreou provided a positive focus for the future for the left. The conservatives, on the other hand, were ideologically hamstrung by their association with the repressive post-war governments and the military dictatorship that lasted from 1967 to 1974.

Table 5

Risk categories (counted once per article) by year and newspaper

Risk categories by year/newspaper ( <i>Elevtherotypia/Kathimerini</i> )	1977		1994		2004	
	<i>E</i>	<i>K</i>	<i>E</i>	<i>K</i>	<i>E</i>	<i>K</i>
Risk 1 – precautionary principle	0	0	0	1	1	2
Risk 2 – anticipation of/vulnerability before modern problems	3	10	7	7	11	10
Risk 3 – scientific knowledge as source of sense of body’s vulnerability	1	2	2	1	1	2
Risk 4 – involuntary nature of risks	1	1	1	3	0	0
Risk 5 – adverse impact of science, technology, modern life evident	1	2	4	1	0	4
Risk 6 – mistrust of authority	10	9	19	16	19	14
Risk 7 – mistrust of other people	0	0	2	2	2	7
Risk 8 – low estimation of people’s ability to solve problems/shape destiny	1	0	1	1	1	2
Risk 9 – global/uncontrollable nature of threats facing humanity	0	3	2	3	1	4
Risk 10 – risk/vulnerability/victimization to cohere; blaming others for one’s actions	2	4	2	0	1	4
Total = 210 references <i>Elevtherotypia</i> = 95 (45%); <i>Kathimerini</i> = 115 (55%)	19	31	39	35	37	49

To examine risk reporting in the context of which party was in power in 2004, the 2004 data had to be broken down by constructed week (Table 6), since Pasok held office for the first four months of the year, and New Democracy thereafter. That breakdown allowed for the subsequent compilation of risk categories in each newspaper according to which party was in power for all three study years (Table 7).

Table 6

Risk categories (counted once per article) by year, paper, and constructed week - 2004

2004 risk categories by newspaper ( <i>Elevtherotypia/Kathimerini</i> )	Week 1 <i>E</i>	Week 2 <i>E</i>	Week 1 <i>K</i>	Week 2 <i>K</i>
Risk 1 – precautionary principle	1	0	2	0
Risk 2 – anticipation of/vulnerability before modern problems	7	4	5	5
Risk 3 – scientific knowledge as source of sense of body’s vulnerability	1	0	2	0
Risk 4 – involuntary nature of risks	0	0	0	0
Risk 5 – adverse impact of science, technology, modern life evident	0	0	4	0
Risk 6 – mistrust of authority	10	9	9	5
Risk 7 – mistrust of other people	0	2	5	2
Risk 8 – low estimation of people’s ability To solve problems/shape destiny	1	0	0	2
Risk 9 – global/uncontrollable nature of threats facing humanity	1	0	2	2
Risk 10 – risk/vulnerability/victimization To cohere; blaming others for one’s actions	1	0	2	2
Total = 86 references	22	15	31	18

Table 7, then, shows the risk category totals for each newspaper according to whether the conservatives (ND) or socialists (Pasok) were in power. Conservative *Kathimerini* made virtually the same number of risk references regardless of which party held office. However, it made far more references to risk category six – “mistrust of authority” – when socialist Pasok held office (25 references) than when conservative New Democracy held office (14 references). Socialist *Elevtherotypia* also made more references to risk when socialist Pasok was in power, even references to category six – mistrust of authority (29 references under Pasok; 19 references under New Democracy).

Table 7

Risk categories (counted once per article) by government

Risk categories by government (NDemocracy/Pasok)	ND <i>E</i>	Pasok <i>E</i>	ND <i>K</i>	Pasok <i>K</i>
Total = 210 references	50	61	49	50
	(Risk 6 = 19)	(Risk 6 = 29)	(Risk 6 = 14)	(Risk 6 = 25)

Table 8 presents the articles by news peg and year. Political/social welfare/ public administration articles comprised half of all articles included in the study, and half the risk references. Also of note here is the fact that articles about topics that often reflect risk consciousness as defined by the sociologists – environment, health/lifestyle, and political/administrative scandal/corruption – remained relatively and consistently infrequent across the study years. However, as Tables 9-11 reveal, despite the relative infrequency of articles about the environment and health/lifestyle issues, such stories did provide a relatively large number of the risk category references across the study. Overall, environment and health/lifestyle stories comprised 11.7 percent of the study articles, but 21.4 percent (45) of the 210 risk category references in the study.



Table 8

Articles by news peg

		3 years	% of total articles	1977	1994	2004
Valid	Crime/policing	36	15.0	14	13	9
	Existing disaster	8	3.3	3	4	1
	Anticipated disaster	1	.4	1	0	0
	Political/social welfare/public administration	121	50.4	45	34	42
	Celebrity/famous person	1	.4	1	0	0
	Environment	12	5.0	3	4	5
	Health/lifestyle	16	6.7	4	6	6
	Courtroom	8	3.3	1	4	3
	National/global economy	20	8.3	5	9	6
	Political/administrative scandal/corruption	14	5.8	3	6	5
	Education	2	.8	0	0	2
	Space exploration	1	-	0	0	1
	total number of articles	240	99.4	80	80	80

Tables 9-11 break the risk categories down by news peg and year. In 1977 (Table 9), the relatively heavy concentration of risk references in political/social welfare/public administration articles was proportionate to the number of those stories as a percentage of all the articles in the study. Moreover, two categories, two – “anticipation of/vulnerability before modern problems” - and six – “mistrust of authority” - accounted for 17 (or 68 percent) of the 25 risk references in the political/social welfare/public administration peg in 1977. They also accounted for 34 percent of all the risk references in 1977.

Health/lifestyle articles comprised 8.7 percent of the articles (Table 8), but 18 percent of the risk category references in 1977 (Table 9). There was just one risk category reference in the environment peg the same year.

Table 9

Risk categories (counted once per article) by news peg - 1977

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	Total
Crime/policing	0	1	0	0	0	4	0	0	0	1	6
Existing disaster	0	0	0	0	0	0	0	0	0	0	0
Anticipated disaster	0	1	0	1	0	1	0	0	0	0	3
Political/social welfare/public administration	0	7	1	0	1	10	0	1	2	3	25
Celebrity/famous person	0	0	0	0	0	0	0	0	0	0	0
Environment	0	0	0	0	1	0	0	0	0	0	1
Health/lifestyle	0	2	2	1	1	1	0	0	1	1	9
Courtroom	0	0	0	0	0	0	0	0	0	0	0
national/global economy	0	2	0	0	0	1	0	0	0	0	3
Political/administrative scandal/corruption	0	0	0	0	0	2	0	0	0	1	3
Education	0	0	0	0	0	0	0	0	0	0	0
Space exploration	0	0	0	0	0	0	0	0	0	0	0
Total	1	13	3	2	2	19	0	1	3	6	50

In 1994 (Table 10), there were 13 risk references in articles about the environment, making environment-related articles the second-largest purveyor of risk references in that year (17.5 percent of the total). In contrast, there had been only one risk category reference in environment articles in 1977 (Table 9). There were five risk category references in health/lifestyle articles in 1994, as opposed to nine in 1977. Thus, the 1994 total for environment and health/lifestyle was 18, or 24.3 percent of the risk category references for the year. National/global economy articles, insignificant in 1977 (at least away from the financial pages, which were not included in this study), had three references, or six percent of the total study references, and 14.3 percent of the risk references in 1994.

Finally, while there were almost the same number of risk category references in political/social welfare/public administration articles in 1994 (24) as there had been in 1977 (25), they comprised a much smaller proportion of the total risk category references in 1994 (32.4 percent, as opposed to 50 percent in 1977). The eight percent increase in the number of national/global economy and increases in the share of risk category references contributed by articles in news pegs other than environment and health/lifestyle in 1994 suggests a diffusion of risk references in the latter year compared to the former.

Table 10

Risk categories (counted once per article) by news peg - 1994

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	Total
Crime/policing	1	2	0	0	0	5	1	0	0	0	9
Existing disaster	0	1	0	1	0	2	0	0	0	0	4
Anticipated disaster	0	0	0	0	0	0	0	0	0	0	0
Political/social welfare/public administration	0	3	0	1	0	14	1	0	3	2	24
celebrity/famous person	0	0	0	0	0	0	0	0	0	0	0
Environment	0	4	1	1	3	2	0	1	1	0	13
Health/lifestyle	0	0	2	0	1	1	0	0	1	0	5
Courtroom	0	0	0	0	0	1	2	0	0	0	3
national/global economy	0	4	0	1	1	4	0	0	0	0	10
political/administrative scandal/corruption	0	0	0	0	0	6	0	0	0	0	6
Education	0	0	0	0	0	0	0	0	0	0	0
Space exploration	0	0	0	0	0	0	0	0	0	0	0
Total	1	14	3	4	5	35	4	1	5	2	74

Such diffusion was not evident, however, in 2004 (Table 11), an election year, when political/social welfare/public administration articles contributed 55.8 percent of the total number of risk category references. Environmental articles contributed 3.5 percent (3) of the references, a decline on 1977. Health/lifestyle article risk category references moved in the opposite direction, accounting for 16.3 percent of the risk category references in 2004.

Table 11

Risk categories (counted once per article) by news peg - 2004

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	Total
crime/policing	1	1	0	0	2	3	0	0	1	1	9
Existing disaster	0	0	0	0	0	0	0	0	0	0	0
Anticipated disaster	0	0	0	0	0	0	0	0	0	0	0
Political/social welfare/public administration	0	9	0	0	0	24	7	2	2	4	48
celebrity/famous person	0	0	0	0	0	0	0	0	0	0	0
Environment	0	2	0	0	0	1	0	0	0	0	3
Health/lifestyle	2	4	3	0	2	0	0	1	2	0	14
Courtroom	0	1	0	0	0	1	1	0	0	0	3
national/global economy	0	3	0	0	0	1	0	0	0	0	4
Political/administrative scandal/corruption	0	0	0	0	0	3	1	0	0	0	4
Education	0	1	0	0	0	0	0	0	0	0	1
Space exploration	0	0	0	0	0	0	0	0	0	0	0
Total	3	21	3	0	4	33	9	3	5	5	86

In the study, individual sources (Table 12) were counted once per risk category. If a source referred to two different risk (or non-risk) categories in an article, then the source was counted twice. The smallest percentage of risk references for the three years and for each year separately came in the form of lay testimony, the most striking statistic in the by-source data. Journalists provided the most frequent risk commentary. The other categories of source were also consistently strong across the years compared to lay testimony.

Table 12

Risk categories by source of reference (each source counted once per category in an article)

	3 years		1977		1994		2004	
Lay	17	7%	5	9%	8	9%	4	4%
Expert/advocate	37	15%	4	7%	13	15%	20	19%
Government	48	19%	12	20%	12	14%	24	23%
Opposition	43	17%	15	26%	14	17%	14	13%
Journalist	103	42%	22	38%	38	45%	43	41%
Total	248	100%	58	100%	85	100%	105	100%

*Non-risk category frequencies were independent of year*

The chi-square for non-risk categories was not significant at the .05 level (Table 13). However, non-risk categories appeared with relatively greater frequency during the Cold War year of 1977 than in either of the other two years in the study (Table 13): more than 60 percent (44 of 70) of all the non-risk references in the study occurred in 1977. More than one quarter of the total references fell under category six – “not critical of authority or critical only of political views; trust authority”. This is not surprising, given the large number of stories that came under the news peg heading political/social welfare/public administration (see Table 8). Also relatively strong in 1977 were category two – “confident humanity can avoid or deal with problems/calamities; social optimism” – and category 8 – “people can manage without intervention”. In fact, the data for these categories in 1977 accounted for almost all the difference in total non-risk categories between 1977 and each of the other two years. There were 27 more references in those categories in 1977 than in 1994; and 29 more references in

those categories in 1977 than in 2004. Two of the categories did not occur at all in the study.

Two others occurred just once.

Table 13

Non-risk category (counted once per article) frequency by year

Non-risk category frequency by year	1977	1994	2004
NRisk 1 – embracing specific forms of risky Experimentation when no evidence of harm	2 5%	2 15%	3 23%
NRisk 2 – confident humanity can avoid or deal with problems/calamities; social optimism	11 25%	3 23%	4 31%
NRisk 3 – sense of bodily security unaffected by risk knowledge	0	0	1 8%
NRisk 4 – displaying no irritation or anger over the fact that a specific risk is involuntary	0	0	0
NRisk 5 – science, technology, and modern life positive so far	4 9%	1 8%	3 23%
NRisk 6 – not critical of authority, or critical only of political views; trust authority	19 43%	5 39%	2 15%
NRisk 7 – trusting of other people; abuse is not the Norm	2 5%	2 15%	0
NRisk 8 – people can manage without intervention; can solve personal problems, shape personal destiny; rejection of “healthy – unhealthy” “addiction”	5 11%	0	0
NRisk 9 – globalization promotes technological development and so minimizes risks	1 2%	0	0
NRisk 10 – rejection of risk, vulnerability, and victimization to cohere, and of victim-hood for oneself; responsible for one’s acts	0	0	0
Total = 70 references	44 100%	13 100%	13 100%

Chi-square = 12.106 (df = 18);  $p > .05$ ; p value = .842

As in the case of the risk categories, a separate chi-square was run on non-risk categories – two and six – that displayed the strongest tendency to vary between 1977 and the other two years.

The result was not significant: Chi-square = 1.909 (df = 2);  $p > .05$ ; p value = .385.

As Table 14 shows, socialist *Elevtherotypia* and conservative *Kathimerini* made virtually the same number of non-risk references over the entire study (36-34). Both made more non-risk references in 1977, when conservative New Democracy was in power, than in 1994, during which socialist Pasok governed, and 2004, an election year (Table 14). There was also a

good deal of consistency between the papers in terms of the frequencies of the individual categories across the years. As was the case with the corresponding risk categories, non-risk categories two and six dominated. Of the 70 non-risk references, 26 (37 percent) were in category six. Another 18 (26 percent) belonged to category two.

Table 14

Non-risk categories (counted once per article) by year and newspaper

Non-risk categories by year/newspaper ( <i>Elevtherotypia/Kathimerini</i> )	1977		1994		2004	
	<i>E</i>	<i>K</i>	<i>E</i>	<i>K</i>	<i>E</i>	<i>K</i>
NRisk 1 – embracing specific forms of risky experimentation when no evidence of harm	0	2	2	0	0	3
NRisk 2 – confident humanity can avoid or deal with problems/calamities; social optimism	5	6	3	0	3	1
NRisk 3 – sense of bodily security unaffected by risk knowledge	0	0	0	0	0	1
NRisk 4 – displaying no irritation or anger over the fact that a specific risk is involuntary	0	0	0	0	0	0
NRisk 5 – science, technology, and modern life positive so far	3	1	1	0	0	3
NRisk 6 – not critical of authority, or critical only of political views; trust authority	10	9	2	3	1	1
NRisk 7 – trusting of other people; abuse is not the norm	1	1	2	0	0	0
NRisk 8 – people can manage without intervention; can solve personal problems, shape personal destiny; rejection of “healthy – unhealthy” “addiction”	3	2	0	0	0	0
NRisk 9 – globalization promotes technological development and so minimizes risks	0	1	0	0	0	0
NRisk 10 – rejection of risk, vulnerability, and victimization to cohere, and of victim-hood for oneself; responsible for one’s acts	0	0	0	0	0	0
Total = 70 references	22	22	10	3	4	9

Table 15 breaks the 2004 data down by constructed week, since Pasok ruled during the first half of the year and New Democracy thereafter. The 2004 numbers broken down by week are of negligible size. In fact, there was no mention of five of the categories at all in 2004.

Table 15

Non-risk categories (counted once per article) by constructed week - 2004

2004 non-risk categories by newspaper ( <i>Elevtherotypia/Kathimerini</i> )	Week 1 <i>E</i>	Week 2 <i>E</i>	Week 1 <i>K</i>	Week 2 <i>K</i>
NRisk 1 – embracing specific forms of risky experimentation when no evidence of harm	0	0	3	0
NRisk 2 – confident humanity can avoid or deal with problems/calamities; social optimism	3	0	0	1
NRisk 3 – sense of bodily security unaffected by risk knowledge	0	0	0	1
NRisk 4 – displaying no irritation or anger over the fact that a specific risk is involuntary	0	0	0	0
NRisk 5 – science, technology, and modern life positive so far	0	0	2	1
NRisk 6 – not critical of authority, or critical only of political views; trust authority	0	1	1	0
NRisk 7 – trusting of other people; abuse is not the norm	0	0	0	0
NRisk 8 – people can manage without intervention; can solve personal problems, shape personal destiny; rejection of “healthy - unhealthy” “addiction”	0	0	0	0
NRisk 9 – globalization promotes technological development and so minimizes risks	0	0	0	0
NRisk 10 – rejection of risk, vulnerability, and victimization to cohere, and of victim-hood for oneself; responsible for one’s acts	0	0	0	0
Total = 13 references	3	1	6	3

Both newspapers made more non-risk references when the conservatives (ND) were in power (Table 16). As in the case of the risk categories examined earlier (see Table 7), references to non-risk category six – “not critical of authority, or critical only of political views; trust authority” – are noted separately in parentheses, since category six was the most prevalent in the study, and because it is the category that reflects most directly attitudes toward government and other state officials.

Table 16

Non-risk categories (counted once per article) by government

Non-risk categories by government (ND/Pasok)	ND <i>E</i>	Pasok <i>E</i>	ND <i>K</i>	Pasok <i>K</i>
Total = 70 references	23 (Non-risk 6 = 11)	13 (Non-risk 6 = 2)	25 (Non-risk 6 = 9)	9 (Non-risk 6 = 4)

Tables 17-19 show the prevalence of non-risk categories by news peg and year. The political/social welfare/public administration peg accounted for 42, or 60 percent, of the non-risk category references in the study.

The 1977 figure for the political/social welfare/public administration peg was particularly strong in terms of frequency. The 29 non-risk references in that peg represented two-thirds of all the non-risk category references in 1977, and 41 percent of all such references in the study.

The political/social welfare/public administration and national/global economy categories in 1977 combined (Table 17) represented 41 percent of the total of 70 non-risk categories mentioned in all 240 study articles. The eight national/global economy articles accounted for 18 percent of the non-risk category references in 1977.

Table 17

Non-risk categories (counted once per article) by news peg - 1977

	NR1	NR2	NR3	NR4	NR5	NR6	NR7	NR8	NR9	NR10	Total
crime/policing	0	0	0	0	0	4	0	0	0	0	4
Existing disaster	0	0	0	0	0	0	0	0	0	0	0
Anticipated disaster	0	0	0	0	0	0	0	0	0	0	0
Political/social welfare/public administration	0	7	0	0	3	13	2	4	0	0	29
celebrity/famous person	0	0	0	0	0	0	0	0	0	0	0
Environment	0	2	0	0	0	0	0	0	0	0	2
Health/lifestyle	0	0	0	0	0	0	0	0	0	0	0
Courtroom	0	0	0	0	0	0	0	0	0	0	0
national/global economy	2	1	0	0	1	2	0	1	1	0	8
Political/administrative scandal/corruption	0	1	0	0	0	0	0	0	0	0	1
Education	0	0	0	0	0	0	0	0	0	0	0
Space exploration	0	0	0	0	0	0	0	0	0	0	0
Total -1977	2	11	0	0	4	19	2	5	1	0	44



The most striking feature in 1994 (Table 18) was the virtual absence of non-risk references. Three categories accounted for all 13 of the references in that year. Interesting, too, is the fact that the number of non-risk category two references in the political/social welfare/ public administration peg dropped from seven in 1977 to zero in 1994; non-risk category six references dropped from 13 to five, respectively; and non-risk category eight from four to zero. This total loss of 19 references from the political/social welfare/public administration news peg accounts for more than half the drop in non-risk references from 1977 to both 1994 and 2004 (Tables 18 and 19). As intriguing as this might be, however, it is important to note that, like the other frequency differences and trends in the risk and non-risk data taken separately in this study, these shifts are not statistically significant at the .05 level. The chi-square for the drop in non-risk references for categories two, six, and eight from 1977 to 1994 was .762 (p value = .683).

Table 18

Non-risk categories (counted once per article) by news peg – 1994

	NR1	NR2	NR3	NR4	NR5	NR6	NR7	NR8	NR9	NR10	Total
crime/policing	0	0	0	0	0	0	0	0	0	0	0
Existing disaster	0	0	0	0	0	0	0	0	0	0	0
Anticipated disaster	0	0	0	0	0	0	0	0	0	0	0
Political/social welfare/public administration	0	0	0	0	0	5	2	0	0	0	7
celebrity/famous person	0	0	0	0	0	0	0	0	0	0	0
Environment	1	2	0	0	0	0	0	0	0	0	3
Health/lifestyle	1	1	0	0	1	0	0	0	0	0	3
Courtroom	0	0	0	0	0	0	0	0	0	0	0
national/global economy	0	0	0	0	0	0	0	0	0	0	0
Political/administrative scandal/corruption	0	0	0	0	0	0	0	0	0	0	0
Education	0	0	0	0	0	0	0	0	0	0	0
Space exploration	0	0	0	0	0	0	0	0	0	0	0
Total – 1994	2	3	0	0	1	5	2	0	0	0	13

The 2004 results (Table 19) were similar to those of 1994. The chief characteristic, again, was the absence of non-risk references.

Table 19

Non-risk categories (counted once per article) by news peg - 2004

	NR1	NR2	NR3	NR4	NR5	NR6	NR7	NR8	NR9	NR10	Total
crime/policing	0	0	0	0	1	0	0	0	0	0	1
Existing disaster	0	0	0	0	0	0	0	0	0	0	0
Anticipated disaster	0	0	0	0	0	0	0	0	0	0	0
Political/social welfare/public administration	1	3	0	0	1	1	0	0	0	0	6
celebrity/famous person	0	0	0	0	0	0	0	0	0	0	0
Environment	0	0	0	0	0	0	0	0	0	0	0
Health/lifestyle	1	0	0	0	0	0	0	0	0	0	1
Courtroom	0	0	0	0	0	1	0	0	0	0	1
national/global economy	0	1	0	0	0	0	0	0	0	0	1
Political/administrative scandal/corruption	0	0	0	0	0	0	0	0	0	0	0
Education	1	0	0	0	0	0	0	0	0	0	1
Space exploration	0	0	1	0	1	0	0	0	0	0	2
Total – 2004	3	4	1	0	3	2	0	0	0	0	13

As was the case with the risk categories, non-risk references from lay sources were virtually absent from the articles (Table 20), comprising just four percent of all the source references in the study. The latter two study years coincided with the growth in Greece of private television news, which seems, in contrast, to rely heavily on lay testimony. This could be because sound bites liven up what would otherwise be dull stories. For example, newspapers cover the weather and other routine stories in numbers every day. When it is very hot, though, television stations in Greece will run stories showing the impact of the heat on people, featuring comments from people at the beach or in the center of Athens trying to cool off with a bottle of water.

Also notable here is the fact that sources outside the government (or other institution constituting the center of authority in an article) accounted for a disproportionately large number of the non-risk references made in 1977. This type of source appeared most frequently in the study, accounting for 38 percent of all non-risk references.

Table 20

Non-risk categories by source of reference (each source counted once per article category)

	3 years		1977	1994	2004
Lay	3	4%	2	0	1
Expert/advocate	14	19%	7	0	6
Government	11	15%	9	0	3
Opposition	28	38%	22	4	2
Journalist	18	24%	11	5	2
Total	74	100%	51	9	14

*Risk and non-risk clusters were scarce*

One of the key assumptions of this study was that, if the press reflected the growth, spread, and consolidation of a risk culture, then not only should the number of references to risk categories increase over time: clusters of references should increase too, since the risk categories reinforce each other in the theoretical structures of the sociologists. For example, if there were a growing prevalence of risk category six – “mistrust of authority” - it would, the study reasoned, be logical to assume that this would be accompanied by an increasing reference to risk category two – “anticipation of/vulnerability before modern problems”. As Table 21 reveals, however, though there was a numerical upswing in clusters of two risk categories in the same article in 1994 and 2004, as compared to 1977, clusters were generally rare and, given the chi-square for the risk and non-risk categories overall (Tables 2 and 11), independent of year.

Table 21

Publication year total risk categories cross-tabulation (clusters)

Number of risk categories:	Risk clusters per article								Total
	0	x1	x2	x3	x4	x5	x6	x7	articles
publication year 1977	48	24	3	2	2	0	1	0	80
1994	31	34	10	3	1	0	0	1	80
2004	25	36	11	5	2	1	0	0	80
Total	104	94	24	10	5	1	1	1	210 references

The number of risk clusters in an article was a function of its size. Of the 92 articles that were 1-500 words long, 29, or 15 percent, contained risk clusters. Of the 42 articles that were 501-1000 words long, 10, or 23.8 percent, contained risk clusters. Finally, of the six articles that were more than 1000 words long, three, or 50 percent, contained risk clusters. Article size distributions were fairly even across the study years (Table 22), so article size did not confound the distribution of risk clusters over time.

Table 22

Clusters of two or more risk categories by article size and year

	1-500 words	501-1000 words	1000+ words	Total articles
1977	64	14	2	80
1994	62	16	2	80
2004	66	12	2	80
Total clusters / % of total stories	29 / 15%	10 / 23.8%	3 / 50%	240 / 17.5%

The number of non-risk references was so low in the study that it would have been surprising to find any clustering tendency among them. And, as Table 23 shows, there was not. Only 12 articles in the study contained more than one non-risk category.

Table 23

Publication year total non-risk categories cross-tabulation (clusters)

Number of non-risk categories:	Total non-risk categories									Total clusters
	0	x1	x2	x3	x4	x5	x6	x7		
Publication year 1977	52	21	2	2	2	1	0	0	7	
1994	70	7	3	0	0	0	0	0	3	
2004	69	9	2	0	0	0	0	0	2	
Total	191	37	7	2	2	1	0	0	70 references 12 in clusters	

Editorials are given over largely to the expression of journalists' views and analyses, and would logically provide the most scope for direct references to risk categories. To see if this

was the case, risk and non-risk clusters were broken down by news and editorial (Tables 24 and 25). A quarter of the study articles came under the classification of editorial. Forty-two of the articles in the study contained more than one risk reference. Of these clusters, 25 occurred in news articles (Table 24).

Table 24

Total risk category clusters for all three years by article type: news

Risk categories per article	3 years	1977	1994	2004
0	84	37	26	21
x1	70	18	25	28
x2	15	3	6	6
x3	5	1	1	3
x4	3	1	0	2
x5	1	0	0	1
x7	1	0	1	0
Total articles (clusters)	95(25)	23(5)	33(8)	40(12)

Total risk references: 139

Seventeen, or 40 percent of the total clusters, occurred in editorials (Table 25).

The frequency of risk clustering was thus proportionately greater for editorials. Overall, however, editorials accounted for 30 percent (41 of 136) of the articles that mentioned at least one risk category, meaning that the frequency of risk category references in editorials was not much different from what it was in news stories.

Table 25

Total risk category clusters for all three years by article type: editorial

Risk category clusters: editorial	3 years	1977	1994	2004
x0	20	11	5	4
x1	24	6	9	9
x2	9	0	4	5
x3	5	1	2	2
x4	2	1	1	0
x6	1	1	0	0
Total articles (clusters)	41(17)	9(3)	16(7)	16(7)

Total risk references: 71

Non-risk clusters were rare for both news and editorial. Just ten news stories (Table 26) contained two or more risk category references (this figure is derived by subtracting the

number of non-risk articles with just one non-risk category reference, 28, from the total number of non-risk articles, 38. The assumption of this study was that there would be a decline in non-risk references from one year to the next. While this did happen, the numbers were extremely small for all the study years: five non-risk cluster articles in 1977, three in 1994, and two in 2004.

Table 26

Total non-risk category clusters by article type: news

Non-risk category clusters: news	3 years	1977	1994	2004
x0	141	41	51	50
x1	28	15	5	8
x2	6	1	3	2
x3	1	1	0	0
x4	2	2	0	0
x5	1	1	0	0
Total articles (clusters)	38(10)	20(5)	8(3)	10(2)

Total non-risk references: 56

There were no non-risk clusters to speak of in the editorials (Table 27): two in 1977 and none at all in 1994 or 2004.

Table 27

Total non-risk category clusters for all three years by article type: editorial

Non-risk category clusters: editorial	3 years	1977	1994	2004
x0	50	12	19	19
x1	9	6	2	1
x2	1	1	0	0
x3	1	1	0	0
Total articles (clusters)	11(2)	8(2)	2(0)	1(0)

Total non-risk references: 14

Within the clusters that existed, three risk categories tended to show up together. “Anticipation of/vulnerability before modern problems” occurred 48 times in the study. On 20 of those occasions, risk category six – “mistrust of authority” – occurred in the same article (Table 28). The breakdown of these clusters reveals that, while there may have been a link between categories two and six, there was no apparent tendency for the newspapers to link

them on the basis of partisanship. Risk category five – “adverse impact of science, technology, and modern life evident” – occurred a total of 12 times in the study; it co-occurred with risk category two seven times. On five occasions it co-occurred with risk category six. Given the nature of the categories, especially category two, this is not surprising.

Table 28

Most common co-occurrence of risk categories

	Risk 2 and 5	Risk 2 and 6	Risk 5 and 6
Total co-occurrence	7	20	5
<i>Elevtherotypia</i> ND	*	3	*
<i>Elevtherotypia</i> Pasok	*	8	*
<i>Kathimerini</i> ND	*	4	*
<i>Kathimerini</i> Pasok	*	5	*

\* Breakdowns for these category clusters by newspaper and governing party were not calculated because the totals were very small.

*Chi-square cross-tabulations for risk and non-risk categories revealed some significance*

While the chi-squares for the risk and non-risk categories tested separately for dependence on time revealed no significance at the .05 level (see Tables 3 and 13), there were some significant findings at either the .01 or .05 level when chi squares comparing risk and non-risk variations over time were run (Table 29). The three-year totals of all categories (risk/non-risk total) were significant at the .001 level. These findings reflect the complementary nature of the risk and non-risk categories, the frequencies of which tended to vary inversely across the years of the study.

Table 29

Chi-square for total risk and total non-risk references

	3-Year Total	1977	1994	2004
Risk category references	210	50	74	86
Non-risk category references	70	44	13	13

Chi-square = 35.975 (df = 2); p < .001; p value = .000

To locate the source of the significance in the total risk and total non-risk test, individual chi-square tests were run on each of the risk/non-risk category pairs. (A few of the risk, and

several of the non-risk, categories were zero. Since chi-squares cannot be found when some values are zero, a one was entered in all cases where the real finding had been zero. As the overwhelming majority of the zeroes – 13 of the 15 overall – were for non-risk categories, the impact of this alteration of the numbers would be to lessen the size of the inverse variation between the risk and non-risk categories. In any event, what impact there was would be negligible.)

Two of the individual risk/non-risk category chi-squares were significant. Risk/non-risk six - “mistrust authority” and “trust authority” – was significant at the .01 level (Table 30). While risk and non-risk categories six appeared the same number of times in 1977, risk category six showed up 68 times in 1994 and 2004, but non-risk category appeared just seven times in those two years.

Table 30

Chi-square for risk and non-risk categories six

	3-Year Total	1977	1994	2004
Risk category six References	87	19	35	33
Non-risk category six References	26	19	5	2

Chi-square = 24.031 (df = 2); p < .001; p value = .000

Risk/non-risk two - “anticipation of/vulnerability before modern problems” and “confident humanity can avoid or deal with problems/calamities; social optimism” – was the only other category pair that was significant at the .05 level or lower (Table 31).

Table 31

Chi-square for risk and non-risk categories two

	3-Year Total	1977	1994	2004
Risk category two references	48	13	14	21
Non-risk category two references	18	11	3	4

Chi-square = 6.564 (df = 2); p < .05; p value = .038



Because the chi-square for the total category pairs (35.975) was higher than the chi-squares for risk/non-risk six and risk/non-risk two, a chi-square test was run on risk/non-risk categories two and six (Table 32). This produced a chi-square (29.254) significant at the .001 level.

Table 32

Chi-square for risk and non-risk categories six and two

	3-Year Total	1977	1994	2004
Risk categories two/six references	135	32	49	54
Non-risk categories two/six references	44	30	8	6

Chi-square = 29.254 (df = 2);  $p < .001$ ; p value = .000

A chi-square was then calculated for all the risk/non-risk categories *except* risk/non-risk six, to assess the significance of that category in the total chi-square (Table 33). The total was marginally significant at the .001 level.

Table 33

Chi-square for all risk and non-risk categories except six

	3-Year Total	1977	1994	2004
All risk references except category six	123	31	39	53
All non-risk references except category six	44	25	8	11

Chi-square = 13.476 (df = 2);  $p < .001$ ; p value = .001

Next, the chi-square was calculated for all risk/non-risk categories except two and six. This further lowered the significance of the total chi-square to the .05 level.

Table 34

Chi-square for all risk and non-risk categories except two and six

	3-Year Total	1977	1994	2004
All risk references except categories two and six	75	18	25	32
All non-risk references except categories two and six	26	14	5	7

Chi-square = 7.960 (df = 2);  $p < .05$ ; p value = .019

Finally, a chi-square was calculated for all risk/non-risk categories except two, six, and seven (Table 35), since the chi-square for risk/non-risk category seven had produced the next lowest p value (.132). The chi-square for the total risk/non-risk categories minus two, six, and seven was not significant at the .05 level.

Table 35

Chi-square for all risk/non-risk categories except two, six, and seven

	3-Year Total	1977	1994	2004
All risk references except categories two, six, and seven	62	18	21	23
All non-risk references except categories two, six, and seven	22	12	3	7

Chi-square = 5.413 (df = 2);  $p > .05$ ; p value = .067

*The Chi-square cross-tabulation for risk and non-risk articles was significant*

Because the frequency of risk articles increased sharply between 1977 and 1994 and remained the higher level in 2004, and the opposite occurred with non-risk articles, a chi-square was computed for a relationship of variation between those two types of articles (Table 36). The test produced a chi-square of 26.4, significant at the .001 level (p value of .000).

Table 36

Chi-square for risk and non-risk articles

	3-Year Total	1977	1994	2004
Risk	111	21	43	47
Non-Risk	24	17	4	3

Chi-square = 26.400 (df = 2);  $p < .001$ ; p value = .000

In summary, the study showed that there was no dependence of risk or non-risk references on time. It also showed that there was no significant trend over time for risk or non-risk references to appear in greater clusters, but that clustering was influenced by article length.

Of the risk categories, two and six were most frequent. The newspapers showed a tendency to print articles that fit into the political/social welfare/public administration news peg, so it was not surprising that many of the category two and six references came under this peg.

However, despite the preponderance of articles about politics, and though both of the newspapers studied have distinct political leanings, neither showed any tendency to let the matter of which party held office influence their coverage of risk.

Non-risk references were rare across the study, though there were more than three times as many such references in 1977 than in either 1994 or 2004. In addition, the cross-tabulations revealed that the variation of risk against non-risk references over time was statistically significant. This is interesting, but should be considered in the context of the much more important finding that, taken separately, risk and non-risk references were independent of time.

There were relatively few stories of the kind that would normally be associated with a risk culture as defined in this study: environment, anticipation of disaster, and health/lifestyle.

Lay sources were uncommon; experts and politicians were most often cited, but the journalists writing the articles were the most frequent identifiable source of all.

V. Discussion: The study provided no evidence of a risk culture, but revealed that official and expert sources and stories about government dominated the Greek press

This study asked two main sets of questions in a bid to test the theories of sociologists and other observers that society has become more concerned with risk over the past three decades, and that, since this concern originates in profound social and political changes, it is pervasive rather than issue-specific: First, has the way Greek newspapers frame risk changed over the past three decades, and, if so, how? And, second, if there is evidence of consolidation of a powerful risk consciousness in newspapers, does it co-exist with another frame that contradicts it, such as a strong faith in technological progress?

The answer to both of those questions was “no” - at least, not in the case of two of Greece’s most important broadsheet newspapers, or in the context of the way the study distilled and deployed the “risk” and “non-risk” categories. This finding takes on added interest given that the study period overlaps the end of the Cold War, which many of the researchers included in the literature review in this paper have identified as a key event for determining how the media can frame issues. What this study shows is that the collapse of one frame – the Cold War frame - does not necessarily mean that a viable replacement – anchored, say, in concepts of risk or humanitarian intervention – is ready at hand. At the same time, however, it should be noted that, as Norris (1997) points out, it is easier to see that one frame has lost its social force than to identify the very slow development of another.

*The data provided no support for the study hypothesis; risk and non-risk references were independent of time*

One of the most important findings of the study was that there was no statistically significant variation in the frequency of risk and non-risk categories throughout the years under review; moreover, risk and non-risk stories were no more likely to appear on newspaper front pages than on inside pages, suggesting that there was no risk frame affecting editorial decisions

about what kinds of stories to lead with. Though sociologists and media researchers have paid considerable – and increasing – attention to risk over the past quarter of a century, the mainstream establishment Greek press does not appear to document any generalized tendency toward diffusion of expressions of risk consciousness and of the consolidation of a risk frame within that period. There also appears to be no tendency to re-classify risks on the basis of the specific categories this study employed.

This is not to say that trends suggested by the hypothesis do not exist in Greek society or in other Western societies. Leading media researchers whose specialty is risk, and not just sociologists, commonly find, like the sociologists examined here, that contemporary media commentators have come to take a circumspect view of modernity (Wilkins and Patterson, 1991). Their research has often revealed that science and technology are the locus of growing doubts about the modern project: “Journalists began this century attempting to popularize science. Today, they are more skeptical. Progress is no longer assumed when the news story is one of scientific discovery, nor is progress any longer assumed to be desirable” (Wilkins and Patterson, 1991, p. 198).

However, as noted earlier, journalists tend not cover risk; rather, they tend to cover disasters and other issues that have immediacy and impact. The risk theories reviewed here, on the other hand, tend to cite risk consciousness as an orientation toward the future. Of course the media covers projections and forecasts, but even these tend to be covered when they refer, like a weather report, to imminent change. The standards of news reporting, then, may not encourage coverage of risk as such, at least not in the daily press.

Though this study found no evidence of a growing, non-issue-specific risk consciousness of the type described by the sociologists, it did not address the question of whether such a phenomenon is observable anywhere in the Greek media. Private Greek television current affairs programming appears even on the basis of casual viewing to be crowded with issues of individual vulnerability (supermarket employees scraping mold off cheese, carpenters

lacquering playground amusements with toxic chemicals, butchers storing meat in fly-ridden cellars, holiday-makers ignoring the danger of the sun, and weekend motorists the possibility of having an accident). But in order for the meaning of those risk references to be tested for longitudinal significance (and, since the sociological theories under examination claim that risk consciousness has been growing and changing, it is a consistent observable change in risk-reference frequency that would be important), they would have to be compared to television programming from previous years, not to broadsheet newspapers. Unfortunately, such a study could be conducted only with great difficulty, since only state-run television existed in Greece before 1989.

The statistical insignificance of any shifts in the frequency of *non-risk* categories throughout the study years means that an implied rejection of the risk categories used in the study, or the adoption of a contradictory frame, was also independent of time. There were far fewer non-risk references (80) than risk references (210) in the study overall, and regardless of how the data was broken down; so few, in fact, that it is safe to say that, with the exception of a few of the non-risk categories, for all practical purposes the press studied did not refer to non-risk categories. At first glance, this does not seem to merit any attention, since it is a self-evident truth of journalism that bad news, not good news, sells. Furthermore, the non-risk categories imply an absence of conflict, one of the strongest of all contemporary news values, and something perhaps implicit in any interesting story, fiction or non-fiction. However, it is also possible to conclude that this truism that bad news sells says something about society: though bad news sells, it is by no means self-evident why this should be so. There is no eternal and inviolate law dictating that failure, tragedy, and treachery should be most newsworthy, and achievement and triumph dominant only on the sports and celebrity pages. Knowing that something sells is not the same as explaining why it sells.

The chi-square tests in Tables 29-35 reveal statistical significance in the relationship of variation between risk and non-risk categories. This was to be expected, since the risk and non-

risk category pairs were pairs of contradictory attitudes. Those tables, like the frequency tables, suggest that the most important category pairs in the study were two – which referred to attitudes towards society’s future – and six – which referred to attitudes toward people and institutions of authority.

Category two was probably the most important category in the study from a theoretical standpoint, since it, more than any other category, cut to the foundations of the sociologists’ definition of risk consciousness: that it is an *a priori* negative attitude toward the uncertainty inevitably associated with the future. Category six was probably the second most important category in the study from a theoretical standpoint, since it best captured the most significant of the sociologists’ conclusions about the consequences of a growing pessimism about society’s future: the anti-political view that collective action cannot provide solutions to social problems.

Risk categories two and six are among the study categories that would seem most likely to refer to standard news values like impact and conflict. Anticipation of problems or calamities (category two) is newsworthy if it seems to focus on events suggestive of immediate or worsening consequences, such as a nuclear or chemical accident, or gloomy estimates of how bad a problem just exposed really is. Mistrust of authority and concern about officials’ incompetence are also journalistic staples; indeed, keeping a check on holders of political power is one of the main functions of a free press. The journalist-friendly nature of risk categories two – when perception of an immediate threat is involved - and six could thus explain why these two categories appeared most frequently in the study, comprising 135 of the 210 risk references.

From the study it also emerged that the frequency and clustering of risk and non-risk references did not change significantly over the three study decades, a result which reinforces the finding of a lack of significant change regarding reporting of risk categories. This study advanced the hypothesis that complex sociological explanations of risk consciousness should

be reflected in the co-appearance in the press of mutually reinforcing elements of risk consciousness. That was not the case. Seventy percent of the articles that contained at least one risk reference contained *only* one risk reference, and 77 percent of the articles that contained at least one non-risk reference contained only one such reference. The number of clusters was negligible.

Any tendency toward clustering was related to the length of stories (see Table 22). This seems logical, when viewed arithmetically, but could also indicate that there are qualitative differences between shorter and longer articles. Longer stories may allow for more synthesis and development of logical connections than shorter articles.

*Sources: lay testimony was conspicuous by its absence; experts and officials dominated*

Another striking finding of the study was the virtual absence of commentary from ordinary people – from people whose relevance to a story relates to their being personally affected, or potentially affected, by it, or to their playing the role of the average person on the street. Just seven percent of the risk and four percent of the non-risk references – a total of 20, or 6.4 percent, of the total of 312 (see Tables 10 and 18) references in the study – came in the form of lay testimony.

Or, to look at it differently: experts, officials, and journalists were the source of almost all the risk and non-risk commentary in the articles examined. Journalists provided 42 percent of the risk and 24 percent of the non-risk references. Of course, journalists are the hardest to count as sources, since much of what they write they may simply be passing on as public knowledge or established fact from other sources. Journalists could thus be over-represented as sources of risk and non-risk references by the study. They could also, however, be under-represented, for, though the study included editorial pieces, it excluded commentary and analysis pieces, mainstays of both newspapers. Experts, advocates, and politicians provided 51 percent of the risk and 72 percent of the non-risk references in the study.



This absence of lay commentary seems to be a feature of the American national press as well, though not as pronounced as in Greece. In their study of hazard reporting in major daily American newspapers, magazines, and television news, Singer and Endreny (1993) found that testimony from victims or potential victims of hazards accounted for 7.7 percent of the sources cited in daily newspapers in 1984.

Government officials accounted for 24.7 percent of all sources cited in major daily newspapers the same year. And government officials, scientists, and industry spokesmen accounted for around 60 percent of all the sources cited in the major dailies in 1984. Scientists and industry spokespersons appeared more frequently than lay people. However, while Singer and Endreny (1993) found a growth in the amount of lay testimony in 1984 compared to 1960 – when the percentages of such testimony were too small to measure – the current study of the Greek press revealed no significant upward trend for lay comments in the mainstream press (see Tables 10 and 18).

Singer and Endreny also found that American television news was much more likely to use lay commentary than the American national press. The Greek study has not gauged the amount of lay testimony in Greek television newscasts, but casual observation suggests that it is much higher than it is in the Greek newspapers. Sound bites from ordinary people are a common feature of Greek television reporting, which, like television in the United States, relies more on emotional testimony than the staid establishment newspapers.

The current study, like the Singer and Endreny study, raised a question that should interest all journalists: why do journalists not use ordinary people more often in their news reports? One answer is that journalists tend to cover people vested with political and other forms of social power, and so traditionally provide politicians with platforms for airing their views. This is understandable, for people in positions of authority, particularly state authority, have control over much of the collective life of a people. This may explain why half the articles in the study fell into the political/social welfare/public administration news peg. This and the fact that 97

of the 210 risk references fell into this peg (see Table 8) may suggest that risk categories only have a strong chance of appearing if they reflect traditional news values and traditional ways of conceptualizing what news is and how it should be covered.

The reliance on officials for testimony implies that it is difficult for people and viewpoints with no immediate impact and no strong connection to the normal news chain to enter it. It may explain why advocacy and other groups interested in projecting their causes to the public stage events that will attract the media. Such events have immediacy and project conflict, two important news values.

At another level, the potential significance of the absence of lay commentary in the press is obvious for media researchers and journalists: if the views of ordinary people do not find their way directly into the newspapers, then the newspapers may not reflect the concerns and outlook of wide sections of society. If that is the case, then researchers who treat newspaper content as a sort of summary of what and how “people” think, are mistaken. At the same time, however, the appearance of lay testimony in the media may not be representative either. Singer and Endreny (1993) found that lay testimony accounted for almost 20 percent of the source commentary in American network news in 1984. But such commentary is not necessarily either representative or insightful.

Interestingly, opposition sources (parties out of government, international agencies opposing a national government on an issue) accounted for a plurality – 38 percent – of the non-risk references in the current study of the Greek press. Of the 28 non-risk references from opposition sources, 22 came in 1977, a reflection of both the relative optimism about, and generosity on the part of, opposition parties toward government initiatives and of opposition parties’ confidence that they could bring a better future in the years immediately after the end of the military Junta, before the left had ever been to power or had the chance to test its program in the real world. The 1977 articles revealed a consensus across party lines that economic progress and industrial development were positive. There were references to the

need to protect the environment, but these references treated the matter as unproblematic and focused on the unquestioned good that industrialization would bring.

*Political/social welfare/public administration news peg domination reflects the importance of the state in Greeks' lives*

Consistent with the absence of lay testimony was the fact that 121 of the 240 articles in the study came under the political/social welfare/public administration peg heading. Articles about government obviously provide great scope for officials to comment. The prevalence of political/social welfare/public administration stories may reflect the importance of the state as a regulator of vast areas of life in modern Greece and the dependence of the mainstream, partisan print media on the traditional political paradigm for framing news and identifying news values.

Related to the importance of the Greek state in the life of ordinary Greeks were stories covered by two other news pegs: the national/global economy and political scandal/corruption pegs. All three government-related pegs accounted for 155 of the 240 articles: 65 percent of the total.

The number of political/social welfare/administration articles showed no tendency to change consistently over time. It appears that the newspapers under consideration maintained a steady commitment to those types of articles. Though they are not party organs, both papers included in the study, like most Greek newspapers, support a major political party for ideological reasons. Their identification with a party thus buoys the importance of stories and story angles that have party-political significance.

However, there was no tendency of the papers to alter their risk presentation on the basis of which party was in power, even in the case of political/administrative scandal/corruption articles. The preference of the papers to focus on party and traditional institutional politics appears to have been much stronger than any inclination to frame stories in terms of risk. In addition, the risk frame appears not to have been a tool the papers used to attack the political opposition when it is in office; nor does the non-risk frame appear to have been a tool for

supporting the party in office. This lends further support to the main finding of this study, that there is no risk paradigm, no fashion for framing issues in terms of risk evident in the mainstream Greek establishment press: if newspaper editors sensed that framing issues in terms of risk would help them damage their political opponents, it would be reasonable to expect them to do so with relish.

Despite that, the study may suggest that in Greece mistrust of governmental institutions is linked to a sense of vulnerability to risks created by modern society. There may be a low regard for authority that cuts across lines of party affiliation. As noted earlier, throughout the years of the study, there was a tendency for risk category two - anticipation of/vulnerability before modern problems – to co-occur with category six – mistrust of authority. Twenty of the 38 times that risk category two appeared in an article, risk category six also appeared (see Table 28). Or, to look at it in the context of clustering, they co-occurred in 20 of the 42 articles that contained risk clusters. Furthermore, eight articles in socialist *Elevtherotypia* contained references to both risk categories two and six when socialist Pasok was in power, but just three articles contained both risk categories when conservative New Democracy was in power. For conservative *Kathimerini*, five articles contained both risk categories when the socialists were in power; four did so under conservative governments. These numbers suggest that insecurity about the future tended to run in tandem with a general mistrust of the people running society, whichever party they were from. This phenomenon appears to be consistent with Furedi's observation (1977) that risk consciousness has grown as the authority of traditional institutions has diminished.

*Story types normally associated with risk were rare across the study years*

Other types of stories were notable by their absence. With the exception of crime/policing, news pegs one would normally associate with a risk focus – disaster (3.7 percent) and the environment (five percent) – were consistently infrequent across the years. This also reinforces the key finding of the study, that risk and non-risk references were independent of time. For, if

the media under observation reflected the growth of a tendency to frame news in terms of risk, it would be reasonable to expect a growing number of risk-related articles in risk-sensitive pegs to appear. This, however, was not the case. An important qualification needs to be added to this observation: the large difference in the sizes of newspapers from 1977 and the other two study years (see pp. 57, 58) means that there could well have been an increase in the number of risk-sensitive news peg stories in the papers used in the latter two years of the study, but that this increase was not a proportionate growth, because the newspapers increased overall in size. Furthermore, there may simply have been consistently few disasters and environmental stories to report on.

Also supportive of the main finding of the study is the fact that the number of health/lifestyle stories (6.7 percent of the 240 articles), often associated with risk and risk consciousness by sociologists studying the purported negative effects of social fragmentation, remained consistently low across the years of the study. The qualification regarding changing sizes of newspapers over the years also pertains here. However, if the Greek mainstream press covers health and lifestyle issues as little as this study suggests, it suggests that the mainstream press continues to play a rather traditional role as a purveyor of political stories; it could also explain the strength of the market for Greek magazines, which seem to focus more on health and lifestyle, but also celebrity, issues.

Conclusion: There are several possible reasons why the study found no evidence of a risk culture and these suggest further areas for study

Singer and Endreny (1993) found that the media are people's most important source of information about risks, but added that, for the most part, this information does not come "as explicit reporting about risk" (1993, p. 159). Their study thus focused not on risk as such, but on hazards and the risks that relate to them. The main objective of this study of the Greek press was to investigate not just how the media report risk, but the claims of sociologists that risk consciousness has become more important to Westerners. These theories are intriguing and often intuitively compelling; yet they also tend to be, as Tierney observes, "highly abstract and generally unconnected to data" (1999, p. 216); or, as Kitzinger (1999) notes, they fail "to present empirical evidence of how media coverage develops" (p. 67). Thus, the challenge was to find confirmation of the theories in the news media. No such confirmation was found, not even partial confirmation, regardless of how the data was examined.

That, and the other findings of the study, lead to several plausible conclusions: first, there is no risk frame in the Greek press because there is no risk culture; second, since journalistic news values do not include "risk", it may be unreasonable to expect to find evidence of a risk culture in the press; third, this study may have covered a period too short to gauge historical trends regarding risk consciousness; fourth, the striking scarcity of lay testimony in the newspapers studied may mean that the mainstream press does not reflect social trends such as the growth of risk consciousness; fifth, the media as a vehicle for public discourse may be unrepresentative of cultural trends; sixth, the theories of Beck and Giddens are formalistic, and cannot explain risk as a social dynamic; seventh, the relative frequency of, and tendency for, risk categories two and six to co-occur may indicate a link between fear of the consequences of modernity and mistrust of political leaders; and, eighth, the tendency for longer articles to

show relatively heavier clustering of risk categories suggests that longer stories may reflect elements of risk awareness and the importance thereof that is not visible in shorter stories.

From these observations flow some recommendations for further studies that could help journalists and researchers:

1. Studies that cover longer stretches of time and examine in greater detail the extent to which, and the ways in which, the media display risk consciousness or a lack thereof;
2. Studies similar to this one which test the theories of Beck, Furedi, and Giddens in the American and British press;
3. Studies similar to this one which test the theories of Beck, Furedi, and Giddens, against Greek television current affairs programming and tabloid newspapers;
4. Studies which examine the nature of the sources used in the Greek press, and examine why certain sources are used, and what consequences that has for the mainstream Greek press;
5. Studies which compare the role of lay testimony in newspapers and television current affairs programming;
6. Studies which examine whether or not the level of environmental and health reporting has increased in the Greek media during the past four decades; and
7. Studies aimed at gauging the significance of symbolic events and people in the news in framing social discourse.
8. Studies that examine attitudes toward modernity.
9. Studies that examine only articles 1,000 words or longer.

The observations and recommendations noted above are examined in detail in the following section.

*The absence of a risk frame may reflect the absence of a risk culture*

It is possible that a study design flaw has led to an erroneous rejection of the main hypothesis of this study, but this seems unlikely, not just because the statistical analysis showed emphatically that there was no link between risk consciousness and time in evidence in

the Greek press, and not just because none of the categories revealed any tendency to contradict this general finding.

It also seems unlikely because the ten risk categories used to test the Greek press for signs of risk consciousness were carefully deduced from the theories of Beck, Furedi, and Giddens. As noted in the literature review, a criticism frequently lodged against the sociologists by media researchers (Kitzinger, 1999; Tierney, 1999) is that they tend to produce little statistically significant evidence from the mass media to support their claims. This is essentially a complaint that their conclusions about the importance of the news media as conveyors of frames of social experience are not based, or not based consistently and systematically enough, on the scientific method of empirical induction. This study therefore worked backwards, first deducing the risk categories from the sociologists' theoretical edifices, on the assumption that, if they were correct, the categories deduced could then, through the process of empirical induction, lead the researcher back toward confirmation of the theories. This methodological approach made it unlikely that the study was flawed, because it severely restricted the possibility of arbitrarily drawing up the criteria (that is, the risk categories) by which the sociologists' theories were to be tested.

Furthermore, because the end of the Cold War fell right in the middle of the study period, it was reasonable to assume that, if risk consciousness were strong across society, the media would lunge to adopt a risk frame to replace the Cold War frame, especially if such a frame were to emerge largely as a consequence of the evaporation of Cold War certainties and pre-occupations. Yet, this was not evident in 1994 or 2004. Such a trend, of course, might be observable in the context of international conflict coverage. Powerful nations might, for example, show a significant tendency to justify foreign interventions on the grounds that they need to protect victims or stop abuse, rather than stop communism, as they once argued. Since this study included few foreign news articles, however, this would have to be the object of another study.



Barring a cyclical distortion in the data as a result of the large time gaps between the years studied, then, it is safe to conclude that there was no evolution and consolidation of a risk frame evident in the mainstream Greek print media between 1977 and 2004. This is important because it suggests that the sociologists' theories are either incorrect in the Greek context or that the media studied do not reflect the motivating perceptions of ordinary people in society in their daily lives.

*Newspapers may not be the best place to look for evidence of cultural trends*

It may be that the newspapers - at least the ones selected for this study - are simply not a good place to look for evidence of a risk culture. The literature on risk in both sociology and media studies is extensive. Media researchers have clearly identified a growth in hazard reporting since the 1950s. Yet they have also established that journalists cover not risks, but disasters, and note that this is a difficulty in using the media as a gauge of concerns in society about risk: "Environmental risk, in our view, is an abstraction about the possibility of damage and, by itself, does not possess any news value" (Miller & Riechert, 2000, p. 48). That means that stories like those surrounding so-called mad-cow disease, which Beck identifies as the quintessential manufactured risk, will explode into the headlines, only to fade out of them again. In other words, the story can only stay in the news as long as it had immediacy (fresh cases of the illness) and suggested that further developments (more illnesses or a research breakthrough) are imminent. The same goes for disasters like Bhopal and Chernobyl; and for the sun, which makes the headlines as a greenhouse menace during tanning season. Disaster is a strong news value, but not necessarily a good gauge of risk consciousness as a profound and ongoing social phenomenon.

Researchers have also adeptly revealed how coverage of a single risk issue may evolve from one year to the next. Wilkins and Patterson (1991), for example, revealed changes in the way global warming was covered in the American press in the 1990s. Others have noted a change in the frequency and nature of risk stories appearing in the press over a relatively short

span of time. For example, the literature reviewed in this paper recounts how in the 1980s British media researchers noticed a change in the nature and frequency of moral panics in the news. These approaches are promising to media researchers, because they provide depth of analysis while helping to trace trends.

*Risk consciousness trends may be too long-term to chart over the study period*

A third possibility is that no trend toward a generalized emergence of a risk frame was visible because the constituent elements of the risk theories developed by the sociologists have been firmly in place since before the period under study began. In that case, there would be no reason to expect to see any statistically significant rise in the number of risk references in the media. At the same time, this would suggest that acute risk consciousness is not a significant new phenomenon in Western society.

Trying to explain the unexpected emergence of Bill Clinton in the United States and the Tories' perfunctory dismissal of Margaret Thatcher at the apparent apogee of conservative triumph – the end of the Cold War – Furedi (1997) notes that many of the cultural shifts that would eclipse the confident, popular conservatism personified by Ronald Reagan and Thatcher in the 1990s were already largely in place in the 1980s. The fact that a new culture of regulation based in an ethic of risk aversion was already strong in the eighties, Furedi holds, is significant because it shows that there were broad, powerful cultural trends at work even in the heyday of Reagan and Thatcher, trends that would ultimately undermine the cultural influence and substantially erode the political relevance of the traditional conservative outlook. Despite the Reagan-Thatcher commitment to “free enterprise, rugged individualism and conservative morality”, the 1980s, Furedi writes, were in fact

...the decade of caution, the normalization of abuse, of AIDS, of the flourishing of risk consciousness and of the massive increase in the professionalization and the regulation of everyday life.... It indicates that despite the opposition of successive governments a new form of social regulation has successfully evolved (p. 153).

The literature review in this study suggests that, in fact, manufactured risk has been an

issue in American society at least since the 1950s, when the concerns about cholesterol and diet passed from some experts into the media and public awareness. But even before that, concern about manufactured risks had started to color Westerners' attitude toward technology and, by extension, scientific research. Write Wilkins and Patterson (1991), once upon a time scientists

were regarded as pioneers and crusaders; science itself was seen as a vehicle for societal progress. But, Americans seem to have changed their attitude about science. The dropping of the atomic bomb on Hiroshima was a watershed event that symbolized the use of science for destruction as well as for the public good" (p. 197).

And sharply focused doubts about modernity can be traced back further still. Furedi (1992) reasons that

the anti-establishment ideas thrown up in the 1960s were far from original. Many have their roots in the nineteenth century and most were widely discussed in the years between the two world wars.... During the 1960s ... [a] lack of belief in society and a fear of the future began to find general expression" (p. 162).

What was new, according to Furedi, was not the ideas, but their slow diffusion from the conservative intelligentsia of the nineteenth century, to the lost generation of the inter-war period, to the radical campus protesters of the 1960s.

Be that as it may, the present study of the Greek print media has revealed a weakness in the argument that the risk culture is not detectable because it has been very long in the making: not only did the study detect no trends; it detected no significant diffusion of risk consciousness at all in the Greek newspapers. What could be particularly relevant here is the fact that the number of articles dealing with hazards generated by modern society was small and showed no tendency to grow across the study years. This observation needs to be heavily qualified, however, since this study did not measure the frequency of hazard-related articles directly, but merely took them into account as part of the random selection process.

In their study of American newspapers, magazines, and television in 1960 and 1984 Singer and Endreny (1993) reported finding "no evidence of increasing aversion to risk on the part of

the media in the last twenty-four years” (p. 172). Despite its emerging from a study of the American media, this finding is of relevance to the present study not just because of its similar finding regarding risk and time, but also because it covered nearly two decades not included in the current study on Greek media. This may be a further indication of just how long-term the trend toward a shift in risk consciousness is; or it may just be more evidence that there is no such trend.

Singer and Endreny also found evidence that there had been a slight tendency toward risk *acceptance* in the American media in 1984 compared to 1960. This they attribute to the political ascendance of Reagan and Bush, whose administrations “came to symbolize the retrenchment of government in favor of increasingly unregulated private activity – a decade spurred, perhaps, by decades of increasing regulation and government expansion” (173). This analysis - which hindsight shows to be so off the mark - reveals the danger of relying only on empirical observation as a tool in theory building and analysis. There is no clear reason why a period of “increasing regulation and government expansion” should lead to a conservative backlash, unless one wants to accept a dogmatic, historically non-specific, and speculative pendulum theory of history. What Furedi’s retrospective analysis of the eighties shows, by comparison, is that mere description based on empirical data not complemented by logical and historical analysis contributes nothing to theory building; it leads to circular arguments and can lead away from the truth.

*The scarcity of lay testimony may mean the press does not reflect what people think*

The lack of lay testimony in the articles in the study means that the Greek press may not reflect the concerns of ordinary people. Lay testimony seems to be weak in the American print media, too (Endreny and Singer, 1993). The fact that journalists do not rely on lay people might contribute to the absence of a risk culture finding by the present study, for lay and expert perceptions of risk differ (Wilkins, personal correspondence, July 8, 2006). The literature reviewed in this paper demonstrates that the presentation of risk by the media may be very

different from the way individuals in society understand and experience it. Individual responses to perceived risks are by their nature emotionally driven – something that is not necessarily true of the conceptualization of risk by experts or officials, or, therefore, of the reporting of risk.

In addition, the general media framing of risk may differ from the individual sense of risk, which may exist in the sinews of everyday life as anxiety without ever becoming worthy of publication anywhere except in the anxious individual's personal diary. The print media report tend to report disasters, not individual anxiety.

There may be a link between media reports of disasters or hazards and individual anxieties, but it may not be direct. Indeed, it is possible that powerful images, for better or worse, fuel anxiety. Throughout the summer of 2006, for example, Greek television viewers followed the heart-rending story of a ten-year-old boy who had disappeared on his way to a music lesson in the small town of Verria, in northern Greece. Asking a friend whether there was any news about Alex would most likely have brought a knowing response regarding which Alex was being referred to: the Alex who had disappeared. The question is: though journalists simply reported this rare but tragic event, did parents around the country draw the conclusion that they must keep a closer protective eye on their young children? Did coverage make the extraordinary seem like an everyday occurrence? This paper has not tried to answer these or any other such questions. But such extensive coverage of such stories could be a reflection in, and by, the news media of what Furedi calls a pre-existing predisposition to panic. The point is that it is possible that the impact of risk reporting reflects and then taps into deep-seated, pre-existing individual anxieties that very much nourish individual risk aversion heuristics, which are based on intensely personal – and private - experiences of panic that would never, or only rarely, make their way into the newspapers. There is no such thing as a risk news peg at the point of news production, but there may be one at the point of news reception.

Furthermore, there may be a cultivation effect: a regular regimen of stories about pesticides being a health hazard may encourage people to eat organically grown foods. It may also lead them to a more generally cautious attitude toward all forms of modern food production and processing. Similarly, concern about ecological devastation may co-exist and even reinforce fears of over-population and growing world hunger. The symbols of manufactured risks and social problems, which Wilkins and Patterson (1991) note are so important to sustaining media interest in an issue - and a good example of which is the story of the disappearing ten-year-old Alex - may have an impact that goes beyond that intended by the media messenger (Cottle, 2000).

*The media as a vehicle for public discourse may be unrepresentative of cultural trends*

The virtual absence of lay testimony from the study newspapers and their heavy reliance on officials and experts suggests that, far from being a cultural artifact reflecting a wide cross-section of views and debates in society - an assumption at the basis of this study - the mainstream establishment press in Greece may actually reflect the isolation of elites from wide sections of society, and their abhorrence for allowing ordinary people into what they call public discourse or dialogue.

Television news and current affairs programming may appear to redress this imbalance, but this would have to be studied carefully. For example, Endreny and Singer (1993) did find that lay people comprised nearly 20 percent of the sources used in American news in 1984. But they were all cast in the role of victim or potential victim. In other words, when lay people did get a chance to speak out, it tended to be as passive objects upon which negative forces had acted. Thus, for example, "Television news positions ordinary people to symbolize or (literally) 'stand for' ordinary feelings and responses to the consequences of environmental risks" (Cottle, 2000, pp. 31, 32). And advocacy groups doing public relations or promoting a cause can use ordinary people as a stage army, forcing them to become living proof of their point.

Cottle's point is consistent with Furedi's claim that in contemporary society as a whole – and not just through the media - people are seen, and encouraged to see themselves, as vulnerable, pleading victims constantly at serious risk from other people rather than as active political agents. This happened in the case of Alex, mentioned earlier, as members of an environmental group hung a banner from a building in the town center announcing that, “We are all to blame for what happened to Alex”. A representative of the group expressed certainty that more such cases would inevitably follow. Following the publicity stunt, the infuriated mayor of the town told one evening news anchor during a live feed that it was unfair of the media to criminalize all the residents of the town over the tragic disappearance of the boy. The anchor rejected the charge that news people were doing any such thing. However, it was through the agency of the news that a special interest group, like the myriad counselors, psychologists, lawyers, and private detectives with an expert or professional role to play in the story, were able to turn Alex into a symbol of all that is wrong with society and the fundamental vulnerability of people, on the one hand, and their rottenness, on the other. It was through the agency of the media that a mercifully rare tragedy was framed as an inevitable disaster with roots in all sorts of social problems, and thus as the tip of the proverbial iceberg. It was the news media that conveyed the message of universal helplessness at the brink of catastrophe.

Because of the way that ordinary people can be used as props, Cottle (2000) questions Beck's (1999) assertion that lay testimony in the media presents a grass-roots challenge to “scientific rationality”. Indeed, Cottle's evidence seems to suggest that there is at times a division of labor between ordinary people, victims who passively blame, and officials, who receive blame, but also retain exclusive responsibility for taking initiatives and solving problems: for being political actors.

*The theories of Beck and Giddens are formalistic and unable to explain risk consciousness as a social dynamic*

In a similar vein, the findings of this study seem to indict, not necessarily the observations of Beck and Giddens, but the formalistic nature of their theories. Both tend to rely rather more on flourish than fact, and assume media effects which may indeed exist, but need to be established concretely. It is difficult, for example, to know what to make of the following words of Beck, which simply assert the urgent prominence of risk in people's consciousness: "We are living on a ledge – in a random risk society, from which nobody can escape. Our society has become riddled with random risks. Calculating and managing risks which nobody really knows has become one of our main preoccupations" (Beck, 1998, p. 2). If there were any truth in this statement, surely it would be reasonable to expect to find it reflected significantly in the news media, even the sober print media? But the Greek newspapers inspected in this study seemed largely oblivious of the "ledge...from which nobody can escape" and humanity's "main preoccupation" of "calculating and managing risks".

Or, to take an example from Giddens, who argues that people no longer have a passive attitude to the received wisdom of science: "The more science and technology intrude into our lives, the less this external perspective holds. Most of us – including government authorities and politicians – have, and have to have, a much more dialogic or engaged relationship with science and technology than used to be the case" (Giddens, 1998b, p. 32). As in the case of Beck's "main preoccupations", Giddens's "dialogic or engaged relationship with science and technology" appeared rarely in the Greek press examined here.

Beck (1999) and Giddens (2003), like Furedi (1997), find evidence for their assertions in media panics like those around mad cow disease. No doubt such panics and the conspicuous way they take on enormous proportions only to quickly fade, and the steadily increasing media attention given to issues like global warming and cholesterol in the United States over the past half a century, reveal something about what is on society's mind. But Beck and Giddens are



unjustified in springing from such media examples to claims that risk is our “main preoccupation”. Rather, such statements seem to bear out Furedi’s observation that the theories of Beck and Giddens reflect the narrow preoccupations of insecure Western elites, rather than Beck’s omnipresent spirit of “reflexive modernity”. And, with no evidence on the table, Furedi’s assertion that what he calls media panics reveal a society-wide predisposition to panic seems more reasonable than the argument that they illustrate that ordinary people have a critically “engaged relationship with science and technology”.

*The relative frequency of, and tendency for, risk categories two and six to co-occur may indicate a link between fear of modernity and mistrust of political leaders*

The fact that two risk categories, two – “anticipation of/vulnerability before modern problems” - and six – “mistrust of authority” – were the most frequent risk categories across the study years (see Table 3) and co-occurred 20 times (see Table 28), may be worthy of note. It suggests what could be a causal relationship between a growing ambivalence, or even pessimism among people at all levels of society about the future and modernity, on the one hand, and a mistrust of authority, when such mistrust exists, on the other. The sociologists and historians reviewed here certainly see such a link; more, they also detect widespread reticence about, if not outright contempt for, fundamental aspects of contemporary society.

*The findings suggest specific areas for further studies that could benefit journalists and media researchers*

Many sociologists and media researchers cited in this paper concur that the importance of the news media in framing information and issues is manifest. The results of this study do not disprove their views, but would seem to recommend a more circumspect stance. Accepting that media frames are important means either taking for granted media effects, or that media are at the very least an artifact that directly reflects social trends. Yet the results of this study show that those suppositions need to be established empirically, for, while researchers may have shown that risk has become a more important topic for Western society over the past four

decades, and that certain types of risk reporting have become more frequent, at least in spurts, they have not made clear what precise role, if any, the different media play in documenting, and perhaps encouraging and shaping, a societal growth in risk consciousness.

Explaining these things is important to media researchers interested in understanding how and under what influences the news media work. Explaining these things is also important to journalists, who can benefit from critical insight into how unquestioned or stultifying media frames may compromise their ability to be curious, open-minded, balanced, detached, and fact-based in their choice, prioritizing, and coverage of stories. Current vogue notwithstanding, good journalism requires an ability to take as detached a view of a story as possible. Awareness of the ways that frames may oversimplify experience or otherwise cloud our interpretations of it can help them to maintain that detachment. Furthermore, journalists, as much as researchers, benefit from studies that shed light on the dynamics behind social trends. Such studies can enable journalists to place apparently isolated incidents in a wider context, and thus enhance their ability to identify the relative importance and meaning of a given story.

The sociologists whose work was examined here have constructed theories to explain broad social trends, with the aim of anticipating future developments and recommending solutions to current problems or impasses in society. While many media researchers find them to be long on intuition and short on empirical evidence, this criticism should be placed in a context that goes beyond media research. The sociologists' theories are not built on air: they tend to be anchored in a familiarity with the dynamics of historical change and how that relates to the history of changing ideas and perceptions of change; they also tend to be anchored in a consideration of the social forces that cause, or fail to cause, social change. And they do provide evidence, just not, perhaps, a lot of evidence from the news media. Beck (2000) acknowledges this as a short-coming in his work, given the importance he attaches to the media as a presenter of risk issues. Furedi (1997) tends to cite sources of a more intellectual or probing nature – scientific, special area, and advocacy publications, academic literature, and

bestseller lists, but also uses surveys to support his views. There is justification for this: consistent with Marx, he attaches paramount importance to ideas as the reflection of social reality and perceptions of social reality, and thus to the clash of ideas, honed to their sharpest, as the way to clarity in acting to shape the future. It is understandable, then, why he considers the popular media important in shaping social discourse, but of secondary importance. Given the needs of media researchers, journalists, and social theorists, there are several types of studies which could be undertaken to further examine and clarify the issues raised by this study.

1. This study could be conducted over a longer period of time, as a way of determining if there is a long-term trend toward risk consciousness based on the categories derived from the work of Beck, Furedi, and Giddens. This study took three decades as a long-term period. Perhaps a century is needed. The literature reviewed here certainly justifies this, identifying, as it does, the roots of some contemporary intellectual and social trends as far back as the 19th century.

2. It would also be worth repeating the current study using newspapers that occupy similar social positions in Britain, Germany, or the United States, countries whose cultural trends tend to set the tone for much of the world – and the world’s media - and which occupy much of the attention of the social scientists whose views were reviewed in this paper. In Britain, for example, this might mean a study of *The Times* and the *Guardian*; or, in the United States, of the *New York Times* and the *Washington Post*. Such a study would not only test the risk culture theories; it might also, coupled with the present study, provide insight into how social and cultural differences between countries may lead to different understandings of, and attitudes toward, risk.

3. Similarly, the current study could usefully be repeated using Greek television current affairs programming and tabloid newspapers, which seem to be more emotive than mainstream print media and could provide a different picture of the framing of risk by the Greek media; as

Beck (1999), Short (1984), and others cited in this study note, concern about risk today tends to be personal and emotional and can thus not be assuaged by rational arguments about the diminutive or unsubstantiated nature of the risk in question. Studying more emotional television texts, as opposed to newspaper stories, might reveal a much greater concern about risk than that suggested by the newspapers studied here.

4. This study revealed a dearth of lay testimony and abundance of political/expert testimony in the Greek press. This confirms research conducted in the United States. As two researchers note: “One of the best documented findings in news research is that journalists rely heavily on governmental sources” (Miller & Riechert, 2000, p. 51) Given the decline of Greek political parties over the past three decades as representatives of large groups in society with clearly defined economic and political interests, this could mean that officials who once expressed views that reflected those of wide sections of society may no longer do so. Thus, the absence of lay testimony in news articles and a reliance on politicians could give a distorted view of what the majority of people in society care and think about. Furthermore, the current study showed that in Greece reporters are strong sources of information in their own stories. This could mean that journalists simply fail to attribute sufficiently, or that they often write from their own assumptions or stock of knowledge about the world.

There is clearly a need to study more closely the types of sources used by the Greek press. Such a study could begin with a meta-analysis of the content of the remarks made by sources logged by the present study. Comparative studies would also be interesting, especially regarding the frequency of the journalist writing a story being the source of authority. Singer and Endreny (1993), for example, do not include journalists themselves as the identifiable source of information in their stories. Rather, they only count non-journalistic sources.

Public relations practitioners and other advocacy groups are also important sources of news stories, and do much to encourage journalists to cover issues and viewpoints they want to promote, by providing them with research, press releases, interviews, and tours and other forms

of sponsorship (Miller & Riechert, 2000). Advocacy organizations such as Greenpeace are adept at staging events that will draw media attention (Hansen, 2000). Do non-governmental organizations and other public relations-minded advocacy groups play an important role in setting news agendas and shaping news frames in Greece? Given the low number of stories concerning the environment found by this study, the answer is no, at least not as far as environmental issues are concerned. Another question is this: do media frames create a pre-disposition among journalists to cover certain stories in the way that advocacy groups want them covered? In other words, could a risk frame in society serve as the meeting ground for journalists and environmentalists? A meta-analysis of the data from this study would, again, be a good starting point for investigating matters related to source selections further.

Such a study would be very important, especially in Greece, where virtually no news media research is conducted and where the newspaper industry is in sharp decline. Researchers interested in using the news media as a tool for gauging social trends need to know whose concerns newspaper articles reflect. And journalists need to be aware that in selecting – or in allowing public relations groups to select – sources for stories, they may be giving a warped view of the world to readers who like to see their newspaper as a window providing a clear view of the world.

Such a study would also be of special interest in Greece in light of the fact that opposition sources comprised the largest single source of non-risk testimony in this study, and that most of those instances of testimony came in 1977. As noted earlier, despite the statistically insignificant frequency of non-risk references, this could be an indication that the years immediately following the fall of the Greek dictatorship in 1974 were years of optimism for the Greek left. That left still had faith in a socialist future and believed in the unproblematic, liberating impact of economic and technological development. One of the assumptions of this study was that the rapid and sometimes abrupt pace of social change in Greece makes it an ideal country for the examination of the evolution of news frames. A study of opposition

sources could reveal that Greek opposition parties or anti-establishment movements have become less optimistic over the past three decades, and that this has compromised their ability to provide citizens with strong, forward-looking leadership.

5. Television news, as Singer and Endreny (1993) have shown, uses sources differently from newspapers. Television, for example, relies more on lay testimony. Television commentary also tends to be designed to make an emotional impact on audiences. The differences between the mediums mean that comparative studies of the way risk is covered by television and newspapers could help researchers come to a better understanding of how the news mediums and society frame – or do not frame – issues and concerns. Such studies could provide Greek journalists with the insights that come from systematically detailing the similarities and differences between the news mediums.

Given the emotive nature of television news, comparative studies that included television would be of particular interest to testing theories of a risk culture: risk consciousness, according Furedi (1997), is largely an emotional response to insecurity generated by social fragmentation. If this is true, it would be reasonable to expect emotive news sources to reflect it.

6. One of the most interesting findings of this study was the consistently low relative incidence of environmental and health/lifestyle articles. Research based on other, more popular forms of news media would perhaps shed light on whether Greece simply differs from other Western countries in this respect, or if the staid Greek press is simply not the place to look for types of stories that actually resonate widely with Greek audiences, and who get their news and information about the environment and health and lifestyle issues from other sources, like television or magazines.

7. There is a need in Greece for studies gauging the significance of symbolic events and people in the news in framing social discourse, and which assess if, and to what extent, tragic stories about unusual events, like the murder of a child, normalize rare but harrowing

occurrences in people's hearts and minds. People have always been dependent on mediated images in forming views about the world beyond their immediate experience, be it in the form of the words and paraphernalia of a village priest, the lines of actors in a traveling show, or the images on a television screen. Decoding the symbols society creates can reveal much about how that society sees itself, and why it does so.

8. Given the relatively frequent appearance of risk category two in the study articles and the link sociologists and historians see between attitudes toward modernity and attitudes toward uncertainty, it would be worthwhile conducting studies that examine changes in the way the press in Western countries present modernity and its potential. Pessimism about the future could be an expression of low regard for the human potential and human aspirations, and a low regard for humanity would heighten awareness of risk (Furedi, 1997).

9. Since the study revealed a tendency for risk clusters to appear much more frequently in longer stories, it could be worth repeating the current study using only stories 1,000 words or longer. It might also be worth conducting such a study using Sunday newspapers – excluded here – which, in Greece, rely almost exclusively on news analysis and commentary – another category excluded from the current study. Such a study might reveal that the more probing or reflective pieces in the mainstream print media reflect a higher and significantly growing awareness of risk.

All of the recommendations above take the current study as a springboard to more comprehensive studies, the aim of which would be to help clarify the big picture: the literature reviewed in this paper suggests that society-wide framing of risk is closely linked to society-wide perceptions of modernity. In different ways most of the sources cited in this paper note that contemporary society is marked by a pessimistic view of the future. Uncertainty therefore becomes by nature problematic and caution in outlook - if not necessarily in practice - an unquestioned good. Consequently, ambitious human designs based on traditional notions of progress come to seem problematic.

Yet researchers and theorists disagree about the roots of the pessimism and, therefore, about the way of overcoming it. What is needed, if media researchers are to play a leading role in exposing those roots and developing social theory as a creative guide to solving social problems and thus to human liberation, is media research that takes in longer stretches of time – a study of risk consciousness, for example, that takes in the entire twentieth century, rather than just the last three decades – and in more detail – not just three points in a thirty-year period, but every three years for a century. This is a formidable task, but would overcome the limitations of the current study and allow media researchers to play a role in the worthy task of painting pictures of society that are both broad in stroke and accurate in detail, and could thus help light the way ahead.



## Appendix A

### Coding Protocol

#### I. Categories

For this study, a list of ten characteristics of a hypothesized “risk culture” has been distilled from the theories of Ulrich Beck, Frank Furedi, and Anthony Giddens, supplemented at points by insights provided by numerous other researchers and observers. Like the “risk culture” concept, the “non-risk culture” concept is operationally defined through the use of ten categories. The “risk culture” concept categories are:

1. Adoption of the precautionary principle. The impossibility of predicting with absolute certainty the outcome of an action creates fear of social and scientific experimentation. There are no longer good risks and bad risks, just risk itself. Uncertain outcomes constitute risks. Uncertainty is by its nature problematic (Beck, 1999; Giddens, 2003), and it becomes difficult for people to accept any level of risk. The impossibility of eliminating uncertainty, rather than providing a reason for pursuing science, makes confidence in science unjustified: “At this moment, scientists must above all reflect, respect and confess their ignorance” (Beck, 1999, p. 107).
2. A perception that people are vulnerable before anticipated calamities that can in some way be attributed to modern society (for example, “mad cow” disease being a product of mega-agriculture’s unnatural ways of feeding cattle, or of government negligence). In the “world risk society”, nature does not exist separately from society. Society has fully incorporated it, so risk and perception of risk are the same thing (Beck, 1992). Manufactured threats have replaced natural threats to humanity (Giddens, 2003).
3. A heightened consciousness of the body’s vulnerability, as the body becomes the most important expression of self-hood in a fragmented world (Coupland & Coupland, 2000; Furedi, 1997), or as science increases knowledge of threats to the health (Beck, 1999).
4. A feeling that people are exposed to risks involuntarily, thus becoming victims of their environment and other people (Beck, 1999; Wildavsky, 1998). Feelings of victimization shape people’s identity and frame political activism in a culture of abuse (Furedi, 1997; Hollander, 1995).
5. A belief that advances in science and technology result in products that are bad for people’s health, threaten to deplete indispensable natural resources, and may cause irreparable damage to the environment. This belief rests not on technical risk assessment, but on a belief that risk assessment is inadequate in a world of potential hazards of which humanity has no previous experience, on a feeling that the worst-case scenario will eventually occur (Beck, 1999), and that society cannot solve problems it creates (Furedi, 1997).
6. A mistrust of traditional sources of authority (e.g., the state, the family, the church, science), which are seen not only as being incapable of providing protection against risks, but are also implicated in creating them by design, indifference, or incompetence (Furedi, 1997). In the risk society, risk is a product of human decisions rather than acts of god or nature (Beck, 1999).
7. A more general mistrust of other people’s motivations and the belief that abuse is a normal feature of human relationships. In a fragmented world, people become strangers whose motives are unfathomable. People are unsure of how to behave toward, and what to expect of, others

(Furedi, 1997). The weakening of bonds of tradition without anything positive taking their place makes social relationships contingent, and therefore risky, as people cannot be trusted to fulfill promises or live up to commitments (Furedi, 1997; Giddens & Pierson, 1998, as cited in Beck, 1999).

8. A low estimation of people's ability to shape their personal destiny or manage relationships, problems, and daily life without therapeutic assistance (Furedi, 1997).

A tendency to define social behavior as "healthy" or "unhealthy", and to treat behavior deemed "unhealthy" as the result of an "addiction" or some other weakness individuals cannot overcome alone.

9. A perception that threats are global, rather than local or national. Global threats are the universalizing element in human experience, and diminish the power of the nation state, which cannot manage transnational threats (Giddens, 1998).

10. A proclivity for using vulnerability and victim-hood to build bonds of shared experience and otherwise connect with others (Beck, 1992; Furedi, 1997). Celebration of victimhood.

These categories can be simplified to the following, and will be further simplified on the coding sheet (see below):

1. the precautionary principle, and uncertainty as by its nature problematic;
2. sense of vulnerability before anticipated calamities attributable to modern society;
3. heightened consciousness of body's vulnerability owing to scientific knowledge;
4. the involuntary nature of risks;
5. the adverse impact of science and technology on the environment, health, and quality of life;
6. mistrust of traditional sources of authority;
7. mistrust of other people and the normalization of abuse;
8. a low estimation of people's ability to manage life without intervention; the use of health metaphors and "addiction" to categorize behavior and relations;
9. the global, uncontrollable nature of threats; and
10. the use of risk, vulnerability, or victimization to build social cohesion, celebration of victim-hood, blaming someone else for one's behavior.

The ten "non-risk culture" categories can be simplified as:

1. untroubled support of scientific experimentation when there is no evidence to show that it could result in harm to human beings and a willingness to experiment in personal and social life;
2. confidence that human beings can avoid calamity or deal with it when it occurs;
3. sense of bodily security unaffected by dietary and other environmental knowledge;
4. unconcern for the involuntary nature of risks;
5. the positive impact of science and technology on the environment, health, and quality of life;
6. not criticizing traditional sources of authority, or criticizing them for reasons not related to trust or hypocrisy (for example, on the basis of policies or dogmas);
7. trust of other people and the view that abuse is rare and surmountable;
8. a high estimation of people's ability to manage life without intervention; confidence in people's ability to manage risk, leading to confidence that risks are worth taking, and a disinclination to see behavior in terms of health or addiction;
9. globalization marks a technical advance in minimizing risks; and

10. the rejection of using risk, vulnerability, or victimization to build social cohesion, reluctance to be classified as a victim, taking responsibility for one's behavior.

## II. Identifying categories

The categories have been written to be specific enough to be functional and meaningful, but not so detailed that they become difficult for coders to use. In some cases, it may be easy to identify a category. For example, if a man on trial for robbing a bank pleaded that he had turned to crime because he had had an unhappy childhood, then that would qualify as the appearance of risk category 10. However, if that same man also said in the same article that he nonetheless took full responsibility for his action, then non-risk category 10 would also present.

The coders should always look for explicit reference to, or affirmation of, a category in the content of the story. For example, if there is a story on the anniversary of the Chernobyl accident and it contains comments from people in Greece worried that they might get cancer as a result of the accident, then the coder would most easily enter this story as containing a category 2 reference. There are several other categories that could apply here, but 2 is the most neutral, since it simply refers to how people feel. Category 3 might also apply, but that would only be justified by an explicit reference by someone in the story to their resentment of being exposed to what they see as an involuntary risk. The same applies to category 5: someone – the journalist or a person quoted – would have to make a reference to technology as a negative thing for 5 to apply. Category 4 would be appropriate here only if there was a study released showing that people in Greece were in danger of getting cancer as a result of the accident.

The coder must consider each category separately and carefully before deciding whether or not it applies to a story and note the source(s) (lay, expert, reporter) of each category that appears. While multiple categories can be expected to apply to a single story, a coder cannot list the same category more than once per story. Thus, if five people reported in the Chernobyl anniversary story that they were worried about getting cancer because of the accident, then their statements would all fit under category 2, and 2 would be entered once on the coding sheet. The primary interest of this study is in looking for clusters of “risk culture” elements in single stories, not mere repetition, which in itself is not necessarily significant. Since many of the “risk culture” categories are general and not specific to contemporary society, the assumption here is that they only become significant indicators of the emergence of a “risk culture” paradigm if they display a clear tendency over time to appear in increasingly greater numbers in single stories.

All stories will be classified according to one of four categories:

Risk -	only risk categories are present
Non-Risk -	only non-risk categories are present
Both -	both risk and non-risk categories are present
Neither -	neither risk nor non-risk categories are present

## III. Coding procedures

In this content analysis, the unit of analysis is the whole story. Coders will examine entire news stories to see if any of the ten categories of the risk culture concept are present in a manifest form. The coders will also examine the stories to see if any of the ten opposite categories of the “non-risk culture” concept are present. The individual coder will note any characteristics identified in a story by ticking the category boxes on a coding sheet for that story. They will also classify each story overall as either “risk”, “non-risk”, or “both” or “neither” (see section II). The dismissal or criticism of a category in a story should be logged as an instance of the opposite category.

Coders will also measure each article they code by word count: if there is a high incidence of clustering, then category references may become more meaningful if they are viewed in terms of article length. A 100-word article with three “risk culture” categories, for example, could be as significant as, or more significant than, a 1000-word story containing four “risk culture” categories.

Coders will also note the prominence of a story by indicating what page it is on, and to note the type of story: news or editorial, and the news peg it fits into.

(Please see the Coding Sheet, Appendix B.)

Appendix B

Coding Sheet (Final Version)

1. Article number: (1-240) \_\_\_\_\_
2. Article title (in Greek): \_\_\_\_\_  
\_\_\_\_\_
3. Coder's name: \_\_\_\_\_
4. Newspaper:     1 = *Elevtherotypia* \_\_\_\_\_  
                  2 = *Kathimerini*
5. Publication Date:   xx/xx/xx (day/month/year) \_\_\_\_\_
6. Article page:     (1 or 14, for example) \_\_\_\_\_
7. Article type:     1 = news \_\_\_\_\_  
                  2 = editorial
8. Article location: 1 = above the fold \_\_\_\_\_  
                  2 = below the fold
9. Article size:     1 = 1-500 words \_\_\_\_\_  
                  2 = 501-1000 words  
                  3 = 1000+
10. News peg:     1 = crime/policing \_\_\_\_\_  
                  2 = existing disaster  
                  3 = anticipated disaster  
                  4 = political/social welfare/public administration  
                  5 = celebrity/famous person  
                  6 = environment  
                  7 = health/lifestyle  
                  8 = courtroom  
                  9 = national/global economy  
                  10 = Political/administrative scandal, corruption  
                  11 = Education  
                  12 = Exploration
11. News type:     1 = domestic \_\_\_\_\_  
                  2 = foreign
12. Photo/Graphic: 1 = yes \_\_\_\_\_  
                  2 = no

(continued)

13. Risk categories

- present (circle):
- 1 = precautionary principle: no distinction between good and bad risks; uncertainty by its nature problematic; all risk unacceptable
  - 2 = anticipation of, vulnerability before, problems/calamities created by modern society in the future; doom; gloomy predictions
  - 3 = scientific knowledge as a source of sense of body's vulnerability
  - 4 = involuntary nature of risks facing the individual/self; blame others
  - 5 = adverse impact of science, technology, and modern lifestyles already occurred/occurring; society cannot solve the problems it creates
  - 6 = mistrust of traditional/institutional authority; generalizations of corruption; technical/managerial incompetence; conspiracy
  - 7 = mistrust of other people; normalization/generalization of abuse
  - 8 = low estimation of people's ability to manage on their own, solve problems, shape their own destiny; "healthy"–"unhealthy"–"addiction"
  - 9 = global or uncontrollable nature of threats facing humanity
  - 10 = risk, vulnerability, victimization to cohere; adoption of victim-hood, blaming others for one's actions

14. Total number of risk categories present (1-10): \_\_\_\_\_

15. Non-risk categories present (circle):

- 1 = embrace specific forms of risky experimentation when no evidence of harm
- 2 = confident humanity can avoid or deal with problems/calamities; social optimism
- 3 = sense of bodily security unaffected by risk knowledge
- 4 = displays no anger or irritation over the fact that a specific risk is involuntary
- 5 = science and technology positive so far
- 6 = not critical of authority, or critical only of political views; trust authority
- 7 = trusting of other people; abuse is not the norm

8 = people can manage without intervention; can solve personal problems, shape personal destiny; rejection of “healthy”-“unhealthy”-“addiction”

9 = globalization promotes tech dev. and so minimizes risks

10 = rejection of risk, vulnerability, and victimization to cohere, and of victim-hood for oneself, responsible for one’s acts

16. Total number of non-risk categories present (1-10): \_\_\_\_\_

17. Story Classification: 1 = risk  
 2 = non-risk  
 3 = both  
 4 = neither \_\_\_\_\_

18. Number/type of different individual sources for each risk category

Category		Total Sources per category				
		Lay	Expert	Govt	Oppos	Journ
1 = precautionary principle	1 =	_____	_____	_____	_____	_____
2 = vulnerability to modern calamities	2 =	_____	_____	_____	_____	_____
3 = body vulnerable owing to scientific knowledge	3 =	_____	_____	_____	_____	_____
4 = involuntary nature of risks	4 =	_____	_____	_____	_____	_____
5 = adverse impact of science and technology	5 =	_____	_____	_____	_____	_____
6 = mistrust traditional authority	6 =	_____	_____	_____	_____	_____
7 = mistrust other people; normalization of abuse	7 =	_____	_____	_____	_____	_____
8 = low estimation of people’s ability to manage; “healthy”-“unhealthy”-“addiction”	8 =	_____	_____	_____	_____	_____
9 = global, uncontrollable nature of threats	9 =	_____	_____	_____	_____	_____
10 = risk, vulnerability, victimization to cohere: self-identity as victim, blame others	10 =	_____	_____	_____	_____	_____
Total risk sources present per category:		_____	_____	_____	_____	_____

19. Number/type of different individual sources for each non-risk category

Category		Total Sources per category				
		Lay	Expert	Govt	Oppos	Journ
1 = embrace experimentation when no evidence of harm	1 =	_____	_____	_____	_____	_____
2 = confident humanity can avoid or deal with calamity	2 =	_____	_____	_____	_____	_____

3 = sense of bodily security unaffected by risk knowledge	3 =	_____	_____	_____	_____	_____
4 = unconcern for involuntary nature of risks	4 =	_____	_____	_____	_____	_____
5 = science and technology positive	5 =	_____	_____	_____	_____	_____
6 = not critical of authority, or critical only for policy/dogma	6 =	_____	_____	_____	_____	_____
7 = trusting of other people; abuse is not the norm	7 =	_____	_____	_____	_____	_____
8 = people can manage without intervention; rejection of “healthy”-“unhealthy”-“addiction”	8 =	_____	_____	_____	_____	_____
9 = globalization promotes tech dev. and so minimizes risks	9 =	_____	_____	_____	_____	_____
10 = rejection of risk, vulnerability, and victimization/victim-hood for self, responsible for own behavior	10 =	_____	_____	_____	_____	_____
Total non-risk sources present per category:		_____	_____	_____	_____	_____



## Appendix C

### Inter-coder reliability test results

Coder	Risk 1	Risk 2	Risk 3	Risk 4	Risk 5
McCormac	3,5,17	1,3,17,20	20	2	17, 20
Kefala	3,5,8	1,20,	20	2	17
Scott's Pi	.78	.82	1	1	.47

Coder	Risk 6	Risk 7	Risk 8	Risk 9	Risk 10
McCormac	2,3,11,13,14,15	19	NONE	1	1
Kefala	2,11,13,14	19	NONE	1	1
Scott's Pi	.73	1	1	1	1

Coder	NRisk1	Nrisk2	NRisk3	NRisk4	Nrisk5
McCormac	5	2,5,6,16	NONE	NONE	6
Kefala	6	2,6	NONE	15	6
Scott's Pi	.47	.77	1	.49	1

Coder	NRisk6	NRisk7	NRisk8	NRisk9	Nrisk10
McCormac	2	NONE	NONE	NONE	NONE
Kefala	2,9	NONE	NONE	NONE	NONE
Scott's Pi	.64	1	1	1	1

Test sample: 20 newspaper articles (hard news and editorials) taken from 2004 editions of Eleftherotypia.

Study sample: 240 articles (hard news and editorials) from 1977, 1994, and 2004 editions of Eleftherotypia and Kathimerini.

Test sample/Study sample = 8.3%

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