New Age Beliefs and Societal Risk Perception¹

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The New Age movement is a transpersonal movement focused on mystic awakening and human potential development. It has become an important component in modern risk discourse, as it often goes hand in hand with technology opposition and worries about technology risks. The present study examined the possible relationships between New Age beliefs and societal risk perception. It was shown that several hazards—particularly the ones at the center of current debates about security policies and environmental policies—were perceived as significantly riskier by the New Agers than by others. These (hot) hazards include nuclear waste storage, chemical plants, urban violence, genetically engineered organisms, marijuana, and hospital waste.

According to Peters and Slovic (1996),

People respond to hazards according to their perceptions of the risks they pose. What they perceive, why they perceive it that way, and how they will subsequently behave is a matter of great import to industries and governments trying to assess and implement new technologies. (pp. 1427–1428)

The many risk perception studies that have been conducted on lay samples have been aimed at answering two main questions. The first question is “Why are some hazards considered riskier than others in the general population?” while the second question is “Why do some individuals perceive some hazards as riskier than do other individuals?” While answering the first question has proved to be relatively easy, finding satisfying answers to the second question has been, by contrast, more challenging.

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Why are Some Hazards Considered Riskier Than Others in the General Population?

The research strategy followed by researchers attempting to answer the first question is straightforward. They created a set of dimensions likely to characterize different hazards (e.g., voluntary exposure) and correlated judgments obtained as a function of these characteristics across a variety of hazards and global risk assessments for these same hazards. The psychometric paradigm (Slovic, 1987) remains the best known illustration of this research strategy. Researchers working in this paradigm have shown repeatedly that (a) the many dimensions characterizing hazards can be grouped into a limited number of factors; and (b) a substantial part of the variance of risk assessments can be explained by a combination of these factors.

For example, in the study by Mullet, Duquesnoy, Raïff, Fahrasmane, and Namur (1993), four factors were identified: the *dread* factor groups characteristics, such as certainly fatal and catastrophic; the *knowledge of the risk* factor groups characteristics, such as known to exposed (i.e., known from the persons who are exposed to the risk associated with the substance or the technology), new, and voluntary; the *evaluative* factor groups characteristics, such as beneficial to society and economically justified; and the *number of people affected* factor groups characteristics, such as number of people exposed. When considered together, the dread factor and the evaluative factor explain no less than 77% of the variance of overall risk assessments (for a review see Boholm, 1998).

Why Do Some Individuals Perceive Some Hazards as Riskier Than Do Other Individuals?

The research strategy followed by researchers attempting to answer the second question is much less straightforward. Indeed, characterizing individuals is much more complex than is characterizing hazards: Individual variability is considerable. Consequently, the personal dimensions considered have varied widely from one study to the other, mainly as a function of the authors' preferences and choices. Typically, the part of the variance in risk assessment explained by personal factors has proven to be low (Sjöberg, 2003).

Many personal dimensions have been considered, including age (e.g., Hermand, Mullet, & Rompoteaux, 1999), gender (e.g., Gustafson, 1998; Sjöberg, 2000), educational level (e.g., Sjöberg, 2000), training in science (e.g., Karpowicz-Lazreg & Mullet, 1993), income (e.g., Flynn, Slovic, & Mertz, 1994; Palmer, 2003), religious orientation (e.g., Sjöberg & af

Wahlberg, 2002), political preferences (e.g., Sjöberg, 2000), culture (e.g., Mullet, Lazreg, Candela, & Neto, 2005), risk attitude (e.g., Vollrath, Knoch, & Cassano, 1999; Sjöberg, 2003), personal experience with the hazard (e.g., Barnett & Breakwell, 2001; Rogers, 1997), values (e.g., Sjöberg, 2000), social trust (e.g., Siegrist, Cvetkovitch, & Roth, 2000; Viklund, 2003), anxiety (e.g., Bouyer, Bagdassarian, Chaabanne, & Mullet, 2001; Källmén, 2000), self-efficacy (e.g., Källmén, 2000; Kouabenan, 1998), locus of control (e.g., Källmén, 2000), worldviews (e.g., Bouyer et al., 2001; Brenot, Bonnefous, & Marris, 1998), environmental beliefs (e.g., Sjöberg, 2003), the viewpoint (i.e., risk for self or risk for others) taken by the person (e.g., Hermand et al., 2003; Sjöberg, 2000), and the classical personality factors (e.g., Sjöberg, 2003) and classical personality facets (e.g., Chauvin, Hermand, & Mullet, 2007). Two recent studies by Sjöberg and af Wahlberg (2002) and Sjöberg (2003) illustrate this approach well. Sjöberg and af Wahlberg correlated general risk assessment regarding a local depository of nuclear waste and three personality factors. The authors found a correlation of .23 with neuroticism. In other words, the more neurotic a person declared himself or herself, the more he or she perceived the depository as risky in general.

Sjöberg (2003) also correlated personal risk assessment regarding unsuitable dietary habits and five personality factors. The results indicated a correlation of -.23 with conscientiousness. In other words, the more conscientious a person declared himself or herself, the less this person perceived unsuitable dietary habits as risky for himself or herself. In both cases, the part of variance explained was much lower than what is currently found in studies attempting to explain why some hazards are considered as riskier than others in the general population.

New Age Beliefs

In the present study, the term *New Age beliefs* has been preferred to the term *paranormal beliefs*. In previous studies, these two terms have been used interchangeably (Irwin, 1993; Lange, Irwin, & Houran, 2000; Sjöberg & af Wahlberg, 2002). This is probably because both terms refer to overlapping sets of beliefs.

For researchers using the term *paranormal beliefs* (Grimmer & White, 1990; Irwin, 1993; Tobacyk & Milford, 1983), as well as for researchers using the term *New Age beliefs* (Levin & Coreil, 1986; Melton, 1988; Sjöberg, 2003; Sjöberg & af Wahlberg, 2002), these beliefs tend to include extraordinary forms of life (e.g., the Loch Ness monster, the Yeti of Tibet), Psi beliefs (e.g., clairvoyance, extrasensory perceptions, precognition, psychokinesis, telepathy, astral projection), witchcraft (e.g., black magic, voodoo), superstition,

spiritualism (e.g., channeling, communication with invisible entities), reincarnation, meditation, energy flows (with chakras, karma), parasciences (e.g., astrology, numerology, palmistry, graphology), and alternative treatments (e.g., acupuncture, chiropractic, homeopathy, iridology). As a result, the difference between New Age beliefs and paranormal beliefs is very slight.

There is, however, a special feature that differentiates these two sets of beliefs and consequently justifies the use of the term *New Age* in the present study, rather than the term *paranormal*. Belief in the paranormal does not necessarily require any ideological positioning. By contrast, a New Age belief usually refers to an ideological/philosophical framework.

The current New Age movement belongs to the esoteric–mystical realm. It is a transpersonal movement of mystical awakening and human potential development. It aims primarily at promoting the attainment of higher consciousness and self-actualization in order to give birth to a new planetary culture based on a new universal and syncretistic religion (Ferguson, 1980; Hanegraaff, 1995; Levin & Coreil, 1986). The New Age ideology denies analytical thinking and scientific knowledge, and gives greater importance to intuitive analysis and personal experiences. It advocates an allegiance to nature, to the human race (Levin & Coreil, 1986; Melton, 1988; Sjöberg & af Wahlberg, 2002), and to the planet Earth (Gaïa), which is to be rescued from illness owing to environmental pollutions (Hanegraaff, 1995).

New Age beliefs have been found to be related with many demographic variables (for a comprehensive review, see Irwin, 1993). Women report New Age and paranormal beliefs more often than do men (McGarry & Newberry, 1981; Sjöberg & af Wahlberg, 2002; Tobacyk & Milford, 1983). Younger persons report stronger New Age beliefs than do older persons (Clarke, 1991; Irwin, 1993). With regard to educational level, the findings have proven to be inconsistent. Some researchers (e.g., Gray & Mill, 1990; Otis & Alcock, 1982; Sjöberg & af Wahlberg, 2002; Wuthnow, 1976) have found that New Age paranormal beliefs are negatively related to educational level. By contrast, others (e.g., Emmons & Sobal, 1981; Haraldsson, 1985; Tobacyk, Miller, & Jones, 1984) have shown a positive relationship between educational level and New Age endorsement.

New Age Beliefs and Risk Perception

In contrast to other personal characteristics (e.g., gender, age, personality), New Age beliefs have recently appeared as personal characteristics that are able to explain a large part of the variance in societal risk perception. New Age beliefs emerged in the 1960s as a result of modern crises. They have increasingly captured the attention of a large segment of the population in the

United States and in Europe, mainly because economic and societal disturbances, political and religious conflicts, or dramatic climatic shifts have disappointed and confused many people (Ferguson, 1980). The New Age movement has become an important component in modern risk discourse, and this movement has developed in parallel with technology opposition and worries about technology risks. It has espoused many beliefs alien or even hostile to science and technology.

Sjöberg and af Wahlberg (2002) examined the relationship between New Age belief and risk perception in a representative sample of Swedish people. They used several classical New Age scales (Grimmer & White, 1990; Tobacyk, 1988; Tobacyk & Milford, 1983). They found a correlation of .34 between a risk perception score computed from several nuclear energy items and a Higher Consciousness belief score; a correlation of .25 between this same risk perception score and a Denial of Analytical Knowledge score; and a correlation of .22 between this risk perception score and a Belief in Paranormal Phenomena score. In a subsequent study, Sjöberg (2003) reported significant correlations between New Age beliefs (all three scales collapsed) and risk perception for a variety of items such as getting AIDS, high voltage power lines, lightning, nuclear power, natural background radiation, nuclear waste, genetic engineering, terrorist attacks, X-ray diagnostics, and warfare. All of these correlations ranged between .20 and .30.

The Present Study

The present study aims at further exploring the possible relationships between New Age beliefs and societal risk perception. From a statistical viewpoint, the effect of New Age beliefs is difficult to separate from the effect of many of the participants' demographic characteristics, notably educational level. As a result, the effects of New Age beliefs are difficult to precisely assess.

Considering this technical difficulty, we decided to assess possible New Age effects through ordinary mean comparisons by creating two different samples of participants: high scorers and low scorers on the New Age scale. All participants were as equivalent as possible regarding age, gender, localization, and educational level. By eliminating most of the variance attributable to these variables, we were in a better position to precisely assess the relatively pure New Age effects and their patterns.

A comprehensive set of hazards likely to be differently perceived by New Agers than by other participants was selected from the available lists used by either Slovic, Fischhoff, and Lichtenstein (1985) or Bouyer et al. (2001). These hazards include 3 hazards associated with nuclear technology (e.g.,

nuclear waste storage); 8 hazards associated with industrial production and pollution of the environment (e.g., cleaning of tankers at sea); 5 hazards associated with (uncontrolled) urbanization (e.g., tall buildings); 8 hazards associated with food production (e.g., chemical fertilizers); 5 hazards associated with the consumption of substances (e.g., tobacco smoking); and 11 hazards associated with medical and surgical care (e.g., blood transfusions). Most of the hazards are already included in Sjöberg's (2003) list.

Our hypothesis, based on claims by Irwin (1993) and findings by Sjöberg and af Wahlberg (2002) and Sjöberg (2003), is as follows:

Hypothesis. Some hazards (i.e., the ones at the center of most current debates about security policies and environmental policies) will be perceived as riskier by New Agers than by others. These (hot) hazards include nuclear waste storage, chemical plants, urban violence, genetically engineered organisms, marijuana, and hospital waste.

Method

Participants

The sample was composed of 102 unpaid participants (69 female, 33 male) who were recruited on a voluntary basis. Participants were contacted during daylight hours in the main streets of Nantes, which is a busy town of approximately 500,000 inhabitants and located in western France. The people who were approached were told that our research team was conducting a survey on risk perception. They were given some examples of the questions or were shown the first page of the questionnaire.

The experimenter solicited every third passerby until a sample of 50 individuals who scored high on the New Age (NA) scale (i.e., higher than 59 out of 100) was constituted. In fact, 51 individuals were selected because two high scorers were detected simultaneously. After the sample of New Agers was constituted, a sample of participants who scored low on the NA scale (i.e., lower than 21) was created by pairing each participant in the New Age group with a participant having the same demographic characteristics (i.e., age, gender, educational level), but a low NA score.

We chose two thresholds (i.e., >59 and <21) for the following reasons. According to Sjöberg and af Wahlberg (2002), many studies about New Age and paranormal beliefs have shown a more or less widespread trend to embrace a specific New Age belief or another. Depending on the study, between 15% and 60% of the samples reported paranormal, mystical, or

extrasensory experience (Ferguson, 1980; Gaynard, 1992; Grimmer & White, 1990; MacDonald, 1994; West, 1995). This is not enough, however, to consider these individuals as full New Agers. Being a full New Ager supposes the endorsement of a large array of New Age beliefs.

Melton (1988) emphasized the difficulties of making a complete census of New Agers because they have no central organization. It seems, however, that full members of the New Age movement are estimated to number in the hundreds of thousands of individuals in the United States. This corresponds to a very small fraction of the entire population (i.e., about 0.2%). In a previous study using the New Age scale in France, Chauvin (2005) showed that the distribution of New Age scores was skewed. The observed mean value was 32 out of 100; that is, participants with low scores were much more numerous than were participants with moderate or high scores. The skewness value was .59. As it seemed unlikely to sample a large number of strong New Age advocates, we decided to include people with relatively moderate scores (i.e., 60–80), in addition to people with very high scores.

Owing to the relationships (direct or inverse) between educational level and New Age beliefs found by many authors (e.g., Sjöberg & af Wahlberg, 2002), special attention was given to the educational level variable in the pairing process. It was important to neutralize, as much as possible, this effect on risk perception. Consequently, no fewer than six precise educational level categories were created (in accordance with the French educational system): *primary education* (Grades 1–5), *secondary education not completed, first 4 years* (Grades 6–9), *secondary education not completed, following years* (Grades 9–12), *secondary education completed, college degree* (associate's degree), and *other university degree* (e.g., bachelor's, master's, doctorate). The pairing was made on the basis of this detailed categorization.

Participants in the New Agers sample were 36 females and 15 males. The sample had a mean age of 37.9 years and a mean educational level of 3.9 (on a 6-point scale). The participants in the paired sample were 33 females and 18 males. Their mean age and mean educational level were 36.7 years and 3.8, respectively.

Materials

We used 62 New Age items in our study. Of those items, 25 were taken from the Paranormal Belief Scale (PBS; Tobacyk & Milford, 1983; e.g., "Some people have an unexplained ability to predict the future") and from the Revised Paranormal Belief Scale (RPBS; Tobacyk, 1988). In addition, nine items were taken from the New Age Paranormal Beliefs and Phenomena Inventory (Grimmer & White, 1990; e.g., "All living things are surrounded by

an aura"). We took 26 items from Sjöberg and af Wahlberg's (2002) study (e.g., "Eastern wisdom is much more profound than Western science and technology"). Finally, two items were created specifically for the present study. Participants provided their responses on a scale ranging from *strongly disagree* to *strongly agree*.

The risk perception questionnaire was composed of 40 items taken partly from Slovic et al.'s (1985) risk questionnaire and partly from Bouyer et al.'s (2001) questionnaire. The 40 items are presented in Table 1. The items cover six different domains: nuclear technology; industrial production and pollution of the environment; urbanization; food production; consumption of substances; and medical and surgical care. Responses were rated on a scale ranging from *no risk* to *extremely severe risk*. As in Slovic et al. (1985), marks on the scale ranged from 0 to 100 (0, 10, 20, 30, etc.).

An additional risk perception questionnaire was used to detect and eventually to neutralize any possible acquiescence effect. It was composed of seven items corresponding to physical activities (i.e., jogging, swimming, recreational boating, mountain climbing, downhill skiing, diving, surfing) that were unlikely to be perceived differently by New Agers and by other participants.

Procedure

Each participant completed the questionnaire individually. After the contacted individuals agreed to participate in the study, the survey was conducted during at-home sessions or an appointment was made to meet later at participants' houses. In all cases, participants completed the questionnaire in a familiar, calm setting.

The participants were administered the 62 New Age paranormal beliefs and phenomena and the 47 hazards items. Half of the participants were given the risk perception questionnaire first and the New Age beliefs questionnaire second, while the remaining half were given the New Age beliefs questionnaire first and the risk perception questionnaire second.

Regarding the New Age beliefs questionnaire, participants were instructed to rate their degree of agreement with each of the 62 items. Regarding the risk perception questionnaire, participants were informed that the term *risk* refers to the risk for the entire population of the world of being seriously ill, wounded, or dying. For both questionnaires, participants were encouraged to ask questions about unfamiliar terms first and then to complete the questionnaires. When an item did not evoke anything concrete, participants were allowed not to respond. No time limit was imposed.

Responses were recorded in two successive steps. First, participants were invited to circle with a black pencil the number or the point in the response

Table 1

Mean Risk Perception, Differences in Risk Perception, Effect Sizes, and Significance of Differences

	New Age beliefs			<i>d</i>
	Low score	High score	Difference	
Nuclear technology				
Nuclear power plants	71.57	84.51	12.94*	.54
Nuclear waste storage	78.63	89.61	10.98**	.56
Nuclear reprocessing plants	77.06	84.90	7.84	.39
Pollution				
Mercury	69.22	82.94	13.73**	.58
Chemical disinfectants	67.84	80.98	13.14**	.58
Chemical plants	70.20	81.76	11.57**	.60
Cleaning of tankers at sea	79.02	89.61	10.59*	.47
Non-nuclear power plants	42.94	54.12	11.18	.38
Lead	58.04	68.04	10.00	.38
Diesel	43.92	53.53	9.61*	.39
Petroleum refineries	58.43	62.55	4.12	.16
Urbanization				
Stadium violence	46.67	64.31	17.65**	.68
Urban violence	56.27	68.43	12.16**	.53
Tall buildings	36.47	48.43	11.96	.41
Deforestation	72.94	83.53	10.59*	.44
Cranes	29.80	39.22	9.41	.39
Food production				
Genetically engineered organisms	61.76	76.27	14.51**	.56
Food irradiation	67.45	80.98	13.53*	.44

Table 1 *Continued*

	New Age beliefs			<i>d</i>
	Low score	High score	Difference	
DNA technology	54.51	66.67	12.16	.41
Herbicides	55.10	65.69	10.59	.42
Chemical fertilizers	67.84	77.65	9.80*	.41
Nitrates	52.55	61.57	9.02	.34
Plastic food containers	15.69	18.04	2.35	.12
Mineral water	11.37	10.78	-0.59	-.04
Addictions				
Marijuana	56.47	71.57	15.10**	.49
Alcoholic beverages	53.92	65.10	11.18*	.53
Tobacco (smoking)	71.76	78.04	6.27	.27
Ecstasy	81.96	87.25	5.29	.27
Heroin	87.65	91.96	4.31	.24
Medical care				
Open-heart surgery	54.71	68.04	13.33**	.53
Hospital waste	62.55	75.88	13.33**	.57
Surgery	39.02	49.61	10.59*	.50
Antibiotics	38.24	47.45	9.22	.38
Barbiturates	67.25	75.29	8.04	.35
X-rays (radiology)	49.41	55.29	5.88	.19
Morphine	67.06	71.76	4.71	.18
Anesthetics	50.59	54.51	3.92	.17
Blood transfusions	43.14	44.90	1.76	.07
Acupuncture	17.65	11.57	-6.08	-.34
Homeopathic drugs	16.47	7.65	-8.82*	-.51

Note. *N* = 51.

p* < .05. *p* < .008.

scale that best reflects their views. Then, participants were allowed to change their responses using a red pencil. In addition, they were requested to differentiate items as much as possible. The main goal of this two-step procedure was to ensure that participants used the entire range of the response scales

(Hermand et al., 1999, 2003). Only the responses registered during the second step were retained and analyzed.

Results

A principal components analysis was performed on the 62 New Age items. The first factor explained 55% of the variance, and each of the remaining factors explained less than 4% of the variance. As a result, a one-factor solution was chosen. The value of an alpha coefficient computed over the 62 items was .985 (mean inter-item correlation = .546).

The mean responses corresponding to the additional set of seven items were compared. The two values were close (32.46 and 33.84), and the difference was not significant ($p = .74$). Thus, it was considered that there was no tendency among the New Agers to report higher risk values systematically.

Table 1 shows the mean values observed for each item in each sample, the difference between these values, its level of significance, and the corresponding effect size (Cohen's d). The significance of each difference was assessed in the following way: For each item, an ANCOVA was conducted with the New Age score as the independent variable; and with age, gender, and educational level as covariates.

As we were expecting six significant differences (see our hypothesis), the significance threshold was set initially at .008 (i.e., .05/6) for each comparison. As a result, only the 10 differences that were significant at this threshold were taken into account. Those differences concern nuclear waste storage, mercury, chemical disinfectants, chemical plants, stadium violence, urban violence, genetically engineered organisms, marijuana, open-heart surgery, and hospital waste. In other words, many of the hottest topics discussed in the press and other media were represented. In each case, the New Agers perceived the risk associated with these hazards as riskier than did other participants. The corresponding effect sizes were always in the moderate range (i.e., .49–.68). Interestingly, in two cases (acupuncture and homeopathic drugs), the difference, although not significant at the .008 threshold, was in the opposite direction. In particular, New Agers considered homeopathic drugs as less risky than did others participants.

Discussion

The present study assessed the relationships between New Age beliefs and societal risk perception by comparing risk assessment values observed in two samples of New Agers and non-New Agers, which were made as equivalent

as possible regarding age, gender, localization, and educational level. The hypothesis was that the hazards that are at the center of current debates about security policies and environmental policies should be perceived as riskier by the New Agers than by the non-New Agers. This is what was shown.

Regarding the nuclear domain, the difference between New Agers and non-New Agers was greatest on nuclear waste dumping; that is, about one of the main concerns in France. This debate is fueled mainly by (a) the massive amounts of nuclear waste in France (about 1 million m³ in December 2004); (b) the presence in the French territory of a nuclear cemetery (La Hague, which is located in western France); (c) the future building of the International Thermonuclear Experimental Reactor (ITER) in southern France; and (d) the future building of a nuclear waste burying settlement in eastern France. Therefore, intense debate and controversies about these issues have occurred in the French media. This result is consistent with Sjöberg's (2003) findings.

With regard to the industrial production domain, the difference was greatest on chemical plants in general, and some specific chemical products in particular (i.e., mercury, disinfectants). Although the major accidents in this sector of industry occurred out of France, public concern about industrial pollution remains always high in this country. For example, recently published articles in several newspapers stated that the inhabitants of Salsigne (in southern France) who live near a former industrial setting were concerned about higher mortality rates as a result of respiratory and digestive cancers, probably caused by environmental pollution.

Regarding urbanization, the difference was exclusively on urban violence, a recurrent concern in the media. Violence in stadiums is endemic, and violence in big cities has become one of the top priorities of the French government, especially since the 2005 riots in the suburbs and the burning of several thousand cars.

With regard to food production, the main difference was, as expected, on genetically engineered organisms. In France, there are strong concerns about this technology. This has even resulted in repeated acts of vandalism against the genetically engineered crops by groups of activists. This result is consistent with Sjöberg's (2003) findings.

Regarding the consumption of psychotropic substances, the main difference was on marijuana. Although consumption of this substance is illegal in France, because it is allowed in some neighboring countries, the debate about its legalization has also become a recurrent one. It is not uncommon to read in a newspaper, side by side, an article by members of scientific French institutions expressing health concerns about cannabis consumption (and opposing cannabis legalization), and another article praising the healing

virtues of cannabis and stating that more and more young French are used to its consumption.

Finally, with regard to medical care, the observed differences were mainly on open-heart surgery and hospital waste. Despite recent and impressive progress in open-heart surgery, concerns still remain high, owing to the complexity of the procedure. Recent articles in several newspapers reported several fatal accidents as a result of failures during open-heart surgery. Also, a decade ago, controversy concerning hospital waste was at its peak in France, particularly concerning contaminated syringes and infected dressings found in public waste dumps.

The main empirical finding of the present study is that detectable effects of the New Age factor essentially occur for hazards that are at the center of highly debated security or environmental topics. This result is understandable. Simple fear or uncertainty regarding a particular substance, technology, or activity is not enough for a debate to be instated in society: Ideological factors are also necessary ingredients. New Age beliefs appear as well structured cognitive structures that help to shape and fuel societal debates on important issues, such as civil nuclear energy and genetically engineered organisms.

More generally, the persons who are most concerned about many hazards in our society seemingly are also the ones who are less open to scientific risk assessment. In other words, those who are less open to scientific risk assessment are also the ones who seem to be more concerned about many hazards. This result has consequences in terms of risk communication. It illustrates the fact that, between these persons and the experts, the difference is not just in the available information about the nature of the risks or the general scientific background: The difference is a philosophical/ideological one. Thus, such a difference cannot be overcome just by communicating information about risks. Communicating information, in these cases, may even be counterproductive because the mere fact of communicating information may be considered to be aimed at forcibly indoctrinating reluctant people. It is not even certain that extensive education and training in science could present any convincing benefits. As we progressively realized during data collection, many participants in the New Agers group were well educated (see also Haraldsson, 1985).

The main limitation of the present study resides in its observational, nonexperimental nature. The two samples were made as similar as possible regarding age, gender, geographic location, and educational level; that is, for the variables that have been shown to be linked with New Age beliefs. The variable of interest (i.e., New Age beliefs), however, was not experimentally manipulated. As a result, causal relationships between New Age beliefs and risk perceptions cannot be asserted.

What the present study has shown is that between New Age beliefs and risk perception, significant associations exist on some items. These associations may be a result of the fact that New Age beliefs are the cause of elevated risk perceptions; elevated risk perceptions are the cause of New Age beliefs; or New Age beliefs and elevated risk perceptions are caused by another, more global ideological phenomenon: a phenomenon that manifests itself through New Age beliefs and elevated risk perceptions, among other things.

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