

DOWNLOAD PDF CLIMATIC EFFECTS ON INDIVIDUAL, SOCIAL, AND ECONOMIC BEHAVIOR

Chapter 1 : Climatic Effects on Individual, Social, and Economic Behavior : Philip M. Parker :

*Climatic Effects on Individual, Social, and Economic Behavior: A Physioeconomic Review of Research Across Disciplines (Bibliographies and Indexes in Geography) [Philip Parker] on blog.quintoapp.com *FREE* shipping on qualifying offers.*

A article in the American Psychologist identified three classes of psychological impacts from global climate change: The topic of climate change is very complex and difficult for people to understand, which effects how they act upon it. It is shown by Ranney and Clark [19] that by informing people to make them understand the topic of climate science clearly, it promotes the change in behaviour towards mitigation of climate change. Extreme weather events[edit] Further information: Extreme weather This trend towards more variability and fluctuation is perhaps more important, in terms of its impact on human health, than that of a gradual and long-term trend towards higher average temperature. Effects of global warming on infectious diseases Climate change may lead to dramatic increases in prevalence of a variety of infectious diseases. One major reason that change in climate increases the prevalence of vector borne disease is that temperature and rainfall play a key role in the distribution, magnitude, and viral capacity of mosquitoes, who are primary vectors for many vector borne diseases. DyMSiM uses epidemiological and entomological data and practices to model future mosquito distributions based upon climate conditions and mosquitos living in the area. Beyond distribution, rising temperatures can decrease viral incubation time in vivo in vectors increasing the viral transmissibility leading to increases in infection rates. Malaria kills approximately , children under age 5 annually, poses an imminent threat through temperature increase. Dengue There are 4 distinct viruses responsible for Dengue: Dengue fever is spread by the bite of the female mosquito known as *Aedes aegypti*. This species of mosquito can travel up to meters in search of water to lay their eggs, but often remain closer to human habitation. A mosquito becomes infected with dengue when it bites and takes the blood of an infected human. After approximately one week, the mosquito can then transmit the dengue infection to other humans through her bite. While dengue cannot be spread from person to person, an infected person can infect more mosquitos, thus, furthering the spread of the disease. Overall, the female mosquito is a highly effective vector of this disease [29]. When bitten by an infected mosquito, dengue has an incubation period of days. Once infected with the dengue virus, humans experience severe flu-like symptoms. Also known as "break-bone fever", dengue can affect infants, children, and adults and can be fatal. These symptoms usually last days. Dengue can become fatal due to plasma leaking, fluid accumulation, respiratory distress, severe bleeding, or organ impairment. Globalization, trade, travel, demographic trends, and warming temperatures are all attributed to the recent spread to this primary vector of dengue. Today, an estimated 50â€” million dengue fever infections occur annually. In just the past 50 years, transmission has increased drastically with new cases of the disease incidence increasing fold. Recently the number of reported cases has continually increased along with dengue spreading to new areas. Explosive outbreaks are also occurring. Moreover, there is the possible threat of outbreak in Europe with local transmission of dengue being reported for the first time in France and Croatia in Dengue has been endemic in Bangladesh since its first major outbreak in While dengue testing is frequently performed in the private health care setting; it is frequently underperformed in the public health care setting, due to lack of testing accessibility [36]. This indicates that there are potentially more cases of dengue than are getting diagnosed or reported. Dengue incidence has only increased in the last few decades, and is projected to continue to do so with changing climate conditions. Based on these, the Intergovernmental Panel on Climate Change estimates that the mean annual temperature of Southeast Asia will have increased by 3. Taking this estimate, researchers predict an increase of 16, cases in Dhaka, Bangladesh by the year This represents a times increase in dengue incidence. Patz and Olson argue that these changes in landscape can alter local weather more than long term climate change. It is highly unlikely that climate exerts an isolated effect. Preparing for the Future Effective policies which take into consideration predictive climate change models and

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measures are key to preparing for and managing changes in incidence and reestablishment of diseases. A study by NOAA from concluded that heat stress will reduce labor capacity considerably under current emissions scenarios. Water crisis The freshwater resources that humans rely on are highly sensitive to variations in weather and climate. In , the IPCC reported with high confidence that climate change has a net negative impact on water resources and freshwater ecosystems in all regions. Warmer water temperatures affect water quality and accelerate water pollution. This reduces the amount of freshwater available for drinking and farming. This situation is particularly acute for irrigation in South America, [47] for irrigation and drinking supplies in Central Asia, and for hydropower in Norway, the Alps, and the Pacific Northwest of North America. Increased extreme weather means more water falls on hardened ground unable to absorb it, leading to flash floods instead of a replenishment of soil moisture or groundwater levels. At the same time, human demand for water will grow for the purposes of cooling and hydration. Increased precipitation can lead to changes in water-borne and vector-borne diseases. Environmental migrant A refugee camp Climate change causes displacement of people in several ways, the most obviousâ€”and dramaticâ€”being through the increased number and severity of weather-related disasters which destroy homes and habitats causing people to seek shelter or livelihoods elsewhere. Effects of climate change such as desertification and rising sea levels gradually erode livelihood and force communities to abandon traditional homelands for more accommodating environments. Deteriorating environments triggered by climate change can also lead to increased conflict over resources which in turn can displace people. This figure includes those displaced by storms, floods, and heat and cold waves. Still others were displaced drought and sea-level rise. Most of those compelled to leave their homes eventually returned when conditions improved, but an undetermined number became migrants, usually within their country, but also across national borders. It is highly exposed to climate impacts, and is home to highly vulnerable population groups, who are disproportionately poor and marginalized. Tuvalu already has an ad hoc agreement with New Zealand to allow phased relocation. They are not willing to leave their homes, land and families. Even where there is awareness many believe that it is a problem caused by developed countries and should therefore be solved by developed countries. Some experts even support migration as an appropriate way for people to cope with environmental changes. However, this is controversial because migrants â€” particularly low-skilled ones â€” are among the most vulnerable people in society and are often denied basic protections and access to services. Climate security Climate change has the potential to exacerbate existing tensions or create new ones â€” serving as a threat multiplier. It can be a catalyst for violent conflict and a threat to international security. The Military Advisory Board , a panel of retired U. One study found no statistically meaningful relationship between climate and conflict using data from Europe between the years and In Britain, Foreign Secretary Margaret Beckett has argued that "An unstable climate will exacerbate some of the core drivers of conflict, such as migratory pressures and competition for resources. Experts have suggested links to climate change in several major conflicts: War in Darfur , where sustained drought encouraged conflict between herders and farmers [73] [74] [75] Syrian Civil War , preceded by the displacement of 1. Climate change and poverty and Climate change and gender The consequences of climate change and poverty are not distributed uniformly within communities. Individual and social factors such as gender, age, education, ethnicity, geography and language lead to differential vulnerability and capacity to adapt to the effects of climate change. Climate change effects such as hunger, poverty and diseases like diarrhea and malaria, disproportionately impact children; about 90 percent of malaria and diarrhea deaths are among young children. Children are also 14â€”44 percent more likely to die from environmental factors, [85] again leaving them the most vulnerable. Those in urban areas will be affected by lower air quality and overcrowding, and will struggle the most to better their situation. List of costliest Atlantic hurricanes and Physical impacts of climate change As the World Meteorological Organization explains, "recent increase in societal impact from tropical cyclones has largely been caused by rising concentrations of population and infrastructure in coastal regions. The s and s were notable because of the extremely low amounts of damage compared to other decades. The decade â€” has the second most damage among the past 11 decades, with only

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the decade” surpassing its costs. The cost is also increasing partly because of building in exposed areas such as coasts and floodplains. The ABI claims that reduction of the vulnerability to some inevitable effects of climate change, for example through more resilient buildings and improved flood defences, could also result in considerable cost-savings in the longterm. Sea level rise and Future sea level A major challenge for human settlements is sea level rise , indicated by ongoing observation and research of rapid declines in ice-mass balance from both Greenland and Antarctica. Estimates for are at least twice as large as previously estimated by IPCC AR4, with an upper limit of about two meters. In developing countries, the poorest often live on floodplains , because it is the only available space, or fertile agricultural land. These settlements often lack infrastructure such as dykes and early warning systems. Poorer communities also tend to lack the insurance, savings, or access to credit needed to recover from disasters. In a journal paper, Nicholls and Tol considered the effects of sea level rise: Small islands and deltaic settings stand out as being more vulnerable as shown in many earlier analyses. Collectively, these results suggest that human societies will have more choice in how they respond to sea-level rise than is often assumed. However, this conclusion needs to be tempered by recognition that we still do not understand these choices and significant impacts remain possible. The IPCC reported that socioeconomic impacts of climate change in coastal and low-lying areas would be overwhelmingly adverse. The following impacts were projected with very high confidence: By the s, millions of people would experience floods every year due to sea level rise. The numbers affected were projected to be largest in the densely populated and low-lying mega-deltas of Asia and Africa; and smaller islands were judged to be especially vulnerable. A study in the April issue of Environment and Urbanization reports that million people live in coastal areas within 30 feet 9. Energy sector[edit] Oil, coal and natural gas[edit] Oil and natural gas infrastructure is vulnerable to the effects of climate change and the increased risk[citation needed] of disasters such as storm , cyclones , flooding and long-term increases in sea level. Minimising these risks by building in less disaster prone areas, can be expensive and impossible in countries with coastal locations or island states. All thermal power stations depend on water to cool them. Not only is there increased demand for fresh water, but climate change can increase the likelihood of drought and fresh water shortages. Another impact for thermal power plants, is that increasing the temperatures in which they operate reduces their efficiency and hence their output. The source of oil often comes from areas prone to high natural disaster risks; such as tropical storms, hurricanes, cyclones, and floods. However, the impact of water shortages on nuclear power plants cooled by rivers will be greater than on other thermal power plants. This is because old reactor designs with water-cooled cores must run at lower internal temperatures and thus, paradoxically, must dump more heat to the environment to produce a given amount of electricity. This situation has forced some nuclear reactors to be shut down and will do so again unless the cooling systems of these plants are enhanced to provide more capacity.

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Chapter 2 : 5 Reasons Why Climate Change Is a Social Issue, Not Just an Environmental One | HuffPost

Climatic Effects on Individual, Social, and Economic Behavior A Physioeconomic Review of Research Across Disciplines. by Philip M. Parker. First interdisciplinary review of research on how climate affects human behavior “ provides an introductory physioeconomic framework, surveys climatic data around the world, and covers over 3, sources.

Sustainability researcher and writer 5 Reasons Why Climate Change Is a Social Issue, Not Just an Environmental One Many communities will be forced to move as they are exposed to rising sea levels, extreme drought that puts strain on resources, or even extreme rainfall that becomes the norm. Acceptance of this complex interaction, which follows the prescription laid out by the concept of sustainable development, is key to beginning to enact effective policy on climate. Since the recent New Climate Economy Report focused on climate change through an economic lens, it is time to facilitate discussion on the social effects. Here are 5 reasons why climate change needs to be considered a social issue as well: Climate change is poised to make matters worse for farmers through a shift in climate and agricultural zones, changes in production patterns due to higher temperatures, and more extreme and changing precipitation patterns all of which threaten crops. Small farmers are an integral part of our societies and, consequently, the effects of climate change on farmers can threaten food supplies and security as well as increase volatility in global food prices. Rural and urban poor are the hardest hit 1 billion people will still live in extreme poverty in and many depend on their surrounding natural resources for survival. Poverty and inequality, which we have been working to improve for decades, will only get worse with climate change because disadvantaged groups do not have the resources to cope with effects such as extreme flooding or droughts that may displace them or change their way of life. Poor neighborhoods in cities around the world are already known to suffer from more pollution, but they will also be disappointingly affected by increase in temperatures. Residents in poorer neighborhood are less likely to have air conditioning and only willing to use it when needed due to cost. There is also a tendency for there to be less trees and for buildings to be constructed from materials that retain heat. Unequal capacity for adaptation Developing countries, who did not significantly contribute to the amount of greenhouse gases in the atmosphere, will now be at an even greater disadvantage when it comes to dealing with the effects of climate change. Developing countries already struggle with lack of infrastructure and less technological and financial resources, among a number of other concerns that will hinder their ability to adapt. Furthermore, these countries are dependent on the resources they do have to deal with high rates of poverty and income inequality, both of which, as we stated, will be exacerbated with climate change. For example, public funds that could have originally been used towards education will now have to go to sea walls, increased irrigation, or storm water systems to adapt. Women, children, and the elderly will become even more vulnerable Women, children, and the elderly who already tend to be a vulnerable group in society will become even more so from climate change. In rural areas of developing countries it is often the responsibility of women and children to collect firewood and water, yet decreasing supplies is resulting in more work and less time for other tasks as they now often have to go further distances to find supplies. In many countries where women do not have equal access to land, capital, and other resources as men yet are often heads of households , women are already having difficulty in accessing climate resilient technology or crops, which are necessary for climate change adaptation. Furthermore, there are various psychological and physical impacts that have already been witnessed in both men and women due to increased pressure to provide for the family. Communities will be forced to relocate Many communities will be forced to move as they are exposed to rising sea levels, extreme drought that puts strain on resources, or even extreme rainfall that becomes the norm. Small island developing states SIDS are particularly vulnerable and are at the forefront of feeling the effects of climate change. It is expected that 34 other villages could also be moved as Fiji grapples with eroding coastlines and increased flooding. The entire nation of Kiribati, a small island state in the Pacific, is expected to become uninhabitable

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due to sea level rise and the country has recently bought land in Fiji in order to relocate. This means entire ways of life that have existed for centuries will be relocated and changed forever. Because the effects of climate change are not simply environmental but economic and social as well, new and existing policies must take a holistic approach and transcend disciplines, sectors, and the public-private divide. Addressing climate change is a tremendous concern unlike any our society has had yet to deal with and requires a unique approach that leaves behind the idea that humans are a separate entity outside of the environment.

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Chapter 3 : WHO | The determinants of health

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The environment can affect health through physical exposures, such as air pollution OECD, b. A large body of work has documented the effects of exposure to particulate matter solid particles and liquid droplets found in the air on cardiovascular and respiratory mortality and morbidity Brook et al. Research has identified specific physiologic mechanisms by which these exposures affect inflammatory, autonomic, and vascular processes Brook et al. The effects of particulate matter on mortality appear to be consistent across countries. For example, a recent review of studies from the late s to mids found a consistent inverse relationship between airborne particulate matter and birth weight in Australia, Brazil, Canada, France, Italy, the Netherlands, South Korea, the United Kingdom, and the United States Parker et al. Another notable example is the evidence linking lead exposures to cognitive development in children Bellinger, ; Levin et al. The evidence of environmental effects of air pollution and lead has been reflected in legislation in many countries directed at reducing levels of these pollutants in the environment. Increasing attention has focused on the implications for health behaviors and social interactions that are created by the built environment. The identification of causal effects using these aggregate summaries raises a number of methodological challenges and does not allow one to identify the specific environmental attributes that may be relevant. More recent work has attempted to identify the specific environmental factors that may be important to specific health outcomes, as well as the pathways through which these factors may operate. For example, the health of some nations is affected by their geography or climate. Page Share Cite Suggested Citation: Health in International Perspective: Shorter Lives, Poorer Health. The National Academies Press. An important example is evidence that links proximity to healthy or unhealthy food stores with dietary behaviors and related chronic disease outcomes Babey et al. Another large body of work has documented how walking and physical activity levels are affected by access to recreational facilities, land use mix, transportation systems, and urban planning and design Auchinloss et al. Across countries, studies have also shown that physical activity by children is associated with features of the built environment, including walking-related features, and physical activity resources Bringolf-Isler et al. The importance of residential environments to obesity and related conditions, such as diabetes, was recently highlighted by a randomized housing intervention: An important difficulty in comparing results across countries is that the proxy measure for the local food environment is often the type of food stores or restaurants available such as supermarkets or fast food outlets , but the extent to which these typologies reflect relevant differences in the foods actually available to consumers may differ significantly across countries. One recent review found that access to open space parks and other green spaces in neighborhoods was associated with physical activity levels in both the United States and Australia Pearce and Maddison, Unfortunately, the study was not designed to identify the specific environmental features responsible for the observed effect. A range of other physical environmental features have been linked to other health outcomes. For example, the density of alcohol retail outlets has been linked to alcohol-related health complications Campbell et al. Transportation systems and other aspects of physical environments that influence driving behaviors are also related to injury morbidity and mortality Douglas et al. Living in socioeconomically disadvantaged neighborhoods as a proxy for a range of environmental exposures has been linked to higher rates of injury in both adults and children Cubbin et al. Social Environmental Factors Factors in the social environment that are important to health include those related to safety, violence, and social disorder in general, and more specific factors related to the type, quality, and stability of social connections, including social participation, social cohesion, social capital, and the collective efficacy of the neighborhood or work environment Ahern and Galea, What also seems important is the stability of social connections, such as the composition and stability

of households 7 and the existence of stable and supportive local social environments or neighborhoods in which to live and work. A network of social relationships is an important source of support and appears to be an important influence on health behaviors. Features of social environments that may operate as stressors including perceptions of safety and social disorder have been linked to mental health, as have factors that could buffer the adverse effects of stress e. One mechanism through which the social environment can enhance health is through social support. Social support has appeared in many but not all studies to buffer the effects of stress Cohen and Wills, ; Matthews and Gallo, ; Ozbay et al. Resilience to the adverse health effects of stress has also been tied to factors that could influence how one perceives a situation threat versus challenge and how one responds to stressors Harrell et al. One theory for the tendency of some immigrant groups to have better health outcomes than might be expected on the basis of their incomes and education see Chapter 6 is the social support immigrants often provide one another Matthews et al. Studies have shown consistent relationships between social capital and self-reported health status, as well as to some measures of mortality Barefoot et al. Social capital depends on the ability of people to form and maintain relationships and networks with their neighbors. Characteristics of communities that foster distrust among neighbors, such as neglected properties and criminal activity, can affect both the cohesiveness of neighbors as well as the frequency of poor health outcomes Center on Human Needs, b. Spatial Distribution of Environmental Factors In addition to considering differences between the United States and other countries in the absolute levels of environmental factors, it is also important to consider how these factors are distributed within countries. Levels of residential segregation shape environmental differences across neighborhoods Reardon and Bischoff, ; Subramanian et al. Perceptions and stereotypes about area reputation, local demand for products and services, and the purchasing power of residents may also influence the location of health-relevant resources. Physical environmental threats such as proximity to hazardous sites may be more prevalent in low-income or minority neighborhoods, a concern of the environmental justice movement Brulle and Pellow, ; Evans and Kantrowitz, ; Mohai et al. These neighborhoods may also lack the social connections and political power that can help remedy adverse conditions. Other Environmental Considerations The panel focused its attention on the role of local physical and social environments as potential contributors to the U. Nor did the panel examine whether neighborhood conditions exert a greater influence on access to health care in the United States than in peer countries. However, these conditions are important to health. For example, the school environments of children, adolescents, and college students can affect diet, physical activity, and the use of alcohol, tobacco, and other drugs Katz, ; Wechsler and Nelson, Workplaces have also long been recognized as important determinants of health and health inequalities, occupational safety, and access to preventive services Anderson et al. Physical working conditions e. Exposure to job strain exhibits a strong social gradient, which influences inequalities in the health of workers Bambra, Other working conditions and work-related policies for U. Other important differences in work-related policies include employment protection and unemployment benefits, as well as family and sickness leave see Chapter 8. There is scant literature comparing social and physical environmental features across countries. Here we provide selected examples of the ways in which levels or distributions of physical and social environments relevant to health might differ between the United States and other high-income countries. Physical Exposures Few data are available to make cross-national comparisons of exposure to harmful physical or chemical environmental hazards. There is, for example, little evidence that air pollution is a more severe problem in the United States than in other high-income countries Baldasano et al. The heavy reliance on automobile transportation in the United States is linked to traffic levels, which contribute to air pollution and its health consequences Brook et al. Data on population exposures to air pollution across countries are relatively scarce OECD, b. One available measure is the concentration of particulate matter less than 10 micrometers in diameter PM An important factor that influences a range of environmental features relates to patterns of land use and transportation. This characteristic has promoted dispersed automobile-dependent development patterns Transportation Research Board, with consequences for population density, land use mix, and walkability Richardson, , all of which may have health implications. In ,

the United States had motor vehicles per 1,000 people compared with in the United Kingdom, in Sweden, in France, and in Germany World Bank, b. Cities in the United States tend to be less compact and have fewer public transportation and nonmotorized travel options and longer commuting distances than cities in other high-income countries Richardson and Bae, Many European countries have strong antisprawl and pro-urban centralization policies that may contribute to environments that encourage walking and physical activity as part of daily life Richardson and Bae, For example, aside from their direct links to injury mortality see Chapter 1, violence and drug use may be indirect markers of social environmental features that affect other health outcomes. As noted in Chapters 1 and 2, homicide rates in the United States are markedly higher than in other rich nations. There are fewer data to compare rates of other crimes across countries. As noted in Chapter 5, certain forms of drug use which is often linked to other social environmental features also appear to be more prevalent in the United States than in other high-income countries. In particular, particles that are less than 2.5 micrometers in diameter, Environmental Protection Agency, At least one study of cross-national differences in social capital found that the United States ranked at an intermediate level compared with other high-income countries in measures of interpersonal trust; the study also found that the United States ranked higher than many other countries on indicators of membership in organizations Schyns and Koop, A previous National Research Council report and a paper prepared for that study Banks et al. However, the focus of that paper was on the social isolation of individuals rather than on social cohesion or social capital measured as a group-level construct. This figure is one of the lowest in the OECD a. According to the World Gallup Poll, people in the United States are less likely than people in other high-income countries to express confidence in social institutions, and Americans also have the lowest voting participation rates of OECD countries. In an interesting link between physical and social environments, Putnam has argued that increasing sprawl could contribute to declining social capital in the United States because suburban commutes leave less time for social interactions. However, it remains unclear whether sprawl helps explain differences in levels of social capital, or health, across countries. Spatial Distribution of Environmental Factors Research in the US demonstrated that people of low socioeconomic status were more likely to experience residential segregation in the United States than in some European countries Sellers, Given the established correlation between neighborhood, race, and socioeconomic composition and various health-related neighborhood resources in the United States, this greater segregation could also result in greater exposure of some population sectors to harmful environments Lovasi et al. Although studies of residential segregation do not directly assess environmental factors, to the extent that segregation is related to differences in exposure to environmental factors, countries with greater segregation may also experience greater spatial inequities in the distribution of environmental factors, resulting in greater health inequalities and possible consequences for overall health status. Studies that use measures of area socioeconomic characteristics as proxies for environmental features have generally reported similar associations of area features with health in both the United States and other countries van Lenthe et al. At least two studies have suggested that spatial variation in health-related resources may have very different distributions in the United States than in other countries. A review of spatial variability in access to healthy foods found that food deserts—areas with limited proximity to stores that sell healthy foods—were more prevalent in the United States than in other high-income countries Beaulac et al. A New Zealand study found that area deprivation was not always consistently associated with lack of community resources including recreational amenities, shopping, educational and health facilities Pearce et al. This finding is in sharp contrast to studies of the United States, which have found associations between neighborhood socioeconomic disadvantage and the absence of resources that are important to public health Diez Roux and Mair, Large geographic disparities in toxic exposures to environmental hazards and in healthy food access have been repeatedly noted in U.S. Similar geographic disparities may exist for other environmental features. These barriers may inhibit physical activity for parts of the population, resulting in worse overall health. Levels of safety and violence may also be more strongly spatially segregated in the United States than in other countries, resulting in areas with greater exposure to violence and its harmful health consequences.

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Chapter 4 : Chapter 8: Mental Health and Well-Being | Climate and Health Assessment

This first interdisciplinary review on how climate affects human behavior provides an introductory framework for research in the field, surveys climatic data around the world, and covers over 3, sources.

Warmer temperatures and shifting weather patterns can worsen air quality, which can lead to asthma attacks and other respiratory and cardiovascular health effects. Despite significant improvements in U. Increases in Ozone Scientists project that warmer temperatures from climate change will increase the frequency of days with unhealthy levels of ground-level ozone, a harmful air pollutant, and a component in smog. This can aggravate asthma or other lung diseases. Children, older adults, outdoor workers, and those with asthma and other chronic lung diseases are particularly at risk. California Air Resources Board Because warm, stagnant air tends to increase the formation of ozone, climate change is likely to increase levels of ground-level ozone in already-polluted areas of the United States and increase the number of days with poor air quality. Fine particles include those smaller than 2.5 micrometers. Some particulate matter such as dust, wildfire smoke, and sea spray occur naturally, while some is created by human activities such as the burning of fossil fuels to produce energy. These particles may be emitted directly or may be formed in the atmosphere from chemical reactions of gases such as sulfur dioxide, nitrogen dioxide, and volatile organic compounds. Inhaling fine particles can lead to a broad range of adverse health effects, including lung cancer, chronic obstructive pulmonary disease COPD, and cardiovascular disease. Particulate matter from wildfire smoke can often be carried very long distances by the wind, affecting people who live far from the source of this air pollutant. Older adults are particularly sensitive to short-term particle exposure, with a higher risk of hospitalization and death. Due to the complex factors that influence atmospheric levels of fine particulate matter, scientists do not yet know whether climate change will increase or decrease particulate matter concentrations across the United States. Climate-related changes in stagnant air episodes, wind patterns, emissions from vegetation and the chemistry of atmospheric pollutants will also affect particulate matter levels. Take our quiz to see how much you know about the health impacts of climate change! Changes in Allergens and Asthma Triggers Allergic illnesses, including hay fever, affect about one-third of the U. Extreme events can affect human health in a number of ways by: Hurricane Katrina was one of the most devastating hurricanes in the United States, responsible for an estimated 1,800 deaths. NOAA Reducing the availability of safe food and drinking water. Evacuations may be complicated by the need for concurrent transfer of medical records, medications, and medical equipment. Some individuals with disabilities may also be disproportionately affected if they are unable to access evacuation routes, have difficulty in understanding or receiving warnings of impending danger, or have limited ability to communicate their needs. These vectors can carry infectious pathogens, such as viruses, bacteria, and protozoa, from animals to humans. Changes in temperature, precipitation, and extreme events increases the geographic range of diseases spread by vectors and can lead to illnesses occurring earlier in the year. The geographic range of ticks that carry Lyme disease is limited by temperature. As air temperatures rise, ticks are likely to become active earlier in the season, and their range is likely to continue to expand northward. Extreme temperatures—too cold, hot, wet, or dry—influence the location and number of mosquitoes that transmit West Nile virus. More than three million people were estimated to be infected with West Nile virus in the United States from 2000 to 2010. The United States has public health infrastructure and programs to monitor, manage, and prevent the spread of many diseases. The risks for climate-sensitive diseases can be much higher in poorer countries that have less capacity to prevent and treat illness. Human infections can occur from a bite of a mosquito that has previously bitten an infected bird. Warmer winters, longer frost-free season, and earlier spring arrival may influence the migration patterns and fledgling survival of birds that are the natural host of West Nile virus. In addition, rising temperature, changing precipitation patterns, and a higher frequency of extreme weather events are likely to influence the distribution and abundance of mosquitoes that transmit West Nile virus. Water-Related Illnesses People can become ill if exposed to

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contaminated drinking or recreational water. Climate change increases the risk of illness through increasing temperature, more frequent heavy rains and runoff, and the effects of storms. These include water quality monitoring, drinking water treatment standards and practices, beach closures, and issuing advisories for boiling drinking water and harvesting shellfish. Top of Page Food Safety and Nutrition Climate change and the direct impacts of higher concentrations of carbon dioxide in the atmosphere are expected to affect food safety and nutrition. These diseases can cause gastrointestinal distress and, in severe cases, death. Climate change will have a variety of impacts that may increase the risk of exposure to chemical contaminants in food. For example, higher sea surface temperatures will lead to higher mercury concentrations in seafood, and increases in extreme weather events will introduce contaminants into the food chain through stormwater runoff. The food system involves a network of interactions with our physical and biological environments as food moves from production to consumption, or from "farm to table. In particular, experiencing an extreme weather event can cause stress and other mental health consequences, particularly when a person loses loved ones or their home. Even the perceived threat of climate change for example from reading or watching news reports about climate change can influence stress responses and mental health. Her ability take these actions is a measure of her adaptive capacity. Some populations are especially vulnerable to climate health risks due to particular sensitivities, high likelihood of exposure, low adaptive capacity, or combinations of these factors. Communities of color including Indigenous communities as well as specific racial and ethnic groups , low income, immigrants, and limited English proficiency face disproportionate vulnerabilities due to a wide variety of factors, such as higher risk of exposure, socioeconomic and educational factors that affect their adaptive capacity, and a higher prevalence of medical conditions that affect their sensitivity. Pregnant women are vulnerable to heat waves and other extreme events, like flooding. They may have greater sensitivity to heat and contaminants, a higher prevalence of disability or preexisting medical conditions, or limited financial resources that make it difficult to adapt to impacts. People with chronic medical conditions are typically vulnerable to extreme heat, especially if they are taking medications that make it difficult to regulate body temperature. For example, changes in temperature and precipitation, as well as droughts and floods, will affect agricultural yields and production. The worst of these effects are projected to occur in developing countries, among vulnerable populations. Understanding the threats that climate change poses to human health is the first step in working together to lower risks and be prepared. Top of Page References 1. Climate Change Impacts in the United States: Global Change Research Program, Analyses of the effects of global change on human health and welfare and human systems. A Report by the U. Advancing the Science of Climate Change. PDF, 80 pp, 4. Contact Us to ask a question, provide feedback, or report a problem.

Chapter 5 : Determinants of Health | Healthy People

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Reviewed by: The use, distribution or reproduction in other forums is permitted, provided the original author s or licensor are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms. This article has been cited by other articles in PMC. Abstract Environmental challenges are often marked by an intergroup dimension. Political conservatives and progressives are divided on their beliefs about climate change, farmers come into conflict with scientists and environmentalists over water allocation or species protection, and communities oppose big business and mining companies that threaten their local environment. These intergroup tensions are reminders of the powerful influence social contexts and group memberships can have on attitudes, beliefs, and actions relating to climate change and the environment more broadly. In this paper, we use social identity theory to help describe and explain these processes. We review literature showing, how conceiving of oneself in terms of a particular social identity influences our environmental attitudes and behaviors, how relations between groups can impact on environmental outcomes, and how the content of social identities can direct group members to act in more or less pro-environmental ways. We discuss the similarities and differences between the social identity approach to these phenomena and related theories, such as cultural cognition theory, the theory of planned behavior, and value-belief-norm theory. Importantly, we also advance social-identity based strategies to foster more sustainable environmental attitudes and behaviors. Although this theoretical approach can provide important insights and potential solutions, more research is needed to build the empirical base, especially in relation to testing social identity solutions. Climate change is a vivid example of this. Despite being one of the most important environmental challenges of our time, progress on developing effective policy and targets to mitigate climate change has been slow, in part because of the skepticism of segments of society, usually ideological conservatives, who question the reality or anthropogenic basis of climate change. The stark divide between those on the left and right of politics in relation to climate change and environmental issues more broadly; Dunlap et al. These examples highlight an intergroup dimension of environmental issues: These intergroup tensions and conflicts are reminders of the powerful influence that social contexts and the groups, we belong to can have on our environmental attitudes, beliefs, and actions. Indeed, our environmental behavior and whether we support a particular environmental action or policy may be determined in large part by our group membership. Our aim in the current article is to draw on the social identity approach Tajfel and Turner, ; Turner et al. We note that there is a growing interest in using social identity theory to analyze environmental problems. For example, Colvin et al. In the current paper, we draw attention to the group-based dimension of many environmental issues, stimulate research that can address the intergroup context in relation to environmental issues, and provide social identity-based solutions that could address the potentially negative outcomes of intergroup contexts. The Social Identity Approach The social identity approach incorporates two interrelated theories “ social identity theory and self-categorization theory ” which each seek to explain how individual attitudes, emotions, and behaviors are influenced by the group memberships to which we belong. Each theory has different foci “ social identity theory has traditionally focused on intergroup relations, whereas self-categorization theory has traditionally focused on intragroup processes “ but they each share the same assumptions and meta-theoretical positions. Put simply, the social identity approach posits that our self-concept comprises both personal and social identities; personal identity encompasses idiosyncratic aspects of the self, whereas social identities are derived from the groups to which we belong. Social group

memberships can be large-scale social categories e. When a person categorizes in terms of a particular social identity, the categorization process causes an accentuation of similarities between the self and other ingroup members, and an accentuation of differences between the self and outgroup members. Drawing on social comparison theory Suls and Wills, , social identity theory also posits that, in order to maintain a positive and clear self-concept, group members are psychologically motivated to see their groups as distinct from other relevant groups, and as more positive than other relevant groups. Consequently, ingroup members favor other ingroup members over outgroup members in evaluations and the distribution of resources for reviews, see Brown, ; Hewstone et al. For example, we judge ingroup members as more likable, knowledgeable, and trustworthy than outgroup members Tanis and Postmes, ; Foddy et al. Whether or not this ethnocentrism has clear implications for environmental outcomes depends on the nature of the social context; intergroup relations can be more or less harmonious or conflictual depending on the status relations between groups. If status differences are perceived to be legitimate, conflict is unlikely to arise, whereas status differences between groups that are thought to be illegitimate are likely to give rise to intergroup conflict. In the remainder of this paper, we draw on the social identity approach as a way to understand humanâ€”environment relations. There is a small, but growing body of research that has applied social identity principles to understand climate change and environmental attitudes and behavior. There is also research that is not specifically framed by social identity but nevertheless provides evidence of the influence of social identity concepts on pro-environmental variables. The strength of the social identity approach is that it: We conclude with a set of social identity-based suggestions for advancing significant and positive environmental policy and behavior and recommendations for future research. The Social Identity Approach and Environmental Attitudes and Behavior Identity and Assimilation to Ingroup Norms As outlined above, when social identity becomes salient, similarities amongst ingroup members and differences between ingroup and outgroup members are accentuated. As a result, ingroup members assimilate their attitudes and behaviors to ingroup norms and away from outgroup norms. Perhaps the starkest example of this process can be seen in relation to the impact of political party affiliation on climate change attitudes. McCright and Dunlap have shown that Democrats in the U. These political alignments are confirmed by other U. Obviously, the relationship between political affiliation and belief in climate change is likely to be bi-directional. Some people will be drawn to a particular party on the basis of their independently formed attitudes toward climate change, meaning that social identity follows individual attitude formation. But a social identity approach would presume that the other causal path â€” that affiliation influences attitudes â€” would be even more pronounced. An example of this pathway was provided by Cohen , who showed that partisan Democrats and Republicans responded to the very same welfare policies in entirely different ways depending on which party participants were led to believe initiated the policies: This research shows that a message can be rejected or accepted entirely on the basis of the group allegiance of the messenger Hornsey and Imani, ; Esposito et al. The majority of the evidence for this argument is correlational, but one recent study provides experimental evidence. Further evidence for the influence of ingroup norms comes from norm focus theory which differentiates between injunctive social norms which describe what is approved or desired by group members and descriptive norms which describe what the majority of group members actually do Cialdini et al. The independent and interactive effects of these norms has been demonstrated in the environmental domain including in relation to littering Cialdini et al. On the flipside, when American participants were provided with information that Americans are excessive energy consumers a negative descriptive norm they were less concerned about climate change and less supportive of climate change policy than when they learned that China was an excessive energy user or they did not receive information Jang, In other words, American participants conformed to the ingroup descriptive norm, albeit a negative one. Although current guests may not necessarily identify strongly with past guests, they share an identity and the behavior of past guests provides the salient script for how to behave in this particular context. Therefore, this finding fits with the social identity approach that people will be guided by the norms of the most behaviorally relevant ingroup in a specific context. Other research has shown that when norms are

misaligned or in conflict it can weaken effects on behavior. The social identity approach also acknowledges that the influence of ingroup norms should be stronger for those who are more highly identified with the group Ellemers et al. For example, social identification with organic consumers predicts willingness to purchase organic products Bartels and Reinders, ; Bartels and Onwezen, , environmental group membership predicts environmental activism intentions Fielding et al. Moreover, more strongly identified group members are more likely to intend to engage in ingroup normative behaviors, such as recycling Terry et al. In other words, the more highly identified group members are, the more salient will be the norms of the group and the more likely they will be to guide behavior. Recent research examining different dimensions of ingroup identification has also shown that it is the self-investment dimension of identification i. The Influence of Intergroup Conflict As we noted previously, negative and competitive intergroup relations may arise when ingroup members perceive illegitimate status differences between their own group and other relevant outgroups Branscombe et al. In addition to climate change, many other environmental issues are marked by just this type of context: Examples include the imposition of environmental regulation on farmers; water allocation decisions that trade-off between water for the environment, agriculture, and the community; or the conflict between groups over fracking of coal seam gas. Although social identity theory does not argue that all intergroup contexts lead to ingroup bias and outgroup derogation, the power differences and perceived illegitimacy that flows from these types of contexts can lead ingroup members to perceive the decisions as unfair and to resist them. A study by Fielding et al. When people come into conflict over environmental issues or resources, their social identities come to the fore. People stereotype each other in ingroup-favoring ways e. Research by Opatow and Brook provides evidence of these processes in the context of environmental protection regulation. When a threatened species act was introduced, ranchers and environmentalists came into conflict. The ranchers viewed the threatened species as insignificant, and characterized non-ranchers as inexperienced, irresponsible, and the cause of the problem. In contrast, ranchers viewed themselves as stewards of the environment who made fair environmental decisions. Interestingly, some environmental issues can give rise to emergent group identities that center around strongly held positions [i. For example, Bliuc et al. When political affiliation overlaps with these opinion-based identities, identity faultlines can emerge that make objective appraisals of evidence psychologically implausible. Another example of conflict giving rise to emergent social identities is the conflict that has arisen over fracking of coal seam gas in Australia. Unlikely alliances have emerged between environmental group members, farmers, conservative politicians, and media presenters who oppose fracking, with government agencies and mining companies perceived as the salient outgroup Hutton, ; Colvin et al. There are important consequences of these identities that emerge out of environmental conflict. The alignment of climate change attitudes with political party identity lends an intense and competitive intergroup dynamic to what should be even-handed discussions about science and truth. When framed within an entrenched intergroup context, solutions advanced by one political party are likely to be dismissed by political opponents simply because they emanate from the outgroup. To the extent that information comes from people, who are perceived to be aligned with the outgroup, ingroup members are more likely to dismiss it regardless of its veracity Abrams et al. In this way intergroup distinctions become entrenched and the potential to reach compromise or develop viable solutions becomes less likely. Although intergroup conflict can stymie progress on environmental issues, it should be noted that a degree of intergroup conflict is inevitable when pushing for social change, and that the alternative to conflict is often an unhealthy stasis. In their meta-analysis of the collective action literature, van Zomeren et al. Other research demonstrates that group identification is positively associated with the belief that the group can be effective in reaching its collective goals van Zomeren et al. Of course, reality is more complex than this: Furthermore, although environmental collective action often involves a range of people from many walks of life, research has shown that people hold negative stereotypes of environmentalists as militant, aggressive, unconventional, and eccentric Bashir et al. With this in mind it is easy to see how messages that emanate from environmental groups that are perceived to be extreme may gain little traction with the broader populace and could even polarize people away from support

for important environmental issues Blüch et al. Two key factors influence which social identities guide behavior: Comparative fit refers to the degree to which a social identity is seen to reflect real world differences between groups. Normative fit recognizes that categorization is a dynamic process that reflects the perceptions of perceivers; that is, people are more likely to categorize into ingroups and outgroups if differences between groups align with stereotypic expectations. Social identities are also more or less likely to become the basis for self-definition depending on how accessible they are; some are fleetingly accessible if primed e. Some recent research demonstrates the fluid nature of social identities in the environmental domain. In a similar vein, when students compared themselves to past students assumed to be less pro-environmental they judged current students to be more pro-environmental but when comparing current students with future students assumed to be more pro-environmental they judged current students to be less pro-environmental Ferguson et al. Willingness to engage in sustainable behaviors also varied in line with the perceived ingroup norms, that is, there was greater willingness when participants compared with past students than when they compared with future students. These findings demonstrate how the intergroup comparative context can influence the content of social identity in ways that could facilitate or inhibit greater engagement in pro-environmental behavior and greater support for pro-environmental policy. Integrating the Social Identity Approach with Other Relevant Theories A question raised by our analysis is whether the social identity approach adds to the understanding of environmental problems beyond other prominent theoretical frameworks. In this section, we examine the similarities and differences between the social identity approach and other relevant theories, with a view to highlighting possibilities for integration and stimulating future directions across frameworks.

Chapter 6 : Introduction to Global Mental Health: Effects of Mental Health on Individuals and Populations

Free Download Climatic Effects On Individual Social And Economic Behavior A Physioeconomic Review Of Research Across Disciplines Book PDF Keywords Free Download Climatic Effects On Individual Social And Economic Behavior A Physioeconomic Review Of Research Across Disciplines Book PDF, read, reading book, free, download, book, ebook, books.

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intake in the last 6 months, and any chronic treatment with potentially psychoactive drugs. All subjects sat in front of a computer terminal and found additional working materials on their desk. Thus, the subjects were asked to provide information about their age, their field of study, the estimated income of their parents [1: Finally, the subject performed the original and a modified version of the Holt and Laury lottery paradigm Holt and Laury, All personalized information including the amount of the individual payoff was pseudonymized using a unique ID number. There are only short instructions 10 min. It consists of four subtests using structured images indicating 1 series [15 items], 2 classifications [15 items], 3 matrices [15 items], and 4 topologies [11 items]. For the respective age group 20â€”25 years. To this end, we used the same experimental setup as Holt and Laury did in their well-established real-payment driven lottery experiment. The lottery was played on computers. In short, the Holt and Laury paradigm presents to the subjects a matrix of ten subsequent lottery draws. For each of the draws, the subject can choose between a low-risk and a high-risk option. For the low-risk options, there is only a slight difference between the respective high payoff 2. In the high-risk option the respective payoffs are 3. All of the ten lotteries are clearly comprehensible and simultaneously presented in one display. After a time of reflection the subject is asked to choose between the high-risk and low-risk options for all draws. In the present study, the whole procedure was repeated with payoffs that were multiplied by a scaling factor [high-stake condition HSS]. Finally, a third lottery was conducted again using a scaling factor of 1; the latter was, however, not included in the calculation of the relative risk aversion r , RRA and the wealth factor W . In order to elicit more spontaneous and less deliberated choices, the lottery was played in a sequential version. The general conditions of the probabilities, stakes, and gains remained unchanged. The player, however, was presented only one lottery iteration per screen. These single draws were presented in random order with respect to the winning probability p . Each probability level was presented three times so that in each stake condition high-stake vs. In the matrix version, the earnings of the low-stake condition LSS were displayed immediately after the game but needed to be waived before entering the HSS. The earnings of the second low-stake lottery matrix version were added to the high-stake lottery payoff. The primary outcome parameters reflect the level of probability at which the subject switches from the relatively safe to the risky options. In order to determine this level unequivocally, within one matrix only one switch to the riskier option was allowed. Consequently, in the original matrix version, there are three switching points: Another factor, which can theoretically affect the switching level is the initial wealth W . Inclusion of this factor in the above mentioned equation as offset for the expected gains yields:

Chapter 7 : Climate Impacts on Human Health | Climate Change Impacts | US EPA

Public policy and social behavior A human being is a part of all economic systems and that is why so many researchers focus in their research on economic change and individual behavior trying to explain how individual and general conditions can affect both economic and uneconomic behavior.

Chapter 8 : Social Economics

Climate change and individual behavior: Considerations for policy by Andrea Liverani¹ 1 Andrea Liverani is a Social Development Specialist in the Middle East and North Africa region at the.

Chapter 9 : Effects of global warming on humans - Wikipedia

Except for the population estimate, the figure is reprinted from The World at Six Billion (pp. 7, 8) by the Population Division, Department of Economic and Social Affairs, United Nations Secretariat, , New York, NY: United Nations.