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PART ONE

INTRODUCTION

1

Creators of Culture

We shape our environment, and then our environment shapes us.
Winston Churchill, undated

Animals face a variety of problems. In addition to attacks by predators, they often have to survive harsh climates and shortages of food and drink. They react instinctively with a corresponding variety of solutions. Salient responses to bitter winters, scorching summers, and lack of food and drink include winter sleep, summer sleep, and migration. Although humans face the same survival problems, they have not evolved these particular reaction patterns. In common with most animals, humans living near the poles do not sleep all day in dark winters, and those living near the equator do not to sleep all day in blistering-hot summers. And almost all humans are reluctant to migrate permanently or to follow flocks of birds in spring and fall on their way to more comfortable places for the oncoming winter or summer. Indeed, unlike our distant ancestors in hunting and gathering societies, we tend to stay where we are, and that seems convenient. But in a hardening climate we are in danger.

In harsh climates, humans must ceaselessly solve problems of extreme cold or heat, shrinking food and drink supplies, and lurking diseases. In response, they have invented a tool no animal action ever can compete with. Its miraculous power can solve a fantastic variety of climatic, nutritional, and health problems. What's more, its wondrous achievements are in no way tied to a specific ethnic group, a

particular geographic area, or a certain period in time. That tool is *money*. As a rule, money can buy all the necessities of life, including heat and cold, food and drink, cure and care. Slowly but surely, the availability of money resources has become the essential solution for the basic problem of human survival. Indeed, we have come to use money as a kind of life preserver, and that seems convenient. But in poverty-stricken circumstances we are in danger.

Both climate and cash, therefore, are of vital importance as resources in supporting survival and a desirable quality of life. Temperate climates offer the best of all worlds, with comfortable outdoor temperatures, thriving plants and animals as living resources of enormous benefit, and relatively healthy living conditions. Cold or hot climates, lacking the climatic resources of temperate areas, endanger our lives and frustrate us. Money resources, however, can compensate for the lack of climatic resources, enabling us to also survive and live happily in harsh climates. These ecological matters of life and death are relevant to a proper understanding of what we collectively value, believe, seek, avoid, and do: that is, our culture.

Each society gives birth to a culture that includes everything that has contributed to survival in the recent or remote past – tools such as money, practices such as work, goals such as cooperation, constructions such as organizations. And climate and cash rock the cradle of culture. This should not be taken literally, of course. Climate and cash are inanimate things; only *we* can bring them to life. Or, to paraphrase Winston Churchill's pointed piece of wisdom, "We shape our environment and, through it, we shape our culture." This is an immense project. It takes a long time, multiple trials and errors, and much competition and coordination to build and rebuild culture in response to climate and cash. Hence, a crucial part of this culture-building process is that we pass on what we have learned from generation to generation in a nongenetic way (for a thorough overview of how this works, see Whiten et al., 2003).

In short, we create our climatic and economic contexts, and these contexts then create our cultures. On this two-way street between contexts and cultures, a vast array of scholars moves from cultures toward climates and economies. My drive is in the opposite direction, from climates and economies toward cultures. I aim to contribute to a body of knowledge about the fit between given combinations of climate and cash and the cultures created in response to them. In this introductory chapter, the points of departure are sketched under the headings “Culture and Survival” and “Culture in Context.” The chapter is summarized in a diagram. In combination with the propositions at the end of each of Chapters 2 to 7, this diagram forms the groundwork for an outline of several bird’s-eye views of culture presented in Chapter 8. One of the views provided in that final chapter, a strategic view of the context-culture links found, sheds novel light on two huge threats humanity faces today: global warming and local poverty. If we can create global warming and local poverty, we can create cultures.

CULTURE AND SURVIVAL

Borrowing from leading cross-cultural psychologists (Hofstede, 2001; Schwartz, 2004; Smith et al., 2006; Triandis, 1995), I define societal culture as a rich complex of values and practices passed on and changed from generation to generation. Complex syndromes of culture have many origins and are developed further in numerous ways (Boyd & Richerson, 2005; Buss, 2004; Diamond, 2005; Nolan & Lenski, 1999). But the most fundamental explanations of culture have been rooted in two clearly distinguishable types of survival: genetic survival over time and climatic survival in a particular place.

On the one hand, culture has been traced back to human reproduction represented by, for example, the “selfish gene” (Dawkins, 1989), menstruation (Knight, 1991), son-daughter preferences (Kanazawa, 2006), and parental investment (Buss, 2004). On

the other hand, through the ages, Hippocrates, Ibn Khaldun, Montesquieu, Quetelet, and Huntington, to mention but a handful of classic scientists, have all tried in vain to relate culture to climate. At the beginning of the 20th century, the proponents of the so-called geographical school also argued that climate matters for all sorts of psychosocial phenomena (for an overview, see Sorokin, 1928). But the geographical school, too, failed to demonstrate and clarify convincingly how climatic effects come about and link up to values and practices. As a result, genetic roots of culture have received much more attention than climatic roots of culture, which is unfortunate because climatic survival is more basic than genetic survival. Genetic survival is simply impossible without climatic survival.

This state of the science is unfortunate also because cold and heat are potentially important origins of culture for descriptive, explanatory, and strategic reasons. The descriptive reason is that thermal climates relate distinct cultures to stable differences in latitude and altitude. Scientifically, climate-based culture maps have to be taken as seriously as geographic maps and astronomic charts. The explanatory reason is that thermal climates relate distinct cultures to unobtrusive differences in atmospheric contexts. Climate is a more fundamental and more stable antecedent condition of culture than more proximate correlates of values and practices such as subsistence technology, urbanization, and democracy. The strategic reason is that knowledge about climatic anchors of culture may keep us from attempting to implement infeasible policies and procedures as a result of aiming to reach beyond contextual limits to globalization and planned cultural change (for details, see Van de Vliert, Einarsen, et al., 2008).

CULTURE IN CONTEXT

Animals instinctively select and change a specific natural environment as their habitat. Analogously, humans create a specific culture that optimizes successful existence in a given context. Perhaps it is

better to talk about several contexts. First are the climatic and economic contexts. In addition, the contexts of water and marine organisms, terrestrial flora and fauna, oil reserves and mineral deposits, and risks of flooding and earthquakes are easily recognizable. Increasingly, alas, animals and humans alike have to cope with polluted air and water, toxic and chemical waste, and deadly viruses. All of these and similar life-controlling contexts together form the niche in which a society builds and rebuilds a fitting culture. For example, it makes perfect sense that Icelanders, Norwegians, and Japanese value and practice whale fishing, that Californians and Cypriots grow wines, and that Chinese and South Africans engage in terrestrial mining.

The reasons for focusing on the climatic and economic characteristics of niches of culture in concert are straightforward. Climatic demands and money resources are basic living conditions experienced by nearly every member of every society on earth on a daily basis. Nonetheless, both contextual conditions vary considerably from one society to another. As a consequence, they have shaped the history of every country on all of our inhabited continents. An extra reason to highlight climate and cash is that they are interdependent factors and form integrated climato-economic niches. Harsher climates make money resources more useful; money resources make harsher climates less threatening. Below, the climatic context, the economic context, and the climato-economic niches are introduced further, in this order, and are visually related to culture in Figure 1.1.

Climatic Context

My first publication on the consequences of climate for culture (Van de Vliert & Van Yperen, 1996) turned out to be a finger exercise for my later work. It made no clear distinctions between weather and climate; between temperature and precipitation; and between the cultural consequences of cold, temperate, and hot climates. These

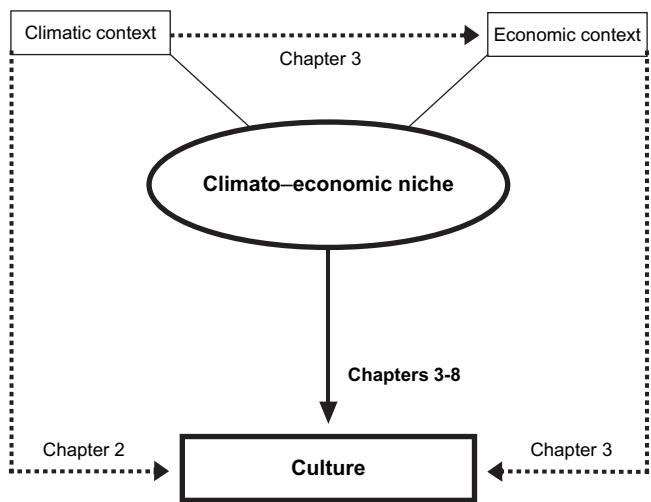


FIGURE 1.1. A model of cultural adaptations to climato-economic niches.

inaccuracies call for clarification because similar dilemmas and errors have plagued scholars ever since Hippocrates (460 B.C.) noted that climate generally shapes physiological needs, psychological well-being, and cultural mores.

Weather versus climate. Whereas weather indicates what is happening to the atmosphere at any given time, climate refers to the generalized weather of an area over at least a 30-year period. Weather changes continuously; climate has been extraordinarily stable for the last 10,000 years. Weather tends to have immediate *physiological* and *psychological* effects at the individual and group levels; climate tends to have *psychological* and *sociological* effects in the longer run and at the societal and global levels of human functioning. Nonetheless, an overview of the extant literature on temperature effects on humans (Parker, 1995), which lists 807 physiological studies, 458 psychological studies and 830 sociological studies, shows no distinction whatsoever between weather and climate. The studies reported here transcend weather by highlighting the psychosocial consequences of climate in the long run and at the societal level of functioning.

Climatic temperature versus climatic precipitation. Climates are made up of temperature, precipitation, wind, humidity, pressure, and so on. To reduce complexity, they are often classified using a combination of the two most important factors: average temperature (frigid, temperate, torrid) and average precipitation (arid, semi-arid, subhumid, humid, wet). In addition, multiple temperature-precipitation combinations within nations are usually averaged to represent the climate of whole nations in a unitary way (the problem of within-nation variation in climate will be addressed in Chapter 2).

For example, in a climate-culture study under the acronym *GLOBE* (House et al., 2004), an international consortium of approximately 170 scholars used the following seven major clusters of climates: *tropical humid* (Colombia, Costa Rica, Ecuador, India, Indonesia, Malaysia, Philippines, Singapore), *savanna* (El Salvador, Guatemala, Nigeria, Thailand, Venezuela, Zambia, Zimbabwe), *desert* (Egypt, Iran, Israel, Kazakhstan, Kuwait, Mexico, Namibia, Qatar, South Africa, Turkey), *subtropical humid* (Argentina, Bolivia, Brazil, Hong Kong, Taiwan), *mediterranean* (Albania, Greece, Italy, Morocco, Portugal, Slovenia, Spain), *maritime* (Britain, Denmark, France, Germany, Ireland, Netherlands, New Zealand, Switzerland), and *continental* (Australia, Austria, Canada, China, Finland, Georgia, Hungary, Japan, Poland, Russia, South Korea, Sweden, United States).

Using such a typological approach to investigate climate-culture links has the advantage that climate is correctly treated as a whole of integrated components. But it also has the disadvantage that the impact of climate cannot be accurately attributed to temperature or precipitation. Take *GLOBE*'s finding that the cultural value of uncertainty avoidance by relying on social norms, rules, and procedures is distinctively stronger in tropical and subtropical climates than in maritime and continental climates (Sully de Luque & Javidan, 2004). Should we explain this finding in terms of climatic temperature or climatic precipitation? Or does a combination of climatic temperature and climatic precipitation account for it? And would

we come to the same conclusion if we used the 58 countries listed instead of the 7 clusters of countries as our unit of analysis? To prevent the occurrence of such queries as much as possible, climatic temperature and climatic precipitation are construed here as country-level dimensions with influences on culture that can be separately assessed.

Splitting up climatic temperature and climatic precipitation is defensible also because it makes sense to assume that temperature has an even more important cultural impact than precipitation, for the following reasons. In general, leaving disasters aside, winters and summers seem to be more critical than wet and dry seasons. Whereas bitter winters and scorching summers endanger thermal comfort, crops, and health, very wet and very dry seasons endanger crops in particular. Furthermore, whereas harsh winters and harsh summers are seldom a godsend, much precipitation can be either bad luck resulting from snowfall during already ice-cold winters or good luck resulting from rainfall during otherwise sweltering hot summers. Similarly, clear skies can be either good luck during bitter winters or bad luck during scorching summers.

Last, increasing temperatures tend to increase evaporation, which leads to more precipitation rather than the other way round. According to the Intergovernmental Panel on Climate Change (Houghton et al., 2001), as average global temperatures have risen, average global precipitation, especially land-surface precipitation, has also increased. For all of those reasons, a thermal climate seems to call for more coping and cultural adaptation than a precipitational climate, mostly in and of itself, and partly in conjunction with a precipitational climate. In this work, therefore, I have restricted my investigations to temperature as the predominant dimension of climate and predictor of culture while taking into account the potentially confounding impact of precipitation.

At first blush, climate as the average level of temperature across all seasons is an unambiguous contextual variable. On second

thought, it can be viewed in two different ways: through a cold-hot lens, with warmer climates seen as more comfortable, and through a cold-temperate-hot lens, with temperate climates seen as more comfortable than both cold and hot climates. Cold-hot contexts range from cold at latitudes closer to the icecaps to hot at latitudes closer to the equator. Cold-temperate-hot contexts range from comfortable at intermediate latitudes to harsh at latitudes closer to either the icecaps or the equator. Both conceptualizations of climatic contexts have been related to culture elsewhere, and both are discussed and criticized here.

Cold-hot context of culture. The simplest research approach is to search for cold-hot relations between the mean level of climatic temperature and some dimension of culture. As a case in point, Esther Kluwer, Richard Lynn, and I (Van de Vliert, Kluwer, & Lynn, 2000) observed an unmistakable country-level link between increasing temperature and increasing citizen competitiveness. Men and women in warmer countries appear to try harder when they are in competition with other people, finding winning more important in both work and games. We speculated that in former times life was more arduous for families in cold than in hot climates, requiring more cooperation or at least noncompetitiveness to survive. In essence, we hypothesized that remnants of less competitiveness in cooler climates and more competitiveness in hotter climates can be observed in modern-day men and women.

Similarly, Hofstede (2001) showed that decreases in geographic latitude as a global indicator of a country's warmer climate go hand in hand with greater differences in power between individuals or groups. The cold-hot difference in climate is at the beginning of a causal chain, his argument ran, because warmer environments are less problematic and easier to cope with. In the relatively cold climates of, for example, North America and Scandinavia, survival and population growth are more dependent on human intervention in nature, with the complicating effects of more need for technology,