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CULTURE, IDENTITY, AND INFORMATION TECHNOLOGY IN THE 21ST CENTURY: IMPLICATIONS FOR U.S. NATIONAL SECURITY

Pauline Kusiak

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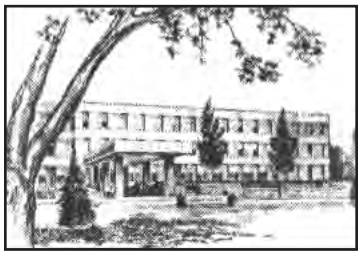

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CULTURE, IDENTITY, AND INFORMATION TECHNOLOGY IN THE 21ST CENTURY: IMPLICATIONS FOR U.S. NATIONAL SECURITY

Pauline Kusiak

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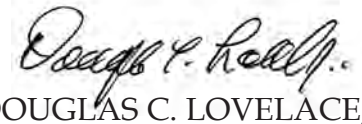
FOREWORD

In this monograph, Dr. Pauline Kusiak traces global trends in the use of language and media in order to identify the national security implications of cultural change and identity formation. Her analysis suggests that in the next several decades, the world is likely to be more ideologically fragmented than at any time during the 20th century. In such a context, not only will the ability of the United States to push back against other rising "centers of influence" be comparatively reduced; other rising powers themselves are unlikely to be able to wield the same forms of influence that shaped international politics in the 20th century. Instead, Dr. Kusiak offers a sociological perspective on these global trends, suggesting that the emergent norms of future generations will challenge existing legal frameworks and bureaucratic methods that states have until now relied on to manage and provide secrecy and security. At the same time, the influx of digital "immigrants" from the developing world to the information domain will indelibly shape the information society as we know it today. For the first time, "cultural engagement" will no longer be an experience that exclusively happens in "far-off" lands, as the global expansion of the information society enables the beliefs and values of foreign societies to impact our day-to-day lives more frequently and more directly.

Ultimately, the monograph makes a compelling case for policymakers to attend to the strategic implications of cultural change and to reach beyond state-centric approaches in security studies in order to do so. The Strategic Studies Institute is pleased to offer this monograph as a contribution that enriches our

understanding of the future security environment and furthers policy debate on U.S. national security and defense strategy.



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PAULINE KUSIAK is a foreign affairs specialist in the Office of the Under Secretary of Defense for Policy. In this position, she has worked in the areas of strategy, stability operations, and special operations and combating terrorism. Dr. Kusiak was the first program manager for the DoD's Minerva Initiative, a basic social science research initiative launched by Secretary Robert M. Gates in 2008. Before joining OSD, she worked as a social and cultural research specialist for the U.S. Army Special Operations Command at Fort Bragg, NC.

SUMMARY

This monograph describes strategic trends in cultural change and identity formation in the 21st century. While it is impossible to predict credibly the values and beliefs of future generations, the first part of the monograph provides a modest forecast by tracing global trends in the use of language and media, as well as in the use of information and communication technologies. The second part then draws out potential implications of these culture and identity trends for the strength of the U.S. "signal" in the global infocommunication sphere.

The analysis by Dr. Pauline Kusiak suggests that in the next several decades, the world is likely to be more ideologically fragmented than at any time during the 20th century and that the ability of the United States to push back against other "centers of influence" may be comparatively reduced. At the same time, existing legal frameworks, bureaucratic methods, and strategic communication techniques are likely to be greatly strained by the emergent norms of a future saturated by information and communication technologies. Ultimately, Dr. Kusiak suggests that in the information-dominated 21st century, the beliefs and values of foreign societies may increasingly and more directly impact our own national security, making it ever more critical for policymakers to understand issues of cultural change and identity formation from a strategic perspective.

CULTURE, IDENTITY, AND INFORMATION TECHNOLOGY IN THE 21ST CENTURY: IMPLICATIONS FOR U.S. NATIONAL SECURITY

National security and defense strategy for at least the last decade has taken a particularly cosmopolitan outlook on world affairs. The *2010 Quadrennial Defense Review* as well as the most recent Defense strategy, for example, suggest that the place of the United States in the international system can best be sustained by engaging newly emergent centers of influence and by pursuing measured responses to multipolarity. They both also argue that building the capacity of partners is the surest, most economical way for the United States to hedge against regional and transnational threats. This monograph will suggest that effectively actualizing this approach to world affairs and maneuvering through the complexities of the future operating environment will demand of 21st-century policymakers an even greater understanding of the beliefs, values, and cultures of foreign societies—as those beliefs and values pertain not only to the international relations of states but also to subnational populations and to transnational actors—than was required just a few decades ago.

Over the last several years, the Department of Defense (DoD) has built numerous programs to respond to the tactical and operational challenges of understanding foreign cultures. However, the strategic implications of cultural understanding have received comparatively less focus.[1] Since changes in interpretation and meaning are highly unpredictable, formulating a strategic appreciation of cultural and identity trends is indeed a daunting proposition. While some comparatively definitive assertions can be made about

demographic trends, economic growth rates, and climate patterns—i.e., that there will be more people on the planet, that those in the global North will be graying while those in the global South will stay young, it will be warmer and non-Western nations that will be important economic players—it is far more difficult to predict how that world will be interpreted and understood by those who live in it.

Ideally, a strategic assessment of cultural trends would give us a glimpse of the values, beliefs, and customs of the people who live in this future world. The adaptability and complexity of human behavior make it effectively impossible to produce credible predictions about specific values and beliefs. Nevertheless, this monograph intends to highlight some key global trends that may shape the politics of culture and identity issues in the 21st century. It will then pose several propositions about potential implications of these trends for national security and for defense.

EMERGING TRENDS OF THE INFORMATION SOCIETY

Knowledge about foreign societies has been shaped throughout the 20th century by various forms of global engagement, as well as by the security concerns raised by such engagement. The social science discipline of anthropology, for example, largely grew out of the expeditionary experiences of France and Britain, and many early anthropologists were employed by the colonial militaries of these nations.[2] Similarly, the Cold War created a new kind of premium on deep expertise of foreign societies, as Sovietologists, Kremlinologists, and other kinds of area studies specialists studied indirect symbols and leadership profiles of the Union of

Soviet Socialist Republics (USSR) to discern the inner workings of an otherwise closed regime.[3]

If colonial expeditions framed interactions with foreign societies in the early-20th century, and the Cold War structured encounters with non-Western cultures in the mid-20th century, the unfolding of the information society—in which distant places and peoples can more directly impact our day-to-day lives—is probably the key dynamic that will shape how culture, identity, and security are studied and understood in the 21st century. Scholarly concepts of "region" and "place" have already been fundamentally transformed by the emerging norms of the information society, as have the means available to study that social behavior. Platforms such as Google and Facebook are not simply mediums through which social intercourse takes place; now they are also readily mined as sources of raw data about human social interaction.[4] Just as security concerns fostered the study of non-Western cultures and later funded the development of area studies, today the U.S. defense and security sectors are investing millions of dollars in computational social sciences to improve data-mining and targeting mechanisms of all kinds. From courtship to diplomacy, from social networking to warfare, the intersection of people's values, beliefs, and customs with the virtual domain will drive cultural trends and identity dynamics, as well as the way we understand those social behaviors, for the foreseeable future.

As noted by scholar Benedict Anderson, the way that social groups understand themselves as a people is largely structured by the symbols and media that comprise their social context.[5] While we cannot predict how people will interpret phenomena and events in an information-saturated future, it is possible to

note trends in the use of tools and mediums that will likely structure those interpretations. What languages will people speak? What will people be reading and listening to? How and from whom will they be learning? If we want to know what trends may shape the politics of culture and identity in the future, one way to start is to trace global patterns in people's use of language and media, as well as their relative degrees of connection to one another through information and communication technologies.

- Language Use: Language is the medium through which human beings establish and maintain relationships. It is the foundation of mutual intelligibility and shared symbolic systems. As such, trends in language use provide some data about the raw materials that future generations will be using to interpret and make sense of their world. Such trends suggest that while English will continue to be an important vehicle of international communication, the comparative influence of the English language in the future may be less than it is today.
  - The percentage of the world's population that speaks English as its first language is actually declining. In 1995, the most common language spoken in the world was Chinese, followed by English. Current projections suggest that in 50 years English will probably drop down to the fifth-most-common native language spoken in the world after Chinese, Hindi, Urdu, and Arabic.[6]
  - English will probably continue to be a widely spoken second language in the future, but it may no longer have the same dominance it enjoyed in the 20th century. At the begin-

ning of the new millennium, about 20 to 25 percent of the world's population spoke English as a first or second language.[7] However, as non-English-speaking countries begin to comprise a larger percentage of the world's total gross national product (GNP), these trends are likely to shift. Some researchers speculate that in the future, more people will speak more languages, and that Mandarin Chinese will become the next "must-learn" language, particularly in Asia.[8]

— The relative influence of foreign languages in the future may also be partially reflected by the relative ability of their speakers to read and write in those languages. North America and Europe continue to have the world's highest literacy rates. Asia and Latin America have the second-highest rates globally.[9] Despite a lower literacy rate, however, China can still boast 1.2 billion literate Chinese people, more than double the total number of first and second English language speakers—literate and nonliterate—worldwide. In contrast, more than half of the world's population of illiterate adults live in South Asia. An additional 176 million illiterate adults live in Sub-Saharan Africa.[10] As youth literacy rates continue to increase around the world, however, adult literacy rates should continue to improve among future generations globally.[11]

• Information and Communication Technologies (ICTs): Few inventions altered the course of history as radically as did the printing press. Some

historians suggest that as literacy extended to the average person throughout the 15th, 16th, and 17th centuries, attitudes to received wisdom as well as understandings of knowledge more generally were irrevocably changed. In particular, individual reason and the ability to question authority were more highly esteemed, such that these values ultimately came to characterize the split between the Middle Ages and the Modern era itself. It is possible that the values and behaviors that the Internet is fostering today will similarly fundamentally alter the way societies around the world interact and behave tomorrow. In light of that potential, it is notable that over the course of the next decade, the largest pool of "immigrants" to this new digital community will likely come from non-Western countries and nations. As these newcomers enter the digital domain, they will likely import their own languages, values, and norms, changing the texture and complexity of the information society we all inhabit in the process.

- Access to the Internet around the world continues to expand. In 2009, worldwide fixed and mobile broadband subscriptions worldwide passed the 1 billion mark.[12] About 1.7 billion people, or 26 percent of the world's population, report regularly using the Internet.[13]
- Internet penetration rates are still much higher in developed countries than in the developing world, where between 58 to 77 percent of the population are online. However, in the decade between 2000 and 2010,

the highest growth rates for new Internet users were in Africa, the Middle East, Latin America and the Caribbean, and Asia.[14] China overtook the United States as the world's largest fixed broadband market in 2008.[15]

— A 2010 CISCO report notes that between 2005 and 2010, the share of the Internet Economy (that is, the approximate amount of purchasing power in the hands of Internet users) held by advanced market countries fell from 85 to 70 percent.[16] Due to differential gross domestic product (GDP) growth rates between the advanced and emerging countries, the expansion of the middle classes in these emerging countries, and the aging populations of more advanced countries, they predict that emerging countries will account for more than half of the Internet Economy by 2025.[17]

— English is currently the most commonly used language on the Internet (with 536.6 million users), followed closely by Chinese (with 444.9 million users). The next most common languages on the Internet (Spanish, Japanese, and Portuguese) are several hundred million users further behind.[18] Given the relative population sizes and the growth of Internet access in Asia, it could potentially take less than a decade for Chinese to become the most commonly used language on the Internet.

— In 2006, fewer than one-quarter of global Internet users were based in the United States, and users in the United States spent less time online than users in Israel, Finland, South

Korea, the Netherlands, and Taiwan.[19] Facebook hosts more than 70 different languages, and about 70 percent of its 500 million active users are outside of the United States.[20]

- Mobile cellular penetration in developing countries has more than doubled since 2005. In 2009, 57 out of 100 inhabitants had access to a cell phone in developing countries, while 67 out of 100 people worldwide had mobile cellular subscriptions.[21] The primary source of global growth has been the Asia-Pacific region. Including India and China, the Asia-Pacific region accounted for 47 percent of global mobile connections in 2010.[22]

- Media Sources and Penetration: While more people are connected globally and have access to the Internet, the sources of news and information they are accessing through those means are also more numerous than they were even 2 decades ago. Such trends suggest that the relative influence of American-generated, English-language media and news sources may shift as sources of news splinter and become more regionally "localized."
  - Circulation rates for print media have fallen in the developed world over the last several years, but have actually increased 13 percent in Asia and 4.8 percent in Africa between 2005 and 2010. At the same time, the number of newspaper titles worldwide has actually increased 1.7 percent since 2008, with the increase in new titles being greatest in Asia (at 2.7 percent). Asia claims a total of 67 of the world's 100 largest daily papers. Despite

having far fewer literate people, the sale of daily papers in India actually exceeded those in China by one million, and was more than double the sales of daily papers in Japan and the United States.[23]

— When CNN launched in 1980, it was the only 24-hour news station in the world. Three decades later, news-on-demand services—from specialized cable television channels to online sites—have largely replaced large broadcast media and restructured how the public is informed about world events, both domestically and internationally. As of 2007, Al Jazeera claims 40-50 million viewers worldwide, a statistic comparable to that of the BBC.[24]

— Hollywood no longer dominates the global market for idealized media images. The world's largest film industry today is actually India's Bollywood, and exports of Bollywood DVDs and Bhangara music CDs are popular in other media markets, such as Africa.[25] With an average release of 50 full-length feature films per week, Nigeria's "Nollywood" is the world's second most productive film industry.[26] Like Bollywood films, Nollywood movies feature love stories, arranged marriages, family dramas, travails of migrating to urban areas—themes that resonate with audiences themselves experiencing the challenges of modernity more than do Hollywood swashbucklers. The medium is also widely used for evangelizing by Christian churches in Africa.[27]

- Infrastructure/Transportation Networks: Improvements in transportation have increased our connection to foreign cultures and societies in the physical domain as much as in the virtual one. Nevertheless, the contrast between growth in virtual connectivity and growth in transportation capabilities is in places quite stark.
  - Whether through use of automobiles, buses, railways, or aircraft, people around the world have increased their travel demand from an average of 1,400 kilometers (km) to 5,500 km over the past 5 decades. The biggest increase occurred in the developing world, where the combined growth in per capita GDP and population was the largest.[28]
  - Nevertheless, there is still a significant mobility gap between developing and industrialized regions. In 2000, residents in North America, the Pacific (Japan, Australia, and New Zealand), and Western Europe traveled five times as much as people in the developing world. Residents of North America, the region with the highest level of mobility, traveled 25,600 km per year, while people in sub-Saharan Africa (not including South Africa) traveled only 1,700 km per year.[29] Between 1990 and 2000, the percent of paved roads in Africa may actually have declined.[30]
  - There have also been some noteworthy shifts in hubs for international travel. In 2009, China became the first non-U.S. or United Kingdom (UK) based airport in a decade to

be one of the top three busiest airports in the world.[31] In 2010, China's Beijing Capital Airport became the second busiest airport in the world, second only to the Atlanta Hartsfield-Jackson airport.

In sum, the above trends suggest that, in the future, we will increasingly be connected to international actors, if unevenly. English will be less commonly spoken than other languages, and more sources of news, information, and entertainment with a local and global reach will not be in English or originate in the United States. In the next decades, the largest number of immigrants to the digital domain opened up by information and communication technologies are likely to come from emerging economies and developing countries. Combined, these trends raise several questions about the relative strength of the U.S. "signal" in the global info-communication sphere.

FUTURE POLITICS OF CULTURE AND IDENTITY

Given these trends in the use of language, media, and information and communication technologies, what are some potential implications for culture and identity issues in the 21st century and their possible impact on U.S. national security? The following are some propositions about future politics of culture and identity for further exploration.

No One Country or Region Will Be Likely to Monopolize Global "Influence" in the 21st Century, Including Us.

While the trends outlined above suggest that the culture and values of emerging centers of influence will spread beyond their borders, the degree of that influence may not be comparable to the kind of experience the United States had in the 20th century. With so many more sources of information, a segmented consumer base, and the proliferation of non-English sources of news, the market for global ideas will simply be more saturated, making it difficult for any one source of images and ideas to dominate.

Fundamentally, a more globalized media marketplace of ideas may challenge the influence and appeal of the regionally based identities that dominated the 20th century. Many pan-regional identities are vestiges from post-colonial nationalist movements and have already lost their persuasive appeal among younger generations. Pan-Africanism and Arab Nationalism, for example, already seem less compelling to contemporary youth as older generations of leaders have become discredited by corruption and poor governance. In other areas, such pan-regional identities never held much sway. The Asia-Pacific region, for example, has historically remained remarkably diverse. Hinduism, Buddhism, Confucianism, and Islam have all found a home here, and the area remains one of the most ethno-linguistically heterogeneous on the planet. Together, Papua New Guinea and Indonesia, for example, account for more than 22 percent of the world's oral languages, the majority of which are not spoken in any other country.[32] Over the last 10 years, the number of

active or recently resolved insurgencies and civil wars in the Asia-Pacific region has been more than double the number that have taken place across the Middle East in the same time period. Given such a diverse backdrop, it is not clear that any rising Asian Pacific power would find ideological integration on behalf of shared regional identities to be an easy task.

At the same time, population influxes to developed Western nations will likely impact the stability of existing regional and national identities. Demographic shifts, the connection of diasporic communities through information technology, and immigration patterns could all trouble 20th-century nationalist ideas and images. According to the Pew Research Center, by 2050, one in five Americans (19 percent) will be an immigrant, compared with one in eight (12 percent) in 2005. Of the increase in the total U.S. population (from 296 million in 2005 to 438 million in 2050), 82 percent will be due to immigrants arriving between 2005 and 2050 and to their U.S.-born descendants.[33] Combined with the decreasing prominence of the English language in business and commerce transactions, and the increasing domestic visibility of images and ideas from distant places, this influx of migrants could heighten debates about national languages and provoke an identity crisis in the United States, as fears grow about the increasing influence of other countries over segments of the U.S. population.

Ultimately, unstable domestic identities, combined with an erosion of the power of older regionally based identities, are likely to work against nationally based models of global influence in the 21st century, in the process eroding any one country's monopoly on global influence.

The Prospects for Master Narratives to Unify International Action May Be More Limited.

Throughout the modern era, certain cultural ideals have provided grand totalizing schema and narratives to organize human activity, (e.g., "all men are created equal," "human reason will triumph over superstition and ignorance," etc). Given the vast array of information sources available today and the increasing regional specificity of the sources of news and media, the ideological threat of the future may less likely be a reigning alternate ideology to our own (for example, communism vs. capitalism), but rather the breaking apart of any universalizing narratives at all. As the 21st century unfolds, we may find that the proliferation of images, ideas, and communication networks limits the power and persuasive appeal of such grand totalizing "-isms" as such. The ability to mobilize international coalitions to action may be significantly weakened as a result. The clash between science and religion is one example of the kind of discursive confusion that could become more common in the future.

In the 20th century, science and technology were not just tools that could be used to develop nations; they were also useful cultural narratives that could help unite the nation-state and act as a universalizing language in the conduct of international affairs. Many of the international security challenges that concern U.S. policymakers today—for example, climate change, space or cyber security—not only demand high levels of international cooperation, but depend on high levels of scientific and technical (S&T) expertise of one kind or another. While S&T-heavy issues such as these could continue to be a source of inter-

national cooperation, they may also become sources of potential strain on international relations in cases where education levels are uneven, cultures of policymaking markedly differ, or ideological bases may exist for rejecting secular, science based-arguments.

While shared scientific facts are probably still the way foreign policymakers in the United States prefer to legitimize political, military, or diplomatic interventions, for many around the world religion is an increasingly important basis for such ethical decisions. As Scott M. Thomas points out in an article in *Foreign Affairs*, the world is simply becoming more religious: the number of evangelicals worldwide is on the rise, and more people are reporting that religion plays an important part in their lives.[34] Additionally, religious people around the world have more children. Thomas observes that as these trends continue, religion will increasingly shape the way that millions of people around the world interpret democracy, human rights, and economic development. Furthermore, information and communication technologies make it even more possible for religiously identified groups to connect to one another globally, for the first time disconnecting religious belief from geography. In this sense, religious discourse could also become a universalizing language in international relations, comparable to the role that science and technology have played for Western policymakers throughout the 20th century. While U.S. policymakers are well trained to deploy scientific and technical expertise in their international relations, today they are less likely to know how to interpret or respond to the strategic impact of religious or spiritual belief in diplomatic action. This could put current and future U.S. foreign policymakers and U.S. foreign influence at a distinct disadvantage as future popula-

tions around the world become increasingly comfortable operating through religious idioms. Ultimately, sustained cooperation may become more challenging as the need to translate policy into multiple registers in order to communicate with divergent domestic and international audiences becomes exponentially more complicated.

ICT-Inundated Society Will Drastically Change the Way Humans Interact, in Particular Regarding Issues of Privacy, Trust, and Transparency.

Phenomena like Wikileaks may already be demonstrating the limits of the forms of governance developed in the mid-20th century for managing 21st-century leaderless, networked social action. As the meanings of trust and privacy continue to be transformed in the information society, existing legal frameworks and bureaucracies for managing secrecy and security may be greatly strained.

Increasing bandwidth seems to be putting more and more information instantly at our finger tips, allowing ever more kinds of social interactions to go electronic and, in the process, irrevocably changing core social institutions. Email and texting have already imported improvisations into ordinary language use, in the process creating "cyber creoles" that "non-native" speakers (that is, older generations) have difficulty understanding. Many believe that the Internet and eBooks have forever imperiled the publishing industry and that libraries, textbooks, and even postal mail will soon be relics of a bygone era. Domestic law enforcement agencies and online dating sites use similar technologies to match us to targets of interest, taking the guesswork and labor out of building community

relations or intimate relationships. The social and cultural impacts of the digital transformation of these basic social institutions are likely to be significant. As more and more aspects of our lives are conducted "virtually," traditional lines between truth and falsity, for example, already seem to be blurring. Some researchers hypothesize that because people use screen names, postings are anonymous, and there are no physical cues to keep behavior in check. The also hypothesize that computer-mediated communication is particularly disinhibiting and allows "people to say just about anything they feel like saying."[35] Online "avatars" may be idealized versions of ourselves, but for many "digital natives" (those who have been raised on the Internet since the late 1990s), the distinction appears to be largely irrelevant.[36] The orientations of younger generations to digital media could pose a significant challenge to current social conventions about privacy and truth telling, and potentially to governance institutions and security classification processes based on those conventions.

If the norms and cyber habits of younger generations push the boundaries of 20th-century security institutions, the attitudes toward and online behaviors of those from different countries may be an even bigger challenge. If, as several of the statistics cited above suggest, the vast majority of newcomers to the global digital community in the next 2 decades will come from emerging economies and developing countries, the challenges of cross-cultural engagement may come home to us in some rather direct and intimate ways. Ethnographers have long noted the ways that different groups of people adopt distinct attitudes toward truth telling, the maintenance of privacy, and even expectations of transparency. We can reasonably

anticipate that those who are coming to the digital community from political cultures very different from our own will similarly adopt distinct orientations to the use, management, and governance of information. One major source of "419" advance-fee scam emails, for example, is Nigeria, where the ubiquity of corruption is unparalleled and where rumor serves as an equally credible source of information as does journalism.[37] The Internet thus enables localized norms and practices to reach out and touch millions of globally distributed in-boxes daily. This kind of information piracy, identity theft, and fraud can slow down other forms of global socioeconomic exchange, rendering a range of systems effectively inoperable. If a greater share of Internet users and a greater percent of the global Internet market shifts to the Asia-Pacific region, and to China in particular, the social conventions that govern global Internet behavior today could slowly orient toward an entirely different set of political cultural norms about knowledge, trust, and privacy. We do not yet understand what the impact would be of the importation of these different cultural norms on the operation of the Internet as a whole and would need many more ethnographies of these sociotechnical interactions to even begin to get a clear sense of the potential implications of a cyber environment that is dominated by non-Western users.[38]

The DoD has already begun to invest human capital and infrastructure into cyber defense and security, but it is not just deliberately nefarious action we should be concerned with. Given the role that information and communication technologies already play in our daily lives, it would behoove policymakers to also begin proactively considering the costs and benefits for building governance institutions for cyber space, as

well as weighing our technopolitical options for "socializing" newcomers into the digital norms that best support our national interests.

CONCLUSION: POTENTIAL IMPLICATIONS FOR SECURITY AND FOR DEFENSE

The above analysis of cultural and identity trends suggest several issues that national security and Defense policymakers should take note of:

- In the next several decades, the ability of the United States to push back against other centers of influence may be comparatively reduced. For the first time, America's notorious unilingualism and cultural chauvinism could become a real strategic liability, not just a tactical or operational challenge.
- The world is likely to be more ideologically fragmented than at any time during the 20th century. This will make it comparatively more difficult to use common unifying narratives to mobilize international actors to action, since such ideas will have to be simultaneously translated in near-real time into multiple languages and registers in order to assuage concerns of divergent local audiences, let alone achieve consensus among foreign leaders.
- The way that knowledge production is organized, managed, and compartmentalized within the intelligence community and security sectors today will prove dangerously outdated for the way that information will be created, circulated, and reproduced around the world in the future. As younger generations who have been born and raised in the information society enter military or government service, the U.S. Gov-

ernment's means of managing secrecy, largely developed in the mid-20th century, may be outpaced by the developing norms and practices of information sharing more common in broader society. At the same time, current assumptions about the quality and use of public information is likely to be challenged by the arrival to the information sphere of more and more non-Western users with very different expectations about knowledge and secrecy than our own.

- Finally, it is not clear that anything in the "strategic communication" or "strategic engagement" toolkit will be up to the task of maneuvering in the complex, multi-directional info-communication domain of the 21st century. The organizational structure, as well as the Tactics, Techniques, and Procedures of psychological operations (PSYOP)/military information support operations (MISO) are long past outdated for the kind of multi-level influence we will need to wield in an information-saturated 21st century. Further, the lack of integration and synchronization between a range of U.S. Government communication efforts will continue to be a major stumbling block. Perhaps most crippling, however, will be the antique, top-down knowledge production paradigms that in still too many places structure our national security institutions. The combined impact may render the life world of national security bureaucracies (and, by extension, of the governments they represent) increasingly alienated from the worldviews of the populations whom they are supposed to be serving and communicating with.

This monograph has focused on sketching out future trends and has been light on articulating solutions for policymakers about how to respond to these challenges. I will conclude by pointing to a few broad steps that could be taken now to prepare us better for some of the possible outcomes discussed herein. Reforming government structures and ruthlessly flattening the way our bureaucracies work would, at a minimum, help those institutions keep pace with the information and communication norms of the private sector and wider general public. Recruiting younger generations, people with foreign language proficiency, and more first- and second-generation Americans into the security sector work force would proactively use America's diversity to our advantage. Perhaps one of the most important things we could do, however, would be to deliberately and more explicitly address cultural change and identity formation in our strategic intelligence assessments instead of treating these issues as merely tactical or operational problems. Embedding this kind of strategic appreciation of cultural change into our foreign policy calculus would better posture policymakers to respond as these shifts are unfolding—something that may be ever more important given the impact that the beliefs, values, and cultures of foreign societies may increasingly have on our own national security in the information-dominated 21st century.

ENDNOTES

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> The evolution of the Internet in the past 40 years has underscored the notion that it is in the network's nature to evolve organically and configure freely as opposed to being determined by strict, static designs. This will remain a powerful assertion going forward, leading governments to focus their efforts on preventative measures affecting the use of the Internet in their sovereign territories and possibly producing disparities not unlike those observed in financial regulation.

Ibid., p. 6.

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