

Introduction and Conceptual Framework

士 Shi Scholars

 Nong Farmers
 Gong Artisans
 Shang Merchants

What makes a successful manager? Chinese tradition divides human beings into four classes, each with its own unique qualities: the *shi* (scholars) are learned and contemplate vision and ethics, the *Nong* (farmers) work the land and can provide for basic human needs, the *gong* (artisans) are creative and strive for beauty and excellence, and the *Shang* (merchants) have strong ambition and a drive to succeed and to accumulate wealth. According to Chinese ancient wisdom, it is only when one can combine the qualities of all four classes—the vision and ethics of the scholars, the appreciation and respect for basic human needs of the farmers, the creativity and drive for excellence of the artisans, and the merchants' ambition to make a profit—that one can become a successful manager.

When I interviewed him for this book, Mr. Kyung-Young Park, the chief vision officer (CVO) of Harex,¹ relayed this wisdom, which had been imparted to him by the honorary chairperson of his company, Mr. Seo. After a long discussion on diversity management and the outsider's misconception of the homogeneity of both Korean and Chinese societies ("there are many differences among us that foreigners do not see—regional, for example"), he concluded that managers could learn a great deal about managing diversity from that Chinese teaching.

Indeed, effective diversity management should encompass these four principles: (a) like scholars, managers must adopt an ethical learned approach to diversity, always aiming to "do the right thing"; (b) like farmers, they must respect their employees' unique characteristics; and (c) like artisans, they must introduce creative solutions as they strive for excellence in diversity management. These qualities, combined with the last principle—(d) ambition to utilize diversity to promote business and societal goals for profitability and social good—lay the groundwork for sound management. These interactive qualities—vision, ethics, respect, creativity, business goal orientation, and striving for excellence—are, in essence, the heart and soul of this book.

The Challenge of Managing Diversity in a Global Context

Successful management of today's increasingly diverse workforce is among the most important global challenges faced by societal leaders, corporate executives, human resource managers, and management consultants. Workforce diversity is not a transient phenomenon; it is today's reality, and it is here to stay. Homogeneous societies have become heterogeneous, and this trend is irreversible. The problems of managing today's diverse workforce, however, do not stem from the heterogeneity of the workforce itself but from the unfortunate inability of corporate managers to fully comprehend its dynamics, divest themselves of their personal prejudicial attitudes, and creatively unleash the potential embedded in a multicultural workforce.

The global economy moves diversity to the top of the agenda. Immigration; worker migration (guest workers); and gender, religious, and ethnic differences continue to dramatically change the composition of the workforce. There is a growing demand for equal rights for these workers and for other groups like older workers, workers with disabilities or non average body weight, people with diverse gender identity and sexual orientation, and workers with nontraditional and nonbinary gender expression. Even without globalization, population projections suggest that the trend to a diverse workforce will continue to be amplified in the coming decades. For example, due to consistently low birth rates and increased longevity, virtually all the more-developed countries will need even larger waves of immigrants just to sustain their current ratio of workers to retirees. At the same time, developing countries are experiencing an unprecedented growth in the numbers of young people. The combination of push-and-pull factors is moving all countries toward the same outcome: a more diverse workforce (United Nations, 2019).

Most large corporations in today's global economy are international or multinational, and even those that do not rely on vendors to sell to customers located outside their national boundaries. For example, Virgin Group, headquartered in the United Kingdom, which provides services in sectors including travel and leisure, health and wellness, music and entertainment, telecom and media, financial services, and space, has main offices in Australia, Singapore, South America, South Africa, UAE/Saudi Arabia, Indonesia/Thailand, Russia, Canada, and the United States.

With total revenues exceeding £16.6 billion (or \$23.5 billion), Virgin employs more than 71,000 people in 35 countries around the world (Hoffower & Brandt, 2020; Virgin Group, 2021).

In the context of the globalized economy, most large companies fall in the category of multinational companies (MNC). The literature on international management includes several typologies of MNC, which are useful for understanding, explaining, and conducting empirical studies about the functioning of—and the interplay between—multinational corporations, the countries in which they do business, and the challenges of managing in a global context (Bartlett & Ghoshal, 1998, 2017). The specific strategies employed by different MNCs to handle the global-local tension are often the determinant of the extent to which the company makes national differences a virtue rather than a hindrance (Edwards, 2010).

The seminal typology offered by Bartlett and Ghoshal (1998, 2017; Bartlett, Ghoshal, & Beamish, 2007) is helpful as a general framework for understanding unique corporate cultures relevant to global workforce diversity. The first is *international corporations* with headquarters in one country and operations in one or more other countries. Their strategy is based primarily on transferring and adapting the parent company's knowledge or expertise to foreign markets while retaining considerable influence and control. This category of companies is characterized by an organizational culture primarily influenced by the home country, particularly regarding human resource management.

The second category is *multinational corporations*, in which the central corporate office still has the dominant decision-making power, but each national or regional operation has some autonomy in business decisions. These companies develop strategic capabilities that allow them to be overly sensitive and responsive to differences in national environments around the world. The company's culture is less unified and rigid, compared with those of international companies, and less dominated by one national culture.

The third form is *global companies* with headquarters that may be in a specific geographic region but with a team composed of managers across the globe jointly making major business decisions. These companies are driven by their need for global efficiency and typically treat the world market as an integrated whole. The corporate culture in this type of company is not dominated by any one national culture.

In addition to strategic alliances and a wide-ranging business span, companies must be able to use the diversity of their human resources to become truly global. This means that they maximize human talents regardless of where their employees are located or their national origin. Soliciting input from employees from varied backgrounds, with different educations and life experiences, can positively impact a company's external outputs (products and customer service) and internal processes (company culture, management policies) (Patrick & Kumar, 2012). As a first step to using diversity, companies must learn the human side of the global company. The training, orientation, and cultural understanding needed for the management and employees of any company—national, international, multinational, or global—include the deep understanding of individuals who live in other national and cultural contexts and the ability to work within a global team framework.

Tensions Posed by Global Workforce Trends

As a result of unbalanced fertility rates in different regions of the world, global demographic trends are projected to create unprecedented workforce tensions. For example, the United Nations expects that the working-age population of the more-developed countries (as currently defined) will barely grow due to low fertility rates. In countries such as Germany, Italy, Japan, the Republic of Korea, or the Russian Federation, the United Nations expects fewer people ages 15 to 64, based on population projections for 2060 (United Nations, 2019). This trend is part of what demographers have called the "Second Demographic Transition,"—due to increased educational attainment and labor force participation, women have children at older ages than before and have fewer children than would be required to replace a country's population (Lestaeghe, 2014). Once countries have fallen below the replacement level, they tend not to return to it (Pattaro et al., 2020). Even if fertility rates increase in these countries, the current deficit in young people cannot be replaced, except by immigration. To maintain their current working-age population levels to the year 2060, these countries will need a few hundred thousand immigrants every year. Historically, these relatively homogeneous societies have been resistant to immigration, yet their current practices, induced by workforce decline, indicate a tacit acceptance of it. Other developed countries, such as the United States, will have more people in those ages but not enough to keep up with the pace of rapid population growth throughout the developing world as today's "youth explosion" in those regions enters the working ages.

Given these contrasting growth rates, today's more-developed countries can expect their share of the world's working-age population to continue to drop from in the first half of the century (see Chapter 4 of this book). In contrast, working-age populations will continue to swell in developing countries as the substantial youth bulges produced by high fertility rates in earlier decades reach working-age. Developing countries have seen a spurt in the size of young-adult populations in recent decades reflecting the widespread adoption of the public health knowledge and practices of the mid–20th century that have rapidly reduced mortality, especially for infants and youth. Although many migrants are fleeing upheavals and even violence in their native lands, most are seeking economic opportunities. With or without the transformation of economies in an increasingly global context, it would be difficult for these countries to accommodate such a surge of young adults into their labor force.

In most countries, people have become accustomed to having children survive, and fertility rates have declined. So, over the next two decades, this bulge should be absorbed virtually everywhere except in Africa, which contains more than one in four of the world's children (United Nations, 2019). Consequently, Africa may be the last frontier of "excess" labor available for low-wage competition in its home countries or to fill jobs in developed countries that have fewer working-age people (see Chapter 4 of this book).

Women's increased presence in the formal labor force has affected—and will continue to affect—not only the workplace but also family and community life. Increasing numbers and shares of women in the workplace may be the most vital component of diversity at the national level in most of the world. In particular, the gap between women's and men's rates has been narrowing in most regions (International

Labour Organization [ILO], 2020). Women's share in the workforce grew significantly in Latin America, Western Europe, and other developed regions during the past several decades. Historically, only a small proportion of women could afford to remain outside the labor force, no matter what their family responsibilities, but they tended to work as unpaid family labor, particularly in agriculture or the informal economy. Even in countries where women have traditionally been discouraged from working outside the home, they came to make up an increasing share of the measured labor force. As a result, women's economic activity rates are increasingly similar around the world, except in regions where society constrains women's roles outside the home. Women's increased presence is particularly evident in economies where higher educational attainments are allied with higher earnings prospects in the formal economy.

A particularly relevant aspect of current workplace trends is that women increasingly migrate autonomously as workers, and women migrants equal or outnumber men in some parts of the world. They are even becoming common in Asia, largely because of more women workers migrating on their own. Rapid economic growth and structural changes in the labor market that began in the 1980s and continued into the 21st century have motivated women to independently migrate. Women migrants' earnings now represent an important source of income for their families at home. Contract labor migration is the most rapidly increasing type of international migration in Asia, and women migrants are concentrated in such female-dominated occupations as domestic helpers, hotel and restaurant employees, and assembly-line workers.

The global economic trends that generate increased or decreased demands for workers in different areas at various times create tremendous opportunities as well as hardships for work organizations, individuals, and families. For example, the technology industry's boom in the 1990s created increased demand for skilled workers and developed countries' generally strong economies during those years created a multinational, multicultural workforce that included many foreigners. Conversely, the global economy's downturn in the early 21st century, particularly the 2008 global fiscal crisis, has displaced many immigrants from their jobs and placed them in limbo. Unable to extend their legal stay in their host countries because their work visas were often linked to their original employer-sponsors, workers were forced to return to their countries of origin, where there were no jobs for them.

Global legislative trends banning discrimination against women, immigrants, minorities, and other diverse groups in the labor force have required employers in most democratic and quite a few non-democratic countries to institute policies that ensure fair treatment of all employees. Some countries have introduced public policies stemming from the ideology of compensating population groups that have been discriminated against in the past. Employers are required to provide designated groups of applicants, such as racial and ethnic minorities and women, with a competitive advantage by actively recruiting them for open positions.

Disregarding these economic, demographic, and legislative trends can be devastating to companies, their employees, and the communities surrounding them. Companies unable or unwilling to change their policies and practices may suffer dire consequences. They may experience intergroup conflicts among their employees; they may limit their access to the pool of potentially talented employees; they may miss opportunities for creating alliances with business organizations; and they may

be vulnerable to expensive lawsuits or government sanctions resulting in severe damage to their earnings, their public image, and their access to investment.

All signs point to increasing heterogeneity in the workforce, even as countries throughout the world continue to struggle with hostile intergroup relations, prejudice, discrimination, and even violence. Gender, ethnicity, age, language, social class, ability, sexual orientation, sexual orientation, religion, or other distinctions may define group membership, as each culture determines the context of social exchange and reward allocations. In Europe, for example, immigrants from North Africa and the former Soviet Union experienced prejudice and discrimination in obtaining jobs. Worldwide, these group divisions contribute to exclusion of underprivileged groups such as women, members of ethnic, religious, racial, and sexual minority groups; older workers; and people with different abilities from positions of power in the workplace and create barriers to job opportunities and promotion. They also stifle the economic growth that could come from these groups of workers and directly affect long-term corporate earnings.

As a result of the increasing heterogeneity in the workforce, countries throughout the world are struggling with a powder keg of hostile intergroup relations in the workplace. The impact of prejudice and discrimination can be more than just detrimental to businesses—it can even result in violence; but, effective management of workforce diversity can create tremendous rewards for businesses and for society at large.

Diversity and Exclusion: A Critical Workforce Problem

One of the most significant problems facing today's diverse workforce is exclusion both its overt practice, as a matter of formal or informal policy, and the perception by employees that they are not regarded as an integral part of the organization. Though diversity groupings vary from one culture or country to the next, the common factor that seems to transcend national boundaries is the experience of social exclusion, particularly in the workplace. Individuals and groups are implicitly or explicitly excluded from job opportunities, information networks, team membership, human resource investments, and the decision-making process because of their actual or employerperceived membership in an underrepresented or disfavored identity group. Applicants and employees alike may be subject to stereotype threats. Inclusion in organizational information networks and in decision-making processes has been linked to better job opportunities and career advancement in work organizations (see Chapters 13, 14, 15). Employees' experience of exclusion, therefore, may play a critical role in explaining the connection between the lack of opportunities for members of diverse groups and their discontent with their roles as employees in organizations. Work organizations, therefore, need to remove barriers to full participation of traditionally excluded groups such as racial, ethnic, and religious minorities; women; people with disabilities; those who are targets of weight bias "under-" or "over"-weight; and members of gender and sexual orientation minorities. They need to overcome social and economic tensions between majority and minority identity groups to become inclusive organizations. One way to combat exclusion, and move beyond merely "managing diversity," is for the work organization to create an inclusive climate, resting on a foundation of fairly implemented employment practices and policies that eliminate bias, thereby flattening out perceived status levels among groups. The implications are far-reaching, as work organizations represent opportunities to bridge understanding and tolerance among people from around the globe.

Recent unprecedented global demographic trends have created ethnically diverse work environments that are often the backdrop for hostile relations, discrimination, and even hate crimes. If managed well, however, these differences could lead to increased harmony among the groups involved. In addition to race, gender, and social class that cut across diverse cultures as determinants of exclusion, other characteristics like ethnicity, language, or religion may define group membership, as each culture determines the context of social exchange and reward allocations. Worldwide, these group divisions contribute to exclusion of group members from positions of power in the workplace and create barriers to job opportunities and promotion.

On a global scale, a gradual shift has been taking place in research and theory development related to diversity, social identity, and multiculturalism. More crossnational collaborations have been taking place, creating a conversion of ideas, concepts, and theoretical formulations from different regions and national contexts around the world. Prior to this shift, the research and scholarly work on individual and intergroup differences in the workplace has largely been disjointed. Although there were similarities in areas of research (e.g., gender and intergroup relationships), they were often examined under different frameworks and using different terminology. There is a growing awareness that the diversity research field itself must become more diverse with respect to elements such as authors, units of analysis (individuals, groups, organizations, societies), cultural contexts, and conceptual frameworks.

Research into workforce diversity hailing from different regions of the world often uses different terminology and may not even use the word diversity. For example, European scholars and those from regions other than North America who publish in this area often identify their work under titles such as "gender studies," "demography of the workforce," "labor migration," and "guest workers." The difference has been more than a semantic preference and seems to have stemmed from different perspectives and worldviews. North American researchers have focused on the diversity of the workforce (e.g., gender, racial, and ethnic differences), which emanated from the region's historical role in absorbing immigrants. Their studies focus on the discrepancies between the ideals and realities of the traditional equal employment opportunities (EEO), anti-discrimination, and fairness paradigms in the dynamic and fast-changing American society. European research has centered on multiculturalism, immigration, worker migration, and gender work roles and the inherent social and emotional difficulties of integrating immigrants and women into each country's relatively stable social fabric and gender roles. Their studies have focused on the social and emotional difficulties inherent in integrating immigrants and women into each country's relatively stable social fabric and gender roles. The increased movement of individuals and groups across national boundaries has triggered debates among European countries as well as in other regions of the world regarding the multicultural nature of their societies. Beyond these two regions—North America and

Europe— there has been growing interest among scholars and public policy makers in developing original frameworks to address issues of exclusion that would fit their own societies' unique challenges. There is clearly a need to bridge this gap and develop a comprehensive knowledge base.

Within the organizational context, I have conceptualized the inclusion construct as a continuum of the degree to which individuals feel a part of critical organizational processes, both formal and informal, such as access to information; the ability to participate in and influence the decision-making process; and connectedness to coworkers, the organization and society (Mor Barak, 2000, 2011, 2015, 2017; Mor Barak & Cherin, 1998; Mor Barak et al., 2006; Mor Barak et al., 2021). The importance of the inclusion experience has roots in basic human needs, and thus the employee's experience is the measure of a work organization's success at becoming a truly global company. Because people have always depended on one another for their livelihood and needed to work together to acquire food, shelter, and clothing, social inclusion has had an important survival function through the ages and across cultures (See Chapter 7).

Research on organizational demography indicates that being in the minority has significant effects on individuals' affective experiences in the workplace, including feelings of isolation, devaluation, and lack of personal efficacy in team and in one-on-one relationships (e.g., Barlow et al., 2010; Settles et al., 2021). In their seminal work, Milliken and Martins (1996) indicated a strong and consistent relationship between diversity in gender, ethnicity, and age and exclusion from important workplace interactions. One of the most frequently reported problems faced by women and minorities in organizational settings is their limited access to, or exclusion from, informal interaction networks. These networks allocate a variety of instrumental resources that are critical for job effectiveness and career advancement, as well as expressive benefits such as social support and friendship (Ely & Thomas, 2001; Haggins, 2020; Ibarra, 1993).

The Inclusive Workplace Model

This book presents a comprehensive model for diversity management using the inclusive workplace model (Mor Barak, 2000, 2005, 2017). Work organizations need to expand their notion of diversity to include, in addition to the organization itself, the larger systems that constitute its environment. Viewed from an ecological and systems perspective, the notion of organizational inclusion is used as a focal point for understanding and managing workforce diversity. The concept of the inclusive workplace presented here and elaborated on in later chapters refers to a work organization that accepts and uses the diversity of its own workforce—while also being active in the community; in state and federal programs that support immigrants, women, the working poor, and other disadvantaged groups; that collaborates across cultural and national boundaries; and that protects the environment and works toward environmental justice (Mor Barak, 2000, 2017, 2019).

The inclusive workplace is defined as one that

- I. values and uses individual and intergroup differences within its workforce;
- II. cooperates with, and contributes to, its surrounding community;

- III. alleviates the needs of disadvantaged groups in its wider environment;
- IV. collaborates with individuals, groups, and organizations across national and cultural boundaries; and
- V. engages in protecting the natural environment and enhancing environmental justice through sustainability initiatives.

Valuing and using individual and intergroup differences within the organization's work-force refers to the organization's relations with its own employees. Whereas an exclusionary workplace is based on the perception that all workers need to conform to pre-established organizational values and norms (determined by its "mainstream"), the inclusive workplace is based on a pluralistic value frame that respects all cultural perspectives represented among its employees. It will strive to constantly modify its values and norms to accommodate its employees.

Cooperating with, and contributing to, the local community refers to the organization's sense of being an integral part of its surrounding community, regardless of whether it derives profits from local institutions and stakeholders. An exclusionary workplace misses the connection between profits and its community because it focuses solely on its responsibility to its financial stakeholders. An inclusive workplace, by contrast, maintains a dual focus, simultaneously intrinsic and extrinsic, that comes from acknowledging its responsibility to the wider community.

Alleviating the needs of disadvantaged groups in the organization's wider environment refers to the values that drive organizational policies regarding the disenfranchised (e.g., the working poor and former welfare recipients). The exclusionary workplace views these groups as disposable labor, but the inclusive workplace perceives them as a potentially stable and upwardly mobile labor force.

Collaborating with individuals, groups, and organizations across national and cultural boundaries refers to the organization's positions with respect to international collaborations. The exclusionary workplace that operates from a framework of one culture is competition-based and is focused on narrowly defined national interests. The inclusive workplace sees value in collaborating across national borders, in being pluralistic, and in identifying global mutual interests.

Finally, engaging in protecting the natural environment and enhancing environmental justice through sustainability initiatives refers to the organization's policies and actions in abstaining from damaging the natural environment, instituting sustainability policies, and promoting environmental justice. An exclusionary workplace emphasizes profits above all and could engage in actions that damage the environment if they can reduce costs. The inclusive workplace considers protecting the environment as a core value, refrains from damaging the environment, and engages employees in sustainability efforts.

There is accumulating research evidence that such corporate practices constitute good business and are good for society at large. The benefits include (a) cost savings due to lower turnover of employees, less absenteeism, and improved productivity; (b) winning the competition for talent by being more attractive to women, underrepresented groups, and diverse workforce members; (c) driving business growth by leveraging the many facets of diversity, such as marketing more effectively to minority

communities or to senior citizens; (d) improved corporate image, with a positive impact on the company's stock valuation; and (e) reaping the benefits of an increasingly global marketplace by employing workers from different nationalities in or outside their native countries (see the chapters related to the inclusive workplace model for specific research examples).

Conceptual Framework and Organization of the Book

For too long, the question posed by management in organizations has been "Is diversity good for business?" The conceptual model presented in this book suggests reframing the question to "How can diversity work for organizations and for their employees and their communities?" My answer is a focus on practices of inclusion. Successful and seamless inclusion is the desired outcome of good diversity management. Achieving this goal, however, is not an undertaking for companies and employers alone. It needs to be reinforced through national and international laws and policies, infused into global workforce cultures, top to bottom, via educational efforts to increase tolerance and cross-cultural understanding, and through media attention to intergroup collaborations. This broad perspective guides the conceptual framework for the book (see Figure 1.1).

The book is divided into three parts. Part I presents the macro, or large-systems, perspective on diversity: global demographic trends, legislation, and public policies in different global regions and countries. Part II presents the micro/mezzo—or smaller-systems—perspective on diversity: how diversity is defined in different countries, theories explaining the diversity, interpersonal and cultural aspects, and communication in the workplace. Part III presents solutions or practical intervention approaches: diversity paradigms, the inclusive workplace model, and case studies demonstrating how corporations in various parts of the world can apply the model.

FIGURE 1.1		Concep	tual	Fram	eworl	c and (Orga	nizat	ion o	f the	Book	ł
						· uiiu						٠.

Macro Dimensions	Micro/Mezzo Dimensions	Practice Applications			
Demographics trends	Individual and group aspects of diversity	Diversity management paradigms			
Legislation	Theoretical explanations of intergroup relations	The inclusive workplace model			
Public policy	Culture and communication	Practice applications for the model			
Global economy	Interpersonal cross-cultural relations in the workplace	Cases for discussion			

This book uses an interdisciplinary approach, drawing from different bodies of knowledge to provide the demographic, legislative, policy, and theoretical background for understanding diversity from a global perspective. Applying the previously stated principles, the book also offers practical guidelines that can help managers generate an organizational culture that welcomes and uses the diversity of their workforce and ultimately create an inclusive workplace.

Summary and Conclusion

The focus on diversity in global business today is quite different from civil rights legislation and from affirmative action programs. It is no longer only a matter of righting past wrongs or of trying to achieve equality of opportunity by addressing the underrepresentation of specific groups. Emerging diversity efforts are focused on managing and engaging the organization's heterogeneous workforce in ways that give it a competitive advantage and makes it a good citizen in the local and global society. The gradual expansion of diversity compliance may be viewed as a continuum: EEO legislation means that it is against the law to discriminate; affirmative action programs mean that companies need to take positive steps to ensure equal employment and promotion opportunities; and diversity, equity and inclusion (DEI) programs are proactive and aim to achieve a diverse and heterogeneous workforce that appreciates and embraces employee differences—and contributes to the local as well as a global community.

It is important to state that DEI programs without the foundation of strong legislation and sound proactive public policy may be fleeting. Often-used slogans such as "diversity makes business sense" and "diversity is good business" reflect a potentially superficial acknowledgment of the necessity of diversity management. Although these phrases do suggest a useful and practical direction, their use often precludes consideration of ethical practices and major long-term organizational changes that may not be immediately linked to the bottom line. If left to the business world's interpretation of "what is good for business," this trend could disappear—as others have in the past—when businesses decide that practicing diversity management no longer aligns with their financial goals. Understanding the full range of practical benefits of diversity management is an important motivator for corporations to invest additional resources in employee development concurrent with their business development; but, in addition, the scholarly and public examination of this multifaceted issue must include the important dimensions of morality, ethics, fairness, and respect for human dignity.

Given the growing acceptance of (though not necessarily adherence to) human rights as a value around the globe, promoting fairness and economic advancement for disenfranchised members of society is perceived as the right and ethical thing to do. It also constitutes good business by giving corporations a competitive advantage in recruitment, in customer relations, in marketing to growing minority communities with purchasing power, and in developing a positive corporate image that translates into corporate profits. To alleviate both social and economic tensions in society, and as reflected within the workforce, work organizations must learn not

only to remove barriers but to actively encourage full participation of members of diverse groups in society.

The premise of this book is that work organizations must create and sustain a culture that is accepting of individual differences—and one that encourages greater involvement in community, national, international, and environmental affairs. In other words, they need to become inclusive organizations inside and out.

J.

Note

 Harex is a Korean-based high-tech company that developed, among other things, an innovative gadget called ZOOP, which replaces credit cards, tollbooth operators, and bank debit cards.