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Social Science and World Revolutions

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At the 2014 annual meeting of the American Sociological Association (ASA) I received a Distinguished Career Award from the Political Economy of World-Systems (PEWS) section of the ASA. At the 2015 ASA meeting a session was organized by Jeffrey Kentor in which several colleagues presented comments on aspects of my academic work. Several of those presentations were subsequently turned into documents and are included in this special section of the *Journal of World-Systems Research*. I have been asked to comment upon them and I will also take this opportunity to present a brief overview of my scholarly life

since graduation from high school.

The authors of the comments are all colleagues that study topics related to my work and whom I have known for many years. They are Jennifer Bair and Marion Werner, Albert Bergesen, Peter



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Grimes, Ho-Fung Hung, Andrew Jorgenson, Jeffrey Kentor, John Meyer, Valentine Moghadam, Michael Timberlake and Jonathan Turner.

I have been very fortunate to have lived most of my life during the second half of the 20th century and the first decades of the 21st century, which has been a period of relative peace and security in the world, and to have been a middle-class white citizen of the United States. My life in the academy has also been fortunate. After high school, I majored in journalism at Shasta College in Redding, California and then transferred to the University of California at Berkeley in 1964 where I majored in Psychology. At Berkeley I took Collective Behavior from Herbert Blumer and a Social Psychology course from Edward E. Sampson, and I participated in the Free Speech Movement in 1964. In 1966 I applied to the sociology graduate program at Stanford and was accepted. These were the years of what I came later to understand to have been the World Revolution of 1968. I was an activist in the anti-war movement and was arrested at the Concord Naval Weapons Station in Port Chicago, California for stopping napalm trucks (see Figure 1).

In 1969 I dropped out of the graduate program at Stanford and took a job teaching sociology at Cañada College in Redwood City, California where I burned my draft card in a pumpkin with several of my students. I was not rehired when my contract expired and so I drove my Volkswagen bus to Panama because Che Guevara had said "two, three, many Vietnams." I organized an antiwar demonstration on the Canal Zone and fell afoul of the authorities. I was in way over my head and was lucky to survive the return trip to California. The California Department of Education tried to revoke my community college teaching credential on grounds of moral turpitude, citing my arrest at Port Chicago as evidence. My claim to having a good moral character was entirely based on the fact that I had stopped napalm trucks at Port Chicago. The hearing officer restored my credential.

After returning from Panama I was living in San Francisco and driving a truck for the Salvation Army. Stanford Professor John Meyer somehow got my phone number and he called to encourage me to return to the Stanford graduate program, which I did. I joined a cross-national comparative research project on the expansion of education and economic development in all the countries of the world led by Meyer and Mike Hannan (Meyer and Hannan 1979). My dissertation used this cross-national research design to examine the effects of dependence on foreign investment on national economic growth and inequality. It was inspired by Al Szymanski's Columbia University dissertation research on the same topic.

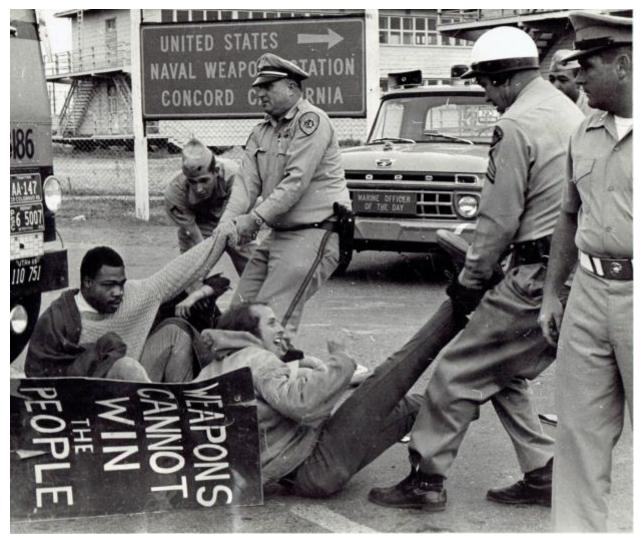


Figure 1. Stopping Napalm Trucks at the Concord Naval Weapons Station. 1967¹

I found that countries that had greater dependence on foreign investment (which later became known as "capital penetration") grew more slowly and had more income inequality than countries with less dependence on foreign investment (Chase-Dunn 1975). I was very fortunate to have John Meyer as my main mentor, and I also am greatly indebted to Morris Zelditch, Bernard Cohen and Joseph Berger who taught me the fundamentals of the comparative method and theory construction which every social scientist should know.² I also formed a lifelong friendship with Al Bergesen, also a graduate student in sociology at Stanford. And I met Immanuel Wallerstein during his stay at the Center for Advanced Studies in Palo Alto. And I became life-long friends with Wally

¹ The marines had to drag us on to the base in order to arrest us. See the painted line I am sitting on.

² Rather than taking sides in the contest between social activists and social scientists I choose to be both, though they are very different activities. I agree with Michael Burowoy's conceptualization of social science as a big tent that contains both public and professional arenas that should respect one another. See "Global Public Social Science"

<u>Goldfrank</u>, a world-system sociologist who invited me to teach a course at the University of California-Santa Cruz in the early 1970s.

In 1975 I moved to Baltimore, Maryland to take a job at Johns Hopkins University. At first I was half time in Sociology and half time at the Center for Metropolitan Research, where a colleague, Roger Stough, introduced me to urban geography. I worked with Ricky Rubinson in Sociology, a fellow graduate of Stanford, to develop a structural version of world-systems analysis that combined our Stanford training in theory and quantitative methods with the ideas coming from the progenitors of world-systems analysis—Immanuel Wallerstein, Samir Amin, Andre Gunder Frank and Giovanni Arrighi.

I also became friends with Marxist Geographer <u>David Harvey</u> and joined his "Reading Capital" seminar. The *American Sociological Review* published an article in which I summarized the findings of my dissertation and I began a long and fruitful collaboration with <u>Volker Bornschier</u> of the University of Zurich. Our book <u>Transnational Corporations and Underdevelopment</u>, was published in 1985. In 1975 Volker and I attended a conference at the <u>Rockefeller Bellagio Center</u> on Lake Como in Italy at the invitation of <u>Neil Smelser</u> (seated in the center in Figure 2) and <u>Harry Makler</u> (seated at the far left). The meeting was organized by the <u>Research Committee on Economy and Society</u> (RC02) of the International Sociological Association. Brazilian Sociologist (and later President of Brazil) <u>Fernando Henrique Cardoso</u> (seated next to Smelser in Figure 2) was in attendance, as was <u>Alberto Martinelli</u> (later to be president of the International Sociological Association). Alberto is seated to the left of <u>Barbara Stallings</u>. <u>Arnaud Sales</u> is seated at the far right, and I am next to him (eyes closed). Volker is standing second from the far right.

In 1979 I received a research grant from the National Science Foundation (NSF) to study the growth of cities in all the countries of the world over the past 200 years in order to examine the development of urban primacy in national city systems. In the later 1970s I also began to regularly attend the conferences of the International Studies Association and the read the works of international relations scholars and to formulate my version of the world-systems perspective in interaction with them (e.g. Chase-Dunn 1981). The work of George Modelski and William R. Thompson was especially important despite our very different sets of intellectual ancestors (Chase-Dunn and Inoue, Forthcoming).



Figure 2. Bellagio RC02 Conference, 1975

In 1985 I finished writing <u>Global Formation</u> and in 1989 it was published by Basil Blackwell. It presented a structural and semi-formalized version of the world-system perspective.³ In Chapter 10 there is a section (p. 214) in which I assert that the search for distinct boundaries between the core and the semiperiphery and the semiperiphery and the periphery is a pointless exercise because the core/periphery hierarchy is really a set of continuous distributions of different kinds of economic and military power. The categorical terms are heuristic ways of pointing to the top, the middle and the bottom of a set of continuous distributions. Despite that extensive literature, beginning with Arrighi and Drangel (1986) that searches for, and often finds, gaps between the "zones" there is no theoretical explanation of what would produce these gaps. The fact that there has been some upward and downward mobility means that regions occasionally will have passed through the gaps. I stick with my contention that the global stratification system is a set of continuous hierarchical dimensions.

While writing *Global Formation* I became interested in the possibility of comparing the modern whole world-system with earlier smaller systems—cross-world-system studies. And the first version of what later became formulated as the semiperipheral development hypothesis occurred to me (Chase-Dunn 1990; see also Chase-Dunn and Hall 1997: Chapter 5).

³ A second edition was published in 1998 by Rowman and Littlefield.

In 1994 Salvatore Babones, Susan Manning, Tom Brown and I founded the *Journal of* World-Systems Research, 4 an open-access electronic journal that eventually became the official journal of the Political Economy of World-Systems (PEWS) section of the American Sociological Association. It was in this period that <u>Tom Hall</u> and I turned toward the comparison of the modern system with earlier regional world-systems. Our book, *Rise and Demise* was published in 1997. It retooled the concepts that had been developed to comprehend the modern system for the larger job of comparing world-systems⁵ and we developed a general iteration model⁶ to explain the spirals of size and complexity that have occurred in world-systems since the Stone Age. In 1991 I got another NSF grant to study small world-systems and in 1998 The Wintu and Their Neighbors: A Very Small World-System in Northern California (with Kelly Mann) was published by the University of Arizona Press. We used ethnographic and archaeological evidence to examine the nature of a small system in which the interacting polities were all village-living hunter-gatherers. My collaboration with Terry Boswell led to the publication of our Spiral of Capitalism and Socialism in 2000 (Lynne Rienner) in which we added a series of "World Revolutions" 7 to our model of the evolution 8 of the modern world-system. Yukio Kawano, Ben Brewer and I did research on waves of trade globalization, which was published in the American Sociological Review in 2000.9 I was also fortunate that Stephen Bunker came to my Department at Johns Hopkins. He and Alejandro Portes and Maria Patricia Fernandez-Kelly were great colleagues during those years. Beverly Silver and Giovanni Arrighi came later from Binghamton and the Hopkins Sociology Department became an important node in the scattered world of world-systems research.

⁴ See "The Rise of JWSR" http://irows.ucr.edu/papers/irows119/irows119.htm

⁵ World-systems are defined as being composed of those human settlements and polities within a region that are importantly interacting with one another (Chase-Dunn and Hall 1997).

⁶ The first version of our iteration model is explained in Chapter 6 of Rise and Demise. An improved version was presented in C. Chase-Dunn et al (2007).

⁷ World revolutions are clusters of social movements and rebellions that break out in different regions of the system during the same time periods. These clusters are designated by symbolic years in which dramatic collective actions occurred that characterize the nature of each cluster: 1789, 1848, 1917, 1954, 1968, 1989 and the current world revolution, which we designate as 20xx because we are not yet sure of its symbolic year. 1917 obviously refers to the October Revolution in Russia, but it also includes the Chinese Nationalist and Mexican revolutions.

⁸ In using the term 'evolution,' we mean long-term patterned change in social structures, especially the development of complex divisions of labor and hierarchy. We do not mean biological evolution, which is a very different topic, and neither do we mean "progress." Whether or not simplicity, complexity, equality or hierarchy are good or bad are value questions that are not necessary to the scientific prehension of social change (Sanderson 1990).

⁹ An appendix with the data used in this article is at http://www.irows.ucr.edu/cd/appendices/asr00/asr00app.htm

In 2000 I moved to the University of California-Riverside (UCR) to found the Institute for Research on World-Systems (IROWS). 10 Andrew Jorgenson and I worked together with other graduate and undergraduate students at UCR to produce more studies of the trajectory of investment globalization and the rise and fall of the Dutch, British and U.S. hegemonies. In 2005 Peter Turchin and I got a National Science Foundation grant to study global state formation. Beginning soon after I arrived in Riverside, the Settlements and Polities (SetPol) Research Working Group has been quantitatively studying the growth of cities and empires since the Bronze Age. 11 Alexis Alvarez, Hiroko Inoue, emeritus Anthropology Professor E. N. (Gene) Anderson and many graduate and undergraduate students at UCR have collaborated on a series of papers produced by this project. Empirically focusing on the population sizes of the largest cities and the territorial sizes of the largest polities in political/military networks and world regions has allowed us to identify those upsweep events in which the scale of socio-economic and political complexity increased greatly (Inoue et al 2012; Inoue et al 2015. We have also been able to ascertain that over half of the urban and polity size upsweeps can be attributed to the actions of non-core (semiperiphery and peripheral) marcher states (Inoue et al 2016), a finding that confirms the necessity of using the world-system as a unit of analysis for explaining sociocultural evolution. 12

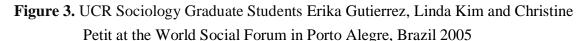
UCR Professor <u>Ellen Reese</u> and I worked with a large group of graduate and undergraduate students on the <u>Transnational Social Movements Research Working Group</u>. We mounted four surveys of attendees at meetings of the World Social Forum in Porto Alegre, Brazil (see Figure 3) and in Nairobi, Kenya, and also at meetings of the U.S. Social Forum in Atlanta and Detroit (Smith and Karides *et al* 2014). Our surveys discovered a rather stable network of overlapping social movements that constitute the structure of the global justice movement (Chase-Dunn and Kaneshiro 2008).

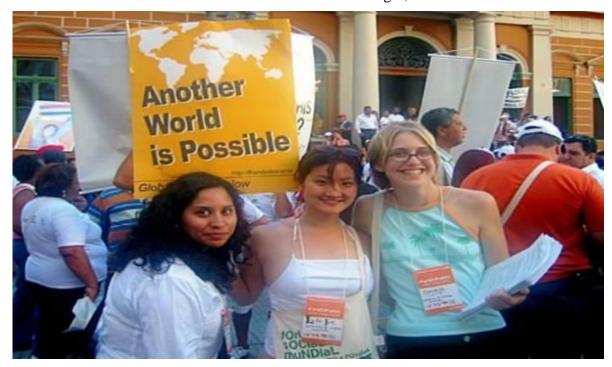
¹⁰ See also irows.ucr.edu/workpaptoc.htm

We adopt settlements and polities as important units of analysis for the quantitative study of world-systems evolution. We use the term "polity" to generally denote a spatially-bounded realm of autonomous authority such as a band, tribe, chiefdom, state or empire (see also Cioffi-Revilla 2001). The term "settlement" includes camps, hamlets, villages, towns and cities. Settlements are spatially bounded for comparative purposes as **the contiguous built-up area**. Our theoretical framework is presented in Chase-Dunn, Inoue, Wilkinson and Anderson (2017). The project web site is at http://irows.ucr.edu/research/citemp/citemp.html. IROWS collaborates with SESHAT: The Global History Data Bank.

¹² A lecture I gave on the evolution of global governance and networks of transnational social movements at the Orfalea Center, University of California-Santa Barbara on, March 6, 2009 is at https://www.youtube.com/watch?v=FxNgOkU6NzY&feature=related

While still in Baltimore I began working on a textbook for an undergraduate sociology course on Social Change.¹³ This book, co-authored with <u>Bruce Lerro</u>, finally appeared in 2014. It was originally published by Paradigm Publishers but is now held by Routledge.¹⁴





While still in Baltimore I began working on a textbook for an undergraduate sociology course on Social Change.¹⁵ This book, co-authored with <u>Bruce Lerro</u>, finally appeared in 2014. It was originally published by Paradigm Publishers but is now held by Routledge.¹⁶ The SetPol project is now working on an improved version of the iteration model of world-systems evolution first

¹³ I wrote the first version of the preface on Wreck Island in 1997, see www.irows.ucr.edu/cd/stories/boat/wreckisland.htm

¹⁴ Social Change: globalization from the Stone Age to the Present. A useful appendix is at http://www.irows.ucr.edu/cd/appendices/socchange/socchangeapp.htm

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¹⁶ <u>Social Change: globalization from the Stone Age to the Present</u>. A useful appendix is at http://www.irows.ucr.edu/cd/appendices/socchange/socchangeapp.htm

presented in Chapter 6 in *Rise and Demise*. We have made great efforts to spatially bound whole world-systems.¹⁷ The results of the SetPol project will be published in a forthcoming monograph.

Commodity Chains and System-Wide Class Relations

Jennifer Bair and Marion Werner's essay (this section) on new geographies of uneven development notes some of the issues on which my theoretical stance differs from other world-system scholars and addresses several issues that have become important since the publication of my Global Formation in 1989. They also read a 1988 essay of mine that cites Trotsky's ideas of uneven and combined development in connection with the importance of semiperipheral societies for the evolution of world-systems. 18 Bair 19 and Werner note that my version of class analysis allows for a continuum from protected to coerced labor with an important sector of protected labor in the core. The theorists of a global stage of capitalism, starting with Ross and Trachte (1990), have argued that globalization was causing the peripheralization of the core as the neoliberal project attacked the welfare state and labor unions and much of the protected sector was downgraded to the precariat. Most of this happened after 1985 which was when I finished writing Global Formation. The growing inequality within the core, as Jenn and Marion and others have noted, has important political consequences and is one of the main forces behind the rise of right-wing populist movements and parties in Europe and the United States. But the fat in the system left over from the New Deal reforms and the boom years after World War II continue to be important factors differentiating the global core from the non-core. The core has become somewhat peripheralized, but the differences from the non-core are still significant. Globalization has not produced a homogenized global class structure in which there is no longer a core/periphery hierarchy. The world is not flat. As Jenn and Marion note, the global class structure and the core/periphery hierarchy have changed, but huge global inequalities remain, and continue to be a significant context for both economic and political developments.

The growth of inequality within the core has produced movements that seem to further sanctify the rule of capitalist property rather than challenging it. The growing importance of the color line mentioned by Wallerstein and the increasing awareness of global inequalities in the core,

¹⁷ In 2016 we held a <u>workshop</u> at the University of California-Riverside on systemic spatial bounding that was supported by the International Studies Association.

¹⁸ Marilyn Grell-Brisk and I have recently written an article on combined and uneven development that discusses how Trotsky's concept works when the scope of analysis is enlarged to compare world-systems and to study the very long-term processes of sociocultural evolution (<u>Chase-Dunn and Grell-Brisk</u> Forthcoming).

¹⁹ Bair got her BA degree at Johns Hopkins and then joined the Sociology graduate program at Duke University where she worked with <u>Gary Gereffi</u>. Her work on commodity chains and reorganizations that have occurred in the international division of labor with regard to the organization and ownership of firms and labor relations pays close attention to major theoretical issues in the analysis of the evolution of global capitalism. In recent years, she has been pursuing a number of these issues in collaborative work with Werner, a geographer.

spurred by mass migration of economic and civil war refugees, have stimulated racist, nationalist and zenophobic counter-movements. The potential also exists for an organized response from unions, displaced workers, oppressed racial and ethnic groups and environmentalists but the antiorganizational movement culture that has been the heritage of the New Left in the World Revolution of 1968 undercuts the emergence of an articulated response from the New Global Left.

A Perfect Storm in Palo Alto

Al Bergesen's essay (this section) describes what I would prefer to call, following Marshal Sahlins, the structure of the conjuncture. The world revolution of 1968 hit Palo Alto right after the Sociology Department at Stanford had been restructured around an experimental theoretical research program inspired by Imre Lakatos's (1978) philosophy of science. The Department was strong on sociological social psychology but weak on macrosociology so they hired John Meyer and Mike Hannan. Out of this conjuncture came several other major contributions to social science. Buzz Zelditch, Bernie Cohen and Joe Berger were producing a profound theoretical research program on status characteristics and expectation states (Berger, Cohen and Zelditch 1971).

John Meyer was in the process of formulating his Weberian take on an emerging global culture that has become known as the world polity or world society perspective (Meyer 2009). Mike Hannan was reinventing Amos Hawley's human ecology for explaining the evolution of formal organizations (Hannan and Freeman 1993).

Al Bergesen's description of the elements that came together in my dissertation include the world revolution of 1968, the theory construction approach of the Stanford graduate program, John Meyer's quantitative empiricism inherited from Paul Lazersfeld (which led me to search for a key variable that would capture international economic dependence) and the panel regression research design contributed to the Meyer-Hannan cross-national research project by Mike Hannan. Regarding the key variable, I came upon Net Factor Income from Abroad in the International Monetary Fund's Balance of Payments Yearbooks, and subcategory of this called Debits on Investment Income (DII). Debits on investment income is an accounting item set up by Harry Dexter White, the main U.S. organizer of the International Monetary Fund, to help track global investments. It is a yearly estimate of the amount of profits made on foreign investments within a national economy. Assuming an average rate of profit, DII allows for the estimation of the total stock of foreign direct investment within a national economy. When this is calculated as a ratio to GNP it yields an estimate of the degree to which a national economy is dependent on foreign investment—so-called "capital penetration." I coded DII from the collection of Balance of Payments Yearbooks at the Stanford Library. Better operationalizations of investment dependence were to become subsequently available.

The panel regression model had been developed by David Heise (1970) in order to disentangle reciprocal causation in which two variables are causes of one another. This was the case with both educational expansion and economic development studied in the Meyer-Hannan project and for my study of investment dependence and economic growth. Panel regression uses measures at different time points to separate out the two different causal effects and makes it possible to examine the effects of different time lags. We found that investment dependence had short-run positive effects but long-run negative effects on economic development.

The world of cross-national quantitative analysis has moved on and the issue of capital penetration effects has become more complicated. Glenn Firebaugh's (1992, 1996) studies claimed to show that the negative effect of investment dependence on economic growth is a statistical illusion caused by the fact that the positive effect of foreign investment on growth is smaller than that of domestic capital investment. Issues about the time lags of effects, the kinds of penetration that have negative effects and that the negative effects may vary across time periods and in different world regions, as well as the important advances that have been made in cross-national quantitative methods, mean that this subject should be revisited.

Sun Burning Out Like a Match

Peter Grimes's essay (this section) is a path-breaking theoretical formulation that describes how complexity theory explains a great deal about physical, biological and sociocultural evolution. Peter²⁰ focusses on the importance of the capture and control of energy for the emergence of complexity. He notes that it is out on the edge between high-energy and low-energy regions that positive feedback loops allow some entities to climb back up the down staircase of entropy to erect greater complexity and hierarchy. These are the physical, biological and sociocultural upsweeps of complexity. With deep knowledge of both natural and social sciences, Peter is able to discover important similarities across phase transitions of very different kinds. His scope of comparison is truly cosmocentric and encompasses what physicists tell us was the beginning of time (the big bang – the modern creation myth) to the present and with interesting implications about the future. Peter is working on a book that will unify science by detailing the similarities, the differences and the interconnections between phase transitions. Watch this space.

The Hegemonic Sequence and the Future of Global Governance

<u>Ho-Fung Hung's</u> essay (this section) on hegemonic transitions and the contemporary geopolitical and geoeconomic situation suggests that the comparative and evolutionary world-systems perspective may be useful for understanding the possible forms that global governance may take

²⁰ I supervised Peter's dissertation at Johns Hopkins and we have been co-authors and close friends since 1982.

in the 21st century. Ho-Fung²¹ points out that Chinese investment in U.S. Treasury Bonds is the major element supporting the U.S. dollar as world reserve currency. The continuation of the ability of the U.S. federal government to print world money enables huge government expenditures without raising taxes. This phenomenon has been called "dollar seignorage" by Michael Mann (2013: 268-273). Despite the fact that the U.S. has a huge trade deficit and has lost its centrality in the production of manufactured goods, the financialization of the global economy built around the U.S. dollar as global money has slowed the rate of U.S. hegemonic decline and sustained the role of the U.S. as the biggest military power in the world. Ho-Fung argues that the Chinese Communist Party is the mainstay of continuing U.S. hegemony because China is heavily invested in the export model of development and because the dollar and U.S. Treasury Bonds are still the most stable investment for the huge volume of trade surplus generated by Chinese exports to Europe and the United States. Ho-Fung contends that China's massive investment in low-yield U.S. Treasury bonds is "tantamount to a tribute payment through which Chinese savings have been transformed into American consumption power." The question is how much longer will dollar seignorage continue, and what will happen to global governance when it finally collapses. A multipolar structure of global economic and military power seems likely. What we do not want to do is what happened in the first half of the 20th century.²²

After Capital Penetration, More Capital Penetration

Jeff Kentor got his Ph.D in Sociology at Johns Hopkins in 1998. He and Andrew Jorgenson are the founding co-editors of *Sociology of Development*, published by University of California Press. Much of his career was spent at the University of Utah, and it was from there that he sent Andrew Jorgenson to UC-Riverside in 2001. Jeff is now chair of the Sociology Department at Wayne State University. His essay (this section) cites some of the more recent publications that have come out of the capital penetration tradition. His essay also mentions the <u>taped interview</u> that he and Andrew conducted with me at UC-R on June 7, 2017 in which I tell my academic story. Thanks to Jeff and Andrew for the opportunity to do this.

My Intellectual Dad

John Meyer's kind letter to Jeff Kentor recounts some of the story told above. I wrote what is above before I had read it. John saved my occupational life and his inspirational mentoring has also produced several cohorts of graduate students who have gone on to productive careers in sociology.

²² Discussion of the current situation and future options is in Chase-Dunn and Inoue 2017

I only want to add one bit to his account. Despite that the senior sociology faculty at Stanford was somewhat less than sympathetic to my revolutionary urges, when I was arrested for disturbing the peace and resisting arrest (a felony) at Stop the Draft Week in Oakland in 1967 they bailed me out of jail. I thanked them then and I thank them now. It took many more years to stop that war, but it was done. John is a great sociologist who has inspired me with his dedication to research and his attention to mentoring. I have tried to pass these things on.

Figure 4. IROWS Colleagues at College Building South (Alexis Alvarez, Rebecca Alvarez, Nelda Thomas, Chris Chase-Dunn, Lulin Bao and Hiroko Inoue)



Gender, Tunisia, the Arab Spring and the World Revolution of 20xx

<u>Valentine Moghadam</u>'s essay (this section) discusses the relevance of the notion of semiperipheral development and world revolutions for explaining local and transnational social movements that have emerged in the last decade. Moghadam is an expert on the global feminist movement and on Middle Eastern and North African (MENA) societies. She takes a refreshingly political-economic approach to understanding global social change. Her essay focusses mostly on Tunisia, but she

also discusses the important role of that women have played in democratic socialist social movements in both the core and the non-core (see also Schaefer 2014). Her analysis of both the hopeful aspects and the tragedies of the Arab Spring movements is a valuable contribution to our effort to comprehend the contemporary world revolution. Tunisia has indeed been an inspiring example for democratic socialists, but most of the rest of the Arab Spring movements have shown the limitations of Habermasian discourse and Ghandhian civil disobedience in situations in which repressive states, imperial rivalries and powerful reactionary counter-movements are willing and able to use violent repression in politics. The New Age values of the New Global Left are at a big disadvantage when politics get nasty. The demise of the Latin American Pink Tide conveys a different lesson. The Pink Tide was a wave of progressive redistributionist policies that swept Latin America (Chase-Dunn. Morosin and Alvarez 2014) but this welfare depended on raw materials extractivism. The Pink Tide arose with the commodity boom fueled by China but now it is foundering as commodity prices have fallen.

Val tries to put the best face on the neglect of gender analysis in my work. I agree with what she says about the importance of unpaid female labor in core/periphery relations. If I could do it over again I would pay more attention to this issue and to the ecological aspects of world-systems. Though it may be too little too late, I can mention that my textbook (Chase-Dunn and Lerro 2016) is better on both counts (gendering and ecological issues) and that I have recently devoted attention to the issue of why monogamy became the predominant form of marriage in modern global culture, even for rich and powerful men (Chase-Dunn and Khutkyy 2016). In critiquing the evolutionary psychology explanation of Walter Scheidel (2009a, 2009b) Dmytro Khutkyy and I propose that monogamous polities could outcompete polygynous ones because they had greater interclass solidarity and hence were better at warfare. The idea that the rules apply to the powerful was well as those without power does not produce equality for either men or women, but it is preferable to a moral order in which the powerful can do whatever they want. I am not sure if this helps fill my gendering gap but it shows that I do think about these things.

Urban Studies, Settlement Systems and World-Systems

Mike Timberlake (this section) reviews the development of urban studies during the globalization awakening and provides a helpful and accurate survey of the IROWS research on settlement systems. Mike arrived at Johns Hopkins as a postdoc not long after I was exposed to urban geography and together we began to think about the world city system. His valuable book, Urbanization in the World Economy came out in 1985. We began corresponding with urban geographer Peter J. Taylor and attended conferences with others working on world cities (Saskia Sassen, Janet Abu-Lughod, etc.). His essay also provides a helpful and accurate survey of the comparative and quantitative research literature on cities and urban systems that has been carried

out by colleagues who were inspired by, or participated in, our early studies of cities in the modern system. The only thing I would like to add to Mike's overview is a mention of the efforts we have made to improve the estimates of the population sizes of premodern cities (see Pasciuti 2002 and Pasciuti and Chase-Dunn 2002). As to whether I am an urban sociologist, I should say that I have come to think of myself as one after studying settlement systems since 1980 and teaching a lower division course called <u>"The City"</u> since 2000.

Intersocietal Dynamics and Sociocultural Evolution

Jon Turner's essay (this section) summarizes the comparative evolutionary world-systems perspective and proposes some modifications. Turner is a famous sociological theorist who coaxed me into moving to Riverside in 2000. His scope of comparison is anthropological and we share an interest in the sociocultural evolution of human societies and in comparing human social organizations with those of other species (see Turner and Machalek 2017). Turner prefers the term "inter-societal dynamics" and he contends that core/periphery relations are not as important as they have been purported to be. He also contends that, while whole-system intersocietal dynamics are important, they may not be the most important for explaining social change.

Jon Turner's essay provides an opportunity to clarify a few matters. He contends that small-scale systems should be called intersocietal systems rather than world-systems. We have tried to make it clear that our use of the term "world" refers to the set of interaction networks that are important for reproducing and/or changing the institutions of everyday life. Those connections constitute the relevant world in which people live. When communications and transportation technologies were less developed "the tyranny of distance" was stronger. The relevant "world" of direct and indirect interaction links for people in any locale did not extend as far across space as it did after intercontinental travel had become easier. This is what we mean when we speak of "very small world-systems." ²⁴

Jon also contends that the core/semiperiphery/periphery structure does not work very well for small-scale systems. We agree, but we have introduced the distinction between core/periphery differentiation (a situation in which polities with different degrees of population density are interacting with one another) and core/periphery hierarchy, in which one or more polities are dominating or exploiting other polities (Chase-Dunn and Lerro 2016:23). And we make it clear

²³ We designate polities as subsystems of world-systems because they are easier to bound spatially than are societies.

²⁴ Randall Collins (1992) was willing to use the term world-system in connection with small-scale kin-based systems.

that it should not be assumed that all world-systems have core/periphery hierarchies just because the modern system does.²⁵

Turner's summary of our iteration model and the study of upsweeps are clear and helpful exposition, and his elaboration of his own models for understanding how warfare works as a selection mechanism driving sociocultural evolution is a valuable contribution. He praises the value of simulation modeling, and I agree. Our SetPol project is working on a multilevel model that we hope will be an improvement of the whole-system iteration model by including the processes that are operating **within** societies, as does Turner's Figures 1 and 2 (and Turchin and Nefadov's [2009]"secular cycle" model), as well as processes operating at the level of whole world-systems (Chase-Dunn and Inoue 2018). 27

Regarding Turner's contention that the work of the world-systems theorists has been distorted by the assumption that the contemporary capitalist system will be transcended by a socialist world society, ²⁸ we can note that Wallerstein (2011) has not predicted how the structural crisis that is now brewing will turn out, and that Chase-Dunn and Lerro (2014: Chapter 20) describe three possible outcomes for the next few decades, one of which is similar to Turner's prediction – "distintegration of the existing world system to something less integrated than it is today, with very active geo-political and geo-economic dynamics ruling a conflict-ridden world." We call this "collapse." While this is certainly a possible outcome, one of the findings from our studies of earlier upsweeps and downsweeps is that downsweeps (collapses) do not last very long. So the issue of what will follow a possible collapse is an important consideration. We agree that human history is partly open-ended and so nothing is inevitable, but some outcomes are more likely than others. And of the probable outcomes, some are much more desirable than others. Undo pessimism is probably just as distorting as undue optimism.

Thanks to Jeff Kentor and Andrew Jorgenson for organizing the ASA session and for putting together this collection of essays addressing my work. And thanks to Jackie Smith for the opportunity to publish this in the *Journal of World-Systems Research*. This brief version of my academic memoirs leaves out the issue of how most of my personal life interacted with my

²⁵ Chase-Dunn and Lerro (2016:23) say "It should be an empirical question in each case as to whether core/periphery relations exist. Not assuming that world-systems have core/periphery structures allows us to compare very different kinds of systems and to study how core/periphery hierarchies themselves emerged and evolved."

²⁶ Thanks to our UC-Riverside colleague Bob Hanneman and a group of graduate students at UC-Riverside we have published two simulation modeling projects. One develops the iteration model in the context of small-scale world-systems (Apkarian et al 2013) and the other is a representation of Randy Collins's theory of battle victory (Fletcher et al 2012).

²⁷ This multilevel model is motivated by our finding that only half of the urban and polity upsweeps were caused by non-core marcher states. The other half must have been due to processes operating within polities.

²⁸ Stephen Sanderson (2005) mounted a similar criticism of the world-system perspective. See also Chase-Dunn and Lawrence (2010)

professional life, but that will have to wait for another occasion. Let me also thank my parents, my brother Bill, my wife Carolyn Hock and my daughters Cori, Mae and Frances for all their love and support. And, as my friend Gunder Frank would have said, the struggle continues.

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Any conflicts of interest are reported in the acknowledge section of the article's text. Otherwise, author has indicated that she has no conflict of interests upon submission of the article to the journal.

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