Southeast Asian Studies in the Age of STEM Education and Hyper-utilitarianism

Thongchai Winichakul*

[*Abstract*]

Area studies, including Asian and Southeast Asian studies, in the post-Cold War era have been facing an epochal challenge that is rooted in two conditions: on the one hand, the end of the Cold War and the fading geopolitical rationale, and on the other, the emergence of the technology-driven transformation of the global economy and society. The consequences thus far are paradoxical: 1) While the technology-led transformation needs a workforce with critical and innovative abilities, higher education becomes more hyper-utilitarian; 2) While the transformation instigates increasing diversity of identities in global cultures, many countries thrive for STEM education at the expense of learning languages and cultures, including area studies which are essential for diversity. Southeast Asian studies programs need to change in response to these new conditions. These changing conditions and paradoxes, nevertheless, take different forms and degrees in the American, European and Asian academies, thanks to their different histories of higher education. The prospects for Southeast Asian Studies in

* Senior Researcher, IDE-JETRO, Japan: Emeritus Professor of History, University of Wisconsin-Madison, USA. Thongchai_Winichakul@ide.go.jp

these various academies are likely to be different too.

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Ⅰ. Introduction

Since the end of the Cold War, there have been many discussions about the relevance and justification of area studies and Asian studies.[1] Southeast Asian studies in particular is one of the fields that has generated considerable introspection in order to justify its rationale in the present and future, perhaps more often than other area studies programs.[2] These introspections are symptoms that Asian studies and Southeast Asian studies are facing the changing conditions that require the re-examination of their values and relevance. Most discussions have paid attention to globalization and the changing geo-politics in the post-Cold War period that gave attention to globalization and the changing geo-politics in the post-Cold War period which in turn rendered the nation-states and the regionalism of area studies problematic. Although such arguments deserved a serious consideration, they usually overlooked the most immediate context of area studies, Asian studies or Southeast Asian studies, i.e. the effects of those new conditions on the higher education systems around the world including Southeast Asia. Nor did they examine the differences between higher education systems among those countries and regions due to their different histories. Moreover, they did not consider the factor that probably affects Asian and Southeast Asian studies most directly and effectively, namely the digital revolution and the so-called “disruption” era.

With the benefit of hindsight, this paper attempts to address the changes in higher education worldwide brought by the digital revolution and the disruption era. It will also discuss the future of

1 For example, Rafael (1999); Miyoshi and Harootunian (2002), and Cheah (2004).
2 Hirschman et.al. (1992); SSRC (1999); Hau (2003); Reid (2004); Kratoska et.al. (2005); Sears (2007); Goh (2011).

Asian studies and Southeast Asian studies in relation to such changes and in the context of different higher education systems. Let us begin with the history of Asian and Southeast Asian Studies and their contexts.

Ⅱ. Past to Present: the previous styles of Southeast Asian Studies

Broadly speaking, Southeast Asian Studies and Asian studies have gone through two eras, each of which was shaped by and reflected in the political economy that generated the demands for such fields of knowledge: the colonial and the Cold War eras. During the colonial era, Oriental studies, largely led by European scholarship, responded to the demands for knowledge about ancient civilizations in various European colonies. During the Cold War era, American area studies grew out of the demands for knowledge that helped fulfill the twin missions: to fight or contain communism, and for modernization and economic development. In other words, Asian studies before the post-Cold War has been shaped by these environments of the European and American academia.

Although they were not contrasting and in fact were complimentary to one another in various ways, European Oriental studies and the American area studies entailed different "styles" of knowledge, emphasizing different subjects, sub-fields, disciplines, and so on. Under the colonial ideology that claimed itself to be the champion of ancient civilizations, Oriental studies focused on the classical subjects such as philology, epigraphy, archaeology, art history, ancient history and classical literature. American area studies responded to the demand for knowledge for counter-insurgency and economic modernization. It paid more attention to the social sciences and the related humanities, namely political science, anthropology, modern history and the literature on nation-states.

The notions of Asia and Asian regions such as Southeast Asia in those two styles of scholarship were not quite the same either. For the Europeans, the interests in "Asia" varied according to their

respective colonial interests: the British Indian sub-continent, French Indochina, British Burma, the Malay States, crown colonies and northern Borneo, or the Dutch East Indies. For them, the East Asian countries were the "Far East" and the "Near East" and local populations were "Orientals". For the Americans, "Asia" signified China and Japan first, whereas the rest of Asia – South, Southeast Asia and so on, were defined by geo-political arrangements during and after the Second World War and after. For the European Orientalist scholars, moreover, ancient civilizations were shaped by religious influences from India, hence "India beyond the Ganges", the "Greater India", and the inseparability of Sri Lanka and the Theravada countries in Southeast Asia. The Philippines was beyond the "Sanskrit" arch. For Asian studies under American dominance, nation-states in their concept of geo-political regionalism were its primary concern.

Asian studies and Southeast Asian studies in Asian countries have been under the influence of these two scholarly traditions, especially that of America. Despite that, the Asian incarnations of Asian and Southeast Asian studies are unavoidably different from the Euro-American ones due to their different histories and the political economies of higher education.

Ⅲ. Studies of "Others" versus studies of "Self"

Higher education and the academy in most Asian countries began as a colonial institution to produce civil servants to serve the modern state. The post-World War II period of modernization and development also propelled the rise of higher education to serve the expanded bureaucracy and the early industrialized production that required a more highly skilled workforce. Unlike higher education in the Euro-American world that had its roots in religion and in the knowledge regime which was later called "the liberal arts", the top priorities in higher education in most Asian countries have been focused on "useful" knowledge, that is, applied science, medical science, engineering and technical knowledge and the applied social sciences. The liberal arts – non-applied science, the humanities, and

the arts – were not as important because they were not obviously seen as "useful" in a practical sense.

Moreover, while the Euro-American academies recognize the significance of research at least in the past hundred years, most universities in Asia, except Japan, remain primarily teaching and technical-training institutions. Research enterprises are limited to specific areas, especially medical science. Even after the efforts to promote research in the past decade or so, and given the enormous resources in many countries, the infrastructure and experience of research institutions are uneven and lacking. In terms of the intellectual climate, the processes and legacies of the anti-colonial struggles, the transition to a post-colonial society, and nation-building under the modernization agenda during the Cold War have all had lasting impacts on the development of academies and scholarship in Asia. In these conditions, the study of Asia and Southeast Asia within the region are different from the Euro-American traditions in fundamental respects.

First and foremost, the European and American interests in Asia and Southeast Asia generated the knowledge of "Others" in Asia, whereas the studies of one's own country was the knowledge of the "Self" or the "Home". This fundamental difference has enormous implications politically (such as domestic versus international counter-insurgency), economically (global capitalism versus national economy), and ideologically (nationalism versus "Orientalism" as Edward Said puts it), and so on. The scholarship of the "Self" or the "Home" does not imply any superiority or a better truth. Rather, it tends to respond to a different environment than the one constructed by outsiders. For instance, it often responds to the twin processes of nation-building. First, there was anti-colonialism, or reactions to colonial conditions. Second, there was the subordination of minorities, be they ethnic, religious, or otherwise, and regional identities within the new nation's territorial "Self", its geo-body. In some cases, the subordination was rooted in the pre-colonial imperial polity or hegemony whose legacies are part of the post-colonial condition.[3] The scholarship of a home country

3 This is definitely the case for Southeast Asian countries where regionalism or

tends to be nationalistic. The dominance of certain ethnicities, religions, and political centers, and prejudices towards those outside the dominant group, are usually the results of those processes as well.

Secondly, even the studies of other Asian countries often entail different perceptions and agenda from European or American ones because other Asians could be neighbors, partners, allies, competitors, rivals or enemies in history and at the present time.[4] (The exception to the account here is Japan where those programs that study "Other" Asian countries were established from the early twentieth century.)[5]

Thirdly, the "Self area studies" is integrated into the conventional social science and humanities departments/disciplines in Asian institutions. Until recently, for instance, there was hardly a need for a Thai studies program in Thailand. Asian studies and Southeast Asian studies as a particular field and set of programs had not found much demand or success in Asia and Southeast Asia respectively until recently. Fourthly, the economy of the "Self area studies" is mostly local, i.e. according to the demands, applications, resources, and so on of a particular country. The emphasis for the studies of the "Self" is on the "useful" knowledge for development, i.e. the applicable, policy-oriented social sciences, due to their histories of higher education.

Fifthly, the fields of knowledge without clearly useful applications – such as the humanities and the arts – were not in high demand, hence, they received less attention and fewer resources, although the number of students in these fields may be higher because they are less expensive to deliver.[6] With Japan and

majority-minorities, or both, remain a problem in the post-colonial nations. These problems have roots in pre-colonial political and cultural conditions but were reformulated and exacerbated in the colonial period.

4 I discuss this point more in Thongchai (2014: 884)

5 See Thongchai (2014: 885-886)

6 The pure science and basic research in science are another area that is relatively less emphasized in most Asian countries, not because they are not useful but because they are too expensive for a country to invest in. The investment in science is the scholarship for students to study overseas.

probably India too as exceptions, the humanities in Asia have been less engaged with the modern higher education systems. It was true that the Orientalist interests in ancient civilizations had been expressed in many fields of the humanities. But they engaged with local intellectuals as informants and assistants, and with local knowledge – such as religions and literature -- that had evolved for centuries, as the object of studies by the outsiders. Local knowledge that is close to the humanities has not engaged and developed in the modern higher education systems. They were left under the authority of traditional intellectuals and institutions, although they have been affected by modern scholarship. As a result, the influences of neo-traditionalism and nationalism were typically stronger in the humanities in the scholarship in Asia.

Ⅳ. The Post-Cold War challenges and changes outside Asia

In the 1990s to 2000s, area studies in the USA, including Asian and Southeast Asian studies, were challenged. First, the notions of regions in area studies that was based on Cold War geopolitics were challenged, thanks to the new geopolitics of the post-Cold War era. The nation-state, the primary geographical unit of area studies, also became problematic, substantively and methodologically, thanks to globalization. It has been increasingly seen as a limited and often mistaken unit for studies unsuitable for the study of global or cross-country phenomena. In addition, intellectually, the validity of area studies within the American academy was questioned in that it was not scientific knowledge. Science, rational choice, big data moved in at the expense of area studies in many social scientific disciplines.

Although area studies survived the challenges, the impacts are still felt, resulting in significant changes to area studies. Geography and the spatial subjects of area studies have been revamped and redefined. The post-national space and new regionalism emerged in studies of regions as well as in reality. Alternative space and scales of human geography have emerged as valid for area studies. Among the exciting and innovative ones are, for instance, border and border

crossing studies, trans-Asia or inter-Asia, and the turning away from the land and lowland; to upland and the ocean-centric or water-centric maritime regions. Nevertheless, the concepts of nation-states and Cold War geo-politics have not disappeared. At the least, I agree with King in this volume and Sutherland (2005) that they are "contingent devices" because they are commonly known, thus useful, and because they express how the world has been organized in the past few hundred years up to the present.

Regarding the epistemological challenge from science, the direct impact was the phasing out of area studies from the major social scientific disciplines in the American academy, particularly in economics, political science, sociology, and demography. Experts of particular world regions and nations become endangered species since their expertise has been no longer the main criteria for their profession or for recruitment. The innovative scientific methodology in dealing with massive data sets is needed.

On the other hand, the linguistic turn and cultural studies have strengthened the humanities, substantively, conceptually, and methodologically in all disciplines and fields. Post-colonialism in scholarship in particular has made area studies innovative and politically rigorous. An epistemological implication is the significance of the study of language as the basis of knowledge production and of the interpretive methods in the human sciences, in contrast with the empirical data for scientific methods. These trends in the humanities are independent from, and are not reactions to, the hyper-scientific trends in social science. The result of these contrasting epistemological forces is the sharp "humanistic turn" in Asian and Southeast Asian studies. Intellectual interests in geopolitics or the economy are declining, but have become stronger in critical studies in, for instance, popular culture, media studies, and religious studies. One ample indicator has been the steady decline of members of the Association for Asian Studies (AAS) from social science disciplines since the 1990s.

Ⅴ. The Post-Cold War opportunities in Asia

Around the same period in the 1980s-2000s, the globalized economy benefited many Asian countries enormously. Many Asian countries were no longer underdeveloped, but became middle-income economies and, in addition to Japan, many have joined the league of industrialized nation-states. New economic regionalism, multilateral partnerships, and intra-Asian investments and trade gave rise to the demands and interests in Asian countries. These conditions, plus the desire for the "knowledge economy", has propelled the dramatic change in higher education in Asia since the 1990s. Not only was it affordable for the government to invest and expand it, but the demands from people also increased rapidly as reflected in the enrolment that tripled from 1965, the previous boom in higher education.[7] Universities and educational institutions proliferated, especially private ones, while public institutions expanded into many more fields and turned their attention to more research, including the attempt to establish research universities.[8]

Ruth McVey (1998) observed that globalization marginalized Southeast Asian studies. This might be the case in the European and American academies. But it was not the case in Asia. In the post-Cold War economic globalization, the knowledge of other Asians and Southeast Asians is needed, and it is affordable to many Asian countries. The potential for Asian and Southeast Asian studies within Asia has changed dramatically. Since the 1990s, aside from Japan, such programs in many countries have emerged, developed and become more visible.[9] Within Southeast Asia, Southeast Asian

7 See Task Force on Higher Education and Society (2000: 16-20 and 27-28) for the enrolment statistics. Although the report does not focus on Asia, it suggests the phenomenon is world-wide, with some examples from Asia. I concur with the report, as the similar changes were visible across Southeast Asia and India. The exception may be the countries in the bottom tier – Laos, Cambodia, and Myanmar.

8 Task Force (2000: 28-33). For the surge of research universities in Asia and beyond since the 2000s, see Altbach and Balan (2007).

9 For example, in Korea, Southeast Asian studies was not a legitimate, institutionalized field of study until the 1990s. It has grown even further since the 2000s (Joen, 2011). A similar history can be found in Thailand and other countries. The Institute for Southeast Asian Studies (ISEAS) in Singapore was an exception,

studies programs have become more common in major universities in the region.

A superficial observation may suggest that those Asian and Southeast Asian studies programs are the outgrowth of American area studies. This is true to some extent, as the proliferation of those programs usually involved scholars who graduated from the USA, and whose number and authority in their respective academies have matured. For Southeast Asian studies, the Cornell University model in fact reflects a different environment and era. The Cold War geo-politics and the usual close connection between an Asian country and its colonial metropolis were replaced by the post-Cold War regionalism, multi-lateral partnerships and the realignment of many kinds. Asian and Southeast Asian studies in Asia are fundamentally different.

First, Southeast Asian studies in the region is about one's neighbors and "Asian Others". Whether those countries have been arch-rivals, competitors, untrustworthy neighbors, estranged friends, good friends or comrades in history and in the present, the studies and the "gaze" of those studies in Asia are likely to not be the same as the colonizer's gaze or those of a superpower of the Cold War. Second, the programs in Asia emerged in the context of economic prosperity and the demands for economic relations whereas the previous approach and agenda of area studies in the USA were directed to the development and modernization of Third World countries. The disciplines, fields, major subjects or issues of interests are likely to be different from the Euro-American ones.

Many programs in the leading institutions in Singapore and South Korea, for example, are aware of the different eras, and different environments from the American model, hence the need to recognize the different characteristics of Southeast Asian studies. They are attempting to find their niches and novel ideas to produce a particular kind of Southeast Asian studies appropriate for their regions and countries.

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as it was established earlier in 1968 as part of the foreign ministry, not an academic institution.

Ⅵ. The new landscape of Asian and Southeast Asian studies

The landscape of Asian and Southeast Asian studies has changed since the beginning of the new millennium. First, Asia is not only the object of studies by the "First World" academia but it is also the producer of knowledge. The global productions of Asian and Southeast Asian studies are becoming more diverse, and are no longer an almost exclusively American and European enterprise. The number of recognizable scholars of Asian studies from Asian countries and the generation of original scholarship from Asia have increased rapidly. Many Southeast Asian studies degrees are now awarded in Southeast Asian universities. Many publications and international journals in the field are produced in the region. Moreover, unlike in the previous eras in which a native scholar usually studied his/her own country, nowadays there are more experts on a given country who are nationals of other Asian nations. More Asian students complete their higher degrees in another Asian country (not counting Japan), and more doctoral programs in Asian studies have been established in many Asian countries. It is time, in Hau's words, to "decenter" Southeast Asian studies from its Euro-American base (2003). This does not necessarily mean that the new sites will become dominant, or the Euro-American programs will deteriorate, let alone disappear. These multiple nodes of knowledge production are under the diverse environments of their respective academia and countries.

Secondly, there has been an important change in the past twenty years or so in the stronger presence of Asians as scholars of Asian studies in Euro-American and Australian institutions.[10] There are also more non-native Asians from the United States and European countries who teach Asian studies in Asian countries.[11] This does not imply that the Asian views and knowledge are more accurate or better. Rather, their approaches and perspectives towards Asia may be different from those from the USA or Europe

10 Kondo (2001) and Rafael (1995) have made the same observations since the 1990s.

11 Steinhoff (2007: 10) observed that since the mid-1990s "there were American Japan specialists teaching in Japan and in various other English-speaking countries...", and they probably would increase after that.

because Asian countries are their home. Kondo writes, "… people who were formerly the objects of representation by the dominant are ourselves entering the academy and the arts in order to 'represent ourselves'" (2001: 25). Rafael calls this phenomenon, "migratory scholarship" which is not exactly self or the other, insider or outsider, but the "in-between" (1995). To these expatriate Asian scholars, "home" signifies the place of belonging, care, and even passion.[12]

Thirdly, the relationship of scholars of Asian and Southeast Asian studies has begun to shift. Asian scholars used to play the second fiddle, as students to the Euro-American first fiddler, or as native scholars, informants and subjects of studies.[13] Increasingly this is not the case. More relationships, collaborations, and networking among scholars of Asian studies across the globe and intra-Asian academies are growing quickly.[14]

Ⅶ Present to future: What is coming up?

The socio-economic transformation driven by the digital revolution is under way. Many people, particularly those who are optimistic about the future for humanity, the "techno-optimists", believe it is the "Fourth Industrial Revolution".[15] Schwab, an engineer and a

12 I have addressed the issue of the "home" scholars, their in-between position in the relations to the object of studies, and the intellectual implications of such a position (Thongchai 2003).

13 Alatas (2003)

14 Examples are the Southeast Asian Studies Regional Exchanges Program (SEASREP) which began in the mid-1990s, funded by the Toyota Foundation; the Asian Public Intellectuals project funded by the Japan Foundation that began around the same time; the network that produces the journal Inter-Asia Cultural Studies, several pilot programs such as the Social Science Research Council's (SSRC) Inter-Asia conferences, and the recently formed Southeast Asian Studies consortium. Institutions in many Asian countries are also playing active roles in that trend, for example, the Asia Research Institute of the National University of Singapore.

15 The first one driven by the steam engine, mechanical production and the railroads from 1760 to 1840. The second one was mass production driven by electricity and the assembly line, starting in the later 19th century and into the early 20th century. The third was driven by the semiconductor and the early stage of computers (mainframe to the beginning of personal computers) from the 1970s to

business leader who was one of the founders of the World Economic Forum at Davos, has described this revolution succinctly in that the digital technology becomes more sophisticated and integrated, due mainly to the "internet of things", creating the connectivity, interactions, and fusion between the virtual and the physical systems, and between the physical-digital-biological domains, across the globe. This is the key development of technology that is transforming the world. The current technology has disrupted the usual ways of doing things, from the state to community and individuality, from nations to the global order.[16] Thus, many people, call these current transformations the "Age of Disruption" generated by the "disruptive technology". The techno-optimists predict a huge leap forward that will bring prosperity to all humans. We may be skeptical or even dismissal of this optimistic forecast, but the transformations due to the digital revolution is undeniable as we have witnessed since the 1990s. The rest of the section below is derived mainly from Schwab (2016), who, in my opinion, represents the moderate view among the techno-optimists because he does not overlook the disadvantages and the obstacles that could derail the optimistic scenario.[17]

In Schwab's view, the implications of the digital revolution embrace society, human relationships and individuals. He sees it as increasingly empowering citizens, who are likely to become better-informed, and thus commanding a more positive and recognized public voice. But the technology would also increasingly cater for individual interests, needs and opportunities, thus contributing to the greater fragmentation of society. It would be more difficult to govern this much more diverse and fragmented society. Therefore, government will possibly become less effective,

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the 1990s.

16 Schwab (2016: 12-13) chapter 1.

17 As a matter of fact, Schwab does not consider himself a techno-optimist since he also warns us against the potential difficulties due to the limits and constraints from government, politics, failing education, the global uneven development economically and technologically, and so on, hence the unintended consequences. Nevertheless, I use the term techno-optimist to include people like him because he sees the potential brighter future of humanity in the context of the digital revolution and urges us to help make it a success.

forced to decentralize power and allow growing societal competition (Schwab 2016: 66-67). The age of disruption may also give rise to a new kind of inequality and segregation – both economic and technological (Schwab 2016: 77).

As for the individual, mobility will become the norm, instead of their fixity in a local or nation-state context. Before this age, individuals became used to the fixed identification of their lives within a place, ethnic group, a particular culture, or a language. This was the basis of the assumptions of the traditional perspectives of area studies. New individual identities will be more fungible and multiple. A family is likely to become trans-national (Schwab 2016: 78). The new generation is also more multilingual thanks to transnational marriages and family mobility.

The coming age requires an educational system appropriate for the fusion of the digital, physical and biological technologies, and for the increasingly capable, connected and intelligent machines. Demand has and will continue to rise in STEM education (science, technology, engineering, mathematics), but it also needs to address the roles that machines cannot fulfil which rely on intrinsically human capabilities. New professions will emerge, driven not only by technologies but by non-technological factors: demographic, geopolitical transformations and new social and cultural norms. The emphasis will be placed on the ability of a workforce "to adapt continuously and learn new skills and approaches within a variety of contexts" (Schwab 2016: 47), and on the social and creative skills and decision-making ability in situations of constant change, uncertainty and novelty. "[The] complex problem-solving, social and systems skills will be far more in demand…compared to the physical ability or content skills" (Schwab 2016: 44).

The techno-optimists usually take for granted the West/ North/digitally advanced urban society as their assumption and the base-line of their analysis and forecast. Cities and urbanity will be globally inter-connected, resulting in a new kind of geography that cuts across the current nation-states. But the hyper-connected world may give rise to a new kind of inequality and segregation, for example, the disparity among countries and in each country,

between the urban and the non-urban, and between the rich and the poor. This disparity could imperil the transformation of the digital revolution (Schwab 2016: 71). Even Schwab sees the disparity and differences merely as the possible cause for difficulties in the digital revolution. In Schwab's words, "hyper-connectivity does not naturally come with greater tolerance or adaptability… However, [it] also contains the potential [for] greater acceptance and understanding of differences…" (Schwab 2016: 77). In my view, those differences are not only the possible obstacle for the new age, but part of the normal condition with which the disruptive age has to contend. In other words, the differences and disparities are unlikely to go away regardless of the transformations. Individuals and societies still need to learn that cultural differences may come in different forms, and then how to deal with them, not only to prevent them from derailing the transformation, but to make them evolve and develop alongside the transformation.

Is the transformation riven by the "disruptive technology" of the "Fourth Industrial Revolution" the environment for the new era of higher education including area studies, Asian and Southeast Asian studies? I believe it is. In my opinion, it has and will affect higher education and scholarship for decades to come.

Ⅷ. Response from higher education and its paradoxes

In response to the digital revolution, higher education across the globe rushes for STEM education. On the one hand, the digital revolution has created the anxiety for countries not to be left behind. On the other hand, they see the new opportunities for the next round of prosperity. The reward is high. So is the grave consequence of being left out. Governments and administrations of higher education in most countries in the world, including in Asia and especially in Southeast Asia, have rushed for STEM education, from the basic knowledge of computer coding to the advanced knowledge contained in artificial intelligence and nano-technology. To ordinary people, the rapidly increasing demand for manpower in the STEM areas is apparent. This rush to STEM has also been

intensified by the influence of neo-liberalism in higher education that has put universities under pressure to make money from the provision of educational services, given the drastic decline in public funding. STEM education is the meeting point between industry, government, the customers of higher education and the university that wants to generate funds. Higher education is becoming hyper-utilitarian.

In most countries, the promotion of STEM education comes with the devaluation of the social sciences and humanities because they lack utility, i.e. they do not make money for universities, industry, the country and individual consumers. This unfortunate vision and policy have various consequences, from verbal comments by government leaders but to no real effect, to actual implementation, namely, increasing class sizes, closing-down courses, down-sizing and abolishing units, reducing funding in research and cutting down the hiring of new staff and the number of available tenured positions. These fields are also often faced with the demand to justify their values in utilitarian terms and often people in these fields comply accordingly in terms of how useful they are for tourism, the entertainment industry, and so on. In reality, I understand that we may not have options but we have to speak in the language that the senior managers and administrators can understand. But epistemologically those answers are misguided. The values of the humanities and area studies are mainly not to be seen in utilitarian terms. They are indispensable for the transformation brought about by the digital revolution.

The visionary advocates of the disruptive age recognize that the next era of digital transformation demands and places more emphasis on the ability of a workforce to adapt continuously and learn new skills and approaches within a variety of contexts. It needs the innovative ability of individuals. It needs an educational provision suitable for people with the social and creative skills and decision-making ability under constant change, uncertainty and novel ideas. The complex problem-solving ability will be far more in demand, and this capacity of individuals is not automatic or given. Nor is it the outgrowth of technical training, coding skills, technological know-how, or scientific empiricism on which STEM

education usually focuses. It requires, I would argue, training in critical thinking, skeptical questioning, and comparative and interpretive reasoning. This is the realm of social studies and the humanities. The greater understanding of cultural differences and how to deal with them, as a society and as individuals, require education and scholarship provided in such fields as area studies.

In my view, the fervor for "big data" and the craze with scientism in devaluing area studies, both of which started in the USA, were also the symptoms of the digital age. The proliferation of studies with "big data" sets was not possible before the age of the personal computer. The "big data" approach and methods produce new kinds of knowledge. But the use of scientific criteria to devalue the humanities and area studies is misguided and unwarranted. It is a corollary of the hyper-scientific euphoria of the digital revolution. The humanities and area studies share at least one fundamental property that makes them categorically different from the sciences, namely, they are language-based knowledge, produced from the understanding of language, culture, and history, and mainly using interpretive methods, not empirical, material-based knowledge, produced mainly by quantifiable and deductive methods. These different kinds of knowledge should not be justified by the same universal criteria.[18] In defending the value of the humanities and area studies, one should not attempt to make them more scientific than they can be, because their values are in the knowledge and wisdom that science cannot produce.

The humanities and area studies should not be required to justify their epistemological values in scientific terms, or their social values in utilitarian terms. They are as indispensable to humanity as

18 The regime of "Quality Assurance" (QA) that spread among universities across the globe is also suitable to the epistemology and institutional practices in the STEM disciplines more than others, especially those at the opposite end of knowledge, namely the humanities and the arts. The QA has been adopted without adequate attention to the differences among branches of knowledge, disciplines and fields. Besides, the QA serves the neoliberal governance of higher education and the utilitarian purposes, which are beyond this paper to discuss. Lim (2001: chapter 6 and 7) has cautioned against the adoption of QA in developing countries primarily because of their different histories and the different conditions of higher education from the West.

scientific knowledge and STEM. Without this awareness, the hyper-scientific and hyper-utilitarian education in our time have created two paradoxes.

1) The digital age demands critical and complex thinking and the ability to adapt. Innovations come from this intellectual basis. But critical education is put aside in the drive for technical knowledge. The technological-driven economy leads to hyper-utilitarian education which undermines the humanities and other critical learning.

2) The digital transformation is taking place in the context of cultural differences and social diversity, and the transformation requires the ability of societies and governments to deal with the explosion of diversity in collective and individual identities. But the disproportional emphasis in STEM education side-steps the production of knowledge that helps us understand the processes generating cultural diversity

Ⅸ. Southeast Asian studies in the new era

These general trends take place differently depending on the historical conditions of the higher education system in particular countries. In the USA, generally speaking, the decline in the humanities is of some concern but not as serious, given its origin of higher education in those non-utilitarian fields of knowledge. The effect of hyper-rationalistic, hyper-scientific knowledge, however, have had a lasting impact on area studies. In Asia, particularly Southeast Asia, modern higher education has always given the higher priority to applied or utilitarian knowledge in the sciences while the value of liberal arts, particularly the humanities and the arts has been secondary. Hyper-utilitarianism is comparatively stronger (than in the American case).[19] In many places, the push for

19 In the UK and Australia, despite the liberal arts tradition of higher education, because higher education had primarily been in the hand of the state, neo-liberalism and hyper-utilitarianism seem to cause extreme difficulties for universities more than in the USA, and to area studies more than the challenge from the sciences.

STEM is at the expense of the social sciences and the humanities – the home of area studies – not because of hyper-scientific thinking and methodology, but because of the short-sightedness of how to deal with the digital revolution. On the other hand, however, the prosperity within the globalized Asia allows new areas of knowledge production including area studies. These are two major contributing factors to Asian and Southeast Asian studies in the region. They could run in parallel, and need not be a conundrum.

Nevertheless, area studies cannot be the same. It cannot continue to live on the legacies of the colonial or Cold War scholarship. Despite any skepticism about the age of disruption, it must respond to the new conditions. If the transformation driven by the digital revolution, requires proficiency in global diversity in order to adapt, innovate and live with the increasingly geographically and culturally diverse world, the knowledge of different regions and peoples of the globe is invaluable.

The questions for all of us in Asian and Southeast Asian studies are the following: what are the styles of knowledge, disciplines and fields of emphasis that are pertinent in this new context and environment? What are the visions for these studies? Given the different histories and political economies in Asia and in the Euro-American academies, should the programs in Asia and Southeast Asia follow the humanities turn or take a different path following their own visions for the new Asian and Southeast Asian studies in the region?

Ⅹ. Some suggestions

We should keep these questions in mind while continuing to explore the innovative styles of Asian and Southeast Asian studies. Nonetheless, I would like to make some suggestions that are relevant to our exploration for the future.

First, in Asia, given the relative weakness in the humanities, Asian and Southeast Asian studies should pay more attention to the technological-related issues, instead of taking the humanistic turn,

thus making area studies more relevant to the social changes of the disruptive age. We need to explore the social and human dimension of technology-driven transformation, in research and in our classroom. The transformation of the digital age needs knowledge on these matters. In some ways, the studies of materials culture, the visual culture, the environment, and others that explore the conjunction of technology, capitalism and cultural studies, have made headways in that direction. Samson Lim, at the Singapore University of Technology and Design (SUTD), for example, has created a curriculum that links engineering and design with Southeast Asian studies.

Second, the comprehension of the world nowadays is different from the pre-digital and pre-internet age. We currently live with 24-hour world news and live telecasts from any spot in the world, compared to a printed page in the local newspaper that reported a wired news report. The awareness of global issues is at our fingertips, and is disseminated across the globe at our choice instead of news selected by an editor. Globe-trotting opportunities are easier and more affordable even by students than in the past. A typical middle-class teenager today has experience of international travel, and has been exposed to other cultures much more than previous generations. The world in their reality and imagination is not unfamiliar or so abstract as for previous generations when travel was expensive and difficult; thus, it was exclusively for the rich. Today, young people interested in other parts of the world seem issue-oriented. Also, increasingly, the relevance of knowledge about particular areas and regions is not the substance itself because knowledge is the essential path toward other purposes, such as advocacy for certain causes, politics, philanthropy, adventure, personal improvement, or purely for the intellectual journey. Places and cultures are no longer strange; yet they are different. The comprehension, method and purpose of learning about global diversity have changed. Pedagogy and research on Asia and Southeast Asia cannot be the same.

Perhaps in the near future the content and substance of a fixed area (country, region) will not be as significant as learning how to learn about cultural diversity. Experts on deep regional knowledge

remain important. But students and the non-experts also need area studies knowledge for "competency in cultural diversity" – the ability to take cultural diversity into the natural way of thinking, the normative way of living.

Third, the environment for language learning is radically different too since it is easier for students to acquire a foreign language in local settings, given the increase of multi-lingual students whose linguistic competency comes naturally. The forms, methods, and pedagogy for learning a foreign language have to change. Language experts and teachers are aware of these changes. They are exploring new methods of learning foreign languages. At the University of Wisconsin, for example, the old days of studying an Asian language may be numbered, and the new methods may be realized soon, such as learning languages from issues of interest or via popular culture, films, and so on.

Fourth, in the colonial era, the ancient civilizations were the focus of "area studies". In the Cold War, geo-politics and nation-states comprised the paradigms and units of analysis of area studies. In the current age, the geo-political basis and the methodological nationalism are justified now for historical reasons and since they are the primary arrangements of the global community today. Nevertheless, they have been modified significantly to accommodate the question/subject that does not fit geo-politics or nations. Geographical flexibility should be the methodology and the outcome of area studies knowledge to enhance our student's ability to think, switch back and forth, among different spatial parameters in their dealings with the global, trans-national, border zones, and transcultural diversity. The geography of inter-city connectivity, trans-national marriage and adoption, financial flows, and narcotic trafficking, for example, should not be difficult to comprehend regardless of the national context. Each spatial parameter implies its particular history, languages and cultures. I believe many experts in area studies have acquired this ability as an outcome of our life-long learning about other countries. Why not make the "flexible-area studies" a goal for our students too?

XI. Conclusion

The "disruption era" poses new challenges for Southeast Asian studies far beyond the problematization of the geographical notions of Asia. The misguided direction that does not understand the necessity of the humanities and area studies for an understanding of the transformations driven by the digital revolution are leading higher education to paradoxical trends. These trends are beneficial to neither the understanding of the transformations nor to higher education and area studies. On the other hand, to renew its relevance and to increase the value of Southeast Asian studies, it must recognize the changing environments for such kinds of knowledge and respond to the demands of the new era. To turn challenges into opportunities, I believe, Asian and Southeast Asian studies in Asia should not and cannot replicate the American area studies or the Cornell model of Southeast Asian studies. Perhaps, they should not follow the "humanistic turn" either. Instead, they should develop their own "style", emphasis, priority in the process of responding to the new era and new demands within the conditions given by their histories of higher education. It is possible, in my view, that the increasing resources and opportunities in Asia may facilitate the emergence of the next generation of Southeast Asian studies in Asia.

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