

*Hans Kuijper**

What's wrong with the study of China/countries

All things are one. (*Heraclitus*)

There is nothing isolated. (*Zhu Xi*)

Tout tient à tout. (*French proverb*)

ABSTRACT

In this paper¹ the thesis is submitted that there is something fundamentally amiss in Western Sinology (*Zhōngguóxué*, as distinct from *Hànxiué*, which is a kind of old-fashioned philology aggrandised with quasi- if not pseudo-philosophy): “China experts” either tacitly pretend to be knowledgeable about everything related to China, in which case they cannot be taken seriously, or reluctantly admit not to be scientific all-rounders with respect to the country, in which case they cannot be called China experts. The author expects no tenured professor of Chinese Studies/History and none of his/her devotees to share this view. Having exposed the weakness, indeed the scandal of Sinology as practised thus far, he also points out the way junior China-students should go. The fork in that road is two-pronged: translating or collaborating.

KEYWORDS: Sinology, area/country studies, complexity, scientific collaboration, e-research

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¹ This paper is the shortened and updated version of the article “Uplifting the Study of China”, which can be downloaded for free at the Academia.edu website. With the article “Is Sinology a Science?” (Kuijper 2000) we attempted the ball to start rolling. Our message having fallen on deaf ears, however, we found solace in Seneca’s saying: *Silentium videtur confessio*.

Introduction

To mark its 50th anniversary, in April 2003, the Institute of International Relations, a think tank affiliated with the National Chengchi University, in Taipei, published a double issue of its flagship journal *Issues & Studies* on “The State of the China Studies Field”. The reasons given for this laudable initiative were: *a*) “the major jump in both data output within China and access to this data by scholars from outside the PRC”, and *b*) “the dramatic increase in the number and types of individuals analyzing China”. However, the reader who expects to find a critical assessment of how China has been studied will be disappointed. The (mainly Western) contributors to the special issue ignore the elephant in the room. None of them is brave enough to ask the key question: of all the Western scholars having occupied themselves with the “curious land” (David Mungello), who has really been in the business of “analyzing China”, *qua* China? We think the sad answer to this perfectly legitimate question is: nobody has! Let us explain.

The Study of China Evaluated

Sinologists — taken as such (students of *China*) and, we wish to stress, not taken as, *e.g.*, literary students engaged in the study of *Chinese* literature, or economists specialising in the *Chinese* economy — share a common interest in China, just as Japanologists share a common interest in Japan (and Sovietologists shared a common interest in the erstwhile Soviet Union). However, Sinology — and the same holds, *mutatis mutandis*, for any other country study — is not defined by the perspective on the object of inquiry (China) but by the object itself. “China students” (not: Chinese students!) have no tidy description of their enterprise; they omit to specify or develop their distinct research question and do not have a “research programme” (Imre Lakatos). Describing the scientific discourse is a prerequisite for meaningful exchange of ideas, but this requirement seems to have slipped from memory in the China debate. As a result, quite a bit of ambiguity has spread, which in turn has led to murky results. Sinologists are not in search of systematised/ordered knowledge of China *qua* China. Consequently, they do not see the structure of the country, its tapestry, its *Gefüge*, the intimate connections between its components, the features that determine its look and feel, the whole that differs from the sum of its parts. Nor do they see the structure change (*Strukturwandel*), the change pattern (*Wandlungsstruktur*), the interlocking/interactive relations between the transformations of the compound (the country).

“China scholars” do not really conceive of the enormous mass of things Chinese as belonging together, as constituting *one* thing. Having a material object, an *explanandum* (China), they do not have a formal object, an *explanans* (Sinological viewpoint), a fact they conveniently forget, try hard to

gloss over, or do not like to be reminded of. Sinologists have not developed a domain ontology; they have no command of a body of theoretical concepts that would put them on the same footing as, but differentiate them from, linguists, literary students, demographers, geographers, archaeologists, law students, psychologists, sociologists, anthropologists, economists or political scientists, professionals who increasingly collaborate in international and — more important — interdisciplinary projects. The cosmos, the earth, the biosphere, man, language and society are the *explananda* studied by cosmologists, geologists, biologists, anthropologists, linguists and sociologists respectively, each group being divided into — ideally — intercommunicating subgroups. Sinologists, however, are holding their own territory but do not have their own theory. There is no Sinological counterpart of Franz Boas, Noam Chomsky, Ferdinand de Saussure, Georges Dumézil, Émile Durkheim, Ronald Dworkin, Mircea Eliade, Norbert Elias, Henri Fayol, Northrop Frye, Clifford Geertz, Erving Goffman, Torsten Hägerstrand, Herbert Hart, Leonid Kantorovich, John Maynard Keynes, Philip Kotler, Claude Lévi-Strauss, Kurt Lewin, Yuri Lotman, Erwin Panofsky, Jean Piaget, Adolphe Quételet, John Rawls, Carl Ritter, Georg Simmel, Herbert Simon, Ninian Smart, Herbert Spencer, Jonathan Turner, Ludwig von Bertalanffy, Léon Walras, Max Weber or Wilhelm Wundt.

The way of finding out whether Sinologists really are what they pretend to be (experts on China) is making inquiries how comfortable they are with quantitative reasoning and information technology, about their familiarity with mixed methods research, how they classify their subjects, about the key terms of their debate, about the property of the relations between their master concepts, about their argument's assumptions, about the kind and number of hypotheses they have framed, about the Grundstein and Gipfel of their conceptual Gebäude, about the core subject (problématique) of their discipline, about its highways and byways, about the landmarks/milestones in its history, or about the central point that assures its unity. Such a point would be a "black hole", eine grundlegende Aporie, like the relationship between the continuous and the discrete in mathematics, between spacetime and matter in physics, between body and mind in psychology, between man and society (Mitwelt) in sociology, between natural law and legal positivism in jurisprudence, between efficiency and justice in economics, or between organisms and their natural environment (Umwelt) in ecology.

"China experts" have a keen eye for details but do not let them speak as parts of a whole. They do not have an architecture for organising the details, for presenting them into an intelligible system. Their writings excel in multitude rather than plenitude, in *multa* instead of *multum* (Pliny). We are provided with an aggregate but not with a whole, with a heap of stones (a few segments at most) but not with a well-founded and well-structured

house, *i.e.* with a **model representing China in and of itself**, as a complexity of coupled human and natural systems.² The mosaic, the score, the wiring of the country is not given. “The one is not shown in the many and the root is not connected with the twigs” (一不显于多, 本不贯于末). To be sure, the *plures* are insignificant so long as the *unum* is elusive. For “*Im Aufbau des Ganzen werden die Züge erst bedeutend*” (Goethe). In order to comprehend something, it is crucial to be able to see the ordinary in the extraordinary (type-token distinction).³ Not having their own model, and mistaking the cramming of facts for discernment in selecting the important ones, Sinologists are, therefore, not entitled to wear the sacred mantle of science, the hallmark of which is empirically and theoretically founded, systematised knowledge.

“China students/scholars/experts”, taken literally, are undisciplined academics, dabbling in Chinese language, culture and history, but unable to point out the endogenous and exogenous variables of their research, let alone the (form of the) relations prevailing among them. Their publications, displaying breadth of scholarship rather than depth of insight, contain copious footnotes but a rigorous, sustained and substantive argument is difficult to find. Nobody knows whether their investigations suggested, or were guided by, a Sinological theory. Labouring through their (sometimes aggressively marketed) books, one feels like looking at the stars in company of an amateur astronomer, who keeps on pointing at glowing dots and hazy streaks in the night sky — without a powerful telescope, without

² There are iconic, analog, animal, verbal, symbolic, data-based, theory-based, deterministic, stochastic, quantitative, qualitative, mechanistic and computational models. Visit http://en.wikipedia.org/wiki/scientific_modelling, www.dur.ac.uk/ias/modelling, www.helsinki.fi/tint/models and <http://www.muellerscience.com/ENGLISH/model.htm>. Also see Magnani and Nersessian (2002), Rose and Abi-Rached (2013, pp. 92–102), and Morrison (forthcoming). Though models are always wrong (because the real world is more complex), modelling, *i.e.* approximating, is the essence of scientific labour. Models can be integrated; see Gray (2007, Preface). Metamodels, which are closely related to ontologies, highlight the properties of models; see Caplat (2008). Model theory (<http://plato.stanford.edu/entries/model-theory>) forms an integral part of mathematical logic (<http://settheory.net/world>), which is an important subfield of mathematics and should be distinguished from philosophy of mathematics (<http://plato.stanford.edu/entries/philosophy-mathematics>), which, lying at the deep end of epistemology and its twin brother metaphysics, occupies a special place in the philosophy of science. Compared to this, philosophical logic and philosophy of logic are different ballgames.

³ Visit <http://plato.stanford.edu/entries/types-tokens>. Perhaps uniquely, art — and culture historian Jacob Burckhardt (1818–1897) knew how to describe “*das Einzelne als Andeutung für das Typische*”.

any attempt to reduce the incomprehensible multiplicity of the universe to a comprehensible simplicity, to design a theory, that is. To be convinced of this, the reader should open a volume of *T'oung Pao*, “the foremost journal on Sinology, covering history, literature, art, history of science, in fact, almost anything that concerns China”.

The study of China in the West has a long history, but a coherent scheme of basic concepts concerning China *qua* China has never been developed, the meaning of which can only be: the country, now rapidly moving to the centre stage (economically, politically, and — the West fears — militarily), has never been truly analysed. It has been variously (and wildly) speculated but never really theorised about. A host of distinguished scholars has amassed facts and figures about (pre)Imperial, Republican and Communist China, but none of them seems to have attempted to reduce the incomprehensible multiplicity of this universe to a comprehensible simplicity. *Monumenta Serica*, another important scholarly journal, founded in 1934 and devoted to China, runs into 64 volumes, with an average of more than 500 pages, but features no article on the foundations/underpinnings of sinology. *Principia Sinologica* is the title of a book yet to be written.

The study of China belongs to the fuzzy category of “area studies”, the numerous practitioners of which seem to believe they can do without a textbook comparable to, say, Samuelson and Nordhaus (2009), Heywood (2013) or Nolen-Hoeksema et al (2014). Basically disoriented, they still have to get their act together by organising themselves, as the members of the International Geographical Union (IGU) and the International Union of Anthropological and Ethnographical Sciences (IUAES) did. There is need for an international journal devoted to the history, theory, methodology and philosophy of area/country studies, the unclassifiable animals among academic disciplines.

Countering Likely Objections

It may be objected that China is a country *sui generis*, and that notions having their origin in the West are not applicable to it, all the more so because the connotations and denotations of the words concerned have changed in the course of time. The central proposition of those who adopt this relativistic attitude is that China must be understood from within. Indigenous terms such as *bian* (变, 辩), *chang* (常), *cheng* (诚), *dao* (道), *de* (德), *di* (帝), *dun* (顿), *fa* (法), *gong* (公), *gu* (故), *he* (和), *hua* (化), *huang* (皇), *ji* (机, 极), *jing* (敬), *jue* (觉), *kong* (空), *li* (礼, 理), *ling* (灵), *mei* (美), *min* (民), *ming* (名, 命), *pin* (品), *pu* (朴), *qi* (奇, 气), *quan* (权), *rang* (让), *ren* (仁), *shan* (善), *shen* (神), *sheng* (圣), *shi* (势, 是, 时, 事, 实), *shu* (恕, 术), *ti* (体), *tian* (天), *tiao* (调), *tong* (通, 同), *wei* (为), *wen* (文), *wu* (无, 悟), *xiao* (孝), *xin* (心, 信), *xing* (性, 行, 形), *xu* (虚), *xuan* (玄), *xue* (学), *yi* (一, 义, 艺, 易), *yong* (用), *you* (有), *yu* (宇), *yuan* (元, 缘), *zhen*

(真), *zhi* (致, 知, 智), *zhong* (中, 忠) and *zhou* (宙) should be the analytical categories, and scholarly research should be presented within their framework. China can never be understood from without, a conviction upheld by the Chinese themselves, particularly by those having a strong sense of nationalism. However, this line of reasoning cannot be taken without some qualifications:

Firstly, bringing out different translations of the same indigenous term, Sinologists come under the suspicion of simply not knowing what they are talking about. On this account, the reader should compare Feng (1953) with Cheng (1997), Cheng and Bunnin (2002), Cua (2003), Jullien (2007), Lai (2008), Zufferey (2008), Mou (2009) and Fraser (forthcoming). For example, *ti* (体) is confusingly rendered into “substance”, “body”, “model”, “style”, “principle”, “method”, “genre”, “essence”, “form”, “trend”, “nature”, “unity”, “*noumenon*”, “vigour”, “reality”, “foundation”, “constitution”, “*constitutivité*”, and “bone-structure”. Rendering *ti* into, say, “substance” is to overlook a fundamental difference between the Western and Chinese way of thinking. Whereas philosophy in the West, since Aristotle, has been biased in favour of “substance” (what a thing really *is*, without its accidental properties), Chinese educated in the wisdom of the *Yijing* and the *Daodejing* conceive of everything as something “all the time on the way to be something else” (Joseph Needham). Taking a dynamic/evolutionary/processual perspective reminiscent of Whitehead’s *Process and Reality* (Helin et al 2014, Chapters 2 and 4), they consider everything and everybody as fundamentally *changing over time* instead of *existing at some time*. Where Westerners would say “yes”, or “no”, Chinese, reluctant to embrace the “law of excluded middle”, reasoning “non-monotonically” and going beyond the “square of opposition” (Béziau and Gan-Krzywoszynska 2014, Ficara 2014), are likely to answer: “Well, not exactly”. They are alien to the philosophical concept of ontology and never engaged in a discussion about the distinction between *esse*/existentialism and *essence*/essentialism. They see *relations* as being essential (reality). They emphasise situation, position and *guanxi* (Yang 1994), because, in their view, being is belonging, *esse est inter-esse* (being-in-between), spatially, temporally, socially or otherwise. For them, individuals/entities are intersections/nodes of relationships. Chinese have difficulty in understanding Plato’s dialogue *Phaedrus*, in which Socrates speaks, without fatuous redundancy, of the superlative reality of the forms as “really real reality”. The theological doctrines of “consubstantiality” and “transubstantiation”, over which so much ink and blood were spilt in the West, are beyond them, because they fail to see the (importance of the) difference in meaning between *homoousios* (of same substance) and *homoiousios* (of similar substance). In contrast to Westerners, who have been deeply influenced by,

and are only just beginning to distance themselves from, the Aristotelian-Cartesian-Newtonian preference for causative/serial/catenary/linear thinking (events/actions are concatenated), Chinese have been emphasising the importance of correlative/web-like/matrical/structure-related/nonlinear thinking (events/actions are multidirectionally interwoven, correspond to each other). They are geared to the “whatness” instead of the “thatness” of things. Adhering to Sunzi’s *weiqi* logic, they are not disposed to the Western logic of identity (logocentrism). In their view, *difference* (otherness) is prior to, and a condition of, *identity* (sameness); it is not itself identifiable (Kaipayil 2009, Taddei-Ferretti 2012, Vandermeersch 2013).

Concepts constitute the building blocks of man’s thinking and galvanise him into action; they form, subtly interconnected, the fabric of his life. Consequently, as long as some important notions and their cognates remain vague, others must share this defect, making human thought and behaviour elusive. The requirement not to be vague about ideas that have been most potent and persistent in Chinese history is thus paramount. Though the argument about “meaning” continues (especially among philosophers), with the *Siku Quanshu* (Emperor Qianlong’s library, counting about 840,000,000 characters) now electronically accessible and various types of computer software available, a thorough investigation of the interconnected concepts basic to Chinese thinking through the ages has been greatly facilitated, a plain fact most “China experts” are not aware of, as an unbiased sample taken from the membership of SACP, ISCP, EACS, ACPA and EACP may reveal.

Secondly, epistemic relativism, the view that the truth of knowledge-claims is relative to the standards a society/culture uses in evaluating such claims, is an incoherent doctrine, unable to defend itself, because, if it is right, the very notion of rightness is undermined, in which case epistemic relativism itself cannot be right. However, if the relativistic stance is untenable, the non-relativist (universalist) also faces a tall problem: how to develop a view that includes an acceptable account of rationality and rational justification which is non-dogmatic, rejects any notion of a privileged framework in which knowledge-claims must be couched, and is self-referentially coherent (Krausz 2010). Universalists tend to be ethnocentric, arrogant and intolerant. We disagree with the relativist, who maintains that culture-bound disciplines are blocking our ability to understand another country, but we also have a different opinion from the universalist, who denies this.

The “emic-etic debate” among cultural anthropologists revolves around the question whether an account of actions should be given in terms that are meaningful to the actors belonging to the culture under study, or in terms applicable to actions in other cultures as well. Whereas the emic perspective

focuses on intrinsic distinctions, only meaningful to the members of a given society, the etic view relies upon the extrinsic concepts and categories of scientific observers. This contradiction seems to be mistaken, for the points of view can be reconciled. A sensible *combination* of the emic and the etic lens yields a binocular vision, making depth perception possible (Kuijper 2014).

The fact that the great bulk of the ordered knowledge of social and human scientists is only based on the investigation of Western data does not imply the impossibility of cross-cultural dialogue, being a process in which the parties gradually *learn* to understand each other. The Okanagan (syilx) people, living in British Columbia and Washington (State), call this *en'owkin*, understanding through a gentle process of clarification and integration. A dialogue is not a debate. The former is geared to reaching an agreement (consensus), the latter to scoring a victory (meaning: somebody else's defeat!); the one aims at inclusion, the other at exclusion. In an "authentic dialogue" (Gadamer) the participants do not talk at cross-purposes (*dialogue de sourds*) but actively listen to each other; rather than being bent on proving themselves right, they are eager to gain insight. A dialogue, or *samvāda* (Mayaram 2014), being a real, genuine conversation, will inevitably lead to comparing (not to be confused with equating), to the placing together and examining of two things in order to discover similarities and differences, an activity that plays a crucial role in every scientific discipline. And this comparing (which should never be the comparing of an ideal situation here with the messy reality there!) may result in a change of mind, a mental leap, a conceptual re-configuration.

It may also be objected that after the Second World War Sinology split in specialisms, making the jacks-of-all-trades-but-masters-of-none with regard to China a dwindling species. We think this assertion is to be taken *cum grano salis*. The change from "China study"/"Chinakunde" to "Chinese studies"/"Chinawissenschaften", or "*Sinologie als eine willkürliche Ansammlung von Einzelfächern*" (Hans-Wilm Schütte), has not improved the situation. On close inspection, many so-called experts, focusing on one or another aspect of China, turn out to be amateurs only — sometimes gifted amateurs, able to express their ideas and opinions well, but non-professionals nonetheless.

What is necessary here is to "rectify names" (*zhengming*). For Confucius said: "If names are incorrect, language is not in accordance with the truth of things, and if language is not in accordance with the truth of things, affairs cannot be carried on to success" (*Lunyu*, Book XIII, Chapter 3). "Professor of Chinese" doesn't make sense (not any more than "professor of life", "professor of man", or "professor of society" does), unless this appellation of distinction is shorthand for "professor of linguistics with principal research interest in the *Chinese* language, or linguistics in China". In

much the same vein, we doubt whether every “professor of Chinese literature” can be safely assumed to hold an academic degree in literary studies. “Lecturer/reader in Chinese economics” will not do either, for *Chinese economics* is a nonexistent subject matter. To be sure, Chinese economists lecturing on the economy of, or the application of economic theory in, China (or another country) *do* exist. There are Chinese, Japanese, American, Indian, Arabic, Russian, European and Australian logicians, mathematicians, scientists and philosophers, some of them being of high caliber, but there are not, and cannot be, such things as Chinese, Japanese, American, Indian, Arabic, Russian, European and Australian logic, mathematics, science or philosophy, a major point many Sinologists/area-students, muddle-headed about the subject they are writing on, seem to overlook.

Many “China experts”, acknowledging the impossibility of being a scientific all-rounder in regard to the country, have the bad habit of putting on the hat of a scientist without filling his shoes, that is, the habit of delivering lectures on the Chinese language, communication style (media), literature, legal system, political system, military system, educational system, health care system, financial system, economy, taxation, agriculture, energy sector, transportation sector, business activities, society, art(s), religion(s), psyche, culture or environment without any degree in linguistics, communication/media studies, literary studies, law, political science, military science, educational science, medicine, (corporate, public or international) finance, economics, taxation theory, agronomy, energy science, transportation studies, business administration, sociology, art history/criticism, science(s) of religion, psychology, *Kulturwissenschaft(en)* or ecology/sustainability science respectively. Only a few “China experts” have taken the trouble to obtain a degree in any of the disciplines mentioned before ascending the pulpit. However, lecturing on a subject that lies within their purview, they often stray into forbidden domains — without duly notifying their credulous and gullible audience.

More, much more interesting things could be written on, for example, the concept and practice of law in China if, paradoxically, the authors were also well up in the writings of Plato, Cicero, Aquinas, Suárez, Althusius, Grotius, Hobbes, Pufendorf, Montesquieu, Cesare Beccaria, Jeremy Bentham, John Austin, Henry Maine, Oliver Wendell Holmes, Otto von Gierke, François Gény, Roscoe Pound, Benjamin Cardozo, Giorgio Del Vecchio, Gustav Radbruch, Hans Kelsen, Carl Schmitt, Karl Llewellyn, Herman Dooyeweerd, Alf Ross, Lon Fuller, Patric Devlin, Herbert Hart, Julius Stone, Norberto Bobbio, Harold Berman, John Rawls, Joel Feinberg, Ronald Dworkin, Joseph Raz, Richard Posner, John Finnis, Duncan Kennedy, Robert Alexy, Roberto Unger, Jeremy Waldron, Ernest Weinrib, Dennis Patterson, and Andrei Marmor, among others.

Similarly, books, or articles, about “Chinese art” would tremendously gain in importance if, in a way that only *seems* to be contradictory, the writers thereof were acquainted with the aesthetic views of Plato, Aristotle, Plotinus, Brunelleschi, Alberti, Hume, Baumgarten, Winckelmann, Kant, Burke, Lessing, Schiller, Hegel, Coleridge, Schopenhauer, Kierkegaard, John Ruskin, Nietzsche, Heinrich Wölfflin, Benedetto Croce, Clive Bell, Collingwood, Erwin Panofsky, Walter Benjamin, Roman Ingarden, Susanne Langer, Hans-Georg Gadamer, Theodor Adorno, Harold Osborne, Nelson Goodman, Maurice Merleau-Ponty, Ernst Gombrich, Clement Greenberg, Mikel Dufrenne, Monroe Beardsley, Richard Wollheim, Frank Sibley, Arthur Danto, Joseph Margolis, George Dickey, Stanley Cavell, Jacques Derrida, Roger Scruton, and Noël Carroll, among others.

A mature science consists of several subdisciplines. The workers in these special vineyards occupy themselves with a part without losing sight of the whole (see note 3). Biology, for example, deals with living things at different levels in the biosphere (as distinct from the litho-, hydro-, atmo- and noosphere). Its growth was triggered by a division of labour. Zoologists are interested in animals, ethologists in their behaviour, botanists in plants, mycologists in fungi, phycologists in algae, and microbiologists in bacteria and viruses. Here the ramification does not stop. Mammalogists are concerned with mammals, entomologists with insects (which are divided into creatures such as ants, bees, beetles, bugs, butterflies, cicadas, cockroaches, dragonflies, earwings, fleas, flies, grasshoppers, lice, mayflies, mosquitos, moths, termites, thrips, ticks and wasps [Resh and Cardé 2009]), carcinologists with crustaceans, arachnologists with spiders and their relatives, ornithologists with birds, oologists with their eggs, nests and breeding behaviour, ichthyologists with fishes, malacologists with molluscs, nematologists with roundworms, helminthologists with parasitic worms, and herpetologists with reptiles and amphibians. The point is that, despite their differences, all the divisions and (sub-)subdivisions are interrelated; mother, daughters and (great-)granddaughters are akin. The splitting of biology in specialisms has been guided by the same principles. There may be differences in dialect, the *language* spoken is the language of biologists, “cell”, referring to the smallest 3D structure of a living thing, being their key concept. After World War II, Sinology also started to diversify. By any stretch of the imagination, though, we cannot see how the (sub)subgroups thereof form a family; there is no intellectual kinship, no scientific lineage, no academic genealogy. The new style “China experts” have nothing in common — in a distinctively scientific manner, that is. They still have no command of a characteristic network of basic notions related to *China*. There is an endless stream of books and articles “about China”, but there is no real *Sinological* debate. There are no schools of *Sinological* thought (comparable to schools of thought in political science, law, IR theory, psychology, learning theory,

sociology, cultural anthropology, linguistics, literary theory, economics, or philosophy), simply because there is no *Sinological* language, a remarkable fact that seems to have gone unnoticed.

The claimed post-war “split of Sinology in specialisms”, said to have occurred in the USA and to have been slavishly followed in other countries, is a case of deceptive appearances. Books giving a general picture of China keep on rolling from the press, books not written by reporters, whose unscientific *modus operandi* may be excusable, but by tenured professors. Whoever believes that the all-rounders in respect of China are dead and gone is grossly mistaken. The *touche-à-tout sans profondeur* is still around; the jacks-of-all-trades-but-masters-of-none (or: only-one) are still alive and kicking. Some of these all-purpose China scholars do not even shrink from predicting the country’s future (*vide infra*, note 30), clearly unaware of the nonlinear-science revolution of the 1970s, that emphasised the certainty of uncertainty (the conventional idea of probability was already challenged in 1921 by John Maynard Keynes) and led to a redefinition of causality (Scott 2007, pp. 9–18). If pretending to be, or making no objection to be introduced as, an expert on some aspect of China, without a degree in the discipline concerned, is reprehensible, downright unforgivable is it to make no bones about changing bonnets and to masquerade as connoisseur of China *tout court*. Those who are guilty of doing so (one only needs to listen to the China pundits affiliated with the Brookings Institution or featuring in a TV programme like “Fareed Zakaria GPS”) corroborate Alexander Pope’s statement: “Fools rush in where angels fear to tread”.

The Way Ahead

What is to be done? Advising “China experts” to go home and to look for another job is certainly not what we are thinking of. For one shall not throw the baby out with the bath water. Sinologists are (we dare to hope) fluent in classical and modern Chinese. So, first and foremost, let them cultivate their talent! There are plenty of books eagerly awaiting translation.

Over the last 150 years or so, numerous books belonging to any of the four categories into which Chinese bibliographers traditionally put their sources, viz “classics” (*jing*), “history” (*shi*), “philosophy” (*zi*), and “literature” (*ji*), have been translated into a European language. However, not every author who has participated in the great Chinese conversation about the basic principle of order (in nature and society) has found a translator of his work, the assiduity and diligence of Édouard Biot, Cyril Birch, Édouard Chavannes, Séraphin Couvreur, Robert des Rotours, Homer Dubs, Jan Duyvendak, Alfred Forke, Esson Gale, Olaf Graf, David Hawkes, James Hightower, Wilt Idema, Wallace Johnson, David Knechtges, John Knoblock, Franz Kuhn, James Legge, Victor Mair, Göran Malmqvist, Georges Margouliès, Richard Mather, William Nienhauser, Max Perleberg,

Rainer Schwarz, Nancy Lee Swann, Erwin von Zach, Arthur Waley, Burton Watson, Stephen West, Richard Wilhelm, Martin Woesler and other translators notwithstanding.

Remarkably, there is no translation of the Great Books of the Chinese World, comparable to the *Great Books of the Western World*. The latter, published by Encyclopædia Britannica, Inc., is a set of 60 volumes containing 517 works (by 130 authors) in mathematics, physical sciences, life sciences, social sciences, history, philosophy, and imaginative literature. Three criteria governed the selection (by Robert Hutchins and Mortimer Adler) of these books, which made their appearance in a time span covering more than 25 centuries (from Homer's *Iliad* and *Odyssey* to Claude Lévi-Strauss' *Structural Anthropology*). They were chosen by virtue of their dealing with issues, problems or facets of human life that are of major concern today as well as at the time in which they were written. They are worth reading carefully many times or studying over and over again. And they have very broad and general significance; their authors have something of importance to say about a large number of great ideas making up the abstract and complex infrastructure of Western thought.

Only a fraction of the rich Chinese literature has found its way to Gallimard's world-famous *Bibliothèque de la Pléiade*. The integral, annotated translation of the *Zhengshi* [Dynastic Histories], the importance of which can hardly be exaggerated, is the dream of many historians. Sima Guang's *Zizhi Tongjian* [Comprehensive Mirror for Aid in Government]; the *Shitong* [Ten Encyclopedic Histories of Institutions]; the monumental *Gujin Tushu Jicheng* [Complete Collection of Illustrations and Writings from the Earliest to Current Times], which — in the 18th century — attempted to embody the whole of China's cultural history; Shen Kuo's *Mengxi Bitan* [Dream Brook Brush Talks]; Li Jie's *Yingzao Fashi* [Treatise on Architectural Methods]; the extant collections of *Zhaoling Zouyi* [Edicts and Memorials]; the treasure troves known as *Daozang* [Daoist Canon], *Daozang Jiyao* [Essentials of the Daoist Canon] (extra-canonical texts) and *Dazangjing* [Chinese Buddhist Canon]; the invaluable Dunhuang manuscripts; and thousands of *Difangzhi* [Local Gazetteers] are waiting to be (further) opened up by Sinologists for scientists unable to read Chinese. So are the works mentioned in the three-volume *Zhongguo Fazhishi Shumu* [Annotated Bibliography of the History of China's Laws and Institutions], compiled by Zhang Weiren and published, in 1976, by Academia Sinica. In addition, a new, philosophically as well as historically annotated translation of the *Zhuzi Jicheng* [Complete Collection of the Works of Ancient Philosophers] in which the important distinctions between words/characters,

thoughts and things (objects, events, or actions) are not blurred⁴ would be welcome. Furthermore, an incomplete list of modern and contemporary books deserving (in our view) to be translated reads as follows:

- Jin Yuelin, *Luoji* [Logic], 1935;
- Yang Honglie, *Zhongguo Falü Sixiang Shi* [A History of Chinese Legal Thought], 1936;
- Fu Qinjia, *Zhongguo Daojiao Shi* [The History of Daoism in China], 1937;
- Cai Yuanpei, *Zhongguo Lunlixue Shi* [A History of Chinese Ethics], 1937;
- Tang Yongtong, *Han Wei Liangjin Nanbei Chao Fojiao Shi* [The History of Buddhism in the Han, Wei, Jin, and Northern and Southern Dynasties], 1938;
- Feng Youlan, *Zhen Yuan Liu Shu* [Six Books on Purity and Primacy], 1939–1946;
- Jin Yuelin, *Lun Dao* [On Dao], 1940;
- Sun Benwen, *Shehuixue Yuanli* [Principles of Sociology], 1944;
- Chen Yinke, *Tangdai Zhengzhi Shi Shulungao* [Draft of a Political History of the Tang Dynasty], 1946;
- Zhang Dongsun, *Zhishi yu Wenhua* [Knowledge and Culture], 1946;
- Liang Shuming, *Zhongguo Wenhua Yaoyi* [The Essence of Chinese Culture], 1949;
- Hou Wailu, *Zhongguo Sixiang Tongshi* [Comprehensive History of Chinese Thinking], 1957–1963;
- Xiong Shili, *Tiyonglun* [On *Ti* and *Yong*], 1958;
- Xiong Shili, *Mingxinpian* [Illuminating the Mind], 1959;
- Hu Jichuang, *Zhongguo Jingji Sixiang Shi* [A History of Economic Thought in China], 1962–1981;
- Chen Guofu, *Daozang Yuanliu Kao* [On the Origin and Development of the Daoist Canon], 1963;

⁴ See Reck (2013, 1–13 and 21–23). Readers interested in analytic(al) philosophy, as distinct from continental philosophy, should read Vrahimis (2013), compare Soames (2014) with Schrift (2010), and visit www.iep.utm.edu/analytic, http://en.wikipedia.org/wiki/index_of_continental_philosophy_articles, <http://www.routledge.com/books/series/SE0159>, <http://universitypublishingonline.org/cambridge/histories> (click on “philosophy”), <http://www.atiner.gr/philosophy.htm>, <http://philosophy.wisc.edu/jhp> and www.esap.info. The Cambridge Companions to Philosophy series, Rödl et al (1984 ff), and Santinello & Blackwell (1993 ff) are for the advanced student. Kenny (2012) is monumental. http://en.wikipedia.org/wiki/index_of_philosophy, <http://philindex.org> and <http://www.philosophypages.com/dy> are handy tools for doing philosophical research. “&HPS” shows that history and philosophy (of science) can be integrated.

- Zhou Jinsheng, *Zhongguo Jingji Sixiang Shi* [A History of Economic Thought in China], 1965;
- Xu Fuguan, *Zhongguo Yishu Jingshen* [The Aesthetic Spirit of China], 1966;
- Yin Haiguang, *Zhongguo Wenhua de Zhanwang* [The Future of China's Culture], 1966;
- Tang Junyi, *Zhongguo Zhexue Yuanlun Yuanxing Pian* [Fundamental Discussions of Chinese Philosophy: Human Nature], 1968;
- Mou Zongsan, *Xinti yu Xingtai* [Mind and Nature], 1968;
- Tang Junyi, *Zhongguo Zhexue Yuanlun Yuandao Pian* [Fundamental Discussions of Chinese Philosophy: Dao], 1973;
- Qian Mu, *Guoshi Dagang* [Outline of (Our) National History], 1974;
- Lao Sze-kwang, *Zhongguo Zhexue Shi* [A History of Chinese Philosophy], 1974–1981;
- Tang Junyi, *Shengming Cunzai yu Xinling Jingjie* [Human Existence and Spiritual Horizon], 1977;
- Li Zehou, *Zhongguo Jindai Sixiang Shilun* [Historical Treatise on Modern Chinese Thought], 1979;
- Zhu Guangqian, *Tan Meishu Jian* [Letters on Beauty], 1980;
- Zhang Dainian, *Zhongguo Zhexue Dagang* [Outline of Chinese Philosophy], 1982;
- Jin Yuelin, *Zhishilun* [Theory of Knowledge], 1983;
- Huang Gongwei, *Fajia Zhexue Tixi Zhigui* [Guide to the System of Legalist Philosophy], 1983;
- Sun Longji, *Zhongguo Wenhua de "Shenceng Jiegou"* [The "Deep Structure" of Chinese Culture], 1983;
- Liang Shuming, *Renxin yu Rensheng* [Human Heart and Human Life], 1984;
- Sa Mengwu, *Zhongguo Zhengzhi Sixiang Shi* [A History of Chinese Political Thought], 1984;
- Wu Hui, *Zhongguo Gudai Liu Da Jingji Gaigejia* [Six Great Economic Reformers in Ancient China], 1984;
- Mou Zongsan, *Yuanshanlun* [A Treatise on the Highest Good], 1985;
- Shen Jiaben, *Lidai Xingfa Kao* [On the Penal Code in Successive Dynasties], 1985 (reprint);
- Li Zehou, *Zhongguo Gudai Sixiang Shilun* [Historical Treatise on Ancient Chinese Thought], 1985;
- Li Yuri, *Sunzi Bingfa Yanjiu* [Studies on Sunzi's Art of War], 1986;
- Tao Jianguo, *Liang Han Wei Jin zhi Daojia Sixiang* [Daoist Thought in the Han, Wei and Jin Dynasty], 1986;
- Li Zehou, *Zhongguo Xiandai Sixiang Shilun* [Historical Treatise on Contemporary Chinese Thought], 1987;

- Jin Wulun, *Wuzhi Kefenxing Xinlun* [A New Theory on the Divisibility of Matter], 1988;
- He Lin, *Wenhua yu Rensheng* [Culture and Human Life], 1988;
- Zhu Bokun, *Yixue Zhexue Shi* [A History of the Philosophy of Yi(jing) Study], 1988;
- Tang Liquan, *Zhouyi yu Huaidehai zhi Jian* [Between the *Yijing* and Whitehead], 1989;
- Li Kuangwu, *Zhongguo Luoji Shi* [A History of Chinese Logic], 1989;
- Huang Renyu, *Zibenzhuyi yu Nianyi Shiji* [Capitalism and the 21st Century], 1991;
- Hu Weixi, *Chuantong yu Renwen* [Tradition and Culture], 1992;
- Gu Xin, *Zhongguo Qimeng de Lishi Tujing* [History and Prospect of Chinese Enlightenment], 1992;
- Zhang Dainian, *Zhang Dainian Xueshu Lunzhu Zixuan Ji* [Collection of the Academic Writings of Zhang Dainian Selected by Himself], 1993;
- Feng Qi, *Zhizhi San Lun* [Three Essays on Wisdom], 1994;
- Zhang Liwen, *Zhongguo Zhexue Fanchou Jingxuan Congshu* [Compendium of Selected Categories in Chinese Philosophy], 1994;
- Chiu Hungdah, *Xiandai Guoji Fa* [Modern International Law], 1995;
- Mou Zongsan, *Renwen Jiangxilu* [Lectures on Culture], 1996;
- Chen Shaofeng, *Zhongguo Lunlixue Shi* [A History of Chinese Ethics], 1997;
- Li Qiang, *Ziyou Zhuyi* [Liberalism], 1998;
- Ge Zhaoguang, *Zhongguo Sixiang Shi* [A History of Chinese Thinking], 1998–2000;
- Bai Shouyi (ed.), *Zhongguo Tongshi* [Comprehensive History of China], 1999;
- Chen Lai, *YouWu zhi Jing* [The Border Area between Being and Non-being], 2000;
- Chen Lai, *Zhuzi Zhexue Yanjiu* [A Study of Master Zhu's Philosophy], 2000;
- Lao Sze-kwang, *Wenhua Zhexue Jiangyan Lu* [Lectures on Cultural Philosophy], 2002;
- Lao Sze-kwang, *Xujing yu Xiwang* [Illusion and Hope], 2003;
- Yu Ying-shih, *Zhu Xi de Lishi Shijie* [The Historical World of Zhu Xi], 2003;
- Zhang Jialong, *Zhongguo Luoji Sixiang Shi* [A History of Logical Thinking in China], 2004;
- Li Zehou, *Shiyong Lixing yu Legan Wenhua* [Pragmatic Reason and the Culture of Contentment], 2005;
- Sun Zhongyuan, *Zhongguo Luoji Yanjiu* [Studies on Chinese Logic], 2006;
- Zhang Liwen, *Hehexue* [The Philosophy of Harmony], 2006;

- Ji Xianlin, *Sanshinian Hedong, Sanshinian Hexi* [Thirty Years East of the River, Thirty Years West of the River], 2006;
- Lao Sze-kwang, *Weiji Shijie yu Xin Xiwang Shiji* [A World of Crisis and the New Century of Hope], 2007;
- Wang Hui, *Xiandai Zhongguo Sixiang de Xingqi* [The Rise of Modern Chinese Thought], 2008;
- Li Bozhong, *Zhongguo de Zaoqi Jindai Jingji* [China's Early Modern Economy], 2010;
- Yao Dali, *Dushi de Zhihui* [The Wisdom of Reading History], 2010;
- Liu Yingsheng, *Hailu yu Lulu* [Maritime and Continental Routes], 2010;
- Tang Yijie & Li Zhonghua (eds.), *Zhongguo Ruxue Shi* [A History of Confucianism], 2010–2011;
- Wang Liqi, *Yantielun Jiaozhu* [Discourses on Salt and Iron Collated and Annotated], 2011;
- Jin Guantao and Liu Qingfeng, *Zhongguo Xiandai Sixiang de Qiyuan* [The Origins of Modern Thought in China], 2011;
- Yi Wu, *Yijing de Chubian Xue* [Yijing: Learning to Deal with Changes], 2012;
- Huang Ying-kuei, *Wenming zhi Lu* [The Path towards Civilisation], 2012;
- Jin Yaoji, *Zhongguo de Xiandai Zhuanxiang* [China's Modern(ity) Turn], 2013;
- Yang Kuo-shu, *Zhongguoren de Jiazhi guan* [Chinese Views of Values], 2013.

Finally, over the last three decades, eminent Chinese economists have variously written about the unprecedented growth of their country's economy and the concomitant problems thereof. Their main theoretical/empirical work has, alas, seldom been translated into a Western language.

Translating, that humble, yet ever so important activity, is the strength, doing scientific research is the weakness of Sinologists not graduated in any of the social or human sciences. They should, therefore, concentrate on the former and link up with scientists for the latter. If they desire to embark on the study of a subject related to China, we would counsel them not to run the risk of being shipwrecked because of shortage of seamanship. Instead, they should look around for China oriented scientists to set up a joint venture. In this way, the party lacking disciplinary grounding has the right analytical tools at his disposal, whereas the party unable to read Chinese has access to primary sources. For "There is no more excuse for sinologists writing incompetently on technical subjects than for scientists working incompetently upon texts" (Denis Twitchett). It would be wrong, however, to conclude that partial views add up to a *Totalbild*, to a complete and coherent picture of the articulated, multileveled whole of China. What we have

got when the various joint ventures finally come out with their product is a patchwork rather than a tapestry, a juxtaposition rather than a composition, a pile of well-made bricks rather than a house, an “aggregate” (*Gesamtheit*) rather than a “whole” (*Ganzheit*).

China is a Complex System of Complex Systems

Each country is a territory-bound, history-moulded, multi-minded, at one time open, at another time closed system of inextricably intertwined physical, chemical, biological and social systems. It has a “face” (*Gestalt*), a style, a character, a distinctive “sound” or “beat”, a particular “flavor” (*rasa*), a cultural heritage expressing its soul. Constantly changing, sometimes revolutionarily, it has properties none of its constituent subsystems has (much in the same way as the nature of water is irreducible to the attributes of hydrogen and oxygen; and a computer or television picture is more than the sum total of the bits of the pixels into which it can be decomposed). Not being an aggregate of (groups of) humans who live on an expanse of land, but a superorganism, a hierarchically ordered, non-fragmentable *holon*, an exceedingly complex system of complex systems, and an intricately evolving compound/composite (the elements of which are held together by a mysterious kind of chemistry), a country cannot be understood by studying its parts one by one, by considering each or some of them out of its/their context. It can only be understood across the disciplines, that is to say, inter- or transdisciplinarily.

Like the ant that cannot see the pattern of the carpet, a country student can never grasp the whole picture of it, not only because it is hard enough to be expert in one scientific domain and enormously difficult to learn two (let alone more than two) disciplines, but also because the whole of the country is something else than the sum total of its parts. Composition goes far beyond juxtaposition. So we need genuine scientific collaboration. The human body can only be dissected/analysed at the price of cutting vital connections. Breaking a country up into morsels for scientists from separate, autonomous departments to chew on amounts to destroying a “system” (σύνστημα, *constitution*) in order to *com*prehend it. The crux of the matter is that the parts and the whole are interconnected, intertwined and interinvolved; they are inseparable from⁵ and non-subordinatable to, each other. Quite simply: it takes two to tango.⁵

Countries, big or small, have to be thrown into a fresh perspective. Concepts borrowed from the burgeoning science of complex systems must be applied to them. Studies have been done on the complexity of cells/neurons,

⁵ Language use is another form of *joint action*. See Clark (1996). “Classicism is the subordination of the parts to the whole; decadence is the subordination of the whole to the parts”, Oscar Wilde aptly said.

brains, organisms, companies/organisations, cities, polities, economies, societies, ecosystems and “social-ecological systems” (SESs), even on the complexity of the entire globe (complexity being defined as “elements that react to the pattern they together create”). It is time to explore the possibility and feasibility of studying the complexity of *countries*, of recasting the issues related to them in terms of complex systems. At this critical juncture, when mankind’s survival is at stake, we can no longer afford to think and behave as if the intricately patterned and dynamically evolving economic, financial, political, legal, military, social, cultural, educational, religious, ecological, and foreign-relations systems of a nation-state are not interconnected, are not corresponding to, interfacing with, or mapping onto each other. It is time to imagine China through the miraculous language of mathematics/logic, “the cosmic eye of humanity” (Eberhard Zeidler);⁶ time to search for equations and inequalities, intersections and interactions, (inter)dependencies and coherencies; time to look for links and loops, homologies and isomorphies, correspondences and correlations, analogies and (self)similarities, kinds and grades of embeddedness, dynamic interfaces, the relationships between structures, the invariance/constant in the variety/change; time to contextualise categories and to elucidate the pathways underlying China’s functioning; time to trace, map and computationally visualise the web of its mutually sustaining elements, the network of its variously connected and continually changing multilayered institutions; time to investigate how the whole of the country, being a huge semiotic one-many, a complex “system of systems” (SoS), is held together and differs from that of another country, like Rembrandt’s *Night Watch* from Picasso’s *Guernica*. Hopefully, the day will soon come that “China/country experts” — and their twin brothers/sisters “big historians” — see the difference between description (telling a story) and analysis

⁶ Studying relations between variables (things able to change) is what mathematics is all about. “Mathematics is concerned with the investigation of patterns of connectedness, in abstraction from the particular relata and the particular modes of connections” (Alfred North Whitehead). Zeidler (2004) emphasises the connectedness of the divisions of mathematics. Further, see Chaitin (2005), Parrochia et al (2012, *Introduction*) and Tegmark (2014). Also visit http://dsin.ku.dk/participants/key_researchers/ditlevsen and www.maa.org. See note 2. For the *history* of mathematics, visit <http://www.unizar.es/ichm>. For logic, visit <http://plato.stanford.edu/entries/logic-classical> (as well as other logic-related entries in this constantly updated philosophical database), and see the Springer book series edited by Jean-Yves Béziau, *Studies in Universal Logic* (2008 ff). Also visit <http://www.uni-log.org>. For the still evolving category theory, a conceptual framework allowing us to see how structures of different kinds are interrelated, visit <http://plato.stanford.edu/entries/category-theory>. Connection is the core of everything. *Tout tient à tout*.

(providing an explanation), and show interest in the latest developments of, and close relationships between, mathematics, philosophy and the science of (complex) systems.

Basically, complex systems scientists are exclusively interested in properties common to all complex systems, leaving it to non-formal scientists, in the fields of natural or cultural research, to study the differences between these systems. Practically, however, they confine themselves to a particular system and follow essentially one of two approaches. The first method is the building and study of a mathematical model that only contains the most important properties of the system. The tools used in such studies include, but are not limited to, dynamical systems –, game –, and information theory. The second approach is building a more comprehensive and realistic model, usually in the form of a computer simulation, representing the interacting parts/agents of the system, and then watching and studying the emergent behaviour that appears. The power of computer simulation, aka computational modelling, has far exceeded anything possible using traditional paper-and-pencil mathematical modelling. The two approaches can be combined. The science of complex systems encompasses the study of particular systems and the study of systems in general; any advance in one of them makes a contribution to the other.⁷

Mark Newman, who is associated with the renowned Center for the Study of Complex Systems, at the University of Michigan, concludes a recent survey as follows:

“Complex systems [science] is a broad field, encompassing a wide range of methods and having an equally wide range of applications. The resources reviewed here cover only a fraction of this rich and active field of study. For the interested reader there is an abundance of further resources to be explored when those in this article are exhausted, and for the scientist intrigued by the questions raised there are ample opportunities to contribute. Science has only just begun to tackle the questions raised by the study of complex systems and the areas of our ignorance far outnumber the areas of our expertise. For

⁷ Visit www.mathmod.at, <http://www.amses-journal.com>, www.socio.ethz.ch/modsim/index, www.univie.ac.at/ivc/swc. Modeling and simulation, the landscape of which expands at an impressive rate, is essentially a computational tool. Visit <http://en.wikipedia.org/wiki/simulation> and http://www.nasa.gov/sites/default/files/501321main_TA11-ID_rev4_NRC-wTASR.pdf. In addition, see the Springer book series edited by Louis Birta: *Simulation Foundations, Methods and Applications* (2013 ff). See also note 2 and 6.

the scientist looking for profound and important questions to work on, [the study of] complex systems offers a wealth of possibilities.”⁸

The science of complex systems is an early 1980s outgrowth of *a*) the science of systems (the study of the general properties of systems), *b*) cybernetics (the study of control and communication in systems), *c*) system dynamics (the study of the behaviour of complex systems over time), *d*) synergetics (the study of the fundamental principles of pattern formation in systems), *e*) nonequilibrium statistical mechanics (the study of the emergence of dissipative structures), *f*) catastrophe theory (the study of sudden shifts in the behaviour of a system arising from small changes in its environment) and *g*) mathematical biology or biomathematics (the mathematical study of the mechanisms involved in biological processes). In the late 1990s, the “complexity turn” took place: social scientists (sociologists, economists and political scientists in particular) changed their attitude to, and became increasingly interested in, complexity science.⁹

The *SAGE Handbook of Complexity and Management*, published a few years ago (Allen et al 2011), is “the first substantive scholarly work to provide a map of the state-of-the-art research in the growing field emerging at the intersection of complexity science and management studies”. Given that each company belongs to an industry (line of business), which is one of the sectors of an economy, which in turn is one of the systems a country consists of, we hope that this paper will convince the reader of the importance of redesigning Sinology, of the significance of forging bridges between complexity science(s) and “China studies”.

⁸ Visit <http://arxiv.org/abs/1112.1440>, <http://cssociety.org>, www.complexsystems.org, www.complexityexplorer.org, <http://www.philosophica.info/voces/pensamientocomplejo/PensamientoComplejo.html>, <http://www.mdpi.com/2078-2489/5/3/404/htm>, <http://main.csregistry.org/tiki-index.php?page=Complex+Systems+Institutions> and http://www.ccs.fau.edu/hbbl3/?page_id=678. Hooker (2011), Ji (2012), Starr et al (2013), Batty (2013), Clemens Jr (2013), and Faggini and Parziale (2014) are excellent complexity studies. Jencks (2003) deserves special attention (pictures!). Complexity increases as evolution proceeds (Chaisson 2001, Lineweaver et al 2013, Stewart 2014).

⁹ Explore http://en.wikipedia.org/wiki/Social_complexity, www.nessnet.eu, www.isce.edu, <http://comdig.unam.mx>, <http://cams.ehess.fr>, www.imbs.uci.edu, www.santafe.edu, www.lsa.umich.edu/cscs, <http://cnets.indiana.edu>, www.necsi.edu, www.imtlucca.it, www.complexityandsociety.com, www.eccs14.eu and <http://iccs2015.eu>. In addition, see Dimitrov (2011), Wolf-Branigin (2013), Maldonado (2013, Vol. III), Byrne and Callaghan (2014), Strathern and McGlade (2014), McCabe (2014), Jaffé (2014) and Johnson (2014). Social ontology, to be distinguished from philosophy of social science(s), is the study of social being, of the social complexity in its entirety (Pratten 2014, Chapter 1).

Scientific Collaboration

China can be compared with a brilliant-cut diamond, that sparkles in the sun. There will be no sparkling/brilliance until variously educated scientists shed light on the country, which is a multiplex reality. Having many faces/facets, it should be approached integratively, or holistically, rather than reductionistically. The scientific “attack” on China should be a concerted one; the operation should be a combined, joint effort. Like every country, it should be studied interdisciplinarily (and — to make sensible assessments possible — comparatively); it should be depicted cubistically (with different viewpoints amalgamated into a multifaceted whole), because the whole and the parts of China are mutually implicated. China is a universe the centre of which is everywhere.

There are different ways of scientific collaboration,¹⁰ but they have a common denominator. The scientists involved understand that reality, being the nexus of interrelated phenomena irreducible to a single dimension (*ordo connexio rerum*), can never be grasped by separate disciplines, which have formed the layout of universities since the 18th century. While specialisation (read: fragmentation) has yielded sharper analytical acuity within particular knowledge domains, where the *ceteris paribus* clause has been the self-imposed, unrealistic rule of operation (unrealistic because other relevant things never remain unaltered!),¹¹ the goal of reaching integrated understanding has receded. Depth of focus has been achieved at the expense of breadth of view. Some scientists begin to realise that difficult, real-life problems require the pooling of disciplinary knowledge and analytical skills. It may be very hard for one (wo)man to become an expert in two disciplines, but two (wo)men jointly well-versed and well-trained in two disciplines, e.g. physics and chemistry, chemistry and biology, biology and psychology, psychology and sociology, sociology and economics, or — and here the circle closes — economics and physics, can co-produce something of great value.

Interdisciplinary research is not a simple case of summing or aggregating several disciplines into one, multidisciplinary research project. Extra effort is needed to achieve the promise of synergy, by forming a cohesive team that combines the expertise of different (groups of) people. Cross-

¹⁰ This subject relates to the issue of unity of science. See McGuinness (1987), Wilson (1998), Damasio et al (2001), and the book series *Logic, Epistemology, and the Unity of Science* (2004 ff). Also visit www.bpb.de/apuz/30122/die-einheit-des-wissens, <http://plato.stanford.edu/entries/scientific-unity>, <http://inters.org/unity-of-knowledge> and <http://scimaps.org>.

¹¹ For more on *ceteris paribus* clauses, visit <http://plato.stanford.edu/entries/ceteris-paribus>.

disciplinary collaboration is difficult, because it is inimical to individualism and ego-tripping, requires a conceptual turnaround, lacks prestige in classical academia, seems to threaten the position of deeply entrenched colleagues, has to overcome institutional barriers, and places one outside the circle of standard job slices. However, it has considerable added value: not only personal, because it enriches the life of those involved, and social, because its results tend to be more robust, but also scientific, because the collaboration minimises duplication, lights up blind spots, fosters analogical reasoning, leads to cross-fertilisation, creates collective intelligence (Malone and Bernstein 2014) and stimulates innovation (provided the members of the team actively listen to, and challengingly question, each other; provided they attempt to argue on the same wavelength, so to speak [Waldrop 2011]). The adversaries of interdisciplinary (as distinct from: *international*) collaboration do not have to worry: it means integration, not fusion, of disciplines; it is based on the salad bowl concept, on the law of blending, on the principle $1 + 1 > 2$. Its participants are comparable to the members of a symphony orchestra who are professional players of different instruments *put in tune*.¹²

Workers in both the natural and the cultural (*i.e.* cognitive, behavioural, social, and human) sciences are increasingly using mathematical methods and techniques. Since the bridge between these sciences and mathematics

¹² See Balsinger (2005), Frodeman et al (2010), Thompson Klein (2010), Bhaskar et al (2010), Wechsler and Hurst (2011), Welsch et al (2011), Lakhani et al (2012), Bammer (2013), Jacobs (2013), Martini (2013), Thorén and Persson (2013), Montuori (2013), Bourguine (2013), Jungert et al (2013), Michelucci (2013, v-x), Mathieu and Schmid (2014), De Montjoye et al (2014), Chopp et al (2014), Repko et al (2014), Aldrich (2014), Gethmann et al (forthcoming), and the special issue of *Cosmos and History* on Transcending the Disciplinary Boundaries (5:2 [2009], 1–321). Also visit www.inter-disciplines.org, <http://academicexecutives.elsevier.com/issues> (Volume I, Issue 1; II, 2; and III, 2), <http://dx.doi.org/10.1007/s00267-013-0180-z>, <http://dx.doi.org/10.1063/1.4789673>, www.transdisciplinarity.ch/e, www.iwr.uni-heidelberg.de, www.helsinki.fi/tint, <http://dx.doi.org/10.1093/acprof:oso/9780199693894.001.0001>, www.nss-journal.org (search *interdisciplinarité*), www.inter-disciplinary.net, www.culturalpolitics.net, www.units.miamioh.edu/aisorg, <http://dx.doi.org/10.7202/1007079ar>, <http://dx.doi.org/10.1038/512126a>, www.ciret-transdisciplinarity.org, www.warwick.ac.uk/fac/crossfac/cim, <http://thesocialsciences.com>, www.dsin.ku.dk, www.pin-net.gatech.edu, <http://scientrix-epm.com>, www.ceiich.unam.mx, www.inidtd.org, www.culturesofknowledge.org, www.nap.edu/catalog/11153.html, <http://dx.doi.org/10.1038/514292a>, <http://edge.org/conversation/hugomercier>, www.univie.ac.at/constructivism/journal/10/1/065.alroe, www.cairn.info (*interdisciplinarité*) and www.nsf.gov (interdisciplinarity). Notice the difference at <http://olihb.com/2014/08/11/map-of-scientific-collaboration-redux>.

(the wider, higher and deeper growing study of topics such as quantity, structure, space, and change)¹³ is heavily traveled, the interdisciplinary dialogue is stimulated. Moreover, scientific collaboration is facilitated by e-research, which may be called a major break-through in science and technology. It combines *a*) vast quantities of digitised data (digital libraries), *b*) supercomputers running sophisticated software, and *c*) high-tech connectivity between computers (cloud- and grid computing, semantic web). With modern computers, almost any form of knowledge can be precisely expressed, and multi-dimensional computations of complex multi-scale phenomena are not beyond reach anymore. The potential of the Internet, implying the availability of all information for everyone, instantly and everywhere, seems to be boundless.¹⁴

Wide and Deep

Unmistakably, there is something terribly wrong with Western Sinology (*Zhōngguóxué*). The field is not circumscribed. Unable to define their disciplinary matrix, lacking a research agenda, not having built a domain ontology (a precise explanation of the basic terms of their discourse), not commanding a theory of their own, and not searching for systematised knowledge with regard to China in and of itself, the so-called China experts in Europe and America are not scientists, even if “science” is broadly defined. Ignoring the elephant in their room and refusing a *Reflexion auf eigenes Tun*, these scholars boldly claim to synthesise the results of all kinds of professional study regarding the country of their choice, but — without a conceptual framework, *i.e.* without a model representing China as such — they are not able to present a comprehensive and coherent picture of the country, not to mention a lucid exposition of its dynamics, its phase transi-

¹³ Visit www.zbmath.org and www.ams.org/mathscinet/msc/msc2010.html. See note 6.

¹⁴ See Dutton and Jeffries (2010), Anandarajan (2010), Hesse-Biber (2011), Nielsen (2012), McCarty (2014), Floridi (2014) and Pietro Michelucci’s editorial to Vol. 1, Issue 1 (October 2014) of *Human Computation*. Visit www.digitalhumanities.org, <http://digitalhumanities.org/centernet>, www.humanitiesebook.org, www.dlib.org, <http://cci.mit.edu>, www.allhands.org.uk, www.siggraph.org, <http://ivl.cns.iu.edu>, www.centrefordigitalhumanities.nl, <http://en.wikipedia.org/wiki/internet>, www.scimate.org, www.w3.org, www.asia-europe.uni-heidelberg.de/en/hra-portal.html, <http://cba.mit.edu>, <http://arxiv.org/abs/1407.2535>, www.globalbraininstitute.org and www.supercomputing.org. Scientists are closing in on quantum computing. For the history, philosophy, areas and great insights of, or the extensive literature on, computer science, visit http://en.wikipedia.org/wiki/Computer_science, www.acm.org/about/class and <http://linwww.ira.uka.de/bibliography>. The journal *Computational Culture* (2011 ff) should also be mentioned.

tions, its transformation logic. Browsing and trespassing rather than really “putting together” is what these heroic polymaths are good at. Having no degree in any of the disciplines concerned, they do not shrink from rushing in where angels fear to tread. Implicitly claiming to be scientific all-rounders in respect of China, these jacks-of-all-trades keep the reader/listener/viewer in the dark as to how the parts fit into the whole and, conversely, how the whole stands interconnected with the parts. Their China approach is *mile-wide-but-inch-deep*. Though their population is dwindling, they are by no means extinct, their scholarship often being the pretentious garbed in the unintelligible.

The claimed post-war “split of sinology in specialisms” has worsened the situation, because there is confusion and obfuscation as to who has a thorough grounding in a scientific discipline and who has not. Some, and we believe many, “China experts” are actually amateurs who have the bad habit of donning the hat of a scientist without filling his shoes. Others have no qualms about introducing themselves simply as “Professor at the University of ... (name of city)”. A courteous request to present academic credentials is considered a token of disrespect, and deeply ingrained customs (old boys network) preclude fundamental internal criticism, causing intellectual inbreeding, a deplorable situation politicians choose to turn a blind eye to. Occasionally — we confine ourselves to one example — someone, knowing very well that studying a language is not the same as studying the literature written in that language, decided to enrol for literary studies before hurling him/herself at the *Chinese* literature. His/her monodisciplinary approach to the country is then *mile-deep-but-inch-wide* (the truth would be intolerably stretched if such a person permitted people to call him/her *China* expert). However, the problem with these one-dimensional scientists (Cyclops), who Max Weber would have derogatorily called *Fachmenschen* (de- or compartment people), is that they are accusable of silo/stovepipe thinking, of not seeing the big country-picture, of being unable to think systematically (to discern the parts as well as the whole). To remove this odium, these pundits have a tendency to cross boundary lines, blissfully ignorant about the dangers of skating on thin ice.

Readers taking pains to check the list of contributors to “Chinese/Asian Studies” journals will discover that the editorial boards of these competing periodicals (the number of titles runs into the dozens) have not been consistent in their declared policies on the professionalism of authors. All too often, published articles are *not* “of the highest academic standard”. In our view, the wheat has not always been separated from the chaff, and experts in their own field of study are still allowed by editors who may not be kosher themselves to veer off course, that is, to leave their academic home turf and to enter unlawfully upon somebody else’s professional domain.

Brill's *Encyclopedia of China* (2008), the English translation of *Das große China-Lexikon: Geschichte, Geographie, Gesellschaft, Politik, Wirtschaft, Bildung, Wissenschaft und Kultur* (Primus Verlag, 2003), is another graphic example of what we call the scandal of Sinology. Let the potential buyer of this prohibitively priced tome first examine in which discipline from which university in which country its contributors graduated. We hope he/she will then realise the danger of being informed about a subject of great importance by a bunch of people being amateurs only, but shamefully masquerading (and presented!) as China professionals.

The fork in the road ahead for Western Sinologists is two-pronged: **translating** (where the *Hanxuejia* come into play) or **collaborating**. They are reported/supposed to be fluent in classical and modern Chinese. So our advice would be: cobbler, stick to your last. There are numerous important Chinese books eagerly awaiting translation. If their desire is to embark on the study of a China related subject, we would counsel them not to venture forth on too vast a sea, but to look around for China oriented experts (*i.e.* scientists [in the first place] who have a special interest in China) to set up a joint venture, with the caveat that partial views do not add up to a picture of *the whole* of China. For making good use of organised and structured databases, they need to be interconnected.¹⁵ Partial studies that are not nicely dovetailed or firmly interlocked with each other present the reader with a *spectacle coupé*, with a Humpty-Dumpty broken into bits. Such studies (one may think of those collected in the only chronologically ordered set of hefty tomes entitled *Cambridge History of China*, this work being a far cry from a clear account of China's figurations, a profound, multiperspective narrative/story of its past) do not constitute a coherent whole. They lack the critical and unifying (not: uniform) framework that could be provided by the science of systems and the related science of networks, the theoretical parts of which must appeal to researchers really willing to work together and fully aware of the awesome power of making the right distinctions and abstractions.

Parceling up neglects relations that matter. Compartmentalisation, or departmentalisation, the breaking down (mentally) of a complex system into "more manageable" subsystems easily results in losing sight of the context,

¹⁵ The online *Encyclopedia of Life Support Systems* (www.eolss.net) is a striking example. Being an "integrated compendium of twenty one encyclopedias", the EOLSS body of knowledge "attempts to forge pathways between disciplines in order to show their interdependence". It "deals in detail with interdisciplinary and transdisciplinary subjects, but it is also disciplinary, as each major core subject is covered in great depth by world experts". The mission statement of SciColl, "facilitating a new generation of interdisciplinary research that relies on scientific collections in different fields" (www.scicoll.org), sounds promising. See note 12.

of the environment, of the surroundings, of the conditions under which these subsystems operate within their suprasystem. A good physician and a commander-in-chief know this. We need a cubistic, multi-professional perspective, a multimodal integration. If and only if they are orderly and specifically put together (assembled), single parts/modules/entities/agents make up a whole, as every architect, astronaut, *chef de cuisine*, choreographer, composer, flower arranger (*ikebana*), gardener, novelist, even a football coach can tell. The interactions and interfaces between the components of a country (e.g. its political, legal, military, economic, financial, social, educational, and cultural system) need to be investigated, much in the same way as the fundamental structure of the human language faculty is examined in current linguistics, that is to say, the interfaces between phonetics, phonology, morphology, syntax, semantics, and pragmatics.¹⁶ For, as the ancients intuitively knew already, the perpetual interplay of components (a process involving exclusiveness-dissimilarity-uniqueness-discreteness as well as inclusiveness-similarity-commonness-continuity) is the basic principle of life and the core of all matter; it is the very essence of intelligence, creativity and harmony. In the words of Chinese-American theoretical physicist Kerson Huang: “Interaction makes the world tick”. Studying China multidisciplinary is fatally flawed; it will lead to *hamartia*, to “missing the mark” (illuminating the whole country); it is bound to result in a building not held together by cement, in the sterile juxtaposition of accounts forming a picture of incompatible colours. Partition walls must be lowered (but certainly not removed). What we need is detribalisation, collaborative scholarship, a well-coordinated joint effort, a disciplinarily integrated approach, that facilitates consilience, the joyful jumping together of scientific knowledge.

¹⁶ See Ramchand and Reiss (2007, 1–13) and O’Grady et al (2009, Chapters 2–6 and 12–14). The study of the brain’s dynamic functional connectivity is another example ‘At the most fundamental level, modern physics presents us with a world of *structures* and making sense of that view is the central aim of the increasingly widespread position known as *structural realism*’ (French 2014). Structural realism is considered to be the most defensible form of scientific realism, one of the reactions to logical positivism. Visit <http://plato.stanford.edu/entries/structural-realism>, <http://dx.doi.org/10.1119/1.4789885> and <http://dx.doi.org/10.1119/1.4812316>. In addition, see Piaget (1968), Jameson (1972), Rickart (1995), Surdulescu (2000), Sturrock (2003), Procházka et al (2010), Epperson and Zafiris (2013, xiii-xx), Ching (2013), Hertzberger (2014), Spohn (2014) and Burgess (forthcoming, Chapters 3 and 4). Compare <http://philsci-archive.pitt.edu/view/subjects/realism-anti-realism.html> with www.univie.ac.at/constructivism/journal/9/3 and [-/10/1](http://www.univie.ac.at/constructivism/journal/9/1). In September 2013, the project The Structure of Reality and The Reality of Structure, led by Professor F.A. Muller (<http://www.projects.science.uu.nl/igg/muller>), was launched at Erasmus University Rotterdam.

The main thrust of this debunking argument is that China ought to be seen under the aspect of its whole, *sub specie totius*, which is not to say that analysis, as understood in analytic philosophy (see note 4), is unimportant. Scrutinising parts/aspects of the country, one has to view them “from the angle of totality” (Shen Kuo). China, being understood as a unity (a notion distrusted by poststructuralists thinkers), by taking all in all, must be portrayed not in a “flat”, or “curved”, but in a “fully rounded” way (the terms were coined by E.M. Forster). For knowledge of the whole is knowledge of each and every part of it, and the other way around. It cannot be overstressed: in order to be scientific, the approach to China should be integrative, orchestral. Professional players should put their various instruments in tune and perform a symphony. Different perspectives must be brought together into the same dialogue space. Being a large, intricate and culture-soaked society *cum* polity *cum* economy *cum* geography *cum* history, China has to be studied truly interdisciplinarily. Only connect! That is the whole of our sermon (see note 6). EINHEIT IN VIELFALT; UNITY IN DIVERSITY; BHINNĒKA TUNGGAL IKA; JUNTOS COMO UNO; E PLURIBUS UNUM; 多元一体. For, just as with the cable (a number of wires/strings bonded or braided together to form a single product), *L'UNITÉ FAIT LA FORCE*, the unity whose potential many a university has forgotten to exploit, the force we desperately need to be able to cope with mankind's predicament. Besides collaboration between Sinologists and China oriented scientists, we need ICT-driven collaboration between these scientists. In other words, we are in need of (Chinese mastering) Sinologists prepared to work together with scientists having *a*) profound knowledge in a particular discipline, *b*) a special interest in China, *c*) proficiency, or the will to actively engage, in communicating with other “T-shaped” experts, and *d*) skill in using the tools provided by rapidly developing e-research; with scientists being, additionally, conscious of the important but often forgotten fact that geography (the study of who, what, how, why and where) is nothing but history in space, while history (the study of who, what, how, why and when) is only geography in time.

The method of “structured dialogic design” (Flanagan and Christakis 2010) could be used to engage the stakeholders in a productive conversation; the newest techniques of big data analysis, categorisation, concept mapping, data/information/knowledge/network visualisation and multimedia presentation could be applied to stimulate their imagination; and much could be learned from those having first-hand experience in OR/MS and project management (see wiki: ‘big science’ and ‘list of megaprojects’; visit International Centre for Complex Project Management's website). First and foremost, however, Sinologists (presumed to be competent to translate) and China oriented scientists willing to team up with each other should consult

people versed in network — and (complex) systems science. For these are the fast evolving fields of research that may provide a conceptual framework within which the closely intertwined patterns of China can be described and analysed meaningfully. What is more, these are the disciplines that can play a crucial role in understanding any country/nation and, ultimately, *die ganze verknottete und vernetzte Welt*, which is — we hope those involved in international relations studies will realise it — a hypercomplex, dynamic system of complex systems of complex systems in the cosmos (the grand total).¹⁷

Multidisciplinarity is certainly not the solution to the problem of Western Sinology. Changing from the *mile-wide-but-inch-deep* approach of the generalist (“China study”) to the *mile-deep-but-inch-wide* approach of juxtaposed partial studies (“Chinese studies”), one gets out of the frying pan into the fire. Sinologists should decisively act, attempt to engage the interest of scientists from various quarters, and treat China as a *Ganzheit*, as a territory-bound, history-moulded and goal-directed totality of identifiable and yet interdependent actors and factors. The study of China, in particular the long overdue interdisciplinary study of its modernisation,¹⁸ should be **mile-**

¹⁷ For network science, see Newman (2010), Contucci et al (2014), and D’Agostino and Scala (2014). Also visit www.barabasilab.com, www.cnn.group.cam.ac.uk, www.ds.mpg.de, www.dym-cs.eu, <http://arxiv.org/abs/1407.0742> and www.netsci-x2015.net. For the science(s) of systems, see De Rosnay (1975), Turchin (1977), Skytner (2005), Meadows (2008), Ramage and Shipp (2009), Hofkirchner (2009), Mingers (2014), Capra and Luisi (2014), and the book series edited by Alfonso Montuori: *Advances in Systems Theory, Complexity and Human Sciences*. In addition, visit www.iss.org, www.ifsr.org, www.iascys.org, www.collegepublications.co.uk/systems and www.global-systems-science.eu. For systems ENGINEERING, visit www.sebokwiki.org. For a short cut through the vast literature on the science(s) of complex systems, visit www.springer.com/physics/complexity?SGWID=0-40619-6-127747-0. See also note 8 and 9, and the journals *Complex Adaptive Systems Modeling* (2013 ff), *Journal on Policy and Complex Systems* (2014 ff) and *Complexity, Governance & Networks* (2014 ff). Taylor (2001) captured a new *Zeitgeist* in the making. On January 23, 2000, Stephen Hawking famously said: “I think the next century will be the century of complexity”.

¹⁸ The key question here is: **Can China become a modern nation without liberty?** Put differently can the PRC, where the spittoon has disappeared from the public eye, be a modern country the people of which are chained; indeed, allow themselves to be bullied, or to be corralled like cattle? For liberty/liberalism, *liberté/libéralisme* and *Freiheit/Liberalismus*, explore Wikipedia and visit www.existentialpsychotherapy.net (theme!). Schelling (1809), Berdyaev (1927, Chapter IV), Popper (1945), Ryan (2012, Chapters 2 and 13) and Diehl (2013) are must readings for Chinese intellectuals, almost all of whom have a basically uncritical attitude of

wide-and-mile-deep, and the most important words should be “coordination” and “integration”. The dilemma as to whether to take the road to “knowing nothing about everything” or to “knowing everything about nothing” in respect of the country will then be broken, and both the wood and its trees will be seen. Firmly distancing itself from multidisciplinary research, the study of China we have in mind requires a well-thought-out, perfectly balanced division of labour, *i.e.* the specialisation of cooperating individuals valued by Adam Smith and Émile Durkheim. Parts and whole, it bears repeating, are mutually implicated and inseparable from each other. It takes two different persons to perform a *pas de deux*. Entangled, *Yin* and *Yang* form *Taiji*, the fundamental concept that was created in ancient China and has been visualised as the symmetrical but undichotomisable ☯ diagram but that the West, used to black-white, on-off and yes-no thinking (first/last quarter moon symbol), has had great difficulty in understanding except Niels Bohr (see his coat of arms). Working together as a scientific team informed about the latest developments in (complex) systems and network science is the key to understanding China as such, to comprehending the country taken as a distinct whole, that is, not taken as an isolate(d) entity, incompatible with, and not comparable to, other countries.

The change to interdisciplinary research will be a paradigm shift. Reading John King Fairbank’s widely acclaimed book *China: A New History* (Belknap, 1992), one might be impressed by the ease with which the “great American China-scholar” wrote about all kinds of subjects related to the country he had fallen in love with. However, it should not be overlooked that Professor Fairbank, whose well-known students were Benjamin Schwartz, Mary C. Wright, Rhoads Murphey, David Nivison, Albert Feuerwerker, Merle Goldman, Thomas Metzger, Philip Kuhn, Paul Cohen, Orville Schell, Andrew Nathan and Ross Terrill, is to blame for encroaching upon foreign territory, for having entered without announcement/permission the domains of professionals. Now let J.K. Fairbank & Co. be a legal person with many cross-communicating heads, each graduated in, and familiar with the history of, geography, demography, archaeology, linguistics, literary studies, economics, taxation theory, agronomy, (corporate, public and/or international) finance, business administration, political science, law, military studies, medicine, psychology, sociology, anthropology, mythology, educational science, semiotics, informatics, media studies, transportation studies, religious studies, art history (*Kunstwissenschaft*), energy studies, ecology (sustainability science) or philosophy, and — common denominator — having mainly research interest in a particular, his/her discipline

mind, as evidenced by the developments in the “PRC” (a pleonasm!) since June 1989 (Deng [Xiaoping] tanks). See Kuijper (2013).

related aspect of China. We dare say this scientific, the university spirit epitomising community, by focusing on the process of finding answers to carefully formulated shared questions and then pooling the resources of its members, would be able to produce a book on the complex and multi-faceted history of the country entirely different from, and more thoroughly researched than, the one written by JKF, provided the poly-dimensional mapping project is well managed, provided the scientific orchestra is well conducted, by somebody knowing how to create order in the cacophony of sciences (as Dmitri Mendeleev did when he created order in the apparent chaos of chemical elements). Were such a comprehensive, diasynchronically focused book (series) published, the giant step from multi- to interdisciplinary research (and production), *vom Nebeneinander zum Ineinander*, from “conjunction” (e.g. hammer and nail, shoes and laces, or quill and inkpot) to “inherence” (e.g. body and organs, family and members, or university and faculties), would have been taken, a decisive move those subscribing to the fundamental idea of *Das Bauhaus* would loudly applaud but no automobile –, aircraft –, or spacecraft manufacturer would be surprised at. Having only superficially dealt with this matter of utmost importance, we leave it to be further discussed at the highest echelon of the world’s top universities.¹⁹

Conclusion

With philosophy, mathematics, science and technology changing their character, the study of China should be lifted onto a higher plane, higher than what “China experts” at the School of Oriental [*sic*] and African Studies (SOAS), the German Institute of Global and Area Studies (GIGA), the National Institute of Oriental [*sic*] Languages and Civilisations (INALCO), the Brookings Institution, the China Research Center (Atlanta), the Universities of Auckland, British Columbia, California, Cambridge, Chicago, Coimbra, Edinburgh, Erlangen-Nürnberg, Geneva, Hawai’i, Helsinki, Iowa, Leeds, Leuven, Ljubljana, Michigan, Munich, Naples (*I’Orientale*), Nottingham, Oslo, Oxford, Pittsburg, Rome (*Sapienza*), Salamanca, Tokyo, Vienna and Warsaw, the East Asian Institute (Singapore), *Collège de France*, *Le Centre d’études sur la Chine modern et contemporaine* (Paris),

¹⁹ In December last year, we sent an earlier version of this article to the current and a former director of the renowned Fairbank Center for Chinese Studies at Harvard University and suggested discussing the subject of the paper at the next advisory committee meeting. The former let us badly down; the latter (a student of JKF who has miserably failed to predict any of the major historical events in the country he is said to be expert on) did not even care to respond to our e-mails. Nobody at this famous China policy advising centre seems to be interested in uplifting the study of China!

Academia Sinica (Taipei), the Ruhr-University Bochum, the Chinese University of Hong Kong, and Fudan –, Nanjing –, Peking –, Shanghai Jiao Tong –, Tsinghua –, Xi’an Jiao Tong –, Zhejiang –, Columbia –, Princeton –, Stanford –, Yale –, Kyoto –, Aarhus –, Bologna –, Heidelberg –, Humboldt –, Leibzig –, Leiden –, Lund –, Sofia –, Stockholm –, Uppsala –, Vilnius –, Lomonosov Moscow State –, Saint Petersburg State –, Jawaharlal Nehru –, National Taiwan –, Seoul National — and Australian National University aim at; higher than the declared objective of the leadership of CCPN Global, that “unique global academic society for advancing the study of China and the Chinese from a comparative perspective” launched in March 2013; higher than what Professor Mikhail Titarenko and his colleagues at the Institute of Far Eastern [*sic*] Studies of the Russian Academy of Sciences (currently in the process of being radically reformed) seem to have in mind; even higher than what Professor Amako Satoshi, chairman of the Central Planning Committee of NIHU’s programme “Contemporary Chinese Area Studies” and chief editor of *The Journal of Contemporary China Studies* (2012 ff.), allegedly attempts to achieve.²⁰

If the purpose of *Chinakunde*, Синология, *Zhōngguó-yánjiū*, *Zhōng-guó-xué*, *Chūgokugaku* or *Shinagaku* is to make a fine weave, its approach should be historical/longitudinal/warp-like as well as cross-sectional/transversal/weft-like, *i.e.* the whole shebang should be accounted for; China’s “pivot” (枢), “root” (本), basic structure, metamatrix should be focused on;²¹ the one/whole should be shown in the many/parts (Varzi 2014, Burkhardt et al forthcoming). Those embarking on the study of the country *as such* should take a leaf out of the handbook of historical sociology (Norbert Elias, Michael Mann) or historical anthropology (Marshall Sahlins, Christoph Wulf), cull the pages of the international journal *Social Evolution & History* (2002 ff), and proceed like the poet and the painter (Lessing), like evolutionists and ecologists, but never forget that “*jeder Mensch mehr kann sein als nur Glied einer Masse*” (Karl Jaspers) and comparing plays a crucial role in every scientific discipline (Mahoney and Rueschemeyer 2003, Lange 2013). Acquainted with “multidimensional modelling” (Romero and Abelló 2009), “multilevel modelling” (Wang et al

²⁰ NIHU is an acronym, standing for National Institutes for the Humanities. Explore www.china-waseda.jp.

²¹ Visit www.scientrix.com/scientrix-our-story. In mathematics, a matrix is a rectangular array of numbers, symbols or expressions, arranged in rows and columns. “Matrix” and “determinant” (the value associated with a square matrix) are basic notions in linear algebra, the roots of which seem to be sought in China (Hart 2010; Smith 2013, p. 46) and the applications of which are manifold (Lay 2011).

2012) and — *der Dritte im Bunde* — “agent-based modelling”,²² and being regular visitors of the homepage of IAOA (The International Association for Ontologies and its Applications), they should pay attention to the contemporary and the noncontemporary (unfinished past), and always bear in mind that *paths* (multi- rather than dialectic processes) and *patterns* (arrangements/orderings at a certain point in time) are contrapuntally/polyphonically related — on macro-, meso- and microscale. In other words, they should connect the dots and consider China’s condition in the round. Their discourse, coherently foregrounding/highlighting one group of (f)actors after another, should be complexity/nonlinearity-oriented and complement (not: replace) reductionist explanations (Mitchell 2009). Their approach should be morphogenetic (Archer 2013) and reflect the views shared and discussed at the annual conferences of the System Dynamics Society. Researchers in the field of systems — or cellular and developmental biology might be able to provide a clue as to exactly how to proceed (Eils and Kriete 2014; http://en.wikipedia.org/wiki/List_of_systems_biology_research_groups).

With each and every one of the cultural sciences beginning to realise that without the help of the other neither will be able to proceed very far, **the heyday of Sinology is yet to come**. However, this crucial point (*Wende!*) in the history and evolution of that odd field of research called “China study”, or “Chinese Studies”, cannot be reached until one thing, being not only an *événement* but also an *avènement*, has been accomplished: the official opening of a truly scientific, genuinely interdisciplinary and professionally managed China research centre, *i.e.* the inauguration of an **Institute for Advanced China Study** (Centre of Excellence), fitting neatly into the university imagined by Elkana and Klöpper (2012),²³ affiliated with a yet to be established and ICSU and ISSC connected International Union of Area/Country Studies and linked up with the global e-infrastructure.²⁴

²² See Šalamon (2011) and Sun (2012), and visit www.agent-based-models.com.

²³ See also Chopp et al (2014); visit <http://president.asu.edu>, <http://www.eua.be/euima-collaborative-research.aspx>, <http://www.knowledgeworks.org/sites/default/files/2020-Forecast.pdf> and <http://www.scienceintransition.nl/english>

²⁴ The study *eResearch2020 – The Role of e-Infrastructures in the Creation of Global Virtual Research Communities* was carried out on behalf of the European Commission, Directorate General Information Society and Media. The Study Brochure can be downloaded at <http://www.eresearch2020.eu/eResearch%20Brochure%20EN.pdf>, the Final Study Report at <http://www.eresearch2020.eu/eResearch2020%20Final%20Report.pdf> and the annexes to this report at <http://www.eresearch2020.eu/eResearch2020%20Final%20Report%20Annex.pdf>. Also visit www.proquest.com, <http://worldwidescience.org> and <http://thomsonreuters.com/products/ip-science/04062/wos-next-gen-brochure.pdf>!

Meanwhile, the organisation of an **international conference** on comprehending, and coping with, the complexity of China might be worth considering, the meeting being a world forum co-organised by Associations/Societies of Sinologists (e.g. EACS), co-supported by the European Consortium for Asian Field Study (ECAAF) and really committed to improving the current state of the study of China. “Really committed”, because the high-profile “World Forum on China Studies”, co-sponsored by the State Council Information Office of the PRC and the Shanghai Municipal Government, is a national disgrace, a shameless show of partisanship.²⁵ The participants in the *onsite* and/or *online* conference we are thinking of, especially the younger generation among them, will undoubtedly benefit from a fundamental, critical, open and professionally moderated discussion.

Noun phrases like “systems thinking”, “research synthesis”, “nonlinear behavior”, “circular causality”, “feedback loop”, “pattern formation/recognition”, “data mining/compression”, “upper ontology”, “conceptual modelling”, “knowledge integration/cartography/management/web”, “network evolution”, “sub/superlinear scaling”, “system dynamics”, “strange attractors”, “structural transition”, “stigmergic behaviour”, “network of networks”, “hyperlink analysis”, “scientific collaboration”, “soft computing”, “multi-formalism modelling”, “intelligent information systems”, “meta-programming”, “e-research” and “semantic web” are increasingly used, not only in the natural but also in the cultural sciences. The main reason is the closing of the gap that has yawned between the two realms.²⁶ This deliberately provocative article is nothing but a wake-up call

²⁵ It should be noted that the Chinese Communist, or Capitalist (?), Party, not hesitating to falsify the history of China and pursuing a policy of *chanxin* (mind binding) rather than *chanzu* (foot binding), attempts, by any means possible, to prevent social and human scientists from doing serious research in/on the country — a major subject “China experts” thinking of their next application for a visa to visit the PRC refuse to discuss at public meetings and/or do not dare to write about. For the mission statement of CASS sponsored *China Social Sciences Press*, visit www.csspw.com.cn. For the dubious role played by the Confucius Institutes, operating on more than 450 campuses worldwide, see Sahlins (2014).

²⁶ For a model of how to move back and forth between biological and sociocultural frameworks, see Crane (2001). In addition, visit <http://dx.doi.org/10.1002/cplx.21550>, <http://plato.stanford.edu/entries/sociobiology>, www.ishe.org, <http://plato.stanford.edu/entries/evolutionary-psychology>, <http://cognitivesciencesociety.org>, <http://www.psychologie-heute.de/home/lesenswert/memorandum-reflexive-neurowissenschaft>, <http://thesocialsciences.com>, www.thesisnetwork.wordpress.com, www.cosmosandhistory.org and www.bpb.de/apuz/30116/geisteswissenschaften. Bateson (1979), Seifert (1989), Geertz (2001, Chapter X), Putnam (2002), Gould (2003), Vicari (2008), Kagan (2009 and 2010), Searle (2010), Bunge (2010), Schmicking and

for “China experts”, not only in Europe and the USA but also elsewhere, to be aware of this and to act accordingly, that is, to make the complexity turn in order to reveal the *whole* elephant. It has been our intention throughout the paper to convince the reader that there is an elevated place (a meta position) where the huge body and bewildering variety of data on a country can be compressed into a falsifiable or refutable theory, where multiplicity (*multa*) can be turned into simplicity (*multum*), where — in the case at issue — a breathtaking view of the whole of China can be gained. At that high altitude, long-held convictions will be disestablished and the Eureka effect, the *Aha-Erlebnis* will be, that — by seeing both the many in the one and the one in the many; by realising that kinds of fruit, like apples and oranges, can be compared — one finally com-prehends (*fasst zusammen*). Beautiful and profound is, therefore, the old Chinese proverb: “the pattern is one, the parts are different” (理一分殊).²⁷

China, being a universe the centre of which is everywhere (like an organism the hereditary material of which is encountered in each and every one of its cells), should be studied 1) professionally (*i.e.* by China oriented

Gallagher (2010), Coen (2012), Sun (2012), Wilson (2012), Beauregard (2012), Koch (2012), Nagel (2012), Slingerland and Collard (2012), Shubin (2013), Rose and Abi-Rached (2013), Medicus (2013, *Teil I*), Breyer et al (2013), Wang (2013, Chapter 1), Larsen et al (2013, Chapter 21), Cabell and Valsiner (2014), Vincent and Lledo (2014), Tabery (2014), Güntürkün and Hacker (2014), Fuchs (forthcoming), Haken and Portugali (forthcoming), and the V&R Unipress book series *Interfacing Science, Literature, and the Humanities* (2010 ff) should also be mentioned. Anthropology (divided into a biological/physical and social/cultural part) is an interdisciplinary, bridging discipline, inextricably bound up with (physical and human) geography and its twin sister (natural and human) history; human beings, like gardens, are places where nature/matter and culture/mind mingle (Kant), in many different ways! Man is not a kind of robot, as Churchland (2013) and Swaab (2014), following La Mettrie (1709–1751), want us to believe, and the Human Brain Project (www.humanbrainproject.eu) and the Brain Activity Map Project (www.braininitiative.nih.gov) hope to establish. Reading Li (1999) may be inspirational. See note 10 and 12.

²⁷ In 1970, the author wrote a MA thesis on the key character 理. The 264-page piece of writing has never been published but its subject has intrigued him ever since, because 理 (pattern, structure, order, λόγος) is closely connected with 道 (path, natural course, the “virtuous” Way), the essence of which is 易 (change), or 化 (transformation). *Daoli* (道理) means reason! For recent research on 理, see Liu (2005), Krummel (2010), Rošker (2012) and Ziporyn (2012 and 2013). Lederman and Hill (2004), Du Sautoy (2008), Ball (2009), Bejan and Zane (2012) and Berman (2014) may be a revelation to some people, but not to those familiar with the way of thinking in ancient China. See note 16.

people not only running the gamut of the natural and cultural sciences, but also taking full advantage of the latest in information and communications technology), 2) on the basis of reliable/primary sources, and 3) with the translation skill of sinologists being put to good use. The country (indeed, *each* country) should be approached respectfully (account also being taken of its history), looked at with an open, unbiased mind, and presented in a critical but fair and honest way. China, like a Buckminsterfullerene (buckyball), is a *Gestalt*; a particular plurality; it is a dense and intricate network of ties developed over a long period of time; it is an enormous organisation of numerous agents/individuals-in-process having different, often convoluted and sometimes strained relations with each other; it is a cluster of institutions, being commonly cognised patterns by which societal games are recurrently played and expected to be played (Dai, forthcoming); it is a complex and dynamic system of hierarchical systems; it is a non-linear universe, to be studied as such by China oriented, truly collaborating experts from various disciplines, linguistics, or literary theory/criticism, being only one of them. China is a partly self-organising system, to be defined in terms of space and time (spatio-temporal organization), of structure and agency (social cohesion); it is an entirety, a “difficult whole” (Robert Venturi), a *holon* (not: a *pan*), to be depicted holographically. China, *l'autre du monde indo-européen*, somehow *behaves* (Schmid and Schweikard 2009); it has a non-personal personality, symbolised by its flag and national anthem, and embodied/personified by its head of state, because its people have a sense of belonging (sustained by the Chinese script)²⁸ and constitute a community of destiny (which does not preclude the possibility of internal conflicts); it has interests none of its parts has (Frieden et al 2013); it has a distinct culture, the *rayonnement* of which cannot be measured. The country has a character (*zhonghuaxing*), which is not like the characteristic colour spectrum of a chemical compound (being only the sum total of the spectra, or *Einzelcodes*, of the elements that make it up); it has unique emergent properties, that cannot be attributed to any of its constituent subsystems; it is an *individuum*, something that cannot be divided up without losing its history-and-geography-related identity.²⁹

²⁸ The reader will remember Hugo von Hofmannsthal’s speech *Das Schrifttum als geistiger Raum der Nation* (1927).

²⁹ See Blitstein (2008) and visit www.lefigaro.fr/debats/2008/04/07/01005-20080407ARTFIG00438-domenach-jullien-l-occident-peut-il-comprendre-la-chine-phi. Vukovich (2012) examines how knowledge of the object called “China” has been constructed in the West since the 1980s. For “emergent properties”, see Bunge (2003), Laughlin (2006), Greve and Schnabel (2011), Chibbaro et al (2014) and Dedić (2014). Also visit <http://plato.stanford.edu/entries/properties-emergent>, www.emergence.org, www.dur.ac.uk/ias/themes/emergence, <https://medium.com/sfi>

The argument advanced in this bold article boils down to a single, deceptively simple statement: without scientific collaboration, there will be no (empirically and theoretically founded) knowledge of a country.³⁰ To know a man, it has been said, you have to walk a mile in his shoes; and to know a city, you have to walk a thousand miles. To know a country, we would like to add, you need nothing less than a scientific team. Understanding both the constituent parts of a country and the whole of the country behind all its parts should be the ultimate goal of a — depending on the level of analysis — more or less finely meshed study of it. Change in the field of China/country studies may be difficult (the tyranny of habit!) but is absolutely necessary. Our inspiration came from the work of Ludwig von Bertalanffy, the creator of *Allgemeine Systemlehre* who (influenced by Ferdinand de Saussure?) has been described as “the least known intellectual titan of the twentieth century”. His *Leitmotiv* was “unity-through-diversity” (providing

[-30-foundations-frontiers/emergence-a-unifying-theme-for-21st-century-science-4324ac0f951e](#) and www.meta-structures.org. For “identity” (a concept contested in Indian Philosophy), see Parfit (1984), Gallois (1998), Straub (2004), Lowe (2009), Finnis (2011), Descombes (2013), and Gasser and Stefan (2013). Also visit <http://plato.stanford.edu/entries/identity>, www.iablis.de/iablist/2002/schwemmer.htm and <http://dx.doi.org/10.1007/s11016-010-9463-7>.

³⁰ If each and every “country expert” should take this to heart, the same applies even stronger to those posted up as “Middle East experts”, not to mention “Asia experts”, or “Orientalists” (“Asia” being an ill-defined concept; “Orientalists” smacking of colonialism). They lecture without modesty on a region that encompasses countries as diverse as Egypt, Iran, Israel, Saudi Arabia and Turkey. The ὕβρις of people like Henry Kissinger, Kishore Mahbubani and Ian Buruma, finally, has no limit at all; they are ready to give their take on the current, even the future situation in the whole world — provided they are well paid for it. Visit http://www.foreignpolicy.com/2013_global_thinkers/public. Earlier this year, the highly prestigious American Historical Association established the Jerry Bentley Prize in World History. However, whether “World, Global or Big History” (sort of account of everything having changed; to be distinguished from World-Systems Research and Global[isation] Studies) is a scientific discipline remains to be seen; its practitioners seem to be unaware of the vexed problem of historical knowledge. See McNeill and McNeill (2003), Spier (2010), MacGregor (2011), Christian et al (2013), Curtis and Bentley (2014), Grinin et al (2014) and the forthcoming, multi-volume *Cambridge World History*. Also visit www.history-world.org, www.unesco.org/culture/humanity, www.ibhanet.org, www.thegreatstory.org, www.cfa.harvard.edu/~ejchaisson/cosmic_evolution, www.storyoftheuniverse.org, www.thewha.org, www.metanexus.net, www.global-history.org, www.sociostudies.org, www.cosmosandhistory.org, www.jwsr.org, <http://globalstudiesconsortium.org> and www.criticalglobalisation.com.

space for different perspectives while sharing a common goal).³¹ Our hope is that “the brick we have thrown will attract a jadestone from others” (抛砖引玉) — for the improvement of *intercultural* and *international* understanding, for more peace and harmony in this hyperconnected yet deeply troubled world.³² We do not ask for agreement; we rather hope there will be a fundamental discussion, a great conversation. For “Truth springs from argument amongst friends” (David Hume) and *Du choc des opinions jaillit la vérité*.

**Summa summarum: China Oriented Experts
From All Disciplines, Unite!**

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³¹ Visit www.iss.org/lumLVB.htm and www.bcscs.org; see Ropohl (2012), and note 17. For *interacting* perspectives, explore www.narratology.net and see Mitchell (2009). Also visit <http://de.wikipedia.org/wiki/Perspektivismus> and <http://en.wikipedia.org/wiki/Anekantavada>, and see Bronkhorst (2013).

³² Taking the study of countries (not to be confused with *Kulturkunde*, *Kulturologie* or *Kulturwissenschaft*) to a higher level, we believe, will make an important contribution to understanding the dynamic nature–culture /society interactions, the negative manifestations of which are often referred to as “the human predicament”. See Lovelock (2009), Diamandis and Kotler (2012), Ibrahim (2012), Ehrlich and Ehrlich (2013), Kelly (2013), Brondizio and Moran (2013), Sing et al (2013), Parker (2014), McCabe (2014), DeFries (2014), Afeissa (2014) and the special issue of *Population & Environment* (35:3, March 2014) on population and climate. Also visit www.clubo.frome.org, www.uncsd2012.org, www.ecologyandsociety.org, www.sesync.org, www.beijer.kva.se, www.energysustainsoc.com, www.resalliance.org, www.globalchange.gov, www.millenniumassessment.org, <http://www.futureearth.info>, www.ise.coeco.org, www.earth.columbia.edu, www.azimuthproject.org, www.sei-international.org, www.stockholmresilience.org, <http://en.wikipedia.org/wiki/sustainability>, <http://learningforsustainability.net>, www.sciforum.net/conference/wsf-4 and <http://on.ted.com/s04PN>, www.resilience.org. Conversely, understanding of those interactions, in particular thorough knowledge of the global-regional-local problem attendant on them, will help to better comprehend the complexity of countries. Something for the General Council of the InterAcademic Panel (<http://www.interacade.mies.net>)?!

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