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CHINA'S DARK MATTER AND HOW IT SHAPES FUTURE OPTIONS FOR ECONOMIC AND SOCIETAL PROGRESS

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Abstract

Societies progress by the interaction of their politics, economy and culture, but with forms of interaction between these elements that are highly complex. Each society will find its own formula for this. Emergent policy suggests two responses: moving further towards market discipline; and structuring policy-making around powerful relatively autonomous regions competing for investment and central support. The Party remains the glue holding the total together. Issues remain about the continued prevalence of a disciplined hierarchy and its possible negative effects on innovativeness and the growth of social capital. Four questions are posed: can large-scale industry be achieved indigenously at world standards of efficiency and productivity? Can social capital be expanded? Can small and medium industry innovate and grow without the influence of an independent *bourgeoisie*? Can individuals be creative and responsible in conditions of dependence and anxiety? New research is introduced that suggests path dependence, originating in pre-historic survival responses, preserve hierarchy in the case of China. This contrasts with the trajectory for Japan. The dysfunctions of patrimonialism are largely psychological, but are nevertheless influential in societal functioning, so they are termed here *dark matter*, and described. China's policy options are seen to include more alliances with foreign companies, and the slow evolution of a Chinese form of civil society, neither of which is straightforward.

Introduction

Any society exists by virtue of a balance between three societal features: the political handling of power; the efficiency of the economy in achieving productivity; and the ideational or cultural legitimizing of the relationship between the power structure and the economy. As economic exchange activities rise in intensity and complexity, the balancing and adjusting of these three features becomes more difficult and more critical. Using such an all-inclusive view, much of the respected commentary on China has pointed to a deep-seated discrepancy that suggests a forthcoming period of severe stress. Its essence is the tension between hierarchical control and the release of human creativity and more complex coordination. Certain seemingly universal logics of societal progress increasingly find opposition in the ideals of the current political system (Shambaugh, 2013; Hutton, 2007; Chu, 2013; Macfarquhar and Schoenhals, 2007; Eisenstadt, 2003; Wittfogel, 1957; Fukuyama, 1995; Lardy, 2014; McGregor, 2012). I consequently propose a wider than average probe into the links between the politics, the economy, and the culture of China, using a complex adaptive systems approach. In doing so I will add new findings from evolutionary theory, based on much longer trajectories than normally considered. These suggest a form of path dependence that helps to understand how deep-seated are the constraints for China in meeting the challenge of moving on from an ancient heritage of patrimonialism, and expressed through hierarchy.

The signs of that threat are visible in the State Council's full acknowledgement of the 'middle income trap'. Such a point of slow-down is a break in the trajectories of many developing economies, as they face new complexities beyond their

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institutional and political capacities. Few countries get through this trap. There are also in China regular indications of a related and deep-seated problem in the field of culture. This problem is an amalgam of the corrosive effects of fear, compliance, and mistrust, all of which are natural human responses to autocracy anywhere. This traditional amalgam has the potential to inhibit China's access to the intense levels of creativity and cooperation that typify the world's high income-per-capita countries. These cultural forces are invisible but their effects are not, and because of their power to shape action I term them *dark matter*. As in the physics of the cosmos they work even though they cannot be seen or directly dealt with.

The current performance challenge so clearly acknowledged by policy-makers in Beijing has seemingly fostered an announced set of policies encouraging market forces (State Council/World Bank 2013). But these policies may yet be re-shaped by political forces, and current indications of that are widespread in a tightening of compliance with orthodoxies. So there appear to be two opposite directions of movement. Nor might the policies work as expected when unacknowledged aspects of the context come into play, one example of which is the low level of social capital. In simple terms a move towards allowing market forces to determine societal outcomes will need a great deal of adjustment to deeply entrenched power structures if the market is to drive productivity up to the levels needed for widespread Chinese prosperity. State size, complexity, geographical variety, and the weakness of social integration beyond family, make such adjustment extremely difficult to achieve, and unlikely to be achieved quickly.

In that context perhaps the most significant aspect of China's recent evolution is its administrative response to its own size, by the reviving of an ancient tradition permitting a great decentralization of discretion about action, and especially now about investment. In an earlier deep study of China by OECD (2005) one remarkable fact stood out. Administrative discretion over the raising and spending of revenues was more *decentralized* than in any of the OECD advanced economies. This simple fact runs counter to much commentary on the theme of totalitarianism. What was beginning to be visible then was the re-formulating of centralization, into what is now described by Xu (2011) as a regionally decentralized administrative system. It rests on two features that may be unique to China: the tight central government control of personnel and their careers in administration; and the 'tournaments' of competitive striving among regional leaders to meet performance standards defined in terms such as regional GDP, GDP growth, GDP per capita, and FDI. The end result is that sub-national governments run the bulk of the economy, and in practice they 'initiate, negotiate, implement, divert, and resist reforms, policies, rules and laws' (Xu 2011, 1076). Although a major advance, this structure is not seen by Xu as ideal. He sees it as an imperfect substitute for the 'standard' solutions about how to develop that pour in through external advice. He stresses that unless some adjustment is made to somehow absorb the logics contained in the 'standard' solutions, then this form of decentralization is only putting off the day when inexorable universal logics will take over and productivity will stop growing. Xu discusses a new Chinese form of empowerment but points out that along with introducing law reform and an independent judiciary, political reform remains essential. He suggests that

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'If China is unable to meet the serious challenges of managing the institutional transformation into a democratic federal system, China's political stability and long-run development could be put in jeopardy.' (Xu 2011, 1140)

The widely shared 'standard' external political economy perspective is represented by Hutton (2007) who asks where China's globally great companies are, saying that the state sector is a productivity failure and the private sector is a 'plethora of small transient companies typically dependent on political patronage'.

'The system that has brought China this far is Leninist corporatism, rather than anything approaching a proper market economy, let alone a socialist market economy. It is Leninist in the primacy it affords the Communist Party, and corporatist rather than capitalist because it does not foster capitalist economic pluralism. It is neither a communist nor a capitalist economy.....ultimately the system is structurally unstable. The next phase of China's economic and political development must solve the ambiguity but permit more economic pluralism.' (Hutton 2007, 8)

In defining what he calls the 'soft' institutional infrastructure that is normally associated with such pluralism, Hutton lists the following features: impartial courts, clear property rights, proper commercial processes for bank lending, independent auditors, accountability to a free press, independent trade unions, effective corporate governance, transparent anti-monopoly rules, free intellectual enquiry, and a properly functioning welfare system. As Bergere (2007, 20), writing in parallel has noted¹, China is trying to make capitalism work without capitalists, as it accepts entrepreneurs and then - by coopting them politically - prevents the emergence of a bourgeoisie. Bourgeois energy tends to work positively elsewhere (McCloskey, 2006; 2011), and has been widely crucial in initiating the new forms of spontaneously created order needed to deal with the explosion of complexity involved in moving a society from US\$ 15000 per capita to \$50,000. It also fosters the emergence of a new and more benevolent form of domination to keep a society stable as the business leaders learn the competitive necessities of motivating their workers and satisfying their customers in free markets for labor and product (Weber, 1922; Heilbroner, 1985). It is this more benevolent form of domination that softens the negative effects of lingering autocracy, and adapts the society at ground level to new complexities, during the period when any political elite (usually very slowly) concedes power. A Chinese version of such bourgeois influence is on full display in Hong Kong, Singapore, and Taiwan (Redding 1990). Historically elsewhere it is visible in the Victorian 'high minds' of British nineteenth century business leaders (Heffer, 2013), in the central role of the German Mittelstand, and in the reforming business leadership of post-Meiji Japan (Hirschmeier and Yui 1975).

¹ Marie-Claire Bergere, 2007, p 20 "Acceptant les entrepreneurs mais refusant la bourgeoisie, il a entrepris de creer un systeme capitaliste sans capitalists".

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Even so, China has achieved much so far as it pragmatically moves forward, and the accepting of WTO rules was symbolic in indicating quite radically changing intentions. But it has also taken up a great deal of societal slack in the last thirty years. The hard part lies in the future, as the complexities faced increase exponentially. Such slack has many components and many dimensions, but two examples are: the huge and flexible workforce available for most of the period at very low cost by world standards; and the stoic tolerance of the population for 'eating bitterness' as the hardships they experienced were simply absorbed under official encouragement (Harney 2008, Griffiths and Zeuthen, 2014). Also to be acknowledged is the positive motivating force of visible progress. The evidence from studies of Chinese industry is that most of the progress made at the organizational level (as opposed to the societal infrastructure level) comes from releasing the adventurousness of the private sector (Lardy, 2014), plus the opening of the economy to external forces. Even with these drivers the question remains as to whether the trap will kick in as soon as all the slack is exhausted. Will China be able to play a new game using an established but only partly flexible formula? Underlying that question is a deeper one: Are there forces at work that prevent such fundamental adjustment anyway? Will China remain a patrimonial state? Will its present ambiguities be catalysts for a positive new formula, or will they cause it to fall victim to the so-far experienced universal logics of human societal progress?

The great size of China justifies special consideration in any comparison with other societies, but the rules of competition between countries provide few favors. China could create hot spots of high performance, but for its society to be coherent and manageable as a stable entity, and for it to be able to keep its people cared for, it will still need to move towards the overall levels of competitiveness found elsewhere that can be up to three times more productive. As I shall argue later these new competitive abilities will only grow if two major societal capabilities have been achieved. These are greatly enhanced conditions of cooperativeness and innovativeness within the society. Such features are also invisible influences with great power, and they remain very deep-seated weaknesses in China. They and their causes are what make up China's dark matter.

All societies that have achieved significant prosperity have done so by their mastery of these two capabilities (Mokyr, 2009; Fukuyama, 1995; Acemoglu and Robinson, 2012; Beinhocker, 2007; Redding and Witt 2007; Redding and Drew 2015). They have done so in different ways, e.g. with different institutions and ideals. But, even though the capabilities are universal, there is no single formula for the supportive mechanisms that foster them. Whatever works will do so on local terms. The test is whether the capabilities are achieved, not how. Beyond the variations in 'how' there still remains the universal 'why' and in simple terms this rests on what it takes to prolong the survival and growth of the human species in its societal form, after half a million years of learning. Human beings inherit certain instincts as matters of survival, just as animals learn what kind of food they need and how to get it. These core survival rules are hard-wired into all people and cannot be ignored. Societies may need to adapt to stay true to these survival rules as competitive intensity increases. Old formulae for expressing them may get out-of-date. Therefore the

formula includes the capacity to learn, as Japan quite deliberately set out to do after the Meiji Restoration; and as Singapore did in inviting the multinationals to share significantly in its development. Such changes may require occasional radical adjustments to the relations between the political sphere, the world of the economy, and the ideas and ideals that legitimate the overall formula for staying balanced. Affecting the options are two forces: the power of a society's heritage of particular ways of organizing itself; and a society's capacity to learn new responses to new challenges. This is the stage-setting for the drama China is now acting out.

The current conditions

It is not intended here to review the current China context in any detail, as researched accounts are widely available (e.g. OECD, 2005; Naughton, 2007; Shambaugh, 2013; Bond and Hwang, 1986; Xu, 2011; Aglietta and Bai, 2013; Lardy, 2014; Lemos, 2012; Fenby, 2012; Redding and Witt, 2007). Instead a number of specific questions are posed that are relevant to the dilemma now faced as China makes its attempt to get around the 'middle income trap' it is moving towards. It will reach this – in grossly simple terms – at around \$15,000 per capita GDP, which means sometime – in equally simple terms – in the next ten years.

The essential questions of interest in this paper surround the practical achieving of the two core societal capabilities of innovativeness and *cooperativeness*. The questions are variations on a theme but may be specified for policy consideration as follows:

1. *Achieving efficient scale.*
How can Chinese organizations escape from the two options visible so far of either (a) small scale efficient entrepreneurial innovativeness, and (b) large-scale relative inefficiency?
2. *Social capital.*
How can the main economic dynamo of the private sector maintain its stimulating contribution without the evolution of enough social capital to facilitate spontaneous cooperativeness beyond personalistic connections, so moving on from the 'workshop of the world'?
3. *Released initiative.*
How can organizational motivation include the releasing of widespread employee initiative and distributed leadership?
4. *Endemic anxiety.*
How can an essentially hierarchical society remain responsible for order while at the same time releasing people from the psychological anxieties that go with traditions of discipline and compliance? How can such a society be persuaded to reduce conformity while remaining stable?

Why are such questions asked? The growth of an economy to the levels of prosperity achieved in the advanced economies of the west, Japan, and the little dragons, is based on mastery of two managerial capacities: competing to cooperate;

and seizing competitive advantage by finding the right organizational attributes as fitness functions in a battle for survival, this latter feature commonly depending on innovation.

The achieving of cooperativeness as a competitive weapon is visible in three modes of action: (1) people inside an organization cooperate with their colleagues and their leaders to engender high levels of effort towards the goals of the enterprise; (2) this cooperation includes the contributing of ideas and creativity as well as standard work ; this latter feature increases in significance as an industrial economy moves towards being a knowledge economy, (3) cooperation extends across the economy to lower transaction costs and this is achieved when societal order induces trust in 'the system' to a point where risk of abuse is low.

The seizing of competitive advantage rests on the organization's capacity to so manage its relations with its environment that it has a better chance of survival than its rivals. This usually entails scarce built-in advantages, examples of which might be scale (and so productive efficiency), another might be innovative product or service, another might be crafted reputation. None of these work well to drive up the efficiency of the societal total unless the discipline of market competition is the dynamo behind adaptation in the organization. Such market discipline rests on the principles of a level playing field, in other words the absence of monopoly influences over any major input or channels of output, the absence of clientelism that distorts rationality in decision-making, and the open availability of rich, accurate, information.

To be able to answer such questions, and to know more about why they are asked, it is necessary to examine the evolution of the present Chinese business system, and the options for its future trajectory. In doing so I propose to consider the cultural heritage shaping present-day responses, and the ways in which that influence becomes visible. Projections may then be placed in deep context.

The Cultural Context

Culture has for some decades been discussed in terms of the mapping of shared values, analyzed by society. In a recent comprehensive review Ronen and Shenkar (2013) confirm the persistent presence of clusters by geography across many studies. In Hofstede's (1980) pioneering account, two main cultural clusters are visible; hierarchical/ collective; and egalitarian/individualist. In each of these clusters it is possible to identify a stable balanced base of ideals upon which can evolve a workable form of societal order. Variations on the same theme have emerged from the World Values Surveys, with its presenting of two axes: one of values supporting survival versus self-expression; and one of traditional versus secular values (Inglehart and Welzel 2005). There are substantial overlaps in the Hofstede and WVS schema. The World Values Survey findings and their economic implications are illustrated in Fig 1.

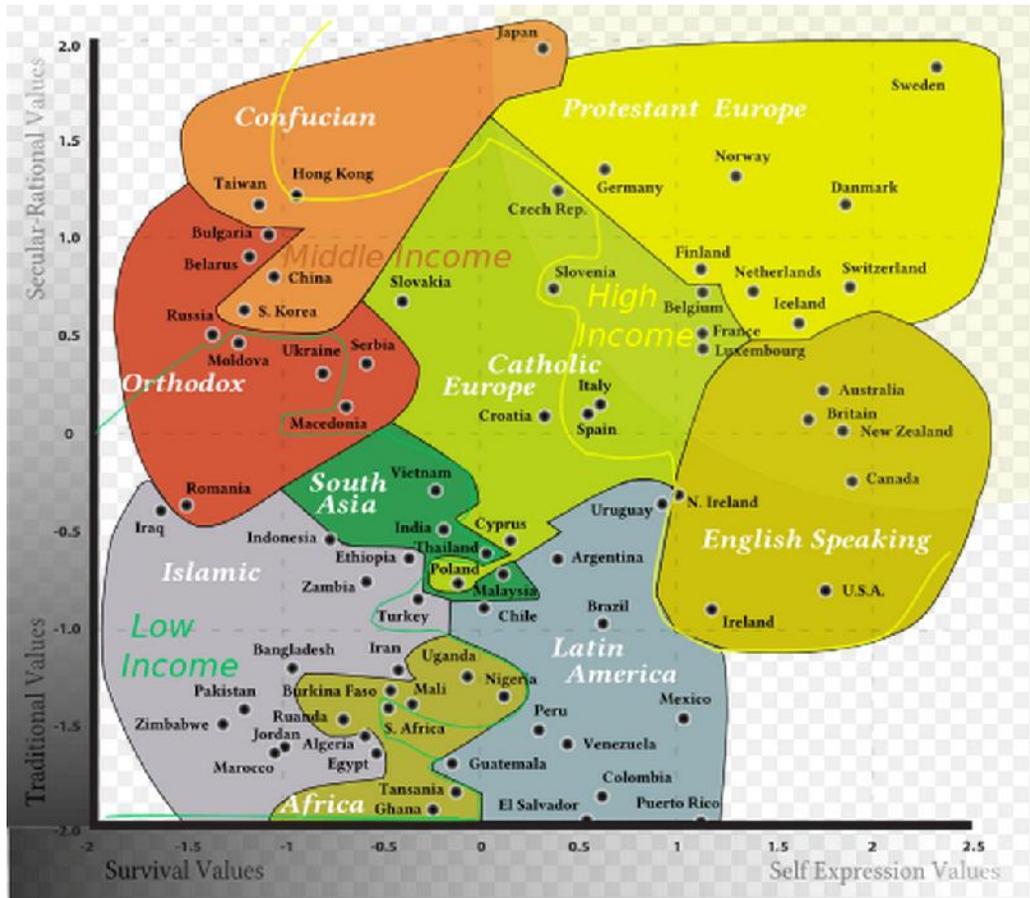


Fig.1. Summary of findings from the World Values Surveys overlapped with development implications and religious or other identifying heritages.

Implicit here is the idea that human evolution has provided two main viable responses for the organizing of society. Until recently it was not understood why this clustering had evolved, an issue that carries significant implications for flexibility and change. The recent summarizing by Welzel (2013) of the decades of World Values Surveys findings, with the addition of new research from the fossil DNA record and from palaeo-anthropology, has now provided a cogent explanation. It stretches back long into pre-history to the ecological conditions that shaped human survival responses over the 60,000 years since the break-out of homo sapiens from the African Rift Valley. Here had been concentrated the remaining 10,000 or so members of the species who had learned to survive the previous long period of ice-ages, volcanic eruptions, prolonged drought and changes to flora and fauna that eliminated many animal and plant species.

In making the long transition from the earlier proto-human condition to being the ultimate adaptive animal in the more brainy modern human condition, a change took place in the structure of core inherited instincts or drives. In the earlier period the dominant drives in proto-humans were (a) to defend, and (b) to acquire. Together these make up the territorialism still instinctive in homo sapiens (Ardrey 1966). But as

the larger-brained species flourished and communicated more, two additional strong drives evolved: (c) to bond, and (d) to learn (Lawrence and Nohria, 2002). As the contribution to survival of these later drives became more significant they came to predominate in shaping behavior. Given these, the human group fittest for survival stabilized at around 150 members. The evolved response proved to be unusually successful in fostering adaptation, and allowed the species to occupy the entire planet. Its crucial shared ideal became reciprocal altruism, and this is why the 'natural' human group is limited by the range over which an individual can judge people who can be trusted, and with whom reciprocal bonding can be made to work. Such groups and their members are more likely to survive. We therefore began as defenders and acquirers and then added the more interactive bonding and learning. Later inventions of institutions to foster shared order, such as forms of law, greatly increased the range of trust and vastly expanded the potential and actual cooperativeness across societies in the cases where such institutions came into use. The further growth of such 'social capital' is the most fundamental of all China's challenges.

But why the two great clusters of culture? The most crucial part of this story comes next, and is a newly formed account known as the Cool Water Hypothesis (Welzel, 2013). The argument put simply is as follows. During the past 60,000 years during which anatomically modern human groups migrated out of Africa and slowly occupied the rest of the planet, the surrounding circumstances at their destinations were not all alike. They moved into different ecologies, and these had strong implications for how to get food, shelter, and safety. In consequence different responses became appropriate. The responses cluster into two broad types. These overlap with today's cross-cultural data; and they are rooted in sixty millennia of pre-historic conditioning. The two types are known (Kortmulder and Robbers 2005) as agonistic (where social structures are based on threat, power, and anxiety) and hedonic (where social structures are based on interaction, persuasion, and prestige). The main features of this conditioning are given in Figure 2.

Fig.2. The two main ecological contexts in which homo sapiens evolved

Social structure modes	Agonic	Hedonic
Ecological conditions	<ul style="list-style-type: none"> -Warm climate -Abundance of resources -More disease-prone -Resources clustered together in predictable locations 	<ul style="list-style-type: none"> -Moderately cold climate, leading to less infectious diseases -Continuous rainfall -Healthy water supply -Permanently navigable waterways -Naturally arable soil -Fewer, scattered resources
Patterns of behaviour	<ul style="list-style-type: none"> -Focus on maximising fertility and health -Farmers required to remain close to the fields to ensure cultivation returns -Individual acquisition of resources visible to others -Delayed consumption 	<ul style="list-style-type: none"> -Focus on workforce value -Men required to travel to gather grain and shepherd flocks -Women expected to stay in villages in order to care for children and the elderly, as well as to look after pulse crops. -Individual acquisition invisible to others -Immediate consumption -Functional
Attitudes and Values	<ul style="list-style-type: none"> -High power distance -Collectivism -High uncertainty avoidance -Feminine -Past Orientated -Confucianist or Taoist belief system -Low trust -Restraint -Group compliance -Fatalistic view of future 	<ul style="list-style-type: none"> -Low power distance -Individualism -Low uncertainty avoidance -Masculine -Future orientated -Judeo-Christian value and belief system -egalitarian -Nurturing -High trust -Indulgence

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In the agonistic case, distributed in most tropical contexts and/or in areas where supply of water was affected by seasonal extremes, and in conditions where food resources were concentrated in restricted areas like fertile river valleys, or forests to support intensive gathering, then an outcome as populations grew would be competition for space, for food, and for water. In these circumstances, if someone strongly proposed to organize things in such a way that all could survive without fighting each other, the most likely response would be 'OK, we need that. So we accept being looked after in exchange for a hierarchical order'. The widespread phenomenon of the 'big man' in tropical countries is a continuation of this social psychology (Sahlins 1963). This survival-driven dependence on a superior for order is the most likely origin of power distance, of paternalist ideals, by extension up to totalitarian states. Packaged with it goes the salience of survival groups like families, and clans, known as collectivism, and these provide psychological support against the anxieties that go with subordination. Individualists evolve in conditions where they tend to run their own affairs, and so are instinctively resistant to hierarchy. They can do without it in most circumstances, and so too can they manage with less group dependence, except for the special and often temporary circumstances where group belonging has high utility.

In the hedonic case, the contexts were areas of low population density and extensive land, as in the plains of northern Europe, but critically with the guarantee of rainfall enough to provide sustenance without human intervention. Until iron age farming began, food was got primarily by hunting and gathering and would require extensive searching and initiative, often by individuals. The keeping of cattle and other domesticated animals became part of the total, and included the option of their ranging. Many of those humans came to depend on cows milk and an indication of this is the genetic transmission of lactose tolerance being concentrated clearly in northwest Europe (Welzel, 2013). There was also enough land to provide for a safe sense of proprietorship. The ancient Anglo-Saxon 'yeoman' was an independent farmer. Individualism evolved early in Britain and is partially accountable for the emergence there of a sophisticated market economy by the thirteenth century CE. On this point Macfarlane points to the significant difference between peasant societies where people are bonded in permanent ties of hierarchical obligation, and societies founded on individual ownership. He sees this as an ancient difference and observes as follows:

‘..there is no necessary evolutionary set of stages from hierarchy to equality. They are alternative systems that may co-exist in time.... it becomes easier to see that the clash between the Indian and the English systems was between a peasant society structure and a fundamentally non-peasant individualistic one.’ (Macfarlane 1978, 270)

If then such structures remain deep in a society's norms and institutions, the development process must work with them and not assume that a force such as capitalism will change them.

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Although the typical hedonic case is northern Europe (which arguably prepared for extensions into 'empty' areas such as North America, Australia, New Zealand), it is highly significant that the same ecology and response was found in Japan, thus making the hedonic type not just a western one. A key common denominator was the reliability of rainfall that would lead to a sense of independence over resources for survival. If someone powerful suggested taking control so as to guarantee social stability, the hedonic response one might imagine as being 'No thank you. We can look after ourselves and do not want to submit to external authority'. A symbol of this is Magna Carta, signed in 1215 to confirm exactly this, and celebrated for the last thousand years in the societies that have since taken their design inspiration from the attendant principles of freedom, individualism and equality. The difference between Japan and China has been crucial to their separate trajectories.

Welzel (2013) provides a graph (Fig 3) illustrating correlation between the Cool Water condition and 2010 per capita income, the overall correlation being .78***. The position of China is at the mid-point alongside Egypt and Algeria. Japan is at a high point alongside Switzerland, the US and Sweden. This points to something in the hedonic that is connected to cooperativeness, innovativeness and high-level economic productivity.

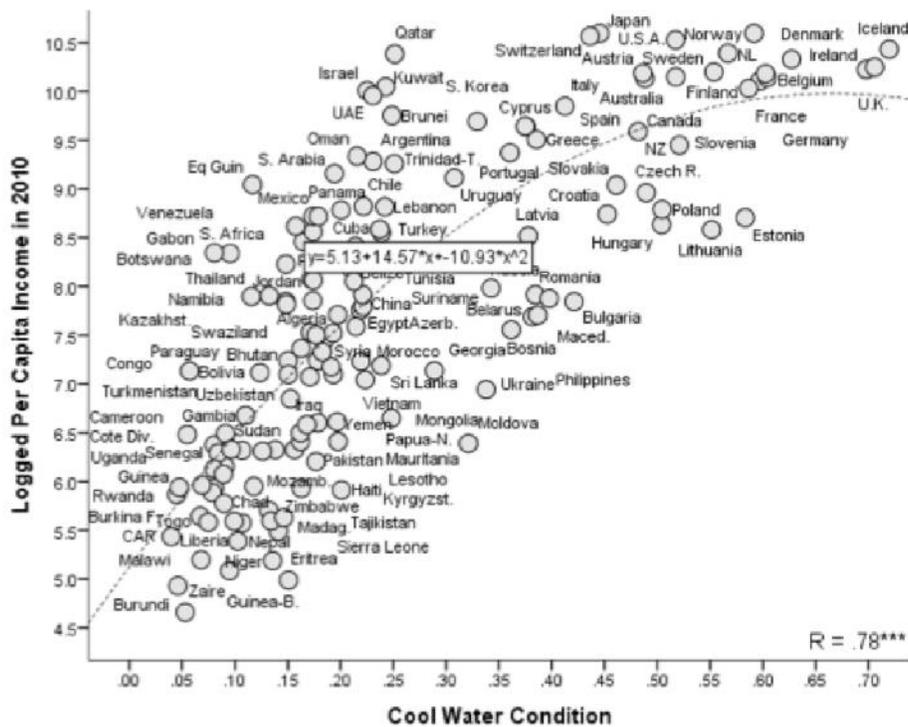


Fig 3. Original Cool Water societal conditioning and current per capita income

A parallel graph (Fig 4) shows the relation between the Cool Water condition and empowerment.

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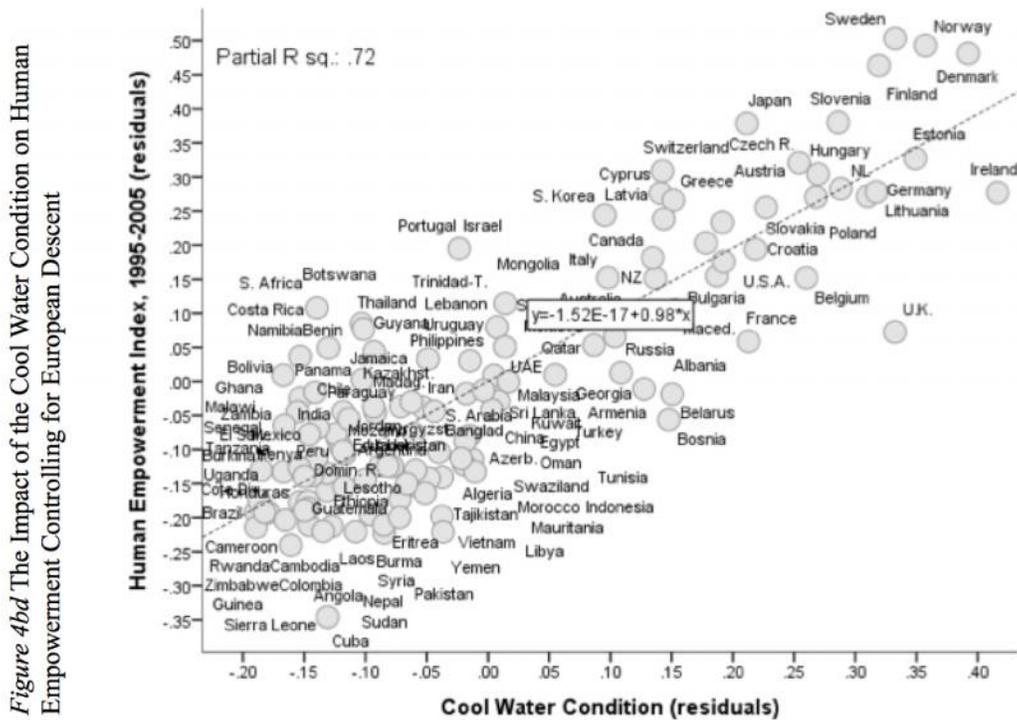


Fig 4. Relation between the Cool Water Condition and human empowerment

The case of China as an *agonic* society was made in the most detail by Wittfogel (1957) who used the term ‘the hydraulic society’, taking as his theme the need for water control as central to the society’s capacity to feed its people. He describes in detail the immense infrastructure for water control and distribution that the state built over Chinese history, plus its attendant state institutions for grain storage, control of trade, administration and taxation, that gave the state absolute power. Counterbalancing the inevitable negative tendencies in despotism were the ideals of Confucianism that supported a scholarly hierarchy, and the tenets of Buddhism and Taoism that prepared people for tolerance. The genius of the design was the stabilizing of family identity and behavior control that then brought a high level of predictability in social conduct. The state could then be both very large and adequately stable because although the emperor was far away the state never was.

Wittfogel commented on the remarkable durability of this extremely centralized political response once established. Even if the society as a total contains alternatives to the pure form of government-supplied crucial infrastructure, keeping control at the centre remained assured by a plurality of factors, among which the hydraulic enterprise itself may have become of little importance. This premonition about path dependency has been borne out by the constant retention by Beijing in recent decades of an established elite. Wittfogel argued in essence that systems of this nature cannot fundamentally change themselves.

'The history of hydraulic society records innumerable rebellions and palace revolutions. But nowhere, to our knowledge, did internal forces succeed in transforming any single-centred agromanageial society into a multi-centred society of the Western type. More specifically: neither in the Old nor in the New World did any great hydraulic civilization proper spontaneously evolve into an industrial society, as did, under non-hydraulic conditions, the countries of the post-Mediaeval West.' (Wittfogel 1957, 227)

Although Mao attempted to destroy the basis of the old order so completely that it could be rebuilt from scratch, and although his attempt was as radical as it is possible to be, his ideal remained central control. The subsequent replication in all but name of an imperial centre and a supporting compliant bureaucracy is a telling lesson in 'the tyranny of history' (Jenner, 1992). In all this we must not forget that the first such design in China rested on an administrative bureaucracy chosen entirely openly on the basis of its cultured intelligence. This allowed Fukuyama (2011) to hail China as the first modern state. This was certainly the case for the time it was happening two millennia ago, but modernization keeps moving forward and the stability provided by a professional bureaucracy still needs to allow for the taking of newer opportunities later as new technology makes them possible. Power needs to spread out from the centre so that eventually new forms of order can spontaneously emerge from within the society rather than from on high. Without this distribution of decision power, the complexities that increase exponentially, and that go with new technology, cannot be used to advantage and the society will decline relative to others.

It is not beyond the imagination for the purity and effectiveness of China's early modern structure to be recoverable, and for it somehow to get over its earlier handicaps of conservatism, so that a new form of the modern may evolve. The present structure of regionally decentralized authoritarianism is clearly a move in that direction, but it remains authoritarian. The challenges remain of not just adaptiveness, but the empowerment of the citizen, so as to open up the store of the society's latent initiative. Whatever the possibilities, it is necessary to better understand the parameters of the path dependency, and what aspects of it may or may not be changeable. For this it is necessary to venture further into the society's dark matter, and ask what understandings shape the institutions.

Culture and progress

It is a short step from seeing the world in the light of the two giant clusters of instinctive, inherited forms of order, to asking about their implications. Do they have any influence on societal progress towards prosperity? The starting evidence is visible in correlations, inside which much research still needs to be done to unravel determinacy. Table 1 presents the correlations from the very large data base of Welzel and others in the World Values project (Welzel, Inglehart and Alexander 2015). These show connections between (1) various legacies of evolution influenced by ecology, and (2) present-day patterns of behavior in the same geographies. The strongest correlations (around 0.85) are between the cool-water condition and the

empowering of humans. This latter is a composite of cognitive mobilization, emancipative values, and civic entitlements. These three concepts are parts of the invisible forces of interest here. They need now to be defined.

Figure 5. Pre-historic and historic conditions and the components of empowerment. Source Welzel 2014.

CORRELATES:	Overall Index:	Index Components:		
	Human Empowerment	Cognitive Mobilization	Emancipative Values	Civic Entitlements
Cool Water Condition	0.85 (137)	0.87 (136)	0.74 (100)	0.74 (150)
Linguistic Individualism	0.71 (104)	0.59 (103)	0.74 (82)	0.69 (110)
Disease Prevalence	0.68 (144)	0.72 (143)	0.62 (102)	0.57 (157)
Lactose Tolerance	0.68 (102)	0.63 (101)	0.68 (80)	0.63 (108)
Genetic Distance from Africans	0.66 (40)	0.71 (40)	0.63 (40)	0.57 (40)
Thermal Challenge	0.53 (145)	0.58 (144)	0.50 (102)	0.42 (158)
Agrarian Potential	0.45 (98)	0.58 (98)	0.19 (69) ^{n.s.}	0.36 (107)

Note: Entries are Pearson correlations with number of nations in parentheses. If not otherwise indicated, all correlations are significant at the 1%-level (two-tailed). Human empowerment variables are measured over 1995-2005. For variable descriptions, see Appendix _.

Cognitive mobilization (Inglehart 1990) occurs when people become better educated and informed, and when they habitually perform intellectual tasks in professional and daily environments. Emancipative values come into play when people find it possible to indulge the desire to be in charge of their lives, and become conscious of their rights to do so. Civic entitlements build on the instinct of reciprocal altruism, and expand as people negotiate between their own preferences and the mutually agreed freedoms of others in the society, becoming guided by norms of justice and fairness. An extended tribute to this powerful element is in McCloskey's (2006, 2011) work on the bourgeois virtues. The strength of this three-part nexus lies in its aggregate nature because the utilities released are socially shared. This is a reciprocal good, and its effectiveness rests on one person's freedoms including the freedoms of others. It works maximally when control of resources of action is so widespread and shared that freedom delivers its benefits most widely.

Why the emphasis on freedom? As Welzel, Inglehart and Alexander (2015) point out, the evolution of cognitive ability in humans gave them power to control much in their surroundings. This development entailed self-awareness, empathy, solidarity and reciprocity. But also with those behaviours came the capacity to imagine other realities, and to form intentions. With intentions came the desire for freedom to turn them into action (Deci and Ryan 2008).

As noted already there is a very high correlation between Cool Water origins and human empowerment via emancipative values. There is also a correlation explaining 81 percent of the variation between Cool Water origins and technological advancement in a society (across 142 countries) (Welzel 2013, 342). We have earlier

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noted the correlation with per capita income. These connections are so significant that they require further explanation.

In the ideal typical Cool Water condition there is a combination of (a) moderately cold climate, (b) continuous rainfall over all seasons, and (c) permanently navigable waterways. The argument (Welzel 2104, 336) is that colder temperatures kill microbes and reduce infectious diseases; they also reduce soil depletion and improve land productivity; continuity of rainfall over the seasons further improves land productivity and water sources. Exhaustion from work is less than in hot climates and labor productivity consequently higher. Navigable waterways lubricate economic exchange and democratize market access. In these conditions soil is arable without irrigation, and small farming households with an iron plough and an ox can work quite large areas of land on their own. Neither community support, nor large extended families, are needed. No central power can monopolize access to water and by that means subjugate people, usually by turning them into a peasantry. Disease security and water autonomy lead to more general security and autonomy. Citing Galor (2011) on unified growth theory, Welzel then proposes that with higher security and autonomy

‘...it is rewarding to reallocate time from maximizing fertility to improving skills. As a result the size of the workforce is kept small while its quality improves. For employers, this means that the factor costs for labor are high. Once rising urban markets increase labor demand, costly labor establishes an incentive to search for technologies that save labor.....geographical conditions dating back to prehistoric times → disease security and water autonomy dating back to historic times → fertility control in recent time → technological advancement today.’
(Welzel 2013, 337)

It is appropriate here to note ‘the Needham question’, arising from his monumental study of Science and Civilization in China (1954), as to why China’s technology and inventiveness slowed down from about 1500 CE and never really recovered in an indigenous form. His answer was that the explanation lay in the societal structures. The question was answered more specifically by Elvin (1973) in terms of a ‘high level equilibrium trap’. Labor was so plentiful that there was no incentive to innovate technically to enhance its productivity. The ecology of intensive farming, under dependence on the state for order, saw a rise in population but inhibited technological innovation. By the nineteenth century China had begun to suffer from the consequences of its huge labor force being unskilled, and (unlike Japan) did not succeed in addressing it until the Communist Revolution. So Japan is different, but in what ways?

China and Japan

Japan changed radically after the 1868 Meiji Restoration, although it did not change totally. It deliberately sought means of catching up with the developed world as it was then, and it brought in from abroad a large number of new ways of organizing

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society. Historically it had gone through three modernizations, firstly under Tokugawa 'the maker of modern Japan' (Sadler 1937); secondly on its own terms under threat from the west in the late nineteenth century, and thirdly with initially strong American influence after 1945. In all these adjustments it showed itself capable of high levels of efficient complex organization in firms, plus very high levels of cooperation within the economy, and between government and industry. During the later industrializing phases a distinct strength was the ability to engage the workforces to commit their skills, and their initiative for improvement, to the betterment of their enterprises. By the 1980's Japanese management had become a global by-word for efficiency, and wealth was built to a very high level. Japan had also become a modern democracy, and its people were strongly empowered. Firms succeeded in global markets while at the same time retaining high moral commitments to worker welfare, societal obligation, and societal identity. Unique forms of professionalism, and of national identity, pervaded the administration of the economy, the government, and the public sector. The trajectory was not perfect and has suffered recently from the negatives of diffuse power (van Wolferen, 1990), but as a state it continues as an example of high cooperativeness and adaptiveness.

One of the keys to Japan's capacity to evolve via its own modernization was the education of the Japanese people. Eisenstadt (1996, 2003), in his study of Japanese civilization, noted that

'... A great educational expansion... made Japan under the Tokugawa probably the most literate pre-modern society... a new common discourse – a new ideology – could potentially develop, new modes of knowledge could become connected in frameworks that cut across major sectors of the population, and common political action could develop'

The contrast with China is stark and its details will evolve later in this paper, except to note that an outcome is a ten times difference in gdp per capita. How did the societies evolve to carry such different capacities for economic productivity ?

The essence of the Japan/China contrast is in the way power is used to deliver societal order. In China power is a matter of overt domination, and so its nature is agonic. In Japan it is a matter of persuasion and consensus and so its nature is hedonic. To understand the Japanese form requires first an acknowledgement of the long millennia of pre-historic evolution under Cool Water conditions. There are also many subsequent influences. From a long list it is possible to suggest four features that have been especially significant in shaping Japan's present-day interpretation of its founding instincts. These are (1) the ancient separation of central power into two counter-posed bodies, (2) the effective decentralization of political power into the regions during the long and stable Tokugawa shogunate, (3) reinterpretations of social ideals such as Confucianism to reflect empowerment and duty to the community, and (4) widespread education to foster debate and to understand change.

The evolving of the China/Japan difference is described in Eisenstadt's (1996) deep study of Japanese civilization. In this he identifies a subtle contrast in

conceptions of statehood and national community. Especially during the Tokugawa shogunate Japanese social philosophers such as Razan, Ekken, Norinaga, Sorai, transformed the thinking earlier absorbed from China. In very simple terms the role of li, or the conformity to rules of order, came to be re-defined. This ordering principle so central to Chinese philosophy is seen as

‘an ultimate reality that encompasses both the transcendental and the sociopolitical realm. This conception was rooted in a dualistic conception of the world, in which the transcendental and the mundane are distinct entities or realms which can be unified only through the metaphysical conception of the li.’ (Eisenstadt 1996, 244).

What took place in Japan was a reinterpretation of this imposed conformity, towards an ideal that emphasized the justifying of action based on saving other people in their real surroundings. The transcendent principle that brought everything together under li was no longer prior or superior, and was replaced by ideals about order that were more objective, more particular, more situational, and more realistic. Eisenstadt sees these as having a more commonsense, materialist character. These came to be grounded in a unifying Japanese rather than a Chinese ideal and it went back to Shinto. It rested on an ideal of the sociability of human beings and the significance of community in nature.

Three significant consequences of this shift in thinking are relevant to the theme of this paper. The first is the legitimizing in Japan of different societal realms as autonomous; art and poetry for instance became legitimate for their own sake, and to provide enjoyment rather than to ideologically shape character. Such intellectual autonomy is a form of empowerment. The second is the rejection of hierarchy. As there is no hierarchic priority in nature, and as the person is self-responsible, then, in a typically hedonic response, people could nourish themselves without the exploitations that go with hierarchy (Eisenstadt 246). This would enhance the personal taking of responsibility, and would avoid the corrosive effects of subjugation via serfdom or peasant existence. The capacity for such autonomy was part of Japan's distinct ecological heritage. Thirdly was the efflorescence of a wide range of new schools of thought, so that Japan, as a non-Axial civilization, could arrive at its nineteenth century meeting with the modern, having achieved an elite-led but society-wide “continuous openness to outside influences and the development of highly sophisticated discourse – a combination which cannot be found in any other great civilization” (Eisenstadt 260). Such pluralism is usually a pre-requisite for the stable societal capacity for innovativeness.

Universal conditions for achieving Innovativeness

Innovativeness was identified by Mokyr in his fine-grained study of the social details of the first industrial revolution in the UK between 1700 and 1850 as one of ‘the two games being played’. One of these was the game against nature, in other words the use of science to harness commercially the potential in the natural world; the other

was the game of interacting with other people through institutions (Mokyr 2009, 12). This paper simply re-defines these as Innovativeness and Cooperativeness. Neither on its own would have been enough. But the two together released an immense force.

In a recent review of societal innovativeness, Redding and Drew (2015) concluded that the social systems that proved the most fertile in this regard shared the following features (Table 2). These make up a configuration of social enabling mechanisms (Caspin-Wagner and Lewin, 2014) and the interplay between the components makes the totality self-reinforcing.

- Deriving Universal Requirements:
1. For world standards of competitive efficiency the economic unit, regardless of its ownership, must be capable of being efficiently scaled up (with the exception of certain service or craft industries resting on individual skills).
 2. In such scaling up it is necessary to retain the psychological engagement of those with skills strategic to the organisation, so that they are motivated to be creative for, and cooperative with, the enterprise.
 3. Such individuals need to be able to express adventurousness with a high degree of autonomy and without fear of punishment.
 4. Such individuals need to be able to safely keep a fair proportion of any rewards that come from their inventiveness.
 5. It should be possible for information to flow through the society in a way that fosters both learning and collaboration.
 6. It should be possible to trust that the surrounding system of order and regulation will act protectively and predictably and express shared ideals.
 7. There should be a fundamentally neutral position in decision-making about risk that rests on objective and rational calculation of evidence-based judgement. Effort devoted to innovation should be applied in conditions of competitive fairness.

Figure 6. Universal requirements for societal innovativeness.

It is possible to see in different societies how such universal principles are locally interpreted. Silicon Valley reflects its host environment of liberal market capitalism. The industries of Nagoya reflect a quite different set of relations between business, government and finance. Again differently, do the industries of the Ruhr in Germany. But in their own ways they are all able to meet the above universal principles.

China's challenge of innovativeness

Mokyr's 'game against Nature' is that of fundamental science, then applied science, then commercialization. This aspect of the middle-income trap has been analysed by Wu (2010), who states that the trap 'arises when the country grows along the path of high effort on imitation to some income level, but fails to switch to the strategy of high effort on innovation, and is trapped there for ever' (166). Among the factors central to success for China is the question of its human capital, and here Zhang et al. (2012) raise the issue of continuing inequality, and the great weakness of human capital among the vast pool of rural poor. The weight of hundreds of millions of relatively unskilled workers, still largely disenfranchised, will begin to drag down progress. They conclude that if this is not addressed then 'China will have to try to accomplish what no other successful Graduate has ever done since World War 2: make the transition from middle to high income with high levels of inequality' (30).

The World Bank (2010) analysed performance in innovation on a scale of 1 (low) to 10 (high) on its KI index (innovation, skills, information) and rated China 5.5 compared with Korea at 8.5, Hong Kong at 8.6, Taiwan at 9.5, and Singapore at 9.6. They also identified the innovation constraints faced by firms as most severe (0) to least (10). For China these were 1.3 for skills, 1.7 for entrepreneurship, 3.0 for information, and 4.3 for finance. The context of China presents embedded obstacles to investment in innovation. Intellectual property is weakly protected (Krepp, Beckenbauer and Gassmann, 2010) so firms tend to copy what they need. Skilled workers move freely among competing firms taking knowledge with them, and poaching is common (Li & Sheldon, 2011). The performance of China in innovation, although implied as strong by the presence of science parks and incubators and certain strong and highly visible companies, needs to be seen against a high dependence on innovation by foreign companies. Wilsdon and Keeley (2007) in a report for the UK government reported that 99 percent of Chinese firms had never registered a patent; that half of the patent applications in China were from foreign companies; and that China's share of patents registered with the World Intellectual Property Organization was 1.4 percent. On the question of adequate human capital the match of education with industrial needs remains poor, with general skills preferred over vocational (Sheldon, Li, & San, 2011). A World Bank report found that of the 4.95 million graduates emerging in China in 2007, 1.4 million were unfitted for employment (World Bank, 2007). A 2005 McKinsey study concluded that of 1.6 million engineers in the labor market only one in ten had the requisite skills to work in an MNC (Farrell & Grant, 2005).

Outcomes for innovation on the shop floor are visible from a recent study by Zimmerman and Bollbach (2015) of attempts by a German automotive components manufacturer to transfer the firm's Lean Production system to its subsidiaries in China. The attempt failed, and the study concluded that manufacturing in China will not be truly 'Lean' in the near future because of the barrier of certain 'cognitive dispositions and behaviors' of Chinese employees. These include (a) problem-solving skills insufficiently developed in education, (b) focus on rote learning of facts rather than on analytical judgment, (c) regard for 'face' inhibiting the making of suggestions, including fear of appearing naïve, (d) emphasis on harmony preventing

the revealing of root causes of problems, and (e) a strong sense of hierarchy blocking communication upwards. The same negative sense of hierarchy is captured in the report by Lieberthal and Lieberthal (2003) on the persistence of organizational silos in Chinese organizations and the general inability of middle managers to perceive the organizational total. Such managers are then handicapped from acting with an understanding the larger strategic context of their responsibilities. Also noted is a one-way flow of communication downwards. Other studies of innovation in Chinese industry have reported similar findings, commonly indicating a tendency to hierarchical dependence, an unhelpful institutional context, and a relative lack of dealing with problems of appropriate social capital (Xue, Liang, Boulton and Snyder 2005, Liu and Buck 2007, De Filippo 1997, Yam, Guan, Pun and Tang 2004, Zhu, Wittmann and Peng 2012, Zhang, Lee, Zhang and Bannerjee 2003, Wang, Guidice, Tansky, and Wang 2009).

A more general concern is now with national total factor productivity, seen by *The Economist* (Oct 11, 2014, p 88) as exhibiting a worrying trend. It is slowing down, and TFP growth is seen by the World Bank as now 40% lower than in the 1990s. By some analysts (e.g. Wu, 2010) its current TFP growth is seen as negative.

It was noted earlier that, for maximizing societal progress, effort to relate innovation to its use in the economy should be conducted in conditions of fair competition, and with an objective and rational context of resource allocation. Studies of Silicon Valley show clearly the dense interactions between the major contributors – government, universities, scientists, entrepreneurs, financial analysts, sources of funding (Hwang and Horowitz, 2012). The success of Silicon Fen around Cambridge in the UK is attributed to its culture of collaboration, visible in 60 networks that bring together academics, industry and capital (Hauser 2015). The comparison with China is addressed by Arnoldi and Zhang (2012) in a study of what they term ‘the dual reality’ of the Chinese knowledge economy. This describes how (a) the generation of new knowledge and (b) its useful application, are de-coupled. In the first sphere of action scientific-based knowledge and professional know-how are perceived as prime drivers of the economy. But in the second sphere of action they remain subordinate to existing administrative infrastructures. State control is evident in its monopolizing of regulation and social resource allocation, in funding via a few national agencies, and in the restricting of alternative funding. The entry of external scientific judgment about research policy is filtered, and the result is – based on a study of the bio-industry – that nationally mandated programs with built-in hierarchical guidelines still play a dominant and inhibiting role in the allocation of research resources. Techno-bureaucrats have undue influence. They describe ‘a milieu of unhealthy relationships’ (165) in which the unacknowledged goal of administrative agencies is to enhance their reach and weight of responsibility rather than to foster the positive contribution of new knowledge. Arnoldi and Zhang see this set of structures as understandable evidence of the attempt by China to find a hybrid that allows the entry of some forms of empowerment while retaining Party control of the state. Such a hybrid remains a response to a paradox but it may not be an

adequate resolution of the deep quandary that China faces, namely that of resolving the tension between hierarchy-based order and the full flowering of initiative.

Conditions for achieving Cooperativeness

As with Innovativeness it is possible to define the universals that support high levels of societal Cooperativeness. The following summary is inspired largely by the work of Ostrom (1990) who studied the issue extensively in many societies, and of Zucker (1986) who took as an example the historical evolution of institutional trust in the US between 1840 and 1920. It is in the institutional sphere of trust (as opposed to the process-based or person-based spheres) that China faces its greatest need when attempting the expansion of cooperativeness. In China this institutional form may be in contention with the other two forms already so well established as the main cement for the clientelist structures in use.

As Zucker (1986: 101) points out institutional trust is a form of insurance. Under such rationality managers metaphorically insure owners against the abuse of their funds, they also insure wage earners against owner opportunism, stock markets insure investors against fraud and misrepresentation, professions insure the reliability and probity of high skills, regulations insure transactions within specific rules. All these forms of 'insurance' then foster the growth of transactions (de Soto, 2000). Critically for China such insurance could and would expand to include transactions between strangers. Economic history shows how that expansion can be exponential. It is the entry point to the modern economy.

Ostrom (1990) was looking at the domain of collective action over the use of common pool resources. Her evidence came from many countries and systems. Her list of cooperation-producing design principles is a picture of what works even though needing local interpretation as to how. The elements may be seen as principles underpinning the forms of institution-backed reliability described by Zucker. These principles are summarized as follows:-

1. Clearly defined boundaries within which rights and obligations can be defined.
2. Sensitivity to local conditions.
3. Individual participation in choice.
4. Monitors reporting to the members.
5. Graduated sanctions.
6. Conflict-resolution mechanisms.
7. Rights of members to devise their own institutions.
8. Same system rising in multiple layers whenever part of larger systems.

It is clear that such a response is essentially empowering for the membership, and one might conclude that it provides prima facie evidence of a connection between the granting of such discretion and the rise of cooperativeness. It would appear to show how institutions such as defined rights, systems of monitoring etc, can act to take instinctive interpersonal trust beyond its previously restricted

boundaries. It might even be an indication of how agonistic instincts accustomed to hierarchy and subjugation may be adjusted under new interpretations of authority. It might give a foretaste of the societal implications that flow from the persistent rise of empowerment globally, reported in detail from the World Values Surveys conducted since 1981, and summarized as the contagion thesis of emancipation theory (Welzel 2013, 407). In this the utility ladder provided by increasing freedom is the incentive for change that leads to a striving for more of the same.

China's challenge of cooperativeness

Industrial revolutions lead to their highest performance levels under conditions where cooperativeness across the economy also reaches high levels (Mokyr, 2009). Two background features need to be in place before this process can accumulate momentum: (i) the widespread sharing of ideals and ethical standards governing conduct, so that the behavior of relative strangers is still more or less predictable (McCloskey, 2006; Weber, 1930) and (ii) the accreting of a layer of institutions that underpin risk and that also make outcomes predictable within a known range (North 2005; Acemoglu & Robinson, 2012, Zucker, 1986). These ideational and institutional contributions are the foundations to sustain all forms of trust.

The background features just defined are both major challenges for China. Considering first the question of unifying ethical ideals, the traditional beliefs of Chinese civilization have taken a severe battering from the deliberate Maoist attempts to destroy them, and then of more recent governments to marginalize them, and now the government attempts to selectively emphasize certain of them. The appearance in Tiananmen Square of a 30-foot high statue of Confucius and its subsequent sudden disappearance, indicates policy dissent. The context is summarized by McGregor (2012) in the title of his informed critique of Chinese authoritarian capitalism, 'No ancient wisdom, no followers'. Those ideals that remain tend to surround the survival of family as mini welfare state and are not conducive to the active practice of communal spirit, despite the constant official exhortations about societal harmony. Anomie is the condition of many (Lemos, 2012). The 'eating of bitterness' is promoted officially as a virtuous contribution to keeping society stable (Griffiths and Zeuthen 2014). Leung and Au (2010) in a review of research on Chinese cooperation and competition conclude that authoritarianism undermines trust, and mistrust undermines cooperation in the social sphere beyond family. To bridge this there comes into use the highly particularistic cement of *guanxi* (Chan, 2009). But beyond such links of interpersonal reciprocity, systemic trust in institutions is weak. The Civicus Civil Society Survey (Civicus, 2006) scored China 1.4 (out of 3) for civil society, just slightly ahead of Russia (1.23) but well behind the advanced industrialized nations such as Germany (2.35) or Netherlands (2.08). Critically for the argument being made about cooperativeness, the World Values Survey (2009) reported that 89 percent of people in China do not trust strangers (US 60, Canada 49, Sweden 31). If *guanxi* sets the boundaries of whom you trust, and if institutions do not help beyond, then widespread cooperativeness is still an ideal and not a reality.

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Towards a general theory of organizational response in China

China is a special case of the more general issue of hierarchy. The core dilemma may be simply stated: how can an economic system *combine* (a) the practical need for organizational hierarchy in the interests of control, and (b) the releasing of human initiative at high levels among organizational members in the interests of the organization and the wider common good? In other words how can hierarchy and initiative be made to work together? The question is stimulated by a general neglect of the issue, as recently noted by Child (2014) in a review of Diefenbach's (2013) new analysis of the hierarchy question. Seeing it as 'one of the most important books to have appeared in recent years' Child notes that

'Hierarchy and its negative consequences is arguably the most pressing social issue of our times and one on which organization theorists have potentially much to contribute. Yet while the subject has been of continuing concern to philosophers and sociologists, most organization analysts have neglected it despite having the tools with which to fashion a fundamental critique.' (Child 2014. 1727)

I propose that in the modern case, found in highly productive economies, the dilemma has been solved with organizations managed on principles of personnel inclusion and motivation. This rests, as noted earlier in this paper on the evolving historically of a more benevolent form of domination that those found earlier, and on the psychological dynamics of free markets in labor and product. Productivity per person, as GDP per hour of work in 2013 US \$, was 57 in Germany, 40 in Taiwan, and 8 in Thailand (Conference Board 2014). The core explanation why is suggested in Fig 5.

The problem of initiative within hierarchy

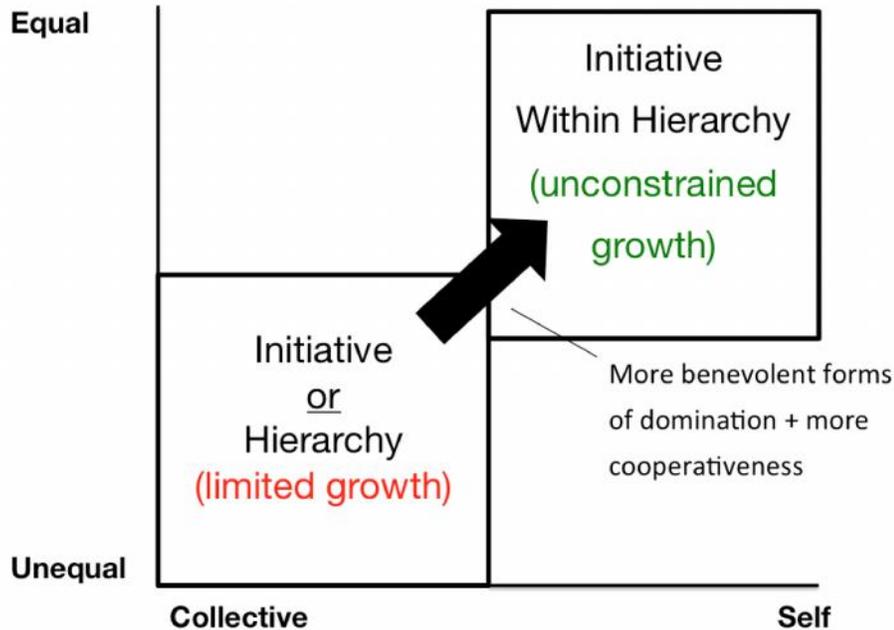


Fig 7. The problem of combining Initiative and Hierarchy

This suggests that societies evolve to produce one of two main responses to the dilemma. Hierarchy plus Initiative occurs mainly in societies that are essentially hedonic in heritage, and consequently high in individualism and egalitarianism. Hierarchy or Initiative occurs in societies with an agonistic heritage, and so high in collectivism and authoritarianism; here Hierarchy and Initiative exist but are not found fused together. The cases of Taiwan and South Korea suggest that it may be possible to evolve from one condition to the other, or to stabilize as a hybrid.

In the Hierarchy or Initiative case where the resolution is to have two kinds of organization, the result is usually a difference in typical organization size. China provides a clear example, with:

1. Small organizations where there is much initiative concentrated in ownership, as with entrepreneurship in family business, the great dynamo of China (Lardy, 2014; OECD, 2005). Such initiative is restricted in its expression and staying power in most cases by the limits of personal ownership. Only very rarely do such organizations grow to large size at world standards of competitive efficiency, and when they do in China they tend to have been earlier coopted into the State orbit.
2. Large hierarchies supported by the State for public reasons, but unable to release initiative within themselves. Their return on capital is half that of

their private sector cousins, despite unmeasurable advantages in capital access, and government contracts.

If a society is only able to handle large scale via the use of inefficient organizations, then it ends up failing to make an impact in the major leagues of global business, except in special cases such as resource industries. If it can only handle innovation efficiently via a proliferation of small organizations, then it cannot take the advantages of scale to exploit global markets. In both cases, the limitations of hierarchy become apparent. They eventually come down to the questions with which this paper began: Why is China weak at innovativeness? In what way is cooperativeness handicapped?

The dysfunctions that go with anxiety

The most elusive and least acknowledged aspect of China's dark matter is the corrosive effect of fear among economic actors at all levels. This fear stems from three sources. First is the uncertainty and anxiety associated with life in such a turbulent economy where most people live close to the subsistence level, and many without state support over welfare. Second is the simple risk of dealing with predatory corruption when a small entrepreneur can be shut down by any of several state offices, such as Commerce, Tax, Police, Fire Safety, Health, without redress from a trusted legal process. In the state sector the uncertainties associated with clientelism and personalism in the vertical elite networks of the region-based political structure, would leave many influential people averse to risk.

The interface between the person of business and officialdom is now a field of high tension as the Party shows itself capable of hard tactics in coopting allies from the business world to work within its control. The tension stems from the implicit subjugation of those coopted. The third source of fear is the long tradition of error having to be settled through punishment. In the traditional Confucian ideal, as practiced either in a family or in the public arena, the rules and rituals of paternalism were not to be challenged. If a person behaved outside those rules he or she was automatically classified as evil, and so must be punished. The seeming gentleness was tempered with severity (Pye 1985, 42). Exemplary punishments to warn the public were often very severe (Hamilton 1984, 417). For centuries one of the six major Boards of public administration was that of Punishments. Although China is no longer imperial, some indication of its latent capacity for punishment is visible in the accounts of the Mao years (Dikotter 2010, 2013).

For the government to have made the 'eating of bitterness' an officially agreed basis for the allocation of respect to stoic individuals suggests that many citizens live in a condition of substantial insecurity (Griffiths and Zeuthen 2014). A rare insight into the effects is provided by British journalist Chu (2013, 101) who writes "What always strikes me when I try to engage Chinese friends for the first time in discussion about political reform in the country is the fear that exists....Most people know what savagery the regime is prepared to sanction in order to survive. And many Chinese have learned to keep their heads down....the regime is capable of taking everything they have and leaving them with no redress whatsoever".

As noted earlier there is a reluctance among personnel in many organizations to stick their necks out. They prefer to keep their heads down. Conformity is safe. Initiative brings risk, unless you own the business. This widespread social psychology underlies the dilemma in Figure 3. The release of the initiative needed in large scale organization is only possible under more benevolent forms of domination.

Discussion

I have indicated in this paper that China is facing its acknowledged middle-income trap with a structure of regionally decentralized authoritarian centres of socio-economic strategy. These are controlled from Beijing through the Party management of key personnel. In consequence much has been achieved by way of the sharing of power and the incentivizing of competitive responses to the society's need for economic growth. In parallel a certain amount of political empowerment has taken place in recent years, via rural and township election systems.

There are voices at state policy level that are logically arguing for further steps to be taken, specifically for example Lin (2012) who advocates two subtle shifts: firstly that the centre's role should become one of facilitating the working out of how to target unique comparative advantages for Chinese state firms to exploit, presumably in contrast with pre-defining them at the centre; secondly the encouragement of 'spontaneous self-discovery' by private firms of how they might grow efficiently. Such suggestions are clearly positive. They would move China further along the process of dismantling hierarchy in the field of administration. I would simply add here that although the formulation and definition of organizational purposes is clearly crucial, the real test lies in the generation of a spirit of willing cooperation within the organization alongside the obvious systems of delegation and control (Barnard, 1938).

With that in mind it is now time to revisit the four questions posed earlier, on (i) achieving organizational scale, (ii) social capital, (iii) releasing initiative within hierarchy, and (iv) the psychology within innovativeness.

Achieving organizational scale

What is at issue here is not scale *per se* but scale with high productivity. So far China's recent economic evolution has produced very large-scale state owned enterprises, but at uncompetitive levels of productivity. In a restricted range of product markets a number of large private firms have also evolved, each with a strong individual leader, usually an owner; the picture is obscure as to how close such organizations are to state support.

Two growth issues are visible in this set. For the state firms the essential problem is that the hierarchies do not release enough initiative. There is too much conformity. For the private firms they run the risk in the long term of dependence on the big boss, and of the succession of power, and also of the absence of internal debate. The dangers of this as researched by Fan (2012) in the wider region are the sudden loss of value at the later period of succession: for the total regional population of such enterprises he reports this loss on average as being about half of

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stockmarket value. Such dependence on key figures and their personal networks makes for great vulnerability, a handicap in any form of concentrated hierarchy.

The answer to these dilemmas is the professionalizing of the management and direction functions, and the consequent de-personalizing of the corporate cultures. It has proved possible to achieve this in some large regional Chinese organizations such as the Cheung Kong group, and also in Korean *chaebol*. It has not yet been achieved in any state where the economy remains heavily politicized, except when a separation of powers is clear, as under certain forms of mercantilism where a firm is licensed to act independently but with duties to report to government.

Social capital

Endemic mistrust is a major burden in many societies, and is associated with the absence of institutional fabric to provide system trust. This in turn is a side-effect of hierarchy. History suggests that the fabric that most effectively knits a society together evolves out of spontaneous processes of stabilizing order, as when guilds give way to professions, or bankers establish shared rules of conduct, or local jurisdictions make laws. It would appear that China, in its fostering of greater regional autonomy, and of local government, is moving in this direction. The question is whether the pace of that empowerment process will match the needs of the society for competitive levels of cooperativeness.

Cooperativeness of the kind that energizes the economy is in simple terms the low-transaction cost ability to do business with strangers. This is because the costs of reliance on personalistic networks are dual: executive time and effort is needed to build and maintain the connections; but much more seriously the range of options for dealings is severely restricted. The entire national market is available to those who can deal impersonally, but how many can? And how long does it take for such a psychology to become the norm? To achieve a change here is to achieve a re-design of the core ideals of Chinese civilization. One might assume that this is not feasible, as one change in the total system would de-stabilize much else. All one might expect is that new forms of system trust would be added to the base ideals, to supplement them. The question then is which ideals then determine the behavior and decide the disputes. How much social capital can be built and how effective it can be depends on that, so this is not a simple or a short-term trajectory.

Initiative

Innovativeness is a habit acquired from one's surroundings. It requires a combination of curiosity, non-compliance with received order, self-confidence, and encouragement. This latter may emerge from a surrounding sub-culture, but is also a matter of pragmatic incentives. It often requires a degree of deviance, or 'sticking your neck out'.

The circumstances that will inhibit such initiative are submission within a power structure and the attendant risks of deviance, habituated conformity to norms of compliance, absence of a questioning mental habit, and absence of incentives. All these features are found in hierarchies, and might be seen as outcomes of such structures, especially when a person is born into a context of clearly prescribed

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vertical order, and when that vertical order is legitimated by a powerful moral code defining the civilization itself.

But there is one context in which the same structural instincts can release initiative, and that is when the person is acting out of duty to the family around which all the moral codes circulate. The entrepreneur building a family business has a duty to use initiative, and this has been the core dynamic within the Chinese economy.

Two challenges are now faced by this form: learning to escape from the succession weakness when the organization has reached large scale; and retaining strategic decision autonomy when the dependencies on the state remain high, e.g. for capital, licensing, government contracts. So too has the government indicated a wish to 'assist' in shaping strategies in the private sector, perhaps a double edge sword. Ultimately as in other sectors these challenges are met with professionalism, and with that the depersonalizing of much thinking and action. But acknowledged also is the positive power of the presiding owner in forming purposes, and the need to retain that in the total.

Anxiety

Anxiety and its more serious exponent, fear, together with the attendant response of punishment, are rarely discussed in the research literature, as they are *dark matter* and cannot be seen. Nor will people talk about them, except late in the evening when the deeper truths emerge over the *mao tai*. But the prevalence of this anxiety should not be surprising against the context. It was of course much worse earlier in the still remembered family histories. And of course younger Chinese people have escaped from such threatening and lived in a golden period. But all totalitarian states with inadequate legal protection of citizen rights, must work with such a feature buried in the social psychology of many.

The question that matters is what effects this has. I suggest there are three. The first is conformity. Much research on Chinese organizations stresses the dutiful compliance of managers and workers but also the avoidance of risk as a subordinate, the reluctance to initiate change, and reticence about taking responsibility. In machine bureaucracies such features may well do no harm, but in the growing knowledge industries, they lead to weak performance.

So too at the interface between the private sector and the Party, there is a manipulation of power relationships that robs the entrepreneur of certain fields of initiative, as his activities fall under political scrutiny. In most such dealings there are advantages both ways, but there is nevertheless an additional complexity that might inhibit innovation. Competitive rationality rests on the cold hard logics of market forces, not on state influence, except in its role as guardian of the competitive essentials.

Conclusion

China has been shaped as a society by an agonic heritage going back many thousands of years and strongly institutionalized in its political structures for a longer period than in any other current society. That influence includes a set of moral ideals without which China could not be a civilization. Whether the heritage makes it a state

as such remains a question, as a state would normally exist as an integrated total at all levels from psychological to political, and China may still be working on the outcomes of a perpetual condition of patrimonialism that expresses its civilization but avoids wider empowerment. It is now facing the eventual cost of that in the limiting of cooperativeness and innovativeness, and in consequence it is facing necessary restructuring. A reminder is needed here that Japan's transition to modernity was possible because of the prior empowerment that had evolved there, as it were 'naturally'.

China's current responses move in a positive direction, and will predictably continue to do so, as the regional hubs of economic decision power take the strain of meeting global competitiveness. It is predictable that the transition towards empowering the people of China will continue too slowly to make a major contribution to getting through the middle-income trap. Instead the necessary initiative may be incorporated through business alliances with outside companies, and this will permit the flowing through of partial empowerment controlled within the economy while the rest of the society more slowly catches up, and while a Chinese form of civil society slowly emerges to foster the cooperativeness upon which modernity rests. In all this we must acknowledge the strong possibility that the agonistic heritage may be too deep to permit such evolution.

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Note

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