

Hintergrundpapier

Nr. 11/2008

Anthropology of Property Rights in Natural Resource: New Trends in a New Century

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Executive Summary

While the focus of this paper is on Asia, much of the argument is drawn from experiences in rural resource management around the globe. One of the problems in the current discussion of "property" and "property rights" in the development literature is the assumption that we are talking about the same thing when we use the same term to describe what are often very different phenomena. The major change in behavior vis-à-vis property that has resulted from recent globalization of economic relations is the growing agreement on how people contract and transact business in regard to things (land, building, trees, etc.) while the cultural content of what these "things" really "mean" in a sense of property is something that each jurisdiction is still debating among itself. In this sense, property rights per se will probably not play the same role in Asian development that they did in North America. Rather property rights will be formed by the rules of transaction and contract. This helps us to understand how we can have rapid development in China and Vietnam without strong property rights. In this sense, property rights as instituted and practised would be an epiphenomenon of the social relationships of transactions rather than the producer of those transactions.

One corner of the world

It is indeed a fitting time to take an assessment of the role of private property in human development. I use the words 'human development' because private property is held by many proponents to be fundamental not only to economic, but also political and social development. Even those who see development as a freedom from deprivation also recognize the inevitable and large role that proper protection provided by private property law and institutions plays in securing their goals for the world's poor (v. Sen 1999:60; Dasgupta 1993:289).

In my part of the world almost everything good is based on our strong ties to private property. This is where private rights, especially in land and natural resources, have become a major definition of a cultural system. For instance, my country sees its very foundation bound to the inextricable relationship between private rights in property and political freedom and personal liberty. The right to the unfettered enjoyment of our property is said to be the reason for our revolution and independence from England. No king is ever again going to be able to quarter soldiers in my house without my permission. Consequently it would not be thought out of place to discuss private property law as part of a normal religious observance. Since the role of private property is so fundamental to our cultural way of life, it is not surprising that the members of this cultural tradition feel that it must be an inherent aspect of human nature, and certainly of a desirable social order.

Anthropologists and property

Since the inherent benefits of private property seem so self evident to us, they must be both natural and desired by all humans. In fact a whole sub-discipline of anthropology has grown up to examine the nature of law, rights and property in human society. This is said to have begun with the work of Sir Henry Maine in the 1860s (Nixon 1998) and has continued into the post-modernist approaches of context analysis and ecology. For the reader interested in what the field has grown into, the two books in the bibliography by Laura Nader would serve as an excellent example. The empirical tradition of Nader and her colleagues is not the only avenue that anthropologists have taken to examining why modern society seems so different from traditional cultures. As a corrective to the usual legalistic or economic centric views of the transition that led to private property in human society, the author would recommend one of his favorite authors, Louis Dumont. For example, his two books; *From Mandeville to Marx: The Genesis and Triumph of Economic Ideology* (1977) and *Essais sur l'individualisme: Une perspective anthropologique sur l'idéologie moderne* (1983) are full of insights and approaches that are very different from (but compatible with) those of the Anglophone, Nordic and Germanic anthropological traditions. It should be mentioned that anthropologist have been joined in this endeavor by a mounting body of research in genetic psychology on the nature of acquisitiveness and the possibility that it may have its basis in our DNA.

While the debate on whether some notion of private property is a universal species characteristic or not continues, there seems little debate in political economy. Even the most rudimentary examination of a list of rich and poor countries shows that those nations whose citizens have the best standards of living also have the most political and institutional support for private property. In the author's field, land administration, it is also true that there are no rich countries with non-functional land tenure institutions; while at the same time there are no poor countries where the land tenure institutions work like they are supposed to.

This is not the first time we who are interested in development have made the startling discovery of the power of private property. When we speak of the "private" in private property we are referring to the evolution of an idea that began in Europe in the 1600s, give or take a century in different localities. In the ensuing four hundred years the idea of a defensible, exclusive right to something has been enshrined in European and North American legal, economic, social and cultural theories. Consequently, it is not surprising that, after WWII, what was seen as so desirable for Western Civilization was ready for export as the colonial period receded into history.

The best examples of rapid development following the establishment of strong private property rights for rural producers are the classic cases of Japan, South Korea and Taiwan. This is not the moment to go extensively into the spectacular results of the land reform in these three countries. Suffice it to say that the creation of private property in land during the land reform in these three countries fulfilled all the expected outcomes predicted in our theories of property and transformed historically poor farmers into a rural middle class. The rewards of this transformation went on to produce the modern democracies that are among the strongest economies in the world today.

Some analysts have argued that there were special circumstances which made the transformation of Japan, South Korea and Taiwan seemingly so effortless (v. Hsu, S-J, 1999). A good example of things not working out as intended was the Swynnerton Plan in Kenya. In the mid-1950s, on the eve of independence, the British undertook a program to demarcate and register all the holdings in a district that was under the traditional control of the Kikuyu. The initial results were similar to those in Japan, South Korea and Taiwan and fulfilled all of our expectations. With local investment in new technology, crops and marketing grew enormously. The Plan seemed to be the proof that land registration and legal recognition of individual property rights were the proper catalyst for rural development. Only as the years passed did it become apparent that the local population was not using the land registry. Many had sold their title deeds to land speculators, but continued to farm the land and continued to make normal customary land transactions with their neighbors. Those who bought the title deeds did not dare to try and take possession. Their new neighbors would not tolerate this. There soon developed a market in title deeds to rural property in the capital city of Nairobi associated with all kinds of dubious transactions, but very little to do with rural development. The experience across the whole of Africa proved to be much the same (See Migot-Adholla and Bruce 1994 for a thorough discussion).

The Kenya experience shows that perhaps what the farmers needed was not a break with traditional concepts of property, but rather a better definition of just what these traditional concepts were and then look for ways in which national land administration could work with them. The land demarcation process associated with land survey provided just the right tool. In this sense the Swynnerton Plan was something of a success, although this was (and perhaps still is) not understood by development theoreticians. What it showed was that traditional land tenure could work with modern agricultural economic relationships. The problem is that the "law-in-action" did not conform to the preconceived notions of what property rights were supposed to look like.

We must remember though, that at the time, the Kenya experience was viewed as yet another success story of the primacy of Western notions of private property serving as a catalytic link between modern property institutions and development. It was (and should still be) evident to all observers that where the land tenure institutions of a country are non-conducive to development, they would have to be changed. Land tenure reforms were initiated in Italy, Iran, Libya, and Egypt and across Latin America under the Alliance for Progress. All these attempts to create more secure

rights for rural producers largely withered away and died a natural death by the early 1970s, leaving only scattered traces in the land registries of any of these countries.¹

Land tenure and property reform fell out of favor and the development literature moved through a succession of "hot" topics such as community development, technology transfer and macro economic reform. The multi-faceted role of private property in creating the social, political and especially economic foundation for a developed country was brought to wide attention by the 2000 publication of Hernando de Soto's book, the *Mystery of Capital*. In this seminal work, de Soto argues that whereas property may be recognized within the community, it has little potential for economic growth unless it can be transacted in the larger economy. Since the major kind of private capital that is possessed by the average citizen in any contemporary nation state is usually associated with land and housing, land registration systems play a paramount role in being able to use these resources in a modern economy. De Soto's famous dictum is that for the majority of people living in poor countries, their capital is "dead". That is, it cannot be used in an easy, safe manner to generate more capital. In an earlier article in the *Economist* he argued that the success in moving from a poor country to a rich one will depend more on getting property institutions right rather than on reforming macro-economic structures (de Soto 1994).

The theoretical foundations for such assertions have been carefully elaborated by recent Nobel Prize Laureates in Economics such as Douglass North (1993), and Ronald Coase (1991). This has resulted in new models for assisting developing nations and has led to something called the Washington Consensus. While this label has created some controversy I use it here in the non-pejorative sense to refer to the development literature after the collapse of the Soviet Union in 1989 that has emphasized the need to protect property rights and enhance markets and trade.²

Getting institutions right

At just the time when a new appreciation of the role of private property was emerging, a very interesting program was taking place in Thailand. The King of Thailand put both his prestige and money behind the idea of a proper land registration and security of property rights for agricultural land owners. The improved income and capital development that followed modern land registration in farming communities surrounding Bangkok was proof that getting these institutions right could provide the kind of support rural residents were looking for (G. Feder and T. Onchon 1987). This experience seemed to clearly document the putative relationship between enhanced private property and development. Indeed, the Thailand case is normally cited in justifying all subsequent efforts. Once again land tenure reform, under the new name of "land administration projects" came to the forefront of development programs. These projects are designed extremely well to bring the very latest techniques and knowledge to the benefit of the world's poor, assisting them in registering their land and providing the necessary legal security for their newly registered possessions.

There have been more than a hundred major land administration projects stimulated by the Thailand experience but the results on the ground are, however, not continuing to confirm the expected catalytic link between private property and development. None has even come close to

¹ It is depressing to note that besides Japan, South Korea and Taiwan, the only other land reforms from this period that have survived more or less intact are those of China, Cuba and North Korea.

² The Washington Consensus literature tied development to the earlier tradition of Friedrich Hayek, Morton Friedman and J.R. Commons. See especially Commons 1924.

replicating the success of the Thai experience. In addition, these types of projects can represent a very considerable investment on the part of international donor agencies and the host government. During our work in Eastern and Central Europe with the FAO Land Tenure Service we estimated that developing a fully modern land registry and the associated legal procedures would cost an initial \$100 million (in mid-1990s dollars). The cost rose from there depending on the size of the country and the number of properties to be included. When Peter Dale and John McLaughlin looked at the actual figures for the first Central European countries to complete the process, these rough estimates were shown to be quite accurate (Dale and McLaughlin, v. especially Chapter 5). The group at LandAdmin.co.uk has pulled together the data on some of the major multilateral projects in Asia. We have made minor updates in Table 1 below.

Table 1

Land Administration Projects in Asia

Country	Project name	Funding**	Value	Dates
Afghanistan	Capacity Building for Land Administration Reform	<u>ADB</u>	\$0.25m	2006-2008
	Technical Assistance for Land Policy	UK	\$0.6m	2004-2008
Azerbaijan	Real Estate Registration Project	World Bank	\$30m	2007-2012
Bangladesh	Modernization of Land Administration	<u>ADB</u>	\$0.8m	1993-1999
	Land Rights Programme	UK	\$0.4m	2001-2005
Cambodia	Land Allocation for Social and Economic Development – P084787	<u>World Bank</u>	\$13m	2008-
	First Development Policy Grant (land tenure and land management components) – P071103	<u>World Bank</u>	\$15m	2007-2011
	Land Management and Administration Project	<u>World Bank</u>	\$33.9m	2002-2007
Indonesia	Land Legislation Phase I & 2	<u>ADB</u>	\$1.2m	2001-2006
	Land Administration Project	<u>World Bank</u>	\$140.1m	1994-2001
	Land Management and Policy Project	<u>World Bank</u>	\$87.6m	2004-
Kyrgyzstan	Land and Agrarian Reform Project Phase 2 (ADR and NGO development)	UK	\$1m	2001-2004
Laos	Land Titling Project	<u>World Bank</u>	\$28.4m	1996-2005
	Second Land Titling Project	<u>World Bank</u>	\$23.92m	2003-2009
Mongolia	Cadastral Survey and Land Registration	<u>ADB</u>	\$9.0m	2000-2006
	Banking, Enterprise and Legal Technical Assistance Credit*	<u>World Bank</u>	\$2m	1997-2001
Nepal	Strengthening Land Administration Services	<u>ADB</u>	\$0.4m	2007-2009
Pakistan	Punjab Land Records Management and Information Systems Project (P090501)	<u>World Bank</u>	\$51.6m	2007-2011
Philippines	Land Administration and Management Project I	<u>World Bank</u>	\$4.8m	2000-2004

	Land Administration and Management Project II	<u>World Bank</u>	\$40.6m	2005-2009
	National Program Support for Agrarian Reform	<u>World Bank</u>	\$ 98m	Pipeline
Sri Lanka	Puttalam Housing project - land titles regularization component	<u>World Bank</u>	\$32m	2007-2011
Thailand	Land Titling Project 3	<u>World Bank</u>	\$206.8m	1994-2002
Uzbekistan	Integrated Cadastre System	<u>ADB</u>	\$0.5m	2004-2006
	Land Registration project Phase 3	<u>EU</u>		2006-
Vietnam	Urban Upgrading Project*	<u>World Bank</u>	\$417.5m	2004-

* Only part of the project is directly concerned with land administration

**Does not include inputs from bilateral development groups such as AUSAID, GTZ, and others who are active in these projects.

Source: updated from © 2008 LandAdmin.co.uk

If things worked out so well for Japan, South Korea, Taiwan and Thailand, why have the results been so mixed elsewhere? For example, the Philippines has a tradition of private property and has been implementing a comprehensive agrarian reform program (CARP) for several decades now. A major component of this program is not only to give land to the tiller, but to ensure that new property is registered and the necessary documents deposited in an upgraded land registry office. The legislation supporting the agrarian reform program came to a close in 2008 and the Philippine government had to make a decision to terminate activities or to renew the mandate. A number of analyses of rural economic progress were commissioned to help policy makers and legislature in deciding on what to do. What the studies and research revealed was that while some rural poverty has been alleviated, there has not been any noticeable transformation of rural production (GTZ, DAR, et al 2006 [2007]). The author and his colleagues were responsible for one of these studies. Our own analysis found that when land reform beneficiaries had their property rights secured, they often sold their land holdings and used the money to finance rural-urban migration (Riddell, et al. 2007). This is not necessarily a bad outcome of agrarian reform. People are using their new property rights as part of a strategy to escape poverty. As long as this incipient land market is transparent and at arm's length, it allows those who see their future in agriculture to amass land. Those who do not want to stay in farming now have some choices for the first time in their lives.

Whether the Philippine agrarian reform program is phased out or renewed, a valuable component would be to provide education and training for non-agricultural employment. The aim, after all, of a reform of non-desirable land tenure institutions is not to produce impoverished small holders. A majority of the rural households throughout the Asia and Pacific Region in recent years has become more and more dependent on off-farm sources of income.

The outcome of the Philippine experience, which has emphasized private property and land registration, is in sharp contrast to China. In China we have had a historical rejection of strong property rights and yet it is the example that is on the tip of the tongue of almost every development analyst. However, China is critical for another reason. We see that there is indeed an impetus to develop stronger property rights, but this is taking place after the whole development process is well under way. This is a key point and forms the crux of our analysis. This is just as true in Vietnam where a relatively minor legal recognition of lease/occupation rights at the village level resulted in the country becoming one of the region's major food exporters (Haque and Montesi,

1996 and Tran Nhu, *et al*, 2006). There is obviously something more going on that will require more than a simple change of land tenure. If we look at Table 2, we can see a place to begin.

Table 2

What do we mean by property rights in land?

What Modern Land Tenure Provides	What People Need
— Security	— Investment
— Land markets	● Density of management
— Mortgages	— Transactions
— Collateral	● Partial interests
— Tax base	— Stability
— Conflict resolution	● Conflict resolution
	— Local-level capacity
	● Governance
	● Innovation
	— Sustainability

The Box on the left lists what we expect modern land registration to give land holders. We are all familiar with the arguments surrounding the primacy of secure property rights in the development of modern economy.³ Security is not only important for those who are possessed of land, but also for those wishing to acquire it. As a result, land registration makes possible the modern land market where in general land putatively moves to its most efficient and best use. Those who have a better idea on how to use land are able to acquire it from willing sellers and at a price agreed to using arm's-length negotiation. Land is also continually in economic play because, with the security given by a working land registration and cadastre system, it can be mortgaged on the one hand and used as collateral for investments on the other.

Another major aspect of modern land registration and cadastre is how in those countries where it is best developed it has virtually ended the plague of almost constant conflict over land that has characterized so much of human history. In those jurisdictions that have well functioning land registration/cadastre it is almost unheard of to have a property dispute erupt into violent behavior. Contrary wise, in virtually any locality with poor or non-functional land administration institutions, violent disputes over land are an everyday occurrence. This is a very important aspect of modern land administration to keep in mind in analyzing the relationship between improving land tenure institutions and good governance. All the above benefits of modern land registration institutions seem so self evident to a resident of modern Western society that one can only wonder why it not also equally self evident to the rural poor who could benefit most from our projects.

³ See Pipes 1999 for a traditional defense of a property rights approach. Jacobs 2006 provides a more modern nuanced discussion.

The reason is most likely that land registration and cadastre are answers to a question that our target population is not asking. Let us begin with a look at the issue of security. By the very nature of traditional land holding in long settled communities, the basis for one's land tenure rights is the social acceptance of those rights by other members of the community, not some piece of paper issued by someone outside the social bonds of normal life. What we fail to understand is that in long-established rural communities, land tenure is also an artifact of social capital, not primarily an abstract right conferred by a government. A person and his/her kin strengthen land tenure rights through investment in increased social capital (see Bebbington 2008 and also Rose 1994). For most of these people, security is not the most pressing issue; it is the need for investment in something that improves income.

However, the kinds of investment they need are not the kind readily associated with the use of mortgages and collateral. We need to keep in mind that for most of Asia in the foreseeable future, land units will remain very small, less than a hectare in size. Most of these already relatively small holdings are fragmented into many parcels. In addition, because of the historical depth of most rural communities, each parcel will have many persons with some claim to it. Thus, assembling (that is gathering together) a number of contiguous parcels to make a "large" farm is usually prohibitive in terms of the never-ending transaction costs to quiet all the claims by every one of the right holders. Attempts to circumvent this by the use of the police power of the state have repeatedly resulted in violent reaction on the part of the people. For example, the present Chinese government acknowledges that there are over a thousand major manifestations pertaining to land each month.⁴ The point is that given the returns to agriculture, the cost of securing rights in land by outsiders can be expected to exceed investment returns in an open land market. Establishing land markets in such situations has classically led to speculation and unethical lending practices rather than economic growth.⁵

The problem is seldom security *intra*-community, but rather *inter*-community.⁶ The cost of measuring tiny plots (that often change in response to individual household circumstances) and putting these into a modern registry will easily exceed the economic value of the holdings. Both the transaction and opportunity costs of dealing with a modern land registry are sufficiently high to mean that most arrangements on the land are never recorded, since they take place almost exclusively within the landholder's kinsmen and community⁷.

⁴ This is true throughout the region. One need only remember the violence in Bougainville, Papua New Guinea, the Indian state of Orissa and indeed almost everywhere, as asking Google to look up "land conflicts in Asia/Pacific" illustrates.

⁵ We could cite any number of empirical studies. Henry George was the first to bring it to the wide attention of those interested in land economy (George, Henry, *Progress and Poverty*, 1880 (1966)).

⁶ Indeed, for most of Asia, the government has no clear demarcation for its administrative units. Where one village ends and another begins is well known to the local population but not to policy makers. The proof of this is the experience of economic concessions being granted in supposedly vacant lands which in actual fact are densely populated.

⁷ There is a common mistake that is inherited from the older model, where land tenure security was for the well-established members of society. In this case, land registration was so valuable that no reasonable cost could be considered too great in comparison to the "insurance" value of a duly registered deed. Therefore there is an old idea still floating around in some circles that the cost of registration should pay all or a substantial part of the cost of surveying, conveying, registering, filing and conserving the documents, cadastre records and deeds. Today, we realize that it is the information that has the most value. Land registries that are incomplete or inaccurate are worthless. Thus, it would be much better to provide a reward of some kind as a stimulus to land users to get all their land tenure documents in order than to punish them when they try to do so.

The kinds of investment that are most applicable to Asian smallholders are not the kind that need all the legal machinery of mortgage and collateralized loans. Experience has shown that even when land is registered, and a collateralized loan is defaulted on, it is no easy or simple matter for a bank to come and take possession. The experience of lending institutions such as the Grameen Bank has demonstrated the utility of lending against what one might call a person's "business plan".

This is not to say that land transactions are absent in areas that don't have the benefits of modern property institutions. By its very nature, agricultural land is always in a dynamic state. At a minimum all of its proprietors are changed every generation. Each planting season a myriad of situations will determine each household's land needs. These include the human resource capacity of each household, health status, migration of members and so forth. Thus in each community in any given year, some households have the capacity to cultivate more land, while other households have to cut back, and arrangements are made according to local land tenure practices. These arrangements tend to be situation specific and short term. They also are almost exclusively arrangements that involve only a part of the interests in the parcel under discussion.

The kinds of transaction that will take place are more similar to those in modern property management in a post-industrial society: they will be a market in partial interests. It is worthwhile to spend a few lines analyzing this further. When a multinational company, such as IBM, opens its new offices in Taipei, it does not want to spend its money on land and buildings in one of the most expensive urban markets in Asia. This is no longer seen as wise investment strategy. Rather a company like IBM wants as much flexibility as possible in responding to rapidly changing needs for staff, facilities and infrastructure. This is much like the rural producer in Asia. Owning land is good, but a full, unencumbered private type of ownership is usually prohibitively expensive, so the emphasis is on transactions in partial interests such as renting, leasing, borrowing, sharing, lending, etc.

Where we do find the spontaneous creation of an active land market of agricultural lands in Asia, as soon as property rights are clarified, is in areas where land conversion to non-agricultural uses is possible. This is invariably associated with urban/industrial expansion. Thus, where land markets in agricultural property are the most active, this does not lead to agricultural transformation or intensification, but rather to land being converted to non-agricultural uses. Is this what we want? I think it is best to explore the range of policy and institutional tools we have available before deciding that one size fits all.

The next thing that we have argued in Table 2 is that small rural producers in Asia want social, economic and political stability. Certainly good land administration is vital to achieving this goal. No one could deny that effective property institutions, a sound cadastre and properly registered titles would be valuable. However, would this solve the problem? Probably not. Throughout the region the source of instability and insecurity is seldom within the community but from a lack of governmental capacity to monitor and control inter-community strife⁸. Private property law and land registration will help, but cannot be sufficient.

I argue that what is most needed first is a really useful land information system (LIS) with sufficient resolution to capture the small size of the parcels. If we look at those parts of Asia where we find really good functioning land administration, we find that detailed land information preceded land

⁸ In this context it is usually the well-meaning [perhaps] use of existing resources in new ways that results in inter-sector competition for natural resources.

registration. The author doubts that there is scarcely a person today who would argue that the Japanese colonial administration should be held up as a model. But if we look at Japan itself, or South Korea and Taiwan, one thing that stands out is the incredible detail of the land information system created during the period between WWI and WWII. Every parcel, house plot, building, road, river, administrative unit and sub-unit is surveyed to the finest precision available with the technology of the day. The land-use and planning maps available to everyone, from the communities to the policy makers during the agrarian reform period, were what can only be described as land administration works of art. In addition to every little parcel being accurately identified on the ground, every person with an interest in that parcel is also dutifully recorded. These maps and databases were not created out of altruistic motives, rather they were administrative tools. As such they provide the foundation for the world-class land information systems of these countries that are so admired today. Their utility in reforming the land-tenure institutions of these three countries was that farmer groups, landlords and government officials all had an accurate view and understanding of exactly what was being transferred to whom and where the properties that were being registered to the new owners were located. As soon as the titles were transferred, the farmers' associations began a process of land consolidation to make their fields more amenable to machine cultivation (v. Cheng, Chen 1961).

This Asian experience would argue for a clear and unambiguous knowledge of "what is where and where is what"⁹ as an essential first step leading to the stability and sustainability necessary to make eventual full-fledged private property institutions viable. For the region's hundreds of millions of small rural households it is not a question of whether or not modern property institutions are desirable, it is one of timing, that is, proper sequencing. When both the policy makers and the rural populations have real data on the nature of land and natural resources, then they can make rational choices.

An example of this is well illustrated by recent Friedrich Naumann Foundation (FNF) experience in Indonesia. The author and colleagues joined the Nation Lands Service in a visit to a community in Central Java that had just completed a GIS assessment of land holdings. This was then put into a database that contained the people and the natural resources of the community. There are several things that are noteworthy in this case. First the entire project was done by local staff and community members after they had taken a course on GIS software. Everything was off the shelf and could be moved from community to community. Second, and perhaps most important, is the fact that the community learned critical things it did not know about its land tenure and environment (FNF 2007). When we speak to policy makers down the line from the actual land users when we are doing research, it is often assumed that that these people have a good idea of the real situation in regard to the land assets under their control. For some reason we believe this to be the case in spite of the fact that we know it is certainly not so in the jurisdictions from which we come. It is especially true when we speak with farmers about their land. While it is true that those who use the land have an intimate knowledge of what the French anthropologist, Levi-Straus, refers to as "a science of the concrete", they often do not have any way of assessing the broader implications of their actions without the benefit of some way to organize those data. For example, even though the farmers who live down the road from me in Minnesota are well educated by world standards, they would have no idea of the implications of the run-off of their fertilizer and pesticide applications in terms of community water supply without the benefit of systematic data gathering

⁹ This is a phrase that was made famous by Peter Dale during his time as president of FIG (fédération internationale géomètre) 1995-1999.

and analysis by a number of agricultural and environmental agencies. The developments in GIS and remote sensing have made the dissemination of this information readily available to a wide public.

In the case of this Central Java population, there are a couple major facts that came to the fore as a result of the community creating its own land information system (LIS). The first is the impact on the state of the hillside and upstream farming practices of the village's irrigation infrastructure. The second is the fact that the number of landless families was many times greater than anyone had previously thought. Both of these major findings (as well as many other unexpected data) made the inhabitants realize that land administration of their community was more than a responsibility of individual families, but rather one that required new concepts and tools for local decision making and governance. As one can readily appreciate, a land registration program would probably have been premature. Such a program will be much more likely to be both appreciated and understood, once these particular people have decided on what it is they wish to assign rights and what it is that they want to register.

This last point segues nicely into the last item in Table 2. Rural populations in Asia, and indeed globally, are searching for some way to make their part of the rural economy sustainable. Everywhere the majority of the best and brightest rural residents are "voting with their feet" and leaving the countryside. Even where we have strong rural land tenure security supported by well-functioning government institutions, for example in Malaysia and Taiwan, we find idle land. The people who have left have not abandoned their rights; they have abandoned the practice of agriculture. We find whole rural communities inhabited mostly by grandparents and some grandchildren. However, it is not just in the developing world where we find this. Even in the highly subsidized agriculture of the United States, Canada, EU, Japan, South Korea and Taiwan, the median age for active farmers is approaching 60 (see Table 3). At this rate, in 20 years we may have to reinvent agriculture, after the present generation dies off. Countries such as China try to prohibit rural-urban migration to keep young people down on the farm, but it appears to be about as successful as pushing water up hill and has never been more than temporarily successful in every country that has tried it (Chan, Kam Wing. 2008).

Table 3

Farm Size and Average Age of Farm Operators

Agricultural economy	Median age of farm owner (years)	Average size of farm holding (ha.)
Japan	60 (57.7% over 65)	1.8
S. Korea	55 (40% over 65)	1.4
Taiwan	58 (32% over 65)	1.1
Canada	51	422 (Range for provinces 58-461)
EU	55 (25% are over 65)	16.2
US	55	182

Sources:

Statistics Canada, "Canada's Changing Labour Force, 2006 Census: Findings" (March 4, 2008)
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Tze-Ching Lin, "Development of agricultural food processing industry in Taiwan", *National Country Reports*, National Agricultural Research Organization (Japan) 2002
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Eurostat, *Yearbook*, 2008

This is because rural life is no longer able (if it ever was) to provide the kind of life people want to live. The point of this discussion is that rural populations need new income streams to make life sustainable. At present, to be compelled to live in a rural community is a sentence to poverty. It is true that improved land tenure and good property rights are important ingredients, but unless rural economy becomes a lot more rewarding economically there is no way in which it will be sustainable. And as new economic models for a sustainable, rewarding rural life emerge, the land tenure needs will be very different than they are today (Williamson, *et al* in press). Again, it looks to me that we need to sequence our institutional investments carefully.

The reader may wonder how I can make the above assertions. After all, agrarian life has been the human norm since the Neolithic Age. To answer this we (author and reader) need to step back and analyze what has been happening in a set of natural processes that has been taking place over the past decades and that result in the realization that the 21st century will be quite different from the 20th. For the analysis under review there are two cumulative processes that are most pertinent. The first is demographic and the second is the growing knowledge of how ecological systems interact.

The first urban generation

United Nations demographers tell us that sometime in the past year or two we have reached the threshold where for the first time in human history more humans live in the urban than in the rural economy.

The 2007 Revision corroborates that the world population will reach a landmark in 2008: for the first time in history the urban population will equal the rural population of the world and, from then on, the world population will be urban in its majority.

United Nations Department of Economic and Social Affairs/Population Division 1 *World Urbanization Prospects: The 2007 Revision*)

Although in the Asian region taken as a whole there are still many countries that have a majority of their citizens classified as rural, over fifty percent of the world's city dwellers live in Asia. From our analytic point of view, however, it is not only the demographic factor *per se* that is of interest. From a land tenure perspective there are three cultural revolutions that are probably the most important. The first is the acceptance of urban culture as the model to aspire to in even the most remote village. The second is that the city has become the new engine of growth. In the past it had always been the rural economy that was the foundation of the economy as a whole. The third is a new type of competition for all rural resources: land, water, air, raw materials and so forth to sustain urban life.

The technological advances that have accompanied this demographic shift in human habitat have served as a catalyst to the adoption of urban values by rural populations throughout the region.

The music that is played in the village, the clothing, consumer goods and life aspirations are those shared to a large degree by relatives living in the city. Indeed, it is hard to find a rural community these days that does not have members in major urban centers. The long history of the separation of populations into urban and rural has given our theoretical foundations a bifurcation that may now be more a hindrance in our research than a help in organizing data. The fact that most rural people today know modern urban life and culture either directly or indirectly through friends and relatives who live there has meant that the status quo in rural areas is no longer tolerated. Age-old patterns of debt servitude, peonage and a life on the margins of starvation cannot be viewed as normal nowadays.

Because the city is the engine of growth, escape from that which is seen as undesirable in rural life is today an option. Every country in the region is experiencing the constant flow of young people to the cities, where they join others from their rural area in the new economy. Life in these slums is deplorable and yet it is somehow preferable to that in what often appears to the outsider to be a pleasant rural environment. If any of these rural–urban migrants returns to their natal community it will most likely be at retirement. In this manner, today's rural communities in Asia are pulled more and more into a cultural perspective shared with the nation's urban dwellers.

The combination of the new opportunities offered in the cities and the incorporation into a global economy has led to an explosion of acquisitive behavior. What is important here from a cultural perspective is that these modern acquisitions are almost universally viewed as individual. Whereas in the traditional rural community, land, housing and major tools and implements are often viewed as shared and pooled resources (Ostrom, 1990), the cell phone, television and so forth are conceptualized as private goods. The same is true for residence. As we discussed above, transactions in land are a normal part of life in any rural community and are necessary given the vagaries of agriculture. What is amazing is how easily rural–urban migrants who come from even the most traditionally structured land tenure systems adapt to a market in land and residence once they are living in the city.

In Beijing, Shanghai and indeed every city in China, people who have the means are moving out of the housing provided by the *danwei* (the employing enterprise) and are buying apartments in new housing complexes that, once purchased, are viewed by the new "owners" as private property¹⁰. The fact that at the time of writing Chinese law does not yet recognize private ownership in urban land, means what they have purchased is a rather large concrete and steel box suspended someplace in space. Yet it is viewed as a private property and it is the owners and aspiring owners that are pushing most vocally for property rights reform.

Contract

The evolution of property rights in land and housing in urban centers in the region starts with various forms of secondary tenures. The rural–urban migrants have to make some kind of arrangements for shelter. This can be with those for whom they work, often leading to the deplorable conditions described in the press (Meredith, 2008). Also common is the necessity of seeking some place to live in one of the irregular housing markets in the squatter settlements. The new urban residents have to enter into some kind of arrangement that is formally or informally

¹⁰ The author's interviews have found that as Chinese state-owned companies are being privatized or are allowed to go bankrupt, the occupants in the enterprise-owned housing are being allowed to purchase these apartments.

contractual from almost the first day they migrate from the countryside. These informal and irregular urban neighborhoods are a constantly evolving experiment in land tenure. Rural to urban migrants arrive with all the preconceptions of how rights in land and residence are allocated in the originating community, they have to constantly deconstruct and reconstruct these notions for as long as they stay in an urban environment. Participating in contractual arrangements extends to urban employment, cell phone service and almost every aspect of economic participation in the modern economy. Therefore contractual relations rule the urban dweller's life long before they are concerned with governmental institutions, such as the land registry or property registry.

For that reason we may need to look at institutions other than private property to explain why some societies are growing so much faster than their neighbors and are having more success in achieving development goals. Table 4 takes a look at the ratings given numerous countries in Asia in regard to security of property rights on the one hand and legal enforcement of contracts on the other. One can observe the results that we would have expected both from intuition and from almost every ranking of rich and poor countries. The richest countries have very high scores for private property institutions, while the poor ones score very low. For instance, Australia, New Zealand, Hong Kong and Singapore all attain rankings above 8 out of ten; numerous poor countries like Nepal are in the low 1.0 category. The table also reveals another interesting contrast. The fastest growing Asian economies are not necessarily those with the highest ranking in private property. China and Vietnam, two countries that have yet to recognize private property in land for instance, are in the middle of the pack with regard to their legal structure and security of property rights, but are within the same range as Japan when it comes to legal enforcement of contract. Meanwhile, there are a number of countries in the table that have a long tradition of private property which score much lower when it comes to legal enforcement of contract. For example, India, Malaysia, Pakistan and Taiwan all rank higher than China and Vietnam in property rights, but somewhat lower when it comes to being sure the contract you have will be enforced.

It is just this kind of observation that has led some development thinkers to posit that getting contracts right might be a necessary precondition to getting the full benefits of private property systems. This is because contractual arrangements have to do with people using land and other resources as well as using things. Property rights have more to do with how land, resources and things are conceptualized within their own cultural milieu (Bromley 2008 p229). The meaning given to land farmed by grandparents in Sichuan or Mindanao is not the same as that given to the apartment migrants own or rent in Guangdong or Manila. A contract is easier to conclude across cultural boundaries and they are concluded everyday in millions of transactions (v. Zhang *et al*, 2008 for an interesting example).

Table 4

Country Rankings (2006)

Jurisdiction	Legal Structure and Security of property rights Scale: 1–10 where 10 is Best*	Legal Enforcement of Contract Scale: 0–10 where 10 is best**
Australia	9.02	7.23
Bangladesh	3.05	1.15
China	5.16	6.87
Fiji	6.41	5.11

Hong Kong	8.43	7.99
India	6.60	2.59
Indonesia	4.15	1.17
Japan	7.66	6.70
Malaysia	7.05	4.27
Mongolia	3.31	6.51
Nepal	1.51	3.37
New Zealand	8.69	7.50
Pakistan	3.39	3.55
Papua New Guinea	4.63	1.01
Philippines	4.47	3.42
Singapore	8.13	8.48
South Korea	6.84	8.11
Sri Lanka	4.40	3.61
Taiwan	6.24	5.56
Thailand	5.81	5.99
Vietnam	5.25	6.36

Notes: * Chain linked, that is calculated over a range of years for which there are data.

** Includes data from World Bank. *Doing Business*.

Source: Economic Freedom of the World. *2008 Annual Report*, (Philippine Edition)

It is the same process that is taking place throughout Asia. The urban squatters who have taken over un- or under-utilized land and have created their residences are ready to protect them against all comers, even those who hold title to the land. Thus, our many projects to regularize the land tenure of squatter settlements are better received by the beneficiaries than our efforts in remote rural areas. The demand is there, the benefits are clearly understood, and a land market is already in operation. The argument here is that we have for too long looked to the experiences of Japan, South Korea, and Taiwan as our models for private property to provide a catalyst to economic takeoff. Each of those economic transformations took place when agriculture was still the engine of growth. As agricultural production grew, the rest of society was carried along with it.¹¹ Nowadays this is the wrong model. Today the biggest impact on employment and income generation is improvements in private property institutions in urban centers. However, this does not mean that no big changes are in store for the region's rural economies, nor that we can just forget about them for the time being.

The New Commons

That the region's societies are in the process of integrating the rural and urban population into a shared culture is fortunate because the most pressing land tenure and land administration problems of this century will certainly be the management of rural resources. The region's cities, whether small, large or mega metropolises, are consumers of natural resources. The water, clean air and

¹¹ It is not necessary here to review the literature on the tax burden exacted on the rural sector in order to develop urban and industrial economies. It is interesting to witness the same negative reaction when urban populations are taxed in order to develop rural infrastructure now that the city is the engine of growth.

food necessary for human existence all must come from some rural place.¹² The city produces none of the natural resources needed for its manufactures, its generation of energy, to feed its fuel pumps, the stone, bricks and concrete to build its buildings and on and on. This will mean that in fact, if not in theory, rural and urban land tenure will be part of a single larger system.

Our modern conception of this process can be traced to those first photos from space showing the earth as a tiny blue marble in vast galaxy that itself was a tiny speck in an ever-expanding universe. As the Brundtland Report concluded, we can for the first time readily grasp that the earth is environmentally a closed system. This is it; there are no infinite resources (Brundtland Report, 1987). Since then those of us working in land administration related fields have become aware of the way natural environmental systems interact, such as the impact of air contamination on climate, for example. Not only that, we can also appreciate the fact that due to systems interaction our land use planning decision have a multiplier effect that is much greater than the simple accumulation of individual choices. Therefore, urban sprawl, mining enterprises, new power stations, and so forth have far-reaching and potentially disastrous unintended consequences.

Of course we realize that this has probably been the case for quite some time. What is different this century is that the affected populations now live in cities. The unintended consequences of policy decisions that happened to people someplace else are now a potential or real risk to lots and lots of people who are in a situation of a critical mass vis-à-vis policy makers. While earth scientists have been warning us for decades, it has taken demographics and the changed politics of urbanization to accomplish what science by itself could not do.

Meanwhile under the radar of public debate, large multinational enterprises have been busy buying up water rights wherever they can (v. GoldmanSachs 2008). This is a case of creating a private property in a natural resource that is needed by all, on the one hand, and is not habitually thought of as a restrictive asset, on the other. The fact that control of a vital resource is in the hands of private property owners is not necessarily a bad thing. After all we have a considerable amount of research on the efficiency of market transactions to maximize the distribution of scarce goods since Coase was given the Nobel Prize. Nevertheless one can readily appreciate that those rural resources like water can never be private property outside public intervention. Indeed, this attempt at market control has stimulated growing investment in desalination (Kerschner and Garaghty, 2008).

It does not take long to see how this is becoming true for all rural and natural resources. Not too long ago it was rare to find any public discussion of farmers' production decisions. Nowadays it is very much a part of the daily decision-making on the part of millions of urban families everywhere. Not only are there ecological groups lamenting the effect of farming practices on water quality and erosion downstream of their operation, but also a growing concern over the safety and quality of the food we consume. Organic food is the fastest growing segment of the grocery market in every major metropolitan area in the region (Organic Trade Association, 2006). And no one reading this will be unaware of the public debate on energy use and air quality. The growing number of people we see (perhaps including ourselves) who are wearing face masks while out and about in the city is just another manifestation of rising awareness. Thus it is not unexpected to find that in certain regions, such as Latin America, there is a mounting tendency to view natural resources as social

¹² This not intended to ignore the very exciting work done in urban agriculture. This has the potential to become a very important component in some eventual smart growth model of urban sprawl, but as such it cannot ever be more than a small part of the food supply chain in a modern city (Iaquinta, D. and Drescher, Axel, 1999, 2000; also Knaap 2008).

property.¹³ Whatever impact this has on Asia in the near term is as yet unclear, but we can safely predict that the question of what is private and what is public in rural resource administration and management will be a major policy debate in the 21st century.

Closing a Circle

We started this paper with the observation that the modern era of private property in land resources first took root in a small corner of the world. The initial spark then was the rebirth of cities as major economic centers and the demand of urban populations, especially merchants, for security of rights in property vis-à-vis the nobility, church and state. This was followed by the steady acquisition and enclosure of the traditional common land in response to an enlarged vision of the world on the part of land owners and entrepreneurs.

In our day an expanding understanding of our world and how its natural systems interact is causing us to envision a new and much larger commons. As the daily news of wars, conflicts and public manifestations over this or that natural resource reminds us; we still need to explore how to institutionally manage human acquisitiveness versus global human needs. With the Washington Consensus we may have thought the matter settled, but instead we find that our work has only begun. Finally, because the new property laws in Asia are being generated in response to transactions and social relations that did not exist before, they will have to be creations that make sense within the context of each jurisdiction. While the deep meaning of "private" in private property may be culturally nuanced, global trade relies not on these meanings, but on the proposition that it is the transactions and contracts that are to be understood by all parties. Thus, it is probably safe to predict that in tandem with economic development and integration into global society, property rights will become as well supported institutionally as they are in Europe or North America. However, we should not be surprised to discover that what is meant by both "private" and "property" will be quite different.

¹³ Older persons like the author have to realize that a whole new generation of young researchers and policy makers has come of age since the collapse of socialism. The issues that gave rise to socialism were never resolved and added to that we have a new imperative to better manage our shared global resources.

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Impressum
Friedrich-Naumann-Stiftung für die Freiheit
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