DEVELOPMENTAL KNOWLEDGE PRODUCTION IN CAMBODIA: A CASE STUDY OF DEVELOPMENT RESEARCH AND ATTEMPTED DISCURSIVE DOMINATION

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Abstract

The effects of foreign trade on the environment in the cases of rice, cassava and fish in Cambodia are examined in this article, but as a case study analyzing markers of developmental discursive practice. The study identifies and analyzes five rhetorical techniques in discursive practice – assertion, provincialism, dismissal of positive outcomes, reference to external causes, and policy fetishism -- then argues that these have in common the denial of local voice. It argues that their deployment tends to increase where a discursive order is more contested. In general, the case study shows how much of development policy literature is rather disreputable.

Key words

Aid, Cambodia, policy, discourse, environment, trade

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INTRODUCTION

Origins and goals

This paper is about an important literature that has to do with the effects of the export of rice, aquaculture and cassava on the environment in Cambodia. It stems from a consultancy, and specifically the requirement from a senior Cambodian official that we carry out a proper literature survey, 'so as not to reinvent the wheel'.ⁱ I found that this literature does not in general reflect a model of scientific advance based upon proper cross-referencing and scientific debate, as I show, though there are exceptions.ⁱⁱ Therefore, I develop a suitable analytical framework, which I explain in the next section. The goal of the paper is to provide an analysis of such literature, and what we think is novel is that it does this to, in effect, a case study of what would normally be gathered for any development exercise seeking to devise suitable development policy. What we find is that it makes little sense to view this case study as a reliable and tested conclusion of what can reasonably be known about the field, but rather a structured set of positions that are not reliably treated as a guide to action. I discuss these methodological issues at greater length in Fforde 2017a. This study stresses the lack of predictive power as a part of relevant scientific methodologies, and so the ability to deny voice to stakeholders, which the senior Cambodian official already mentioned was clearly trying to fight. This is not to argue that government support cannot play a positive role, but to stress that, in this case and likely more generally, the knowledge available to support policy is best treated with considerable scepticism. This in turn suggests that good policy will likely be based more upon investment in better politics than upon investment in research that seeks to offer predictive advice.

An analytical framing

As a character in one of Disraeli's books put it:

... Few ideas are correct ones, and which they are none can tell, but with words we govern men [Benjamin Disraeli, *Contarini Fleming: A Psychological Romance; The Rise Of Iskander*, Part I ch xxi 33 (first published 1832)]

There are many ways analytically to come at what Disraeli seems to be getting at, which is the political power of language and how it is deployed. Disraeli, of course, was a practicing and very successful politician, but as such he worked through social structures of which he argues the creation of meaning was part. He therefore did not deploy language as an isolated individual, but as part of wider social practices: he had an audience. In a similar way, donors' engagements in developing countries such as Cambodia deploy developmental knowledge to seek their goals, which like any other form of human goal-oriented behavior is political. This development knowledge also has an audience.

In classical times, rhetoric was taught as one way for political power to be secured and maintained. Since the 'discursive' turn in social sciences, which often explicitly or implicitly draws on Marxian ideas of the dependence of ideology upon socio-economic context, or Gramsci's ideas of cultural hegemony, the use of knowledge production for political purposes has often been framed in terms of discourse analysis. This field is very widely cited and so likely influential. For example, Fairclough is a widely-cited scholar working in the general area of critical discourse analysis (CDA) whose 2013 edition of an earlier work offers what could be called a 'general theory' of CDA.ⁱⁱⁱ A more focused example relevant to

development is Escobar (2011). Such scholars offer insights into how, as Disraeli might have put it, words are used to govern, in other words what the observable rules are, *and so how they may be recognized, revealing the application of rhetorical practices designed to govern.*

For Escobar, the analytical focus is upon discourse. Such an analysis, to use Escobar's terminology, has a number of characteristics:

First, a discursive order is rule-governed, and will match a development discourse. Some things may change, called for example a discursive regime or discursive formation, but others may not – the discursive practice.

Second, certain other things are privileged and assumed to have a tendency not to change, such as history, the economy and other categories.

Third, in an object under study certain things are structured and ordered *by* the discourse.

In this analytical framework power is, its audiences are told, exercised through discourse: the discursive practice determines what is said, what can be said, what cannot be said. Therefore, recognition of the observable characteristics of such a practice tells participants that power is being exercised, and how. The practice, Escobar argues, determines who has voice, who does not and which meanings are made acceptable, and which not. This is very close to Disraeli's assertion that 'words are used to govern'. This is obviously contentious, one amongst a range of possible theoretical approaches. But the very high levels of citations suggest that the field is important.^{iv}

Clearly, if the argument is to be taken further we would need to explore the motivations behind the people who use these and other practices. Indeed, it is possible to argue philosophically that what appears as arguments about cause and effect are no more than 'ascriptivism' [Lumer et al 2007], which argues that there is a tendency for people to treat actions as, in the main, things that are to do with social interaction around issues such as responsibility, viewing discussions of cause and effect as quite subsequent to this basic sense. Discussions of cause and effect are, in this view, better seen as part of social processes that have to do with the 'ascription' of motives and responsibility entailed by attribution or responsibility via concepts of actions. That is to say, whether causes and/or effects generate predictability is for humans of far less importance than whether they generate judgments of responsibility, leading to praise, condemnation, laughter etc [Stoecker 2007]. This paper sidesteps such issues, reporting 'how' the knowledge in the literature surveyed seems to work and what its characteristics are, rather than delving into the 'why'.^v

The point is that the frameworks offered by Escobar and others are useful, both practically and scholarly, though they risk de-emphasizing that ability to be conscious of 'spin' which students and others may gain from exposure to these very analyses. The question then is how, almost at a technical level, the exercise of discursive power can be identified: what rhetorical techniques can be recognized in a particular context? To use Escobar's distinction between a discursive practice that does not change, and a discursive order that may, how may recognition of discursive techniques happen, so that use of "words to govern men" may cease to be experienced as natural and unquestionable, and thus easier to resist.

Hirschman (1991) offers an analysis of 'reactionary rhetoric' clearly designed to enable those exposed to it to recognize it through its use of what he presents as characteristic and specific rhetorical techniques, which he identifies as three: Perversity, Futility and

Jeopardy.^{vi} These are of immediate value when confronted with contemporary right-wing political language, and this is clearly why he wrote the book.

He deploys this technique to weaken reactionary positions. If neoliberalism, to take an example, were to be attacked in such ways, then -

Perversity could be used to argue that deregulation, given that there is substantial natural monopoly, necessarily leads to considerable economic waste.

Futility could be used to argue that deregulation will necessarily fail to increase liberty because there is nothing in the policy to prevent human nature from seeking out preference and pork through the very state structures required to implement deregulation.

Jeopardy could be used to argue that the use of state power to secure and preserve deregulation (perhaps from organized labour's attempts to stop markets working freely) will necessarily jeopardize liberty itself.

And so on. My point here is that there is a difference between rhetorical techniques and criticisms we might make of particular positions: techniques usually deployed by particular positions (Hirschman's reactionaries) can be deployed against those same positions. We can then identify techniques *as such* in a discursive practice or order, distinguishing between these and the value we attach to the arguments they support.

Developmental knowledge production

This paper draws upon a case study – a collection of studies relevant to certain key issues in Cambodia – to identify rhetorical techniques used to exert power through what may be viewed as a discourse: developmental knowledge. The issues were the possible effects on the environment of foreign trade in the case of rice, cassava and fish rearing. A parallel set of interviews with farmers suggested that they were well aware that use of chemical fertilizers to increase marketed surpluses of rice was 'mining' the soil, with significant environmental damage, but that their long-term view was often that structural economic change meant that their children's futures lay outside farming, so that these strategies made, for them, good sense. However, even with soil damage treated as a current period externality, returns were low. By comparison, cassava was reported as not damaging soils to any great extent.

Developmental knowledge production can be researched through studies that have stressed the importance of patterns of idealized prescription and standard patterns of analysis to understanding development. These are familiar elements of any tertiary degree in international development, which must usually teach how different views have been over time – their histories – and between agencies, comparing, canonically, the World Bank, the UNDP, 'INGOs' etc [e.g. Willis 2005; Fechter and Hindman 2011].

From exposure to such studies it is usually evident to students that developmental knowledge is unstable over time (it varies over time) and place (at any point in time, donors disagree). That there are almost no robust relationships between policy and outcomes globally has some empirical support [Levine and Zervos 1993]; and it is also not unexpected that such results are widely ignored [Fforde 2005]. Awareness of the value, to the contrary of these views, of 'scepticism' about relationships between signs and what they appear to refer to, can be found in a wide range of situations. But as I will show, it is at root a sense of

scepticism that appears crucial to the erosion of a discursive practice in a resistance to the exercise of discursive power.

Cambodia is a particularly useful case study for the analysis of development practices and rationalities. The country emerged back into 'Aidland' in the early 1990s as a large Western engagement sought to support her development. Deeply ravaged by war, the country could easily be seen as a 'blank slate' whose population deserved large-scale support to develop their country in part as, it was easily believed, they lacked to the capacity to do it themselves.^{vii} This meant that developmental knowledge production was relatively free to reflect donor practices.

Some two decades later, I was hired by a donor agency to head a small team and examine the impact of foreign trade upon the environment in the cases of rice, fish and cassava.^{viii} The relevant senior Cambodian official stated very strongly that we carry out a proper literature survey, and not 're-invent the wheel'. We collected what could reasonably be assembled that related to this topic.^{ix} This set of materials is, thus, what could reasonably be said to be the 'body of knowledge' in this area. I am sure that we failed to find materials, but that is normal. We found what such a team could be expected to find, and this gives us a basis for investigating the nature of such a 'body of knowledge' as a relatively robust case study.

Treated as discourse, a way 'to govern men', what appears up front is that these studies express a belief that policy should be based upon research - evidentially-founded analysis. This particular view of the nature of action and of social change is familiar, and may be thought of as a survival of belief in 'policy science', a belief that is readily challenged [Fforde 2010].

The case study used here reveals a literature that is very often – but not always - disreputable: the studies often break basic rules of valid knowledge production. Yet it is about something very important for a poor country that suffered major losses to the Pol Pot regime. It was largely paid for by aid donors. Further, it is what was available on paper at the time collected for any policy discussion about these issues.

In this sense what Escobar and Fairclough suggest is here powerfully engaging: they suggest that it is the attempted exercise of power through control of discourse that is central. Not all agree, of course. However, like the tensions created by Gramsci's stress on ideological hegemony, this position challenges other positions that assert the importance of other forms of power (use of the security forces, denial of access to means of production, use of legal measures to prohibit collective action such as trade unions etc). This said, such debates should engage with the available literature, which is what the case study here attempted to map, and there is not much to suggest that the studies here are atypical of developmental discourse. At the least this suggests that in a particular context, identification of deployment of rhetorical techniques may indicate something about how other forms of power are deployed.

I note five techniques widely deployed in the materials of this case study.

1. *Assertion* - that in what is being discussed the analyst knows what the cause-effect relationships are. A weaker form of the technique is *assertion* that authoritative sources of knowledge state that certain cause-effect relationships do exist.

2. *Provincialism* – this technique ignores – it does not mention – existing literature that would show that the position taken by the analyst are contentious. This buttresses *assertion* in that assertions are less likely to be weakened rhetorically by reference to other dissenting theories.
3. *Dismissal of positive outcomes* – this technique argues that changes that should or could be deemed positive, but which appear to have taken place despite theory that argues that they could not happen, are irrelevant. This can happen by simply not reporting them, or by reporting them but then ‘writing around’ the issue.
4. *Reference to external causes* – this technique avoids discussion of local particular characteristics and links arguments to other, often international, issues.
5. *Policy fetishism* – the technique, which permeates so much of the discursive practice, argues that development can only come through the creation and implementation of correct policy, which can be both official or unofficial (e.g., of an NGO). Like *reference to external causes* this seeks to make invisible the possibility of dynamic change originating from, for example, farmers’ themselves.

A way to appreciate these techniques is through their effect upon *gaze*: that is, upon where the audience is encouraged to look. All for example discourage, in trying to understand rural change, focus upon farmers: the first two by shifting focus towards the analyst’s own theory and the last three by analytical framings that identify the location of cause as being away from farmers: by dismissing positive outcomes that do not fit theory, and by theorising in ways that place causality elsewhere.

As with Hirschman’s Perversity, Futility and Jeopardy, use of each of these five techniques can be illustrated. Consider their application to rhetoric trying to deal on sexist grounds with arguments advocating female participation in higher education based upon their contributions to scientific research in wartime. A study would, thus, *assert* that this was unwise, perhaps citing studies that female learning capacity was inadequate (‘on genetic grounds’), and ignoring studies that argued otherwise. Evidence from such studies that, in wartime, female scientific participation contradicted the (likely mendacious) assertions made, would be ignored (*provincialism*). *Reference to external causes* could argue that it was male participation or the exigencies of wartime that in fact led to scientific advances where women had been present, whilst *policy fetishism* would argue that it was government support that was the key driver of scientific advance. Whilst interviews with scientists could easily undermine these arguments, the rhetorical techniques support any view that this is not needed to understand what should be done. Voice is denied as power is exercised, yet any conscious recognition of these techniques as being present in the argument must surely facilitate resistance, in part through (re)acquisition of voice. Other forms of power may exist, though, such as legal provisions that female scientists as public-sector employees must resign if they marry, impacting upon university admissions and research institute hiring procedures.

In the next section I look at explanations of Cambodia’s recent economic growth, and I then examine knowledge production related to rice and cassava.

EXPLANATIONS OF CAMBODIA'S RECENT ECONOMIC GROWTH

The central question here is how analyses sought to explain the major changes that had taken place since the late 1990s. This is because whilst there was general dislike of the political and governance situations in Cambodia [Fforde and Seidel 2015], from the late 1990s and early 2000s, about a generation after the fall of the Pol Pot regime in 1979, Cambodian development according to some indicators apparently accelerated. GDP growth became substantial. This acceleration was perhaps most marked in rural areas and the services sectors, where over the past half decade informed observers saw very strong growth, especially in rice production [USDA 2010]. Crucially for understanding patterns in the developmental discourse, such change that had *not* generally been expected [e.g. Sjöberg and Sjöholm 2006]. *Policy fetishism* meant that it had to be argued that without proper policies proper change was impossible.

The basic issue is the apparent tensions between observations of rapid change and the apparent absence of conditions for it. Again, and again, observations are made that suggest that rapid change cannot continue without appropriate policy, and there is no explanation given as to why, if this is the case, we are seeing such rapid change. In a nutshell, the literature deployed the technique of *dismissal of positive outcomes*, and supported this through use of *Reference to external causes*, for, rhetorically, if the situation in Cambodia has to be said to prevent positive change, then logically the origins of explanations have to be sought outside the country.

A good example is the 2010 USDA report. To quote:

A resurgence of rice cultivation is occurring all across the nation's vast lowlands, as the rural population expands and previously abandoned or mined farmland is brought back into production. Rice production growth in Cambodia over the past 10-12 years has been surprisingly strong, increasing at a 9 percent annual growth rate. At the same time, rice exports have increased from zero in MY 2000/01 to an estimated 800,000 tons this year (MY 2009/10) [p.1]

The report explores rather deeply the rapid growth in rice production. The same report points out that the repatriation of seed varieties lost during the war period, as well as the introduction of high yielding short season varieties, allowed for a wet season double cropping greatly explaining the steady increase in rice production. There is clearly revealed a tendency to *reference to external causes* – forces that come from 'outside' Cambodian agriculture, which can then be treated as 'passive', or in other words defined discursively as lacking causative power.

One of the most important means through which Cambodia has achieved its strong recent rice production growth has been through modifying the traditional summer wet season cropping cycle, and bringing much more land under an intensive double-cropping regime. Historically, the great majority of rice farmers sowed and harvested a single annual rice crop. However, following the re-establishment of peace in the country, the International Rice Research Institute (IRRI) and the Australian Agency for International Development quickly repatriated native Cambodian seed varieties lost in the war years, while also introducing high yielding short season varieties (maturing in 120 days or less) capable of revolutionizing the rice cropping cycle. *These initial steps at revitalizing the genetic rice stock in the country and rapidly increasing rice production potential in the main summer growing season put Cambodia back on the path toward rice self-sufficiency.* [p.5 – stress added]

The argument thus tends to make invisible any dynamic process at farm level, driven by farmers' own efforts and initiatives, and here attributes change to the activities of IRRI and AusAID projects. It tells us nothing about farmers' decisions, changes in their organizational

abilities (changes in social capital as they learn to organize), informal support through channels outside the state system (and so largely invisible), and so on. Farmer agency is thus downplayed (contrast with Fforde 2017b). The USDA paper is therefore credible to those who feel satisfied with such a position, not credible to those who are dissatisfied.

Thus:

The severe shortage of agricultural credit in Cambodia is crippling rice producers {sic} capacity to continue to increase productivity and output, due to their inability to adequately finance purchases of improved higher-yielding seed, fertilizer, pesticides, farm machinery, and grain storage equipment. [p.3]

The discursive effect of the identified rhetorical techniques is then clear. Local causes are made invisible: if credit shortages will cripple future change, why have they not crippled change in the recent past? The power of the rhetorical outcome is however weak. What can be argued to be missing from this analysis is any significant account of Cambodian farmers' changing behavior and capacity to accumulate at farm level. *Policy fetishism* comes into play. Thus:

... The areas/issues outlined below will likely remain long-term impediments to Cambodia's future rice production potential ...

- Extreme under-funding of agricultural crop extension programs ...
- Significantly inadequate funding for scientific agricultural research ...
- Extremely low production and availability of improved rice seed ...
- Virtually complete lack of commercial farm credit system ...
- Rice crop yield growth rates stagnating ...
- Irrigation expansion threatened [pp.7-8]

The discursive technique is quite clear: it is argued that *without* correct policies, positive change cannot happen: so, *what has caused the positive changes to date?* In general, we see *assertion*.

This use of techniques is common. Take a World Bank study. Whilst the positive changes since the middle of the first decade of the 2000s are acknowledged [World Bank 2009], they were not expected. This is the same position taken by the USAID report – *policy fetishism* asserts that there are certain necessary policy requirements for growth, so that without them growth cannot happen.

Consider also an academic study that seems close to donor concerns [Sjoberg & Sjöholm 2006]. They were far from expecting what was to happen (this was despite real growth in agriculture GDP of 12% in 2003 and 17% in 2005 [p.498] :

Cambodia is facing the familiar problem of achieving sustained rates of economic growth that could help it alleviate widespread poverty. Given that the major success story of the past decade – the garment and textile industry – is under threat, we conclude that Cambodia is yet to achieve an economic take-off.

The question then arises as to how powerful these techniques are. Do they preserve a dominant discursive practice, or are they simply a discursive order, co-existing with others? Contestation can be found by looking in the case study for non-donor analyses, which often come from academics.

Non-donor analyses

In attempting to deal with the apparent mismatch between the absences of what should be needed for development and the presence of rather rapid change processes in Cambodia, in the literature we tend to find non-donor analyses avoiding the technique of *reference to external causes*, by pointing to local characteristics. We find analyses that stress sources of flexibility and adaptability within Cambodian society that contrast with donor accounts (such as those above) that report state weakness, corruption and negativity. The paper here, as when avoiding the issue of motivation discussed above, avoids the question as to why these differences exist.

Two illustrative examples are Ledgerwood & Vijgen (2002) and Lee (2004); to quote the first:

... we suggest four ways to modify classic models used for analyzing patron-client relations in Southeast Asia to more accurately study the contemporary Khmer case. Specifically, whereas James Scott's (1977) classic model sees patron-client ties as relatively fixed, we prefer, following Marston (1997), to see those ties as in constant flux, as always "under negotiation." ...

... patronage ties in Cambodia today are drastically unbalanced, with patrons unlikely to fulfill their presumed obligations to protect and provide support for their clients. In fact, the ties are so weak in some instances that Vijgen prefers the term patronage "customs" rather than discussing a working patron-client "system." [p.110]

Lee (2004), in a study of rural widows, offers an account of how basic bilateral (rather than 'patriarchal' or 'matriarchal' patterns of Cambodian society [Ledgerwood 1995]) gender roles also offer flexibility:

Gender role flexibility helped interviewed widows cope with their economic challenges. They had a pragmatic approach to the sexual division of labor and expected family members to do what was needed to feed the family. The survival requirement to produce family food trumped ordinary gender roles. Widows could "trespass" on male gender roles without condemnation or ridicule. Males also "trespassed" on female roles, assisting in transplanting and helping with child care when necessity required. This gender role flexibility was an adaptive feature of Cambodian culture that alleviated the stresses of widowhood. [p.19]^x

While donor accounts explain this as simple patterns of corruption, these authors see *flexibility* and *adaptability*. These accounts contrast with those presented in the USDA report, in that they do *not* deploy the technique of *reference to external causes*. They treat various characteristics of Cambodian society in general, and particular aspects of it, such as gender relations and patron-client links, as a potential source of change. Therefore, they do not need to seek 'external' causes, such as the IRRI/AusAID projects, or 'policy', to explain change. This suggests that *reference to external causes* is more an indicator of donor-funded discursive practice, less that of scholars.^{xi}

The sheer depth of experience with irrigation in Cambodia, is, obviously enough, a very old story. Thus, Fox and Ledgerwood (1999) helps places the USDA report cited above into a historical perspective, whilst Masumoto et al. [2008] link water for agriculture to issues of flood management. Such studies argue that the situation in Cambodia is dynamic precisely in that it draws upon a range of local factors, such as particular political, social and historical resources, to argue that they offer rather good opportunities for change despite the problems identified by studies such as USDA (2010). Patron-client relationships are, for these analysts, not 'stiff and fixed'; gender relationships are not fixed but 'mutable'; facing new opportunities farmers may draw upon rich historical experiences with changes in rice

cropping patterns and other shifts to agriculture,^{xii} and so on. This suggests that the donor literature is not a dominant discursive practice, but simply a discursive order or regime in Escobar's terms: it is contested, and the rhetorical techniques it deploys then permit identification of participation in the discursive order.

However, the materials collected suggest that analyses that do not use the technique of *reference to external causes* and point to sources of potential for change, and their realization, *within* Cambodian rural society, are the minority. Indeed, they seek also to avoid *policy fetishism* by offering explanations for how there can be rapid change without better policy, better governance, or some other factor external to farmers' activities and concerns. Such a sense of farmers exploiting various potentials can be found in McNaughton (2002):

Rice in Cambodia is largely a lowland crop. Large areas of Kampong Cham, Kampong Thom (high population provinces) and parts of the north-western provinces are poorly suited to rice production but will support so-called upland crops. These systems present significant opportunities for increasing and diversifying Cambodia's agricultural and agro-industrial sector, *a process, which has already begun*.

The kinds of products which can be derived from them are in growing demand as 'specialty foods' among both 'northern' and 'southern' partners in the global economy, particularly but not exclusively among more affluent consumers, who have effective demand for increased variety, year-round availability and quality in their diets. Moreover, the improvements in transportation infrastructure currently planned or actually under construction will link these areas to major urban markets in Thailand and Vietnam.

The challenge for Cambodia is to capitalize on these opportunities, to ensure the biological and economic sustainability of the enterprises, and the equitable, indeed the affirmatively pro-poor distribution of the benefits. [2002: 4-5 stress added]^{xiii}

Other indicators of the exercise of discursive power

Very few of these studies avoid deploying *provincialism*. As already reported, a senior Cambodian official required that this collection of studies be made specifically to avoid failure to see positions taken as contentious. Examination of works cited shows this strong tendency.

Assertion was a common technique. Consider Arulpagasam et al (2003), an analysis that assumes that increases in rice production and exports are 'a good thing'.^{xiv} It deploys statements about various constraints to explain why output and exports are low:

... a host of institutional and policy constraints between the two ends of the supply chain ... tend both to interfere in the transmission of the price signals and reduce the ability of poor producers to benefit from expanding opportunities [200]

Whilst (as we have seen) Australian technical support in the 1990s and early 2000s seems to have been important in improving the variety of rice strains available to farmers, AusAID 2008 deployed *policy fetishism* in assessing its own efforts:^{xv}

Key constraints to agricultural development in Cambodia include policy, planning and monitoring of irrigation systems; the land law; and the policy environment for agricultural markets. Implementation of the land law remains a major constraint to improving productivity in the agricultural sector, and progress on land law reform has been slow. [7]

Similar rhetoric can be found in Bonnivoit et al. (2007), Samnang (2004), and Chansopheak (2007). A study out of Stanford University, Ear (2009), examined 'the political economy of rice and garments in Cambodia':

As in the garment sector, constraints in the rice sector may be (1) external or purely technical; (2) directly governance related; or (3) indirectly governance related. [15]

Common to these studies is the *reference to external causes* – the removal from the analysis of arguments that farmers may be capable of generating change *despite* policy weaknesses. The scholarly capital available to develop arguments here is rich: for example, that social capital may be created without policy change or other interventions.

Search of external causes is of course linked to *policy fetishism*. Thus, we find ‘better governance’, analytically quite outside the farming sector itself, offered as a cure-all:

In the first category, Cambodia’s comparatively low yields compared to its neighbors are caused by poor soils, and low extension and research capacity; and low capacity to export due to inability to meet hygiene standards. *Granted better governance could improve all these things to a greater or lesser extent*. In the second category, a heavy burden of informal payments affect {sic} enterprises above a certain size, along with informal charges for exporting via Sihanoukville. In the third category fall problems such as lack of irrigation, high cost of factors of production due to poor infrastructure and the failure to erect systems to help farmers meet export standards. [15 – stress added]

Discussion

Viewing the discourse analytically, looking for the rhetorical techniques deployed, we may draw two conclusions:

First, evidently positive change (economic growth) is occurring *despite* what is frequently seen as a disadvantageous governance environment, a situation that many analysts find very hard to deal with, and deploy *policy fetishism* to cope.

Second, that a promising place to look for an explanation is farmers themselves, whose potential is probably both more important than many realize, and improving. This is addressed with two techniques: *dismissal of positive outcomes* and *reference to external causes*. In general, the materials are *provincial* in the sense above, and *assertive* in that they do not seek to test theories predictively – yet all argue in cause-effect terms.

I turn now to examine discussions of the relations between trade, the environment and human development.

TWO AREAS OF RURAL ACTIVITY: RICE AND CASSAVA

The materials collected covered rice, cassava and fish production. The focus for each was upon the impacts of foreign trade on the environment. The underlying concern was that there was significant environmental damage, for example, through rice farmers’ use of chemicals, land clearance and soil degradation in cassava growing, and use of chemicals in intensive fish-rearing. For reasons of space the paper does not look at the materials collected that look at fish-rearing. Similar rhetorical devices were found.

Rice

Overview

This crop poses an interesting example of the deployment of *assertion*: much of the literature (some of which has already been cited) frequently asserts that Cambodian agriculture is ‘dominated’ by rice. Yet rice is well below half of agricultural GDP.

Rice, chemical fertiliser, and the environment

A range of sources confirms the importance of considering the potential damage caused by chemicals use in agriculture [UNDP 2010]. There is general agreement that any question of possible environmental damage, in the case of rice, has largely to do with the use of chemical inputs, mainly fertilizers and pesticides. A range of studies argues that historically, these were largely unknown and paddy rice therefore was generally seen as environmentally beneficial. The rhetorical issue is than largely driven by *policy fetishism*, suggesting that policy is the solution.

To illustrate this, a work already cited [Masumoto et al. 2008] asserts that wet-rice is a 'good crop':

Paddy rice cultivation in the Asian monsoon region is not only an excellent form of agriculture offering high land productivity and stable yields; it is also seen as a sustainable and environmentally friendly economic activity that suits the climatic and topographical conditions of this region. This economic activity has existed for thousands of years across various regions of monsoon Asia, as evidenced by the archaeological traces of 7000-year old rice cultivation found in China (Yasuda, 2002). Even today, paddy rice cultivation is a unique way of life supported by the endeavors of people living in harmony with water. [1321]

From this perspective, it follows that introduction of new ways of growing rice poses the main possibilities for damaging the environment. Change is the threat, and, specifically, changes in technologies to ways that involve use of chemical fertilizers and pesticides.

Markets and farmers' choices

Clearly, farmers in Cambodia are increasingly involved with markets in various ways. Even if a farming family is not a net seller of rice they do not necessarily rely only on rice that they grow themselves. With less than 30% of agriculture GDP coming from rice, incomes generation is coming from a wide range of activities.^{xvi} This suggests the likelihood of deployment of *reference to external causes* given the ready reference to complex *local* patterns that would probably require considerable further research and argument outside the discursive order. As elsewhere, the literature often shows use of *assertion* that appears as a tendency to jump to conclusions. Consider for example Kaufman [2008]:

Most Cambodian households and also many farming households (56%, FAO/WB-RIGA data set) are net staple food buyers (overall 66% of food intake is acquired through purchase) because:

- they do not produce enough (limited land, low productivity)
- they sell their product (often at low prices after harvest and have to buy rice back at higher prices at the end of the lean season)
- higher staple food prices reduce purchasing power and impact negatively access to food for many Cambodian households

Effects depend further on how effectively a concerned household can cope with increased food prices [13]

These views may be challenged. In a domestic economy where there is rapid growth, family strategies may well be diversifying rapidly. For example, it could be argued that farmers do not produce enough rice not only because of limited land but also because they put their capital elsewhere. This may be because problems with the irrigation system reduce the relative attraction of rice compared to alternatives. But the rhetorical device of *assertion* means that, within that discursive order, the rules are being followed and such challenges ignored in a report or study without leading to any problems for the authors. Again, the

distinction Escobar makes between a discursive practice, powerful enough for its rules to be respected, and a discursive order, whose rules may change, is useful.

This distinction can be examined through investigation of how materials in the case study deal with a central issue, which is the profitability to farmers of techniques that use chemicals. What we learnt from a small number of interviews carried out as part of the consultancy was that farmers had interesting and informed answers to this question, when it was put to them.

Central to this is the relative attractiveness to farmers of such new ways of growing rice. And here the literature has a lot to say. The main argument is about the value of chemical fertilizer use, and here are diametrically opposed views. These see *provincialism* often deployed, so that open debate is not there to permit the reader to assess different positions. The lack of open debate within the literature is clear. This facilitates deployment of *assertion*.

Consider JICA [2008]:

If a farmer follows the CARDI recommendations for fertilizer applications of urea at 50 kg/ha, and DAP at 75 kg/hectare; this would be an up-front cost of US\$102.50 per hectare to a farmer. Simply stated, *Cambodian rice farmers would not likely see yield increases high enough to justify the cost of the recommended rates of nitrogen. The continued use of fertilizer seems to be a question of the absolute cost of fertilizer, and not one of adequate supplies in the marketplace, or its recognized efficacy in improving yields.* [5 – stress added]

This is meant to suggest that farmers do not see increases in rice yields driven by increased chemical inputs as particularly profitable, *even before considering possible negative effects upon the long-term value of their land if soil quality deteriorates due to chemical use.*

What if increased yields come from technical changes that do not require increased chemical inputs? If we consult a GTZ-funded survey:

GTZ, the German development agency, in February-April 2004 commissioned a thorough evaluation of SRI^{xvii} in Cambodia. Data were gathered from 500 farmers, who were randomly selected in five provinces, 400 of them being 'SRI users' and 100 'non-SRI' for comparison. The 'SRI users' were not yet all using all the recommended practices, or using all as recommended, but even so, a 40% increase in yield was documented, and a 75% increase in net income per ha, *due in part to substantial reductions in farmers' costs of production.* ['Now is the Season for Farmers to Consider Rice Seed Selection 2009: 2, stress added]

The *provincialism* and *assertion* are evident. The comparison here is reported as with techniques using chemical inputs. The picture offered is one where new techniques, using chemical inputs, are such that farmers cash costs are seen as 'high' compared with expected returns, whilst for non-chemical techniques input costs are lower and net earnings therefore higher. Note that neither of these studies mentions potential long-term effects of such changes upon the value of the land.

In the literature we also find various opinions that share the view that non-chemical methods of rice cultivation are more profitable for farmers. Inclusion of consideration of damage to soil by chemical use should make such methods even more attractive. But the literature suggests that they are not being widely adopted. Why? The main arguments are *either* because farmers are 'traditional',^{xviii} *or* that these methods impose 'hidden costs'. Costs may be hidden because the analyst does not fully understand the nature of the farmers' family economy, which is one where available resources must be shared between a wide range of tasks, from farming through to marketing through to caring for children and

the aged. Decisions may be strongly influenced by the fact that women are often busy with other responsibilities (cooking, laundry, other housework) at crucial times such as rice seedling transplanting.

Thus, an INGO view reports and discusses the observation that take-up is neither fast nor spontaneous. This deploys *policy fetishism* (with policy here taken to include INGO policy) and *reference to external causes*.

Many of the rice farmers face the same challenges organic and fair trade coffee farmers saw when they first learned about the new model. Many have farmed small plots with chemicals for generations. *They need help learning new agriculture techniques so that they can someday grow as much rice as they had before.*

According to a 2005 market study, if farmers made the transition from conventional growing to fair trade, organic they could see their profits more than double.^{xix} [OXFAM America 2006:2 – stress added]

See also Makarady (2007). However, the literature does not seem very clear as to just why such techniques are not more widely used. This part of the literature clearly argues *against* chemical input use, but lack of take-up suggests that farmers are in some sense irrational. But whilst many oppose chemical use, contrasting arguments are very common. For example, a recent and authoritative study [Yu et al. 2009] argues that output gains, despite leading to only small increases in farmer income are nevertheless worthwhile.

Yu et al. argue that there is a big potential for increases in rice output. They deploy *assertion* and quote another report supporting the view that such big changes would increase rural incomes by \$35 mn, or 1.85% yearly for agric incomes [p.4]. It argues that this would 'lift a large number of farmers above the poverty line' [p.5]. This conclusion seems to be greatly over-done, given the study's conclusions about the effects of technical change:

These findings are consistent with those from a previous multimarket model analysis of Cambodia (Arulpagasam et al. 2003), which found that the Green Revolution Package (including {chemical} fertilizer and irrigation) increased rice production by 4 percent, agricultural income by 1.5 percent, and rice export by 31 percent. Additional investments to improve traditional seed varieties were projected to further increase rice production by 15 percent, agricultural income by 7 percent,^{xx} and rice export by 228 percent, showing a benefit-cost ratio of 1.7 [Arulpagasam et al. 2003: 23]

If farmers' incomes were to rise by only a few percent, yet rice exports were to near triple, it is not hard to see what this would mean in reality: large increases in incomes for groups above farmers, but not for farmers themselves. The political implications are also worrying; one can imagine a rural economy in 10-15 years time where soil quality in many areas has badly eroded, where farmers have not profited much from this, and are increasingly subject to major economic pressures, whilst other groups, such as millers, have done very well. Why would farmers go along with this? Nevertheless, the report is strongly supportive of such changes, and contains no discussion of effects upon the environment and long-term value of the soil.

Clearly, it should be technically possible to use moderate levels of chemical inputs without damaging the soil. A strand in this literature discussed potential for increases in rice land yields through such measures as changed rice strains and increased chemical fertilizer usage. Yet such studies usually ignore environmental issues, like Yu et al, which is telling :

To contend the rice food security problem, the CBRDP strategy was and is to increase the rice yields by training the farmers to apply additional chemical fertilizer as well as to adopt improved rice varieties. [2]

Yu et al. are not alone in simply ignoring such issues. Another example is Konihi [2003], a value chain analysis.

Farmers' choices and the natural environment

Our concerns so far have been for 'internalizable' externalities – farmers' perceptions of future costs imposed by chemical use through reductions in soil quality. Makara [2000] argues, under the heading 'Environmental Consequences of fertilizer use', for important externalities to chemical use:

The application of fertilizer to rice has potential unintended consequences that are of increasing concern in many parts of the world Negative effect on the quality of surface and groundwater are the most common environment impacts

Intensification of production by applying high nutrient rate in irrigated areas has been reported of nitrogen accumulation in surface and groundwater. Similarly, in the rainfed lowlands, intensification of production by growing dry season vegetables using supplementary irrigation is causing high leaching losses of NO₃-N into groundwater ...

In Cambodia, where dry season rice covers only 11% of the total rice production areas and most of this is under receding areas. Moreover, fertilizer rates in this area are generally low compared to other countries. Although there is no specific study on the impact of fertilizer in this areas, but used to above -mentioned factors it can be assumed that this effect is probably small. At present, fertilizer rates in the rainfed lowlands are generally low.

Consequently, {it has been} suggested that negative environmental impacts of fertilizer use in rainfed lowlands were probably minimal. In rainfed lowlands with access supplementary water from the ground, dry season and early wet season crops cropping is being more common. Villagers usually access stream water or shallow groundwater for daily consumption. Degradation of the quality of these water resources would be a significant concern for public health. In addition artificial and natural wetlands in the rainfed lowlands are often significant food resources for villagers.

Loss of water quality in these ecosystems needs to be guarded against. Since these problems generally do not yet exist in most parts of rice growing areas in Cambodia, now is an opportune time to set in place strategies to prevent it becoming a concern. [4-5 – stress added]

It is striking how *provincialism* is deployed and so how little this report is cited by other studies. The generally poor quality of the literature is shown also by the fact that interactions between trade and the environment are hardly mentioned. One exception is a long study, around 2005, of the effects of trade liberalization on farming techniques; the view seems to be that whilst farmer use of chemicals had been low, the outlook was uncertain. Thus 'Impact of trade liberalisation on rice' (n/d, n/a):

Use of chemical pesticides is not so widespread *largely because the costs are prohibitive to rice farmers who are mostly into subsistent production*. While the value of inorganic fertilizer importation is low, the actual use of inorganic fertilizers could be much higher since the soil in Cambodia is largely characterized as sandy, acidic and poorly fertile.^{xxi} In general, farmers across the country rely on organic fertilizers through animal manure and composting methods, and on periodic flooding in some areas where rice lands are submerged during rainy season which bring in fertile topsoil afterwards. [24 – stress added]

Such views flag the issue of the negative effects of shifts away from animals for draught power, since farmers often reported that this had reduced the availability of manure for organic fertilizer.

Discussion

Our reading of the literature – confirmed by discussions with farmers and alerted by recognition that much of the literature is deploying the rhetorical techniques identified and

so seeking to focus our gaze in certain directions - suggests that adoption of high-yield high-chemical input rice-farming techniques is problematic. Yet any studies reach different conclusions and deploy rhetorical devices. Those who encourage rice exports often advocate chemical fertilizer use whilst both ignoring possible damaging effects upon the environment and soil fertility and avoiding debate. To do so they deploy *assertion* and *provincialism*. We find issues largely presented as solvable through policy – *policy fetishism* - and, through deployment of *reference to external causes*, farmers' broad medium-term lifestyle choices are obscured. The possibility is largely ignored that farmers are mining their land because, in part, they see it as more profitable to invest in changes in location and employment for their families ('leave the land').

These devices hide arguments that whilst increasing crude yields significantly, farmers' net incomes do not appear reliably to rise by anything like so much. In a nutshell, chemical inputs may be rather expensive.

Discursively, it seems clear that the discursive order that allows for deployment of such technical devices is relatively robust.

Cassava

Overview

In comparison with rice, the literature on cassava is far simpler. However, the discussion of it repeats points already made when looking at rice. Like rice, there has been a very sharp increase in Cambodian production in recent years. Much of this has been exported, sometimes processed, sometimes not. Domestic processing capacity is present, and, like rice, there are concerns that too much output is exported in relatively unprocessed forms, reducing potential domestic value-added. Like rice, there are concerns that production may be having damaging effects on the environment, though these focus upon potential soil damage from cultivation and environment damage from processing, both to air and local water resources. Again, we find *provincialism* and so a lack of internal debate in the literature. This suggests that this is a general characteristic of rhetoric, and not simply to do with the particular tensions in the rice sector.

Provincialism - absence of structured debate

Consider the CDRI report [Hing – date unclear, but from internal evidence likely to be around 2010]. This is clearly taking a *provincial* tack and ignores environmental issues. The report notes the rapid increase in cassava output:

{note} the historical development of cassava production in Cambodia in terms of cultivation area, total production quantity and productivity... cassava production experienced rapid expansion between 2005 and 2006. [8]

There is though little use of *policy fetishism* as state policies appear rather unimportant in explaining these changes:

Although cassava increasingly becomes more attractive for farmers to choose among the cash crops, its cultivation and production face several challenges, the most important difficulty farmers always complain about is the significant rise in labour cost and price of agricultural inputs and services brought about by high inflation... [13-14]

This fits with the overall developmental picture of rapid change without shifts in the governance situation or policies.

Using the technique of *assertion*, the CDRI report does not mention possibilities of soil damage, or environmental pollution due to processing. A similar absence is shown by other studies – [Huang Jie et al. n/d]; [Klakhaeng – no date but from internal evidence likely around 2009]. This contrasts with the common view that cassava is environmentally ‘risky’. Consider [Preston 2007]:

A considerable amount of new research information about the use of cassava as animal feed is becoming available from ongoing research in Vietnam, Thailand and Cambodia. Previously, *cassava has been characterized as an “exploitive” crop, destructive of soil fertility*. However, when cassava is grown as a component of a farming system, in which livestock and crops are closely integrated, its capacity to “exploit” the nutrients in live stock manure becomes a valuable asset. [1 – stress added]

A more negative view than Preston can be found in UNDP Cambodia – no date, but from internal evidence around 2008^{xxii} :

In Cambodia, cassava production is booming. Farmers have strong incentive to grow cassava due to greater access to new high yield varieties (HYVs), increasing global demand for cassava-based animal feed, starch and biofuel and rising market prices. Cassava is quickly becoming one of Cambodia's key cash crops ...[1]

The single largest environmental concern regarding cassava is that it can damage soil overtime {sic} if proper farming techniques are not employed. In Cambodia, this is a legitimate concern. Farmers have stated that they need more information about how to properly grow the crop and access to best practices. This can be easily addressed through education, training, farming extension services or the presence of cassava associations. [6 – stress added]

By contrast, UNDP [2008] is more enthusiastic about the prospects for cassava, simply noting possible environmental risks:

Environmental problems increase with mono-cropping practices and increased fertilizer and pesticide use, jeopardizing water and soil quality. [65]

And:

It is important to note that one of the unique and beneficial characteristics of cassava is its ability to grow in poor and sandy soil. In Cambodia, however, it is primarily being grown in the most fertile and productive soil available, in lieu of other cash crops. [2]

We conclude that the literature is less conflicted than in the case of rice. Certainly, there is agreement that farmers confront buoyant demand:

The supply issue will become even more acute in 2009 as current cassava factory expansion plans materialize - demand analysis revealed domestic cassava requirements increasing threefold - and Thailand and Vietnam supply requirements continue to grow. [6]

It seems that the lack of contestation is reflected in the pattern of rhetorical techniques deployed. Given less contestation, the literature is not the same as with rice, where one side, using *provincialism*, is able to simply ignore the other.

Discussion

The literature generally agrees that, for various reasons, expansion of cassava in Cambodia is strongly linked to the export market and risks damaging the environment in two different ways:

- first, through the effects of cassava cultivation upon the soil
- second, through the effects of processing upon two care issues: local water and local air quality (this is not much discussed)

The different use of rhetorical techniques suggests that, for rice which is more contentious, their presence suggests the desire and/or need to defend a discursive order. Were this discursive practice, we would not surely expect variation in the techniques used. To put this in another way and with reference to what I called earlier basic High School standards of argument, such techniques are deployed when the basic arguments are weak and/or vulnerable.

CONCLUSIONS

The study argues that much of the literature shows various rhetorical characteristics. Often, it exhibits *provincialism* – it lacks references to contending positions. It frequently shows *dismissal of positive outcomes* as it frequently has major problems explaining evident change given what are often seen as major problems of policy and governance. It is *assertive*, confident in stating what causes what, and it often uses *reference to external causes* and so avoids proximity to local processes (such as ‘what farmers really think’).

This article has avoided discussion of the causes of this situation, such as the possible motivations of knowledge producers, and the ways in which studies, such as the USDA one, appear credible to some consumers of knowledge and not to others. Thomas Kuhn, the student of science, argues that “If an anomaly is to evoke crisis, it must usually be more than just an anomaly.” [Kuhn 1970:82]. This can be interpreted as saying that much knowledge production obeys procedural rules that do not contain a criterion that requires that accounts be exhaustively compared (as a predictive criterion would), so that something outside science chooses the truth of the matter [Fforde 2017a]. Much human experience suggests that such selections of what is to be deemed the truth are not to be trusted, and are often hidden from view as the expert’s view is presented as the path to follow. This seems to be part of what the literature surveyed here is up to. But, given that good politics seems to require good policy, and vice-versa, this situation would seem also to help explain why those seeking to do good often end up pondering the saying that ‘the road to hell is paved with good intentions’: the evidence seems to suggest, with some thinking-through of the implications of method, that it is wise to not be too credible, or gullible, when consuming expert statements of what will lead to what.

Awareness of these characteristics would seem to weaken the rhetorical power of these parts of the literature deploying them. This would in turn increase the voice of those to whom it is denied. Fforde & Seidel (2015) can be read as showing how this can be done, as parts of the donor community aligned with local Cambodian political actors against existing mainstream positions, in that case the assertion that land-titling was good for development and good for farmers.

Such conflicts should be familiar to development professionals; they are consistent with the view, epitomized by the argument of Cowen & Shenton (1996) that correct development doctrine is defined by authority; it is not robust predictive knowledge, but one of a range of explanations each suited to various belief-sets and, if an interest-based political framing is adopted, interests.

The thrust of many arguments tends to be to create a platform for action and intervention oriented towards official or INGO action, and therefore deploys *policy fetishism*. It may be interpreted as part of a development ‘playground’, where donors’ development discourse makes up a discursive regime or order that is contested by others, and so does not have the

status of a discursive practice subject to fixed rules. Donors, then, are only relatively free to 'govern with words', to state freely and authoritatively what is best for aid recipients. They therefore do not always get what they want [Fforde & Seidel 2015].

The contestation involved in preserving a discursive order is marked in two ways:

First is the deployment of certain identifiable rhetorical techniques. It seems evident to me that these are disreputable. Awareness of them reduces the authority of the text deploying them. What political effects this may have is not, however, obvious, as other forms of power are obviously in play.

Second, the paper noted a *greater* deployment of these techniques in areas where there was more contestation (rice) than in areas where there was less (cassava). This suggests that a *higher* incidence of such techniques in a literature suggests greater investment in them, perhaps at increasing risk as and if audiences are aware of their presence, or to put it another way, that the position taken is for some reason thought inherently weaker and so needs to be supported rhetorically. Again, once an audience is aware of this, extensive deployment of such techniques can be expected to lead to greater scepticism.

Donors accept that studies deploy these techniques. This suggests that they believe that other forms of power are more important.

A striking feature of the literature surveyed is in general its *provincialism* – the weak internal cross-referencing. Citation, especially of differing positions, is very limited. This is particularly true of consultancy reports, which tend to avoid debate in favor of the articulation of a particular position. Academic studies, especially those published in journals, are better.

This then suggests as a final conclusion that the relative viability of discursive domination in a particular context is illuminated by the pattern and nature of the rhetorical techniques deployed. For rice, the viability of dominance is lower, as the position is more contested, and we see more deployment of the techniques identified. For cassava, there is more agreement and less use of the techniques. For those wishing to know the extent to which a literature is contested, this suggests that weak positions are reflected in greater utilization of suitable rhetorical techniques, which can be gauged. This would advise, if possible, that the push be sidestepped or ignored, or, if contest is inevitable, ground chosen where those techniques can be highlighted as their presence reflects inherent weakness of argument. *Provincialism* is a particularly marked tactic and easily addressed, which avoiding it through a demonstrated familiarity with the literature is perhaps why it is a central element – or meant to be – of academic discursive practice. And the case study used here only exists because a Cambodian official – not the donor agency – required it. As in many other areas, this suggests that money and rhetoric alone do not determine what happens: words may be used to govern men, but the particular attempt to do so may fail, especially if the audience knows the tricks the performer is up to.

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Table 1 – the Dataset – List of materials collected

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NOTES

ⁱ A full list of the materials gathered is in the Table below. A parallel paper based upon our fieldwork was recently published in the *New Zealand Journal of Asian Studies* as Fforde 2017b. This paper concludes that farmers' agency – widely downplayed in the literature examined here – most convincingly explains change. These materials were collected as any consultancy would proceed, by asking around, looking in libraries and continuing until no new materials came to light. Only English-language materials were collected. This was supplemented by searches through electronic databases at a good University library in Melbourne. There are nearly 150 items. The final consultancy report is here - <http://www.unescap.org/sites/default/files/AWP%20No.%2090.pdf>

ⁱⁱ References in the text may be found in the Bibliography, when they are normal references, or in the Table, when they are to elements of the dataset – the literature we collected – where the materials are often, for example in mimeo form, not properly sourced in terms of place, publisher etc, as is the nature of much consultancy material.

ⁱⁱⁱ Harzing's *Publish or Perish*, based upon Google Scholar, gives him 5418 citations for his most successful work, Fairclough 2013, and total citations probably over 50,000. This compares, for example, with 4017 for Myrdal's 1968 classic. Escobar 1995 has 8023 [consulted Dec 10th 2015].

^{iv} An equivalent amongst economists is the work of McCloskey 1985.

^v My personal hunch is that motivations are often confused and muddled, reflecting conflicting and unclear pressures: for example, to get paid for the current job, to get paid for being a good scholar in the longer term, to comply with rarely thought-through normative methodological principles, and to feel that lives have meaning as being 'being part of intentional change'.

^{vi} The first argues that a change deemed positive will actually lead, or have led, to the opposite of what was intended; the second that it will not lead to anything; the third that the change will risk too much ('Democracy as a Threat to Liberty' [passim].

^{vii} I argue elsewhere that donor engagement with Cambodia since the international and internal political settlements of the late 1980s and early 1990s can be seen as exhibiting a 'playground' syndrome, where donor

hopes to use Cambodia as a site for prescribed development led to exclusion of important stakeholders, which could not be maintained in practice [Fforde & Seidel 2010].

^{viii} For reasons of space limitations, the paper does not discuss the fish literature.

^{ix} As already mentioned, we collected those materials that were available. These were of three basic types: consultancy studies (both papers and collections), academic studies and press reports. These came from the searches carried out by the Research Assistants in Phnom Penh (using direct enquiry as well as indirect searches of libraries and the internet) and use of rather good academic journal databases in Melbourne.

^x Compare such ideas of the 'mutability' of gender roles with reports that state gender divisions of labour in rice production – 'Women and Rice' (n/d) gives a table quoting a 1995 source; this seems different from that in UNIFEM 2004 p.59 dating the information from 2003 – as mentioned above (quoting [Lee 2004]), such practices appear mutable – adaptable to reflect contexts and, presumably opportunities as well as constraints.

^{xi} A hypothesis, not here developed, is that scholarly engagement with studies that deploy techniques such as *reference to external causes* will also tend to avoid facile comparativist work, which in its turn may more readily support ready generalisation. Such positions of course may be criticised as localist and parochial.

^{xii} See also for example [Someth et al. 2009] on an example of local water management; [Brooks et al. 2008] on the dynamic diversification into aquatic snake catching of poor families in floating villages on the Tonle Sap, to meet demand from crocodile farmers.

^{xiii} The author is supporting an NGO that advocates and supports non-chemical methods. [Feuer 2008] gives an academic investigation of this NGO, CEDAC. See also Makarady [2007] for a CEDAC view.

^{xiv} The same report gives data from the early 2000s that rice was not only a rather low % of agriculture GDP in Cambodia (22%), but is a lower % than in a notable competitor, Vietnam (35%) (table 9.2 p.201). It is risky to describe Cambodian agriculture predominantly rice. Compare FAO [2004] stating that "Agriculture, mainly rice production, accounts for 40% of the GDP employing more than 70% of the workforce." » [1] See also Nesbitt (2003) for a history of the Australian input, which perhaps started to bear fruit from the mid 2000s.

^{xv} See also Shu Fukai n/d.

^{xvi} Agricultural GDP measures, of course, the sum of wages, profits and rent earned in the sector. This data comes from a rather old report but we do not expect there to have been major changes since – note that the thrust of the evidence is that farmers' net earnings from increased rice output are low, in part because input costs are usually rather high. According to the DTIS 2007, the rice sector contributes only some 9% of GDP. See also FN p.7.

^{xvii} To quote from McNaughton [2002: 7-8]: "CEDAC is a Cambodian NGO working for the development of family agriculture, through research, training and rural extension. Funding comes from the Australian aid program and other sources. CEDEC works to improve the lives of small-scale commercial farmers through promoting ecological agriculture. The training approach is similar to that of IPM, group training in farmer field schools, individual training and consultation, and farmer to farmer study tours. The focus is on pesticide problems, organic matter management, and ecological intensification of rice, vegetables and mung beans. Trials with the "System of Rice Intensification" (SRI) developed in Madagascar have shown yields increased up to 150% over the normal (5 T/ha versus 2 T/ha) ... The system is a "biodynamic" one, taking advantage of a subtle understanding of the biological factors which influence rice tillering and final grain yield (soil tilth, water management, transplanting practices, early weeding, and seed selection). CEDAC's farmers also are marketing "organic" produce locally and in the urban centres. Local village consumers prefer and even appear willing to pay a small premium, for pesticide free products, as many are well aware of the dangers of pesticide exposure."

^{xviii} This adjective is very commonly employed. It facilitates deployment of *reference to external causes* with the argument that 'external' changes are required if Cambodian farmers' are to change (see above). See, for example, [Bonnivoit 2007: 7]; [Hortle et al. 2004: 11].

^{xix} See studies such as [Schmauler 2006] reporting increased incomes from natural techniques; also [Schmerler 2006].

^{xx} If we recall other studies arguing that farmer costs would rise, this may be a reference to gross incomes not to farmers' value-added.

^{xxi} No reference is given in the source cited here to support these comments; our fieldwork suggests that farmers' report that chemical use damages the soil and is not the way to create sustainable increases in rice yields, which is the contrary of the argument here. Further research, and criticisms of such ways of arguing, are needed.

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^{xxii} Again, we could have chased the source to find out the date, but again the reader should be aware that conventional editing of such reports does not ensure that soft copy contains full details of provenance.

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