This paper proposes use of an assessment tool called "commodity relations," to measure national knowledge resources to help companies make better site selections for international production operations. The paper first reviews traditional measures of human capital, such as average years of education per individual and literacy rates. The proposed method measures human capital resources by measuring first-order commodity relations, in which thoughts are packages and distributed to others through various media (a book, for example) who pay money for them, and second-order commodity relations, in which an agency other than the senders and receivers of the thoughts finances communication of the thoughts. A survey could be administered that would measure how much time individuals spend on first and second order commodity relations and on noncommodified relations. Individuals in an environment of noncommodified relations would exhibit localized and strong cultural dispositions and strategic communication processes. In first-order relations, individuals would exhibit sustained attention-paying capacity, elaborate conceptualization capacity, and strong cultural dispositions. For second-order relations, individuals would exhibit variable cultural dispositions; short, shifting attention spans; and concrete, object-centered conceptual strategies. Application of this theory would indicate that a business may want to consider locations where mass media rely less on advertising and more on state sponsorship and where print media receive relatively more support from individual purchases than from advertising revenues. Contains six references. (JDD)
Where in the world is knowledge?
A key to international business expansion decisions

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Presented at the Thirteenth Annual Conference
of
Languages and Communication for
World Business and the Professions

Brian Nienhaus
Department of Management
460 Owen
Eastern Michigan University
Ypsilanti, MI 48197
Where in the world is knowledge?

Introduction

This paper proposes a new way to measure national knowledge resources to help companies make better site selections for international production operations. The new assessment tool, imported from mass communication research, is called commodity relations.

Background

Many factors come into play when a company explores international sites for production: availability of transportation to markets and from sources of raw materials, availability and cost of utilities, rates of taxation, regulatory climate, political and social stability, and something that economists call 'human capital.'

By 'human capital is meant, in a roundabout way, that for any production operation, people are a major resource. Moreover, what is important is not their mere availability but their comparative capacity to produce. When a company hires employees at a new international location,
it hopes that the new hires will apply themselves to make the new location productive. The aim—or rather, the hope of human capital assessments—is that the new employees will come not just with bodies but with acquired dispositions that will enable them to focus on their tasks, maintain their concentration during periods of routine activity, and solve new problems as they arise in novel situations.

More formally, 'human capital' is an economic term that has been measured in three ways by economists.

The first measures of human capital are based on proportions of a nation's school-age cohorts who are actually enrolled in schools (Psacharopoulos and Arriagada, 1986). The larger the proportion enrolled, the more human capital the region is thought to have.

A key advantage of this measure is availability: The measure was frequently compiled for a number of countries by UNESCO. The principal disadvantage is that does not take into account any other part of the life cycle that might influence an individual's development of valuable skills. For example, individuals learn through exposure to family and community while they are very young. They also learn (or do not learn) after their formal education is completed, whether at work or during their leisure hours.

Another problem with the age-cohort educational measure is that it does not account for the total quantity of education accumulated. To address this issue, some
economists use a second measure of human capital, average years of education per individual, instead of age-cohort proportions (Kyriacou, 1991; Benhabib & Spiegal, 1992).

Years of education can give a decision-maker a better fix on how much education a proposed labor pool will have accumulated, but--and this is the problem with all education measures--it falls far short of an ideal measure of human capital, one based on the sum of all socialization experiences including those deriving from family, community, work and leisure. It may be useful to know that individuals average seven years of education in one country and nine years in another, but the measure does not ensure that labor force in the latter country actually results in individuals bringing more skills to the workplace.

One other measure of human capital has been used: literacy rates (Taylor & Jodice, 1986). These rates are widely available from UNESCO and other agencies, and they arguably measure something more immediately relevant to a company. Literacy rates hold out the possibility of finding skills in people that years of education measures might miss, as they identify that part of the prospective labor pool that can read, regardless of how or where it might have learned to do so--whether through formal schooling or through informal education at home, community or work.

Right now, the best measure companies have to assess human capital is probably the literacy rate. In an
increasingly competitive international business environment, however, those companies (or their home countries) that are able to improve upon human capital measurement will gain at least temporary advantage over those that rely on these existing measures or, which happens frequently, that ignore the question of human capital altogether and surround themselves with harder data on things like electric power and capital repatriation rules.

The key question is, how can we gain a firmer understanding of nations' human capital resources? Two courses of action suggest themselves in response. The first has been around a long time. Writing in the previous century, Max Weber, as did DeToqueville before him, wondered why, of all the places in the world, industrial development occurred so quickly in western Europe and, thereafter, in North America. The title itself of Weber's response, The Protestant Ethic and the Spirit of Capitalism, signalled that he thought that answer would be found in culture. That is, certain ideas and values that some groups of people inherit from their past might make them apply themselves more frenetically than others to the development of capital wealth.

Following Weber today, one might use the cultural values, myths, and rituals that a century of anthropologists have catalogued for us to try to predict where people might be more productive. We who work in and around business
language instruction might find this method attractive. It requires extensive knowledge of the languages used and meanings made in at least two countries, and we as a community have that knowledge. Those of us who happen to have knowledge of the cultures contained in the handful of sites a company is considering might well be able to contribute, as consultants, to their final selection decision.

We might be able to help such a company, but then again we might not. I speak Spanish, and I have extensive knowledge of cultural practices in Spain, and some knowledge of practices in some locations in Central and South America. I also have training in cultural anthropology and a business degree. But I must say that despite this accumulated training and experience, I find that the link between what a people will think, or what they will practice culturally, and how productive they will be in a manufacturing or administrative setting, remains a mystery. For example, for a car upholstery manufacturer, what practical difference is there between urban Mexico's penchant for, say, gift exchanges in interpersonal relations and the values of personal frugality promoted by Opus Dei among certain segments of Spanish society? Both sets of values arguably encourage personal cultural practices that might lead to the development of human capital skills, but which set of values is more potentially productive? Frankly, I don't know.
If I really had no way to give a company clear advice on cultural grounds, I might defend myself by noting that culture and economics are entirely different spheres of human being and action, so that if one tried to read cultural values and practices for their economic potential, one would be little more than a modern-day Tarot-card reader. The idea that culture is one thing and economics another becomes a refuge for me, but the company still receives no effective guidance in making its site-selection decision.

Yet, companies will need to gain a better fix on their human capital resources. Age-cohort measures, years of education, and literacy rates give them something, but they want more, they are faced with the difficult task of trying to take a hard, economic look at culture. Culture seems almost the antithesis of economics, so they encounter a barrier to improvement. How can we help them move beyond this barrier? Let me indicate first why I think there is a response to this question, and then discuss this paper's particular response.

Economic activity is essentially human activity. It is bound up in some way with human culture. Culture, in fact, is what enables us to act in organized ways to produce products and services, and culture is minimally necessary for others to perceive value in the products and services we produce for exchange. While I see problems in trying to read
a culture for its production-relevant meanings, I also see that the notion of separation between culture and economic productivity is probably a fiction. In seeing this, I must conclude that we can improve upon our ability to measure human capital resources, and in the following section I offer a way to do so.

A new way to measure knowledge: commodity relations

How is human culture linked to human economy? I wish to answer this question not as a philosopher, or even as an economist, but in a way that might lead business decision-makers toward better site selections here and now. There is an important and understandable linkage between culture and economy: It happens at the point where human communication and money intersect.

At this point of intersection, we see three different linkage possibilities. In the first, people communicate with each other in ways that fall completely outside the money economy. We find such communication now in regions of the world where knowledge is passed from person to person freely, without price tags on the knowledge, or without the production of a marketable product or service as the goal of the communication exchange. To take one example from far afield, the self-sufficient, swidden-system communities of mountainous Central America are sites where most communication will take place outside of the money
economy. Closer to home, the time you and I spend speaking to friends this evening will be time in which our words and gestures will flow at arm's length from the money economy.

Whether close at home or far away, when we see communication occurring in this fashion we witness what I have elsewhere called non-commodified relations (Nienhaus, 1993). I will discuss how one might measure the quantity of these relations in a country, and what their consequences might be for assessing human capital, further below.

Some communication exchanges are free in a non-commodified way, but many other exchanges have direct linkage to the money economy. Most importantly, we should note that communication can be linked to money in two different ways, with consequences of substantial potential significance for those of us who must pass judgment on human capital resources a country makes available.

The first way that communication links to money is directly. I write a book, you buy the book, and in doing so you receive a fixed flow of my thoughts and I get some of your money in return. Similarly, we receive money in return for the more freely flowing words we give to our students in the classroom, just as religious leaders receive money in return for their words to their congregations, as psychiatrists do for their time with their patients, or as you and I would if we were consultants to a firm facing a site-selection decision. In all these instances, our crafted
thoughts are packaged and distributed (through various media) to others for money. In the ideal case, the person who receives the symbols is the one who paid for them. I will say why this is important further below. When this happens, we have instances of first-order commodity relations (Nienhaus, 1993).

One might think that with these two types of relations we have exhausted the possible ways that words and money intersect. Words either come with price tags attached or they do not. In fact, there is a third relationship, involving words and money, but radically different in form and potential consequence from the first two relations. I have called this third relationship second-order commodity relations.

Second-order commodity relations happen when a country has a media system financed by a third party, that is, an agency other than the senders and receivers of the sounds and images of mass communication. Where there is such a system, producers of words, witnesses of words, and money combine in a strange way. Producers produce news or entertainment programs for money, but not for the money that comes from witnesses' pockets. Instead, a third party, usually the advertiser, pays for the production of those sounds and images. The advertiser pays for this production for a simple reason: They want those sounds and images to attract the attention of large numbers of people, so that
they can promote their products to them.

For individuals, first-order relations means that people pay for their own symbols, while second-order relations means that they are reduced to merely witnessing they merely witnessing a passing cavalcade, primarily through television, of sounds and images for which they are not asked to pay. Instead, they are asked to witness the symbols so that their individual attention can become part of a package of aggregate human attention, measured by a ratings agency such as Nielson or Arbitron, which media firms then sell to advertising firms.

I argue that we can observe a people's media behaviors with surveys and then analytically divide what we find into three different kinds of symbolic exchange activity: the non-commodified, the first-order, and the second-order. The operational details are available in Nienhaus (1993); here I will just indicate what the surveys would produce, and how they might be used for international site selection.

With a survey one could measure how much time, on average, individuals spend within these three relations. In some countries, especially those which do not have market economies outside their capital cities, we would find a predominance of non-commodified relations. In rapidly developing countries, we would continue to find non-commodified relations, but we would also begin to see
varying quantities of first- and second-order relations, depending on how countries have come to organize their mass media systems. In more developed market economies, we would increasing proportions of first- and second-order relations mixed in with free or non-commodified relations. Crucially, we would find that the proportions of these relations would differ across nations, as some of them have adopted a state-sponsored BBC-type model for their broadcast media, while others have adopted U.S.-style commercial broadcasting. We should find, in short, that citizens of different countries spend different amounts of time, on average, in non-commodified, first- and second-order relations. What, then, could we do with this information?

Let me first characterize the cognitive implications of each of these relations, and then apply them to hypothetical site-selection scenarios in developing and mature market economies.

For individuals who grow up in an environment of non-commodified relations, we might expect the following:

* Cultural dispositions, whatever they are, should be more localized or idiosyncratic
* Cultural dispositions should be strongly held
* Communication processes will be strategic

Dispositions should be relatively more local where non-commodified relations predominate because centralized media
industries have not yet taken hold. How groups of people communicate, then, will be more a function of their immediate communities' pasts. Dispositions will be more strongly held because there will be relatively less competition from imported ways of seeing that happen after an area becomes enmeshed within a wider mass communication system. Finally, communication processes will be relatively more strategic since gestures and words themselves are more often exchanged face-to-face, and one can often assess their efficacy almost immediately.

For first-order relations, we might expect

* Sustained attention-paying capacity
* Elaborate conceptualization capacity
* Strongly held cultural dispositions

In first-order relations, individuals are habituated into a special relationship with symbols. Since they pay money for packages of them (and, historically, the most frequent packaging has been the book) they are encouraged to have faith in the notion that the packages of symbols they acquire will be useful to them in some way. The will tend to work, sometimes for long hours, assimilating these packages, mining them for the useful knowledge they might contain. Out
of these hours of effort come both sustained attention-paying capacity and strongly held dispositions. These dispositions may be more cosmopolitan than those acquired through first-order relations, and they may also be more purely concept-centered.

Regarding second-order relations, we should find individuals with

* Variable cultural dispositions
* Short, shifting attention spans
* Concrete, object-centered conceptual strategies

What happens to individuals who spend relatively large amounts of time in second-order relations? They acquire a peculiar, perhaps lazy relationship to symbolic activity. Since they do not pay for what they witness, they are not motivated by hope that they will find something useful in them. They will tend not to work for long periods of time mining commercial programs for special, useful meanings. Furthermore, they will tend to key in on the consumer goods offered by sponsoring firms, as they are habituated to the practice of purchasing goods to solve personal or social problems or to find happiness. Purchasing a good replaces thinking one's own way to a solution, so, over time, the capacity for abstract conceptualization is not developed as a skill. Finally, for reasons not related to the individual
but to the industry that produces commercial content, there is a need to change topics quickly, whether in news programs, entertainment stories, or commercials themselves, so that a witnesser of a flow of commercial contents becomes accustomed to paying attention in short temporal spurts.

Let me quickly say that the cognitive tendencies I am laying out briefly here are hypotheses; there is as yet no research with them, though I am now preparing pilot studies for the United States (Nienhaus, 1993). For now we have only our own common sense and the internal logic of these relations to support the idea that these relations might help us assess a nation's human capital potential.

On the other hand, internationalization of business is picking up pace, and we need to craft new tools to help us adapt and succeed in this environment. So, even before data are in, I would like to suggest ways in which firms might use commodity relations make better assessments of the human capital resources their potential sites make available.

Applications

Countries, or regions within countries, which do yet have have strongly developed media systems may, in some circumstances, contain the most promising sites for future production locations. These areas will have comparatively large amounts of valuable cognitive skill. Strong dispositions signal cognitive stability, and that, along
with experience in strategic communication should result in a perceptive workforce with problem-solving potential. It is at these locations, too, where we may find that cultural communication consultants may play their greatest roles. Since people at these sites will more likely possess localized ways of seeing their worlds, there is greater possibility that representatives of the investing firm, as outsiders to this local, high-context culture, will misunderstand or be misunderstood in consequential ways by members of the local population. For those who take Weber's cultural approach to international communication, regions where non-commodified communication is the norm may be they can develop their most effective advice.

Direct investments can be made in non-commodified sites, but substantial effort will have to be made in clearly communicating company realities and goals to their work forces. Other selection factors being equal, the payoff potential for locating production operations in non-commodified sites is large. These areas will tend to be less fully drawn into the market economy. Since people will still tend to do many things for themselves, money wages will be comparatively smaller than they would have to be in more market-developed regions. For these smaller wages a company might gain substantial cognitive efforts from a potentially very capable workforce.

In addition to handling strong local cultural
idiosyncracies, whether or not a non-commodified location will work out will depend on one other important factor: the route the region or country is taking in developing its media system.

If a country decides to try to force a commercially based mass communication system into existence, firms may wish to avoid locating their production operations in these sites. Over time the commercial system will eat away at strongly held values and strategic communication capacities, and replace them with trained shortness of attention and shallow conceptualization capacity. Workforces here will be culturally troublesome at first and then, by degrees, more cognitively impoverished.

On the other hand, if one sees non-commodified sites becoming surrounded by BBC-type state broadcast systems, one may find a potential human-capital gold mine. In these locations, local, strongly held dispositions coexist with, and are gradually supplemented or replaced by, similarly strong but more abstract cognitive dispositions acquired through hard symbolic work.

For countries or regions with comparatively little market development, then, one should strongly consider locations where the developing mass media rely less on advertising and more on some form of state sponsorship of the broadcast media, and, similarly, where print media receive relatively more support from individual purchases.
than from advertising revenues.

Many site selection decisions will involve mature economies, and commodity relations can help firms compare human capital resources here, too. Assuming rough equivalence for non-commodified relations across developed countries in spheres of interpersonal communication, the key question, once more, is the degree to which the media system is financed by direct payment for symbols received versus payment by third parties for human attention gathered through a symbol-dangling process--first-order relations versus second-order relations. If a firm wants to maximize human capital received for the wages it pays, it should look closely at those sites where the pool of potential laborers has been surrounded by the useful symbols that tend to flow in first-order relations. Again, comparatively speaking, workers socialized in this way will be more interpersonally adept, more capable of sustained attention, and more generally cognitively active and discerning, than will those who have been surrounded a fragmented cacaphony of colors and symbols that tend to describe advertising-sponsored symbolic fare.

Conclusion

Non-commodified relations denote the free interplay of interpersonal interaction. The book roughly corresponds to first-order relations, and television second-order relations. Using media terms as shorthand for the more
abstract relations is all right for conversational purposes, as long as we remember that the media themselves do not, pace McLuhan (1964), define what is essential about the relations. What is essential is whether or not symbolic exchanges happen within the money economy, and, if they do, how they do. It's one thing to pay for symbols, and quite another to be enticed by symbols so that your attention can be gathered and sold. Symbols offered by CD can be bought just as easily as symbols provide by a book, and a newspaper can come to look a lot like commercial TV if the newspaper company derives 80 percent of its revenue from advertising, as does USA TODAY.

As one might see, commodity relations is a more broadly communicative approach to human capital assessment for site-selection decisions. I stress its breadth because with it we can gain evidence of factors involved in human capital formation that range well beyond education. A person may or may not continue to learn for years after formal schooling is ended. Whether she will learn or not will be, in part, a function of the quality of the symbols that flow around her. First-order flows will encourage continued learning, second-order flows, entertainment and rest. Commodity relations can help a decision-maker pick up the process over a broader life-course than can educational measures.

Whether or not commodity relations will constitute
a better measure of human capital than literacy rates remains to be seen. Insofar as literacy is associated with skills with printed words, and insofar as technological developments involve skills with symbolic flows that are packaged electronically, then commodity relations may become a more valuable assessment tool, especially if it can be shown that roughly similar amounts of research resources can be used to measure the distributions of commodity relations versus simple print-literacy.

In the meantime, all of us, whether or not we are ever called upon to be consultants to firms with international site-selection decisions, might find one aspect of commodity relations useful in our present roles as teachers and scholars. The United States is an interesting case when viewed from a commodity relations perspective. We have a highly developed first-order symbolic sphere, as evidenced by our per-capita spending on education. Lots of symbols are produced in this country for direct purchase, whether as books, CDs, or, through tuition, as time in the classroom.

The U.S. also, however, has the world's most highly developed second-order environment. Our children, despite our best efforts, are attracted to a visual commercial world of immense beauty, creativity—and fragmentation. As teachers, we increasingly have to try to undo the cognitive damage that is done to our children.
during their hours of exposure to commercial media fare. Here and there our efforts work, but many of us will go home from this conference to states where both K-12 and higher institutions of education are coming under increasing scrutiny and attack. Why? Because, from an taxpayer's perspective, we are paid a lot to produce cognitively capable adults, and cross-national comparisons of our students' capabilities are not good at present. The conclusion an outsider would draw is that we are not doing a good enough job as teachers.

That may be, but the symbolic environment of the U.S., and particularly how that environment unfolds during leisure, suggests that leisure is undoing what we are trying to do in the time that we have students in our first-order fold. From a commodity relations perspective, the U.S. would often not be among the top sites for a new production facility. The perspective suggests that this is not because we teach poorly, but because of what happens to people here when the educational day, and the educational years, are over. If it turns out that our human capital capacity does not measure up to other nations', our educational efforts may not be the cause of the problem.

Commodity relations, potentially useful for future site-selection decisions, may also be useful now to some us now, as it suggests that what needs fixing is not our authority or autonomy as teachers and scholars, but the
symbolic environment that surrounds us all in this very entertaining land.


