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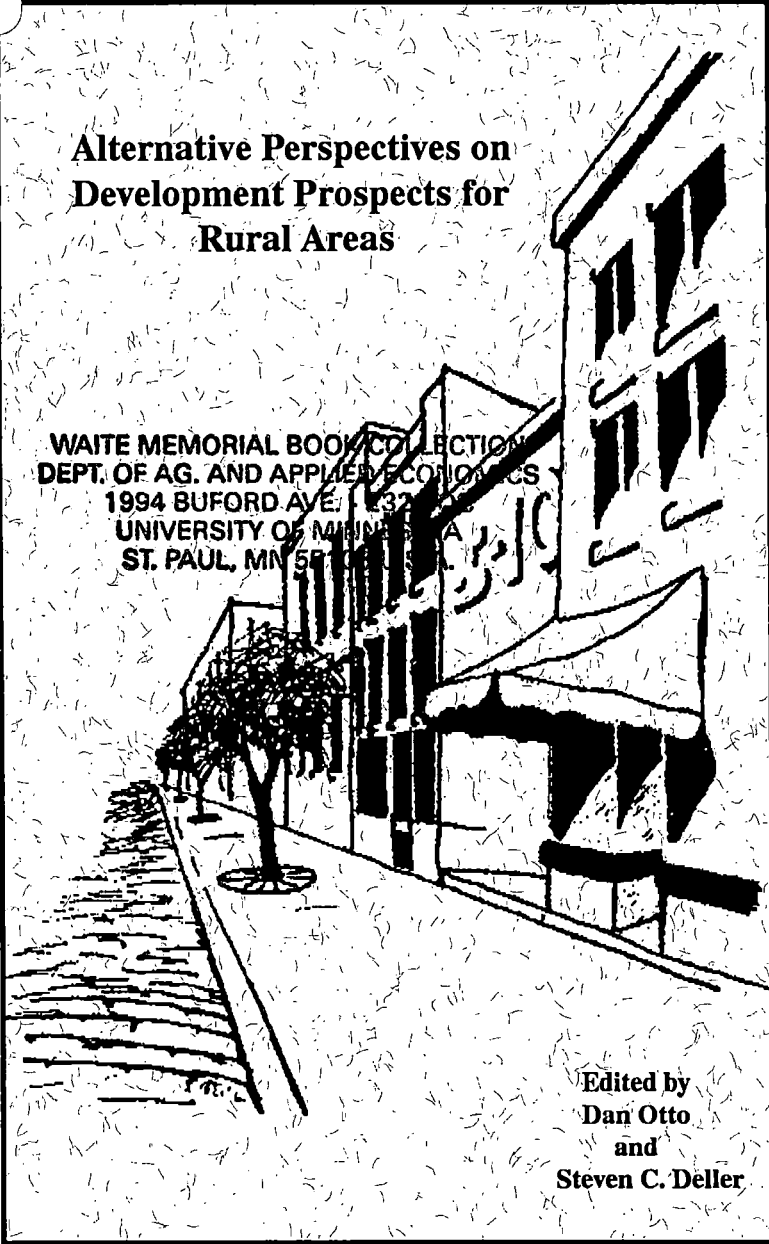
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## **Alternative Perspectives on Development Prospects for Rural Areas**

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## **GROWTH CENTER THEORY REVISITED**

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### **INTRODUCTION**

This paper critically examines central issues in growth center theory in terms of their relevance to current rural economic development concerns in the United States. Past U.S. regional development policies invoked growth center strategies but various pressures precluded any genuine implementation. Nevertheless, historical and contemporary evidence indicates that it is not unusual to find centers of innovative development located in areas that are peripheral in relation to major urban agglomerations. The case of peripheral Jutland, in Denmark, is examined as a relatively clear-cut case of recent rural industrialization based on state of the art flexible production in an international context. Local cultural attributes have played a key role in this process. In contrast, central government industrial and regional development policies have had relatively little impact. The principal contribution of the central government was the creation of a sound educational system.

### **GROWTH CENTERS AND U.S. REGIONAL DEVELOPMENT POLICY**

It should be emphasized that although this paper deals with growth centers, these should not be confused with the kind of growth centers associated with U.S. regional development efforts in the late 1960's and 1970's. The federal legislation that created the Economic Development Administration and the Appalachian program called for concentration of developmental investments in

places with "significant growth potential," presumably to build on existing opportunities and to reap subsequent economies of agglomeration. A detailed critique of the relevant policies and programs is given in Hansen, Higgins and Savoie (1990); suffice it to say here that there was no real implementation of a growth center strategy as understood in economic theory. The "growth center" investments that were made to increase the demand for labor were also poorly integrated with supply-side human resource development programs. In any case, critics with a rural agricultural orientation tended to regard the growth center approach as unduly urban in nature, while more urban-oriented critics complained that the designated centers were too numerous, too small, and too unpromising, i.e. they were viewed as an equity sop to rural areas. Finally, it is worth noting that the economically beneficial "spread effects" that were supposed to flow to the hinterlands of growth centers were scarcely in evidence, as has been typical of similar policy efforts in other countries. Given what is known today about the relatively long-distance linkages that exist among firms in terms of both inputs and outputs, the absence of spread effects should not be surprising--even if the induced development of a small set of genuine growth centers had been the principal object of regional development programs.

Why then resurrect the growth center notion in the context of present concerns with the long-run development prospects of areas that are peripheral in relation to large metropolitan areas? First, because the historical record indicates that economic development in Western Europe was, for the most part, not initiated in large urban core regions, but rather in smaller spontaneous growth centers located in what were then regarded as peripheral areas. And second, because there is considerable contemporary evidence that fresh economic dynamism is frequently

associated with geographic clusters of new firms located away from major urban centers--though these emergent clusters may eventually become major urban centers in their own right.

### SPONTANEOUS PERIPHERAL GROWTH CENTERS

European historical experience. Amidst all of the theoretical discussions of cores, peripheries, and hierarchies, there has been an unfortunate tendency to neglect the prominent historical importance of small cities. The record in fact clearly indicates that development-inducing innovations have not typically been initiated in the large urban cores that commercially dominated world-economies or even national economies. In the later Middle Ages market activity was greatest in areas of half-hearted political control, such as borderlands between feudal units (Jones, 1981). The principal means by which the expanding market system broke up or bypassed the guild system in Europe as a whole was probably the rise of decentralized domestic industry, which set up an elaborate trade network among regions and across frontiers. Throughout Western Europe small towns offered considerable scope for individual and local solutions to scientific and administrative problems, whereas in Asia, absolutist, centralized empires stifled all economic progress. In 17th and 18th century England, for example, small towns were the places where a host of small but productive changes in technology, business organization, and marketing operations were being made.

Braudel (1979a) similarly maintains that the unique experience of the British Industrial Revolution was made possible by a host of transformations going back to the 16th century. He further points out that the fundamental creative changes were not launched in London, but rather in Manchester, Birmingham, Leeds, Glasgow, and countless small towns. London did not even play a

prominent role in the development process until around 1830. France's later industrial revolution was similar in that the development of Paris lagged well behind the decentralized activities initiated in the North, Alsace, and Lorraine. While Braudel regards 17th century Amsterdam as the core of a world-economy, he insists that decentralized activities in such small towns as Leyden, Haarlem, Delft, Brill, Rotterdam and Dordrecht represented "the condition sine qua non of the grandeur of Amsterdam" (Braudel 1979b, p. 153). Jones (1981) even suggests that because of the economic and technological progress made possible by social and political decentralization, a recognizable and prosperous Europe might well have evolved without the traumas of the Industrial Revolution--if population had not expanded so greatly in response to real wage increases.

**The contemporary context.** Porter (1990), in his analysis of the competitive advantage of nations, remarks that competing firms in many internationally successful industries, and often entire clusters of industries, are often located in a single town or region within a nation. He particularly notes how numerous industries in Italy and Germany have grouped around one or a few small geographic areas. Without reference to the growth center literature, Porter nonetheless sets forth some of its major themes in his discussion of the various advantages of geographic proximity. Thus, a concentration of rivals, customers, and suppliers promotes efficiencies and specialization and, even more important, stimulates innovation. Geographic concentration of an industry acts as a strong magnet to attract talented people and other factors to it. Proximity increases the concentration of information and the speed of information flow. Geographic concentration also encourages processes of entry because spin-offs have a tendency to locate near

the original firm. And proximity leads to early exposure of imbalances, needs, or constraints within the cluster to be addressed or exploited. IN view of the fact that the conditions that underlie national competitiveness are so often localized within a nation--though at different locations for different industries--Porter questions whether the nation is a relevant unit of economic analysis. Yet despite this crucial observation, only a few pages of his lengthy book are devoted to the role of geographic analysis; because economists are rarely equipped to deal with spatial issues, such issues tend to be ignored or treated inadequately.

Fortunately, economists' contributions of relevance to spatial analysis have been picked up and applied by scholars in such disciplines as economic geography and urban and regional planning. In this regard, growth center theory has recently been revived by concepts and theories borrowed from economics, and particularly the field of industrial organization. In contrast to the spatial division of labor involving the decentralization of standardized, routine production activities to areas with abundant supplies of cheap labor, it is now frequently argued that a number of current tendencies favor agglomeration of economic activities. These include the increasing use of flexible technologies, just-in-time delivery systems, smallness of scale, and vertical disintegration. Storper and Christopherson (1987) suggest that flexible specialization in both manufacturing and producer services may account for much of the resurgence of metropolitan growth in the United States. Scott (1986, p. 225\4) similarly argues that "vertical disintegration encourages agglomeration, and agglomeration encourages vertical disintegration. In this way, localized industrial complexes, or growth centers, come into being, and the more they grow (up to a certain point at least) the more their locational attractiveness in intensified." Scott and Storper (1987) point out

that in the United States ensembles of new industry have typically been established outside of dominant industrial areas. High-technology sectors, for example, have had their greatest growth in areas on the peripheries of existing large industrial cities, or in smaller urban areas--e.g., Dallas, Colorado Springs, and Phoenix--which then expanded to major metropolitan status. Similar examples of recent peripheral area development are given in Hansen (1990) and Stöhr (1986).

Although the recent literature on new industrial complexes in Europe and the United States indicates that centers of innovation and development are most likely to be found in regions peripheral to old industrial regions, the fact remains that these "peripheral" locations are still largely metropolitan in nature. Does this imply that small towns and rural areas are simply not capable of generating or adopting the development-inducing innovations found in the newer urban growth centers? It is indeed difficult to find examples of economically-lagging peripheral nonmetropolitan areas that have been transformed into modern industrial areas. (There is of course no lack of examples of rural areas where products at the low end of the product cycle are manufactured by cheap, relatively low-skilled labor.) The case of peripheral Jutland is a notable exception. The experience of this Danish region therefore merits careful study for insights that may be applicable in the context of peripheral nonmetropolitan areas elsewhere.

#### RURAL INDUSTRIAL DEVELOPMENT IN PERIPHERAL JUTLAND

**The setting.** Jutland (Jylland) consists of seven counties which account for most of the area of Denmark. Peripheral Jutland is defined here to include five counties: Ribe, Sønderjylland, Ringkøbing, Viborg, and Nordjylland. The remaining counties, Vejle



and Aarhus, are not considered because they have established industrial traditions going back to the last century. Peripheral Jutland, historically a land of independent farmers and fishermen, has been very extrinsic in terms of relations with Copenhagen, which lies at the eastern end of Denmark, on the island of Zealand (Sjælland). In the past communication between the capital and western Jutland was always difficult; even today an auto trip between the two areas requires a break of at least an hour and a half by ferry, and peripheral Jutland still lacks express highways. Moreover, only in recent decades have most peripheral Jutlanders become "bilingual," that is speaking "official" Danish as well as the local dialect, which is unintelligible in the capital. Traditional tensions between Copenhagen and peripheral Jutland persist in many ways and are consistent with the fact that economic development in peripheral Jutland has taken place largely without reliance upon the central government.

**Industrial employment change.** Industrial employment in Denmark as a whole fell from 417,000 in 1972 to 363,000 in 1982, but then rebounded to 406,000 by 1987. Between 1972 and 1982, industrial employment in greater Copenhagen declined from 156,000 to 109,000; by 1987 there were still 109,000 industrial workers in the area. In contrast, industrial employment in peripheral Jutland rose from 102,000 in 1972, to 115,000 in 1982, to 140,000 in 1987 (Miljøministeriet Planstyrelsen, 1990). By 1987, peripheral Jutland, which only a few decades earlier had little industry, had 28 percent of the Danish population but accounted for 35 percent of national industrial employment.

Within peripheral Jutland there is a striking difference in industrial employment change by size of locality (kommune). Between 1972 and 1987, there was a small decline in the number of

industrial employees in localities where the largest town had more than 40,000 inhabitants. In localities where the largest town was in the 10,000-40000 population range, industrial employment rose by 6,000. But in localities where the largest town had fewer than 10,000 inhabitants, industrial employment increased by 30,000. Moreover, these small peripheral Jutland communities alone accounted for 18 percent of total Danish industrial employment by 1987, as well as for 44 percent of the growth in such employment between 1982 and 1987.

Nature and significance. In this section I will attempt to summarize some of the principle features of the industrialization of peripheral Jutland. These remarks are based on a review of the relevant Danish literature as well as extensive interviews I have had with entrepreneurs, public officials, chambers of commerce, and trade associations.

The industrialization process has clearly been based on endogenous entrepreneurship. Less than 10 percent of industrial employment can be accounted for by establishments that have come from outside peripheral Jutland. The local culture strongly supports individualism and independence, which is considered to be a necessity for the good life. The great majority of new firms have been started by persons who have been the sons of self-employed fathers, many of whom were farmers or fishermen. Nevertheless, there is also a strong agricultural tradition of working closely together through cooperative associations, a tradition that has been carried forward by small firms in the industrial sector.

The financing of new firms comes largely from the entrepreneurs' own resources, from funds borrowed from relatives or friends, or from local banks. Local bankers and entrepreneurs have close personal relations, and entrepreneurs in peripheral

Jutland are more likely than their Copenhagen counterparts to own a house that can be used as security for a loan. Small firms exist in a very turbulent economic environment and many go out of business; half of the industrial firms started in the 1970's have disappeared. Nevertheless, owners of failed firms often start new ones. The desire to be independent frequently puts limits on the size of a firm. The typical starter knows how to make a product but not much about management and marketing; in order not to lose control to experts in such matters, the owner will not expand beyond the 15-25 employee range.

So long as entrepreneurs perceive that they can maintain their essential independence they will cooperate with other firms. Thus cooperative networks have been formed to deal with input purchases (to gain quantity discounts), subcontracting, marketing, and other facets of business. Here again it is necessary to emphasize the importance of the cultural factor. Economic networking cannot be forced by outside parties. It can be encouraged, but essentially it takes place spontaneously on the basis of existing social networks (e.g. the Rotary Club, card playing, football clubs) that create an environment of mutual trust.

According to OECD classifications, relatively few products manufactured in peripheral Jutland fall into the high technology category. However, I strongly question the very meaning of a high technology product. Technologies are applied in industrial processes, and the manufacturing processes used in peripheral Jutland are state of the art--indeed they must be for firms to survive in international competition. Although the small firms characteristic of peripheral Jutland make few technologically advanced innovations, they often apply existing technologies in new and improved ways and thus play a significant role in the diffusion of innovations and in economic diversification.

Although a wide variety of manufacturing activity takes place throughout peripheral Jutland, there is a pronounced tendency for firms within an industry and in related industries to cluster in small-town growth centers. For example, there is a major concentration of clothing and textile firms in the Herning-Ikast corridor. These firms both produce and import clothing for the Danish market, but they also export a great deal of their output, particularly to Germany and neighboring Scandinavian countries. The Herning-Ikast growth center, as others in peripheral Jutland, clearly illustrates how Marshallian external economies can come into play with the localized development of an industry. New firm incubator facilities, technical information centers, joint marketing facilities, and excellent industry-oriented vocational education schools both originated from and have contributed to the dynamism of the complex. In the past there have been no dominant firms in the complex though there are now clear indications that international competition is forcing greater organizational concentration. Turkey, for example, now produces clothing and textiles to German standards at half the Danish price. (Industry in peripheral Jutland is not based on cheap labor; by some estimates the discretionary income of workers in peripheral Jutland is greater than that of Copenhagen workers because of the high cost of housing in the capital.) In the Herning-Ikast area, as elsewhere, the survival of Danish firms will depend even more than in the past on ability to be the best niche producers in terms of combined quality, variety, and price considerations.

Other examples of industry-specific growth centers in peripheral Jutland include electronics (Pandrup and Struer-Lemvig-Skive), industrial equipment (Bjerringbro, Nordborg), plastic toys (Billund), ironworking (Lem), Kitchens (ØLgod), shoes

(Bredebro), furniture (Salling Peninsula), and windmills for generating electricity (Herning).

Although it has frequently been argued that just-in-time inventory practices imply increasing spatial concentration of manufacturing firms and their suppliers, this has not been an important factor in the development of growth centers in peripheral Jutland. Just-in-time practices are common, but the relevant inputs typically come from elsewhere in Denmark or, in many cases, from Germany, Sweden or other foreign countries. As in the case of Mexican suppliers of auto components to assembly plants in the U.S. Midwest, physical proximity is not necessary so long as the timing of deliveries can be made in a reliable and predictable manner.

It has also been argued that, in view of the increasingly important need for information inputs, proximity of producer services is needed for the successful expansion of innovative manufacturing activities. Although there has been substantial growth of producer services in Jutland, the more sophisticated activities, e.g. data processing and advertising, are heavily concentrated in Copenhagen and, to a lesser extent, in larger provincial cities. Manufacturing firms in small town growth centers can obtain most relatively routine services locally or they have in house capabilities; but if they have to obtain other services from more distant localities this is not regarded as a significant problem.

#### SUMMARY AND CONCLUSIONS

The historical record and contemporary evidence both suggest that it is not uncommon for centers of innovative economic activity to develop in areas that are peripheral to the larger metropolitan areas. The problem from a rural development perspective is that these peripheral centers have still been largely

urban in nature. It is difficult to find examples of rural areas that have successfully industrialized (and retained their rural character) except on the basis of cheap labor producing standardized products in branch plants. In contrast, peripheral Jutland provides a clear case of endogenous, innovative rural industrialization. However, it would be difficult to simply attempt to emulate this process elsewhere because of the critical role of the cultural factor.

U.S. observers have suggested that technical information centers and small-firm networking programs are aspects of the Danish experience that could be successfully applied in the United States. But this puts the cart before the horse. The technical information centers are not relevant to most firms in peripheral Jutland; they have been helpful in some instances, but in any case they have been an outgrowth of industrial expansion and have not been a significant inducing element in the development process. The Danish government's networking program was inspired by an American professor who revealed the marvels of the Third Italy to government officials who were ignorant of the fact that networking has long been practiced in peripheral Jutland. And where networking does not take place spontaneously, it is extremely difficult for outside consultants to bring it about. On the positive side, the central government did indirectly promote development in peripheral Jutland through the creation of a substantial social infrastructure, particularly highquality general education and industry-relevant technical education. Beyond that, development has been essentially locally initiated and locally sustained.

Regions whose people look to subsidies in one form or another to ensure their economic destinies are likely to be disappointed. Danish experience suggests that even in peripheral rural areas nonagricultural economic opportunities exist for those able and willing to seize them. The United States is still a land of great

economic opportunity, and while the pioneering spirit that characterized those persons who originally settled rural America is no doubt still present, it not seems most in evidence among recent immigrants--and they rarely settle in rural areas.

## REFERENCES

- Braudel, F. 1979a. Les Structures du Quotidien. Paris: Armand Colin.
- Braudel, F. 1979b. Le Temps du Monde. Paris: Armand Colin.
- Hansen, N. 1987. "Poles of Development." in The New Palgrave: Economic Development. eds. J. Eatwell, M. Milgate, and P. Newman, London: Macmillan.
- Hansen, N. 1990. "Innovative Regional Milieux, Small Firms, and Regional Development: Evidence from Mediterranean France," Annals of Regional Science. Forthcoming.
- Hansen, N., B., Higgins, and D. J. Savoie. 1990. Regional Policy in a Changing World. New York: Plenum.
- Jones, E.L. 1981. The European Miracle: Environments, Economics, and Geopolitics in the History of Europe and Asia. Cambridge: Cambridge University Press.
- Miljøministeriet Planstyrelsen. 1990. Tendenser i Den Regionale Udvikling i Danmark. Copenhagen: Miljøministeriet Planstyrelsen.
- Porter, M. E. 1990. The Competitive Advantage of Nations. New York: Free Press.
- Scott, A.J. 1986. "Industrial Organization and Location: Division of Labor, the Firm, and Spatial Process." Economic Geography. 62, 215-231.
- Scott, A.J., and M. Storper. 1987. "High Technology Industry and Regional Development: A Theoretical Critique and Reconstruction," International Social Science Journal. 39,2:215-232.



Storper, M. and S. Christopherson. 1987. "Flexible Specialization and Regional Industrial Agglomerations: The Case of the U.S. Motion Picture Industry," Annals of the Association of American Geographers. 77, 104-117.

Stöhr, W. B. 1986. "Regional Innovation Complexes," Papers of the Regional Science Association. 59, 29-44.

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## DISCUSSION

Question: Amy's talk sounded vaguely optimistic about the possibilities of academic contribution to rural development. Your's was more pessimistic, I mean implicitly not explicitly. I wonder what advice, if your self interests were not involved, would you give country X about using academic experts and to help rural development?

Hansen: I have no comment on that. The thing is that the academic stuff just never filters down to the practitioners. By practitioners I suppose I mean the extension services of one sort or another which are set up to help farmers, and in some cases to help small businesses, and so forth. But the people who practice at that level don't care anything about the academic literature. It's not because the academics don't make it relevant. It's not their fault. I'm not saying this as a complaint against academics, but this is an old story.

Question: So what advice would you give to first world countries with national ministries who would like to do some good work in rural development?

Hansen: List ten or twelve things that would be nice to do with the government's money. But quite frankly, I'm not sure in the end what good they are going to do if the population itself does not have a prior motivation to get something done. And when they have that, you usually do not have the need to do intervene extensively.

Question: The politics of local economic development are the bottom line. The economic development practitioner in the city has to produce a job. So when Charles Able comes around and sells industrial districts, he buys them in the off chance that it is going to work. So that's why critical academic research may not filter down. The second point, is it possible that the agricultural structure in the U.S. has created a persistent poverty population because of the structure of production and these are the people

we're worried about? They are not going to be able to be entrepreneurs because not only do they not have a culture of entrepreneurship, they are dependent upon highly unstable employment and have low aspirations as partly a result of that, and the infrastructure is not there to counteract the over arching structural problems.

Hansen: Yes I agree. For me, so much of this goes back to education. Too often the schools, to me, seem to exist to inculcate Americanism or something in the US and not teach reading, writing and arithmetic. As long as you turn out people who salute the flag, don't burn the flag and all that, then the schools are successful. But Kentucky where I grew up, at least in eastern Kentucky, where I didn't grow up, and I suspect it's like this in a lot of places, the school system was the biggest local employer. And the jobs were plums where the head of the school district was a local friend and the school system was the biggest employer of last resort, all of which had nothing to do with education.

Question: I'd like to disagree with some of the discussion on rural entrepreneurship. We have a lot of spontaneous entrepreneurship out there. If you look at the businesses that are formed out there and 80-90% of them are independently generated. They rely not at all on government programs, they stay away from them. The concern of people selling the government programs is that the entrepreneurs are not adopting them. They get all their money from personal sources, their family and friends, and a little bit from local banks. And whether this is a service industry, a resource based industry, or a manufacturing industry, they are spontaneously locally generated. They are there because they live there and they want to start their own businesses. That doesn't seem to me to fit with your perception.

Hansen: I reread your paper on Pennsylvania in doing this paper and I had some questions because you had studied this rural entrepreneurship. To what extent are these people really remote? In Pennsylvania where they are they seem to have pretty easy access to metro areas. And also they're kind of isolated which is an

issue you don't address. They don't do this networking that creates externality for the whole group. It's that sort of thing that is missing I think, for the regional development.

**Question:** If you look at the data on self employment in the United States, which to me seems to be the beginning of entrepreneurship, you find that self employment is higher in rural areas than in urban areas. The firms are smaller but higher percentage of people in rural areas are self employed. They may not be glamorous jobs, but there are indications that entrepreneurship is alive and well in rural areas.

**Hansen:** Well I did a study with a colleague of three cities in Texas and three cities in California of small entrepreneurs too, looking at Hispanic neighborhoods. Typically the firm has no employees or one employee. When I say no employees I mean there is the family but there are no paid individuals. They are all poor; you know you can have a whole lot of small and dying entrepreneurship. But it's not producing regional development, if you want to put it that way. I can also see somewhere that the rate of new firm creation is higher in rural areas than metro areas, but I do not know exactly what kind of firms these are. They are not building manufacturing plants, they are not providing high level producer services, I do not know what types of businesses they are.

**Question:** What role does government have in the act of entrepreneurship? For example, the acquisition of skills, technical training, is this privately acquired? Is it government subsidized? Is it the role of the private firm? Are these imported skills or home grown?

**Hansen:** With the growth of an industry, the industry creates its own technical schools, with government support. Also, the federation of industries put its own money into these things. They teach CAD/CAM sorts of things. It's really quite sophisticated but industry oriented.

