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SCHOOL OF
BUSINESS ADMINISTRATRATION

DISTINGUISHED LECTURE SERIES

JAMES A. GRAASKAMP, Ph.D., SREA, CRE, CPCU
University of Wisconsin—Madison

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BUSINESS ADMINISTRATION

The University of Connecticut - Storrs, Conn.

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October 17, 1977

School of Business Administration Distinguished Lecture Series

The School of Business Administration of The University of Connecticut is pleased to present its Distinguished Lecture Series. In this Series, outstanding business scholars and practitioners from around the world are brought to Connecticut to meet with University students, faculty and friends, as well as business leaders. The Series serves as a catalytic force which brings leaders of opinion into direct contact with many representatives of the academic and business communities of Connecticut. Thus, each distinguished scholar touches the lives of many of our citizens in the course of each visit.

This Series and the contact that it provides are consistent with the School's role as New England's leading public sector school of business administration. We are pleased to share the following pertinent and instructive commentary with the broader community of our friends and associates throughout the State of Connecticut, and beyond.

Ronald J. Patten
Dean

Dr. James A. Graaskamp

James A. Graaskamp, Ph.D., is Professor and Chairman of the Department of Real Estate and Urban Land Economics at the University of Wisconsin-Madison. He received a doctorate at the University of Wisconsin in 1964. In 1966 he received the William Henry Kiefhofer Teaching Award from the University. Dr. Graaskamp is a Senior Real Estate Analyst (SREA) designee of the Society of Real Estate Appraisers; a Counselor of Real Estate (CRE) of the American Society of Real Estate Counselors; and a Chartered Property and Casualty Underwriter (CPCU) of the American Institute for Property and Casualty Underwriting.

Dr. Graaskamp has had wide experience in private industry, including general contracting, land development, and farm investment, as well as real estate valuation and investment counseling. He is also a Member of the Board of Directors of the Wisconsin Housing Finance Authority, and co-designer and instructor of EDUCARE, a teaching program for computer terminal applications in real estate jointly sponsored by AIREA, ASREC, and SREA.

Dr. Graaskamp's principal areas of research are real estate investment analysis, land development and property tax assessment techniques, and feasibility analysis. He is the author of *A Guide to Feasibility Analysis,* second edition (Chicago: Society of Real Estate Appraisers, 1972); "Development and Structure of Mortgage Loan Guaranty Insurance in the U.S.," *Journal of Risk and Insurance,* March 1967; *Industrial Park Development for the Small Town* (Storrs: Center for Real Estate and Urban Economic Studies, The University of Connecticut, 1974); and other professional publications. He lectures widely throughout North America at major universities and colleges, as well as for national professional real estate organizations and societies.

FOREWORD

It is particularly fitting that the first Distinguished Lecture sponsored by the School of Business Administration of The University of Connecticut should be presented by Dr. James A. Graaskamp. As Dr. Graaskamp's brief biography indicates, he is a man of varied and outstanding accomplishments in both the academic and the business fields. Moreover, his career represents a signal example of achievement over seemingly insurmountable handicaps.

Further, Dr. Graaskamp's topic is particularly suited to the School of Business Administration Distinguished Lecture Series. His comments are directly concerned with the preparation of undergraduate students to assume the responsibilities of leadership in a varied and challenging field of business endeavor: real estate and urban economic studies. Dr. Graaskamp's remarks clearly reflect the long and impressive path of growth and development that business curricula in general, and real estate-urban land economics programs in particular, have traversed since the crisis in business education reflected in the Ford Foundation and Carnegie reports of the 1950's. That much is still to be accomplished is also eminently clear in Dr. Graaskamp's penetrating analysis, despite the substantial achievements of the past 25 years.

The Center for Real Estate and Urban Economic Studies of the School of Business Administration, The University of Connecticut, believes that it is particularly appropriate to focus on a field of study and practice which in its highest and best application encompasses such a wide variety of challenging and demanding disciplines. Beyond that, the Center is especially proud to have been able to serve as joint sponsor for this first Distinguished Lecture.

Dr. Graaskamp's comments and suggestions about real estate and urban land economics curricula are equally applicable to the study of business administration generally. We join him in hoping that more institutions and more faculties will recognize the educational challenges of the fourth quarter of the 20th Century and respond to them as the Universities of Wisconsin and Connecticut have done. With such a response, the needs and aspirations of the business community and of society at large can more nearly be fulfilled.

William N. Kinnard, Jr.
Director, Center for Real Estate
and Urban Economic Studies
Storrs, Connecticut
February 1978

THE FAILURE OF THE UNIVERSITIES TO TEACH THE REAL ESTATE PROCESS AS AN INTERDISCIPLINARY ART FORM

by James A. Graaskamp

Faculty, students, and friends of the real estate industry, I am very much honored to have been invited as the first Lecturer in this Series. Despite my appreciation for this opportunity at The University of Connecticut, however, I may say some rather ungracious things about real estate education at universities in general.

REAL ESTATE IMAGES AT THE UNIVERSITY

One thing that I have learned in my efforts to convert freshman Philistines to Renaissance men with a penchant for real estate is that the need to reeducate the university faculties in their responsibility is perhaps the most critical problem we have in real estate education. Somehow, university faculties, at least relative to the subject of real estate, have forgotten that we are a family of scholars, that we are multidisciplinary, and that we are supposed to be advocates of inquiry rather than of conclusions. In my view, a university's primary function is to reduce the social conflicts that drain the system because of either genuine misunderstandings or the narrowness of viewpoint of vested interests. The basic technique of conflict resolution is presumably by cross-pollination of the various natural and social disciplines, which is assumed possible in the family of scholars. Unfortunately, the university is probably the main cause of conditioning almost every student with an interest related to land to a viewpoint which is almost always in conflict with or adversary to some other viewpoint.

The natural science schools teach that the enemy is industrial society. The planning schools teach that developers are the money grubbers who are destroying the natural environment. Business schools tend to follow the lead of the real estate industry to the effect that public land use planners are naive fascists who lack the ability to plan with equity or, for that matter, with a rate of return to equity. In most cases, the university specialties deliver judgments upon one another rather than seeking some kind of synthesis of their various disciplines in arriving at judgments, policies, and operating criteria relative to the land. This is an effort at land use through adversary maneuvering and confrontation, and reflects a scorn for the other viewpoints. The bias of each university discipline immediately enters the real world because we have been preconditioning our students for their life roles. The planners move directly into government already anti-business; the business people move into business already anti-planning; the engineers, of course, do not speak to either of them; and the natural scientists have developed their own elitism to render judgment on all. So as a result, all we have done really is prepare people to accept the bias of their future employers. At the least, we have narrowed their future employment to whatever the bias of the department was where they received their education.

We have a further conditioning of viewpoint, if you will, because real estate is related to everyone's experience. Real estate is the hysteria of buying a first home, the frustration of dealing with the surly janitor, and the shock of the bulldozer that has just ripped open last year's best pheasant hunting field. These experiences are the faculty's basic image of interaction with real estate.

Another reason for misleading images of real estate is the physical nature of real estate tends to obscure the fact that real estate is essentially a very dynamic, abstract process. We see the brick and mortar when we look rather than perceiving these static elements as a manifestation of a very dynamic process underlying the tangible property. It is a little bit like the old debate in physics as to whether matter was the reinforcement of energy wave lengths in ether or conversely was the cancellation of energy fields in space. Someone said that the problem with science today was that it really did not know its mass from a hole in space. I suspect that the same could be said for many of those who prejudge real estate subject matter.

THE ESSENCE OF REAL ESTATE

The productive elements of real estate depend on the voids, not the solids; the economic unit is the space-time enclosed to house some specific activity. The environment in which that particular space operates, and really almost all of technical innovation in real estate, has reduced the physical bulk of real estate. Somebody rolled a rock in front of a cave and created real estate by distinguishing that natural void from the void around it. That somebody made it more defensible; he made it more exclusive; he made it warmer; and so forth. Almost all of our innovations in structures and improvements have been to reduce the bulk of our enclosures so that we have eliminated the mountain. We have moved down to Buckminster Fuller domes and a variety of structural systems that are consistently more secure in terms of what they can do in terms of environmental control and that are at the same time less bulky, less weighty, and perhaps in many cases more flexible and mobile.

Today, we start out with real estate in terms of an abstraction as a three-dimensional space with a fourth dimension—time. We always talk about real estate as a space-time unit; we talk about an apartment by the month, a motel room by the night, and square foot by the year. Now we are even merchandising tennis clubs with tennis court hours. We are merchandising a fee interest in two months or two weeks or one week at Lake Tahoe on the fourth floor of a building, so that we can buy a vacation, defined in real estate condominium terms.

Now, with the space-time unit we can then begin to hang onto that abstraction a variety of attributes intended to house some kind of activity. These attributes improve adaptation of an activity to its environment or reduce stress on the participants. The activity and perceived stress is entirely a behavioral phenomenon which is going to be unique to the culture or the technology and the purpose for which the space is required. In essence then, we are talking about a very elaborate abstraction which is a response to enclose a behavior. Although it is a manufactured artifact, physical real estate operates entirely within a context which is psychological, social, and political. Business only provides a device for synthesizing a great variety of disciplines to deliver a final product.

THE ECONOMIC-LEGAL INTERFACE

Consider real estate for a moment as a product. The product itself is simply that space-time unit, however

we wish to equip it with attributes. Our structures, our infrastructure, our land surveys provide the definition of the cubage and the desired amenity attributes. Our legal environment provides the definition of the time—the time and the right of possession during that time. The economic commodity is the right to possess and benefit from a space-time unit for a time.

Private rights to use are always those which remain after the public has already defined its interests. One of the tremendous ironies that we have in real estate today is our fetish to protect private property as we have known it for only a very brief period of time. The first private property in the North American Continent that scholars can find was with the Indians along the St. Lawrence estuary who had no sense of land as a private interest until French fur traders arrived. Almost instantly they discovered that, in order to maintain some stability in the harvest of fur bearing animals, the various Indian families had to be assigned territories in which they could hunt such animals. They employed blazes on trees and other surveying techniques which established territories. Private property grew up not as a result of the private individual's self-interest, but as the cheapest social device for husbanding the resource, preventing over-kill, and extinction of fur bearing animals. If you look back to the Mesopotamians and the early civilizations where there was any form of structural real estate, the private interest was always a device used to create accountability and a bonus for using the resource wisely. Private property is a conservation device, not an anti-conservation device. The public interest is first; when it is cheaper for the public to assign rights to private individuals because they will husband and develop the resource, society does so.

The U.S. Constitution establishes the first claim on productivity to be the public's, via the real estate tax. The first rights of decision-making are the public's through police power. If any vested private interest is, in fact, encroached upon by the government, the private owners are compensated in cash through eminent domain, never in kind. Private property is net worth in cash but not in land. The private sector is an abstraction which remains after the public interest has been defined. As we expand our perception of public claims and decision rights, private property diminishes. We are presently in a transition period where we are going back to reasserting the public interest. We are redefining various areas of real estate in order to achieve that balance between the efficiencies of conservation which are inherent in private responsibility, and the efficiencies of scale in conservation which are inherent in the public domain. We are reestablishing that balance in nationwide debates on land use matters as we learn more about the network of real estate environments.

REAL ESTATE EQUITY DEFINED

If real estate can de defined as a space-time unit, then what is a real estate business and what is a real estate equity? They have to be distinguished. A real estate business is simply any enterprise which provides expertise for the conversion of space-time to money-time. Real estate is a space-time abstraction; the business of creating an artifact is a money-time abstraction; and the process is made to go by energy of expertise. All of the legitimate profit centers in real estate are in the delivery of expertise. Almost all of the profits in land have been the result of the ability to externalize costs. By improperly costing the development of the land, there is a profit residual in the development of the land. That, of course, may be heresy; but I think as you begin to examine it, all of the true profit centers in real estate are in the delivery of services or the delivery of cash capital. Money is simply the energy transfer system for expertise.

In that case then, the only definition of ownership that we have been able to find that works in an operational dynamic sense in that equity is the degree to which an enterprise can divert cash from a real estate enterprise to itself. Equity is the degree to which you divert cash flow to your benefit, presumably in payment for your expertise. It is a very useful concept because that means that in Madison—where the city presently receives $.20 of every rental dollar in real estate taxes or in Milwaukee, where the city currently acquires $.30 of every rental dollar in real estate taxes—the public owns 20 percent (or 30 percent) of every private property. The public's social capital is the vested interest that it is taking in skimming, if you will, 20-30 percent of every rental dollar in the form of real estate taxes to support a variety of other enterprises. Actually, some is to support the infrastructure that supports real estate, but that is the minimal part of it. Taxes also support the education, the welfare, and the other public service delivery systems. Therefore, it would follow that public policy would try to maximize as best it can, or at least not inadvertently

destroy, the social capital base on which it is operating. If ownership diverts cash flow to its benefit, it also follows that the public should avoid diverting its own cash flow to others. The difference between income and expense is only who can hold on to the dollar, thus, we have seen increasing emphasis on life cycle costing (i.e., minimizing present value of the outlays, for public real estate decisions).

But by the same token, such a definition of equity means that we can abandon most of the classic semantics of real estate. A property manager who is taking 6 percent off the top is probably more of an owner than the individual "investor" at the bottom who has a cash flow of only 2 percent of rents. The limited partner may be an owner in name, but he has absolutely nothing to say about the project. The general partner is still the owner of equity even though the limited partner provides 95 percent of the equity capital base of the project. A limited partner in this definition simply becomes the holder of a subordinated revenue bond, which is also entitled to the tax shelter. He supplies capital; but he has to sit down and shut up because if he does participate in management to divert cash flow, he is no longer a limited partner by law.

Now, if a real estate project is a cash cycle enterprise and is the process of converting space-time to money-time, then we have established a rather interesting mechanism for modeling the interaction of decision-makers who affect land use.

THE REAL ESTATE PROCESS

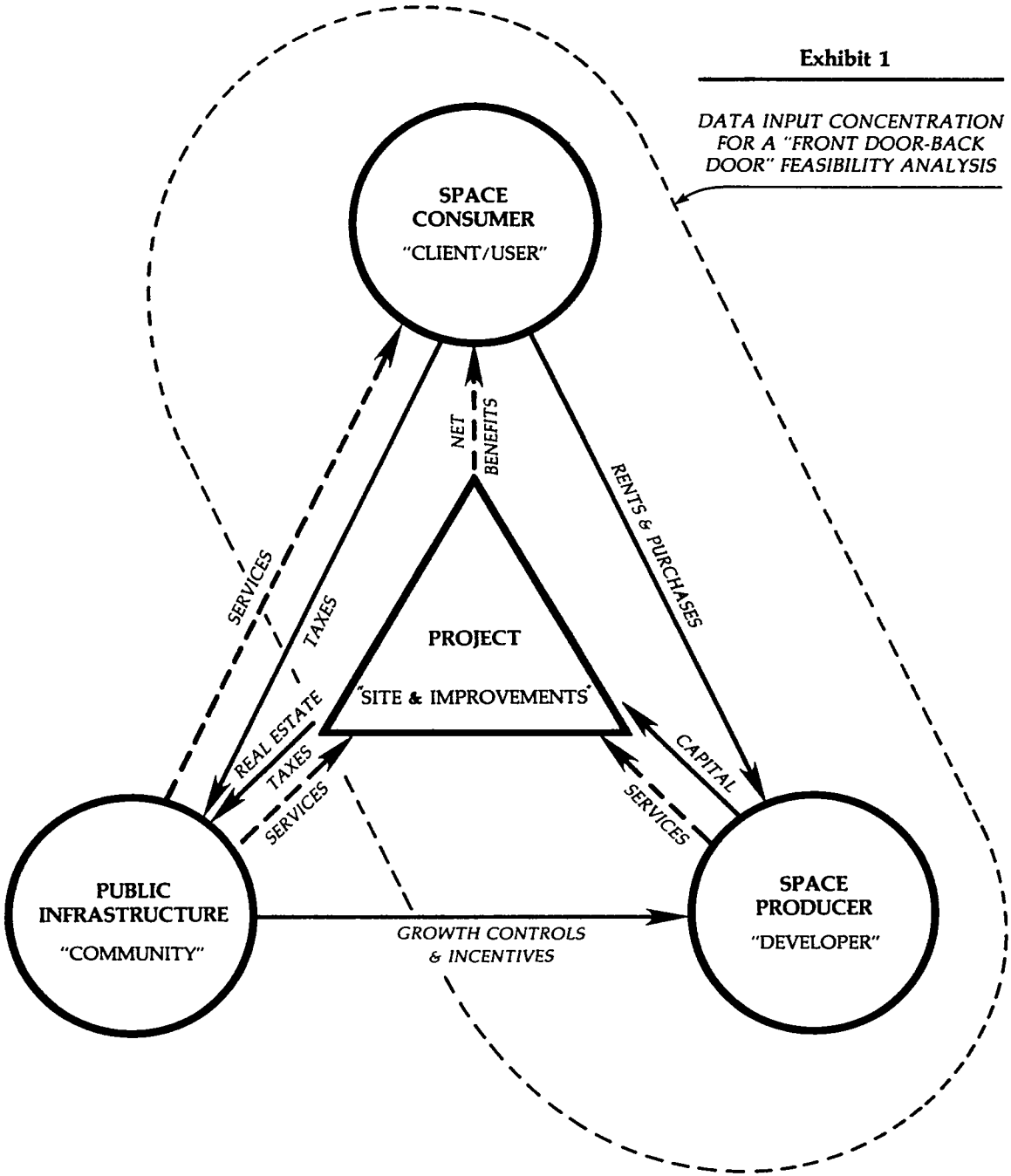
Our first course in real estate at Wisconsin is called The Real Estate Process, and the real estate process is the dynamic interaction of three groups, three cash cycle enterprises, in determining land use and development decisions. (See Exhibit 1)

First of all, the process is driven by a consumer group, a user group if you will. Individual consumers operate through market transactions while collective consumers operate through political mechanisms. Then there are the two groups on the supply side — the collective infrastructure which is supplying the streets, utilities, and services and so forth in which individual parcels can operate, and the individual producing organizations which include the traditional specialties in the real estate area as well as publicly-owned development agencies. Each of these decision groups operates as a cash cycle enterprise. An enterprise in systems parlance is an organized undertaking of any kind. Not all organized undertakings are apt to be cash cycle enterprises; but for the moment, in the money economy, when we are talking about the manufacture and maintenance of an artifact such as real estate, we are talking about a cash cycle enterprise. Only a few such enterprises intend to be profit making although many try to generate a surplus.

As a result, they all have one thing in common — they are all constrained by the need to be solvent, in the short term as well as the long term. This means, then, that equilibrium can be found and real estate solutions can be critiqued to the degree they allow each of the three parties to remain solvent. If, in fact, one party is allowed to push one of the others into insolvency, eventually it is "self destruct" for all three.

New York City is a classic example of a breakdown in cash cycle enterprise. If you can build an International Trade Center with subsidized interest rates, which does not pay real estate tax but some minimal fee in lieu thereof, and if it can then compete on a cash basis at rents which are lower than the market rents to pull tenants out of buildings which were paying real estate taxes, you reduce the municipal income at the same time that you have put the burden on the municipality to service the new trade center. If you make enough mistakes like that, revenues are inadequate to the services expected of the City. As a result, more and more of their best tax-paying tenants say, "Enough of this, we are not getting the bang for the buck we expected." Then they pull out and they move their corporate headquarters to Denver, Arizona, Connecticut, or any one of many different possibilities.

The result is eventually that the balance is further in favor of insolvency of the community, the quality of service goes down, and the next round of relocation takes place. Thus, once that spiral goes in reverse as a result of one party or another gaining a temporary edge, it is a self-destruct spiral. You have to find real estate solutions which allow all three parties to operate on a solvency basis. In our program at Wisconsin, solvency is the central issue — not value. Value is a highly subjective concept depending on what kind of capitalization rate you want to use or what kinds of investment objectives any particular party has. You can explain and predict why people do what they do on a solvency basis when you cannot explain what they do on a classic economic value basis. The great legal debates on "the taking issue" eventually bear on the capacity of private property



THE REAL ESTATE DEVELOPMENT SYSTEM

or public coffers to bear the cash cost of social decisions about land. Therefore, solvency of consumer, producer, and infrastructure is the critical issue for conflict resolution in real estate in a business school, planning department, political science center, law school, or engineering design program.

RISK MANAGEMENT AND CASH FLOW

Cash flow for expertise pushes a developer to build an office building which nobody needs, if he can carefully protect himself with nonrecourse loans from the disaster which will occur when it will not be marketable. There are profit centers in selling the land to the partnership; constructing the building; serving as mortgage banker; and having an insurance agency, a property management firm, an architectural firm, an engineering firm, and a material supply operation. The developer can build a very profitable building which will be vacant when finished. He is permitted to do that by the nature of our finance system, which allows him to treat a mortgage as simply a classic straddle in a commodities market. A mortgage is a Put to the lender if the project does not work, (i.e., achieve solvency) and it is a Call on the appreciation (i.e., cash in excess of capital cost) if it does work. It is possible because regulation of lenders is confused with the sophistry of value rather than focused on cash breakeven points, cash escrows, and debt justified by cash flows.

Real estate enterprise has created a whole series of devices to lay off the variance between assumptions in a cash *pro forma* budget and realizations in the cash journal. The initial estimate of what revenues and expenses are going to be determines capital budget. To the degree that the estimate proves wrong, it is desirable to lay that variance off on somebody else. One can identify every step in the real estate process and look at it as a cash variance control problem. This applies from the very simplistic escalator clause (which says: "Nobody knows what the real estate taxes are going to be in the future, but I cannot afford that kind of surprise on my cash budget so I will lay it off on the tenant who presumably can pass it through to his customers.") to the elaborate mortgage closing process.

The entire mortgage process can be explained in terms of cash flow and cash flow variance institutions. If a mortgagor is going to pledge a property that he has title to, what happens if he does not have title? The title insurance company steps in. What if the property is not located on the property that he has title to? The surveyor's bonding company steps in. What if the property is not worth what the borrower or the appraiser said it was worth? The mortgage guaranty company steps in. What if the interest rate changes and the lender faces the money risk? Perhaps there will be a variable rate mortgage. What if investment value fails as interest rates rise? Perhaps the investor can put the loan to FNMA or GNMA or hedge in the GNMA futures market. What if the relationship of the mortgage payment to the borrower's income is such that it increases the probability of default? There is a graduated payment mortgage so that the payments will be lower until his income can catch up with them. And so on.

Almost all of the various mechanisms in real estate can be explained by working on a cash flow basis and looking at devices or institutions to control and to allocate the variance between our assumptions in the projection of those cash flows and our realizations.

LAND IN THE REAL ESTATE PROCESS

Notice we have not said much about land in terms of the discipline of real estate. First of all, land simply is the locational point where the demand and supply forces for space-time units find cash solvency. The physical, legal, linkage, perceptual, and ecological attributes of a site will affect cash flows and modify locational preferences because these attributes modify cash flows of the parties in an iterative process. If the homeowner feels that he cannot afford to be in the urban environment with its infrastructure and its tax burden and so on, he moves out into the as-yet-untouched open areas. For the short run, it is cheaper for him to have a septic tank, a well, and very low real estate taxes in a minimum package of services than to support the services from the urban public infrastructure. In effect, the homeowner is substituting on the private side for a variety of infrastructure that might otherwise be received in the city from the public side. Developers tend to locate on that land which they can develop at the lowest cost and which can be developed most quickly because of the least amount of regulation and so forth. That obviously is just the cash flow controlling the enterprise. By the same token the public planners tend to discourage septic tanks or low cost land use if these externalize costs on the public tax base. Planners encourage those kinds of land uses which produce more tax revenue than they require in service

costs and so forth. One can note land use decision systems of each of these parties being distorted by the short term necessity of being solvent.

Now, land is a passive factor. It is the impact point, but land is also the final constraint on both enterprise and social solvency and modifies the tradeoffs that are made between the various parties. Land can be analyzed in terms of five basic sets of attributes:

1. *Static attributes* which are within the property lines, slope, soil, shape and the other physical attributes of the site.
2. *Legal-political attributes* which have to be treated together because not only do you have the law, but you have the administration of the law. There is more to the law of administrative arrogance that there is to the black letter law of real estate.
3. *Linkage attributes* which are the relationship of site to services, establishments, and generators beyond its borders that cause a flow of people and services to and from the site.
4. *Dynamic attributes* of the site which affect behavior and how people perceive the land — whether with prestige, with anxiety, with visual identification, or whatever.
5. *Environmental attributes* of the site which are in terms of how it fits into the ecosystem beyond its borders and within the region of which it is a part.

To pick the land and improvement analysis apart with these sets of attributes requires a variety of disciplines. Geology and hydrology to psychology and biology are all inherent in the static attributes. The whole social and political framework may be found in the legal-political attributes. The linkage attributes have to do with both the engineering systems and the cultural interactions which relate each site to various establishments and to other people. Dynamic attributes reflect entirely how people perceive things; the beauty or the fear is entirely in the mind of the beholder, and is the subject area of the behavioral sciences. The environmental-ecology constraint brings in additional subsystems of academic inquiry.

How can real estate be treated as anything but a multi-disciplinary subject? Real estate expertise is expected to be, if you will, a generalist in a series of specialties. That is the function of real estate decision-making. A real estate developer or public planner is the producer of a grand drama which will bring into the play, at the proper point, the various talents necessary to produce an operational enterprise scenario. Land is the stage upon which protagonist and antagonist negotiate.

RESTRUCTURING REAL ESTATE EDUCATION

Real estate education needs to recognize its systematic ties to other disciplines in its basic language. One of my favorite authors (he explains things simply so that I can understand them) is John Beckett from the University of Vermont, who has done a basic little book on systems. He says,*

"...[an enterprise] represents a negotiated consensus [at any one time] between two general sources of power — the power of the environment to dictate the form and the behavior of the organization, on the one hand, and the power of the organization to decide for itself what its conformation and behavior will be, on the other. To be mindful of the inevitable presence of both forces is to be able to penetrate the meaning of organization purpose — in every system, every organization."

How do we bring that concept of process and system, which are in some ways synonymous, to bear on real estate? Well, a good place to start is to junk the term "highest and best use," a concept which is moribund, at the very least, and which is arrogant at the worst. Highest and best use came out of one era which was a very brief period of social time. Study of civilizations developed prior to the Industrial Revolution suggests that land use was determined by social consensus as to what land was to be put to which use, and who was to benefit. Obviously, it was, in many cases, a feudal society that was making those decisions so it was not exactly a democratic process. Nevertheless, it was a communal set of values which determined what land use pattern was to be and who was to share in the productivity. It required, for that communal consensus on land, a relatively static population, a relatively static technology, and, in fact, a relatively static cultural value pattern which persisted over long periods of time.

All of that was lost in the move to the New World. People were trying to break away from that static cultural system and were in the midst of the beginning of the Industrial Revolution, so technology was no longer static. The New World no

*Beckett, John A., *Management Dynamics: The New Synthesis* (New York: McGraw-Hill Book Company, 1971), p. 180.

longer had that cultural continuity and momentum to control it and very quickly, in the United States, we agreed to one basic rule — "Them what pays the mostest gets to use it." This is essentially the concept of highest and best use: wealth maximization of the individuals who owned the parcel. Very soon we found out that principle did not work very well, and we have been trying ever since to reimpose some system for defining and imposing a consensus in place of a historical tradition of *laissez faire*. As a result, we must question highest and best use: "highest" from whose standpoint; "best" from what standpoint? And, the only thing most textbooks can say is that it is that use which produces the highest maximum value for the owner; which means the more he can externalize, the more value for him in the short run.

Now we at the University of Wisconsin talk about the "most fitting use." It is that use which is the optimal reconciliation of the effective consumer demand, the cost of production, and the physical and environmental impact on third parties (those who are not involved in the transaction). Reconciliation ultimately involves financial impact analysis of alternative priorities: who benefits and who pays, and how do all parties remain solvent? Certainly, this is the idealistic approach — the normative in economic circles. Alternately, we operate from the more pragmatic "most probable use." This use may be something less than the most fitting use, depending on current and topical constraints that reflect political factors, the state of real estate technology, and short-term solvency pressures on the parties in negotiation (both on the public side and on the private side).

Most probable use is the basic building block on which we then develop our real estate program. Onto the notion of most probable use we have tried to graft, if you will, systems engineering. Systems engineering says in essence that any enterprise goes about reaching a decision in the following way: It starts with values and objectives, which it then generates into criteria. To make money is good — that is a value judgment — not very operational, but rather moralistic; you can either agree with it in general or not. The objective is to make 10 percent on investment money. That, too, is non-operational until we can define what is "investment money." It may be the money the investor committed, but perhaps it is the money he stood to lose. It may be the money he has yet to recover; it may be the money he could sell his interest for. These definitions become the criteria for screening choices. Sets of criteria must be established for all parties involved in regard to objectives, economic markets, legal-political constraints, engineering constraints, compatibility with third parties (individually and collectively), and ultimately with measures of solvency and of tolerance for risk.

REAL ESTATE DECISION STRATEGIES

Once you have some kind of systematic criteria in real estate, you would call that a strategy. It is probably a strategy with some initial tactic as to search for opportunities that are consistent with criteria. There always will be at least two opportunities; one of which will be doing nothing: a legitimate decision at any one particular point in time. Market trend analysis provides a review of aggregate data to locate where there may be imbalances between supply and demand, a gap defining an opportunity consistent with objectives. Opportunity in a free enterprise system is where you can find a monopoly.

Free enterprise is the art of creating a monopoly if only for a moment. My Daddy taught me,

"Never compete on price because as soon as you start to compete on price, someone will do it for less. By the time your competitor finds out his costs, you are both broke."

The beautiful part about real estate is the ability to create a monopoly. Of course, "monopoly" is not a very happy word. A couple of years ago, one of my graduate students invented the term "channeled demand," which is much more elegant than monopoly. To channel demand, you analyze the profile of the consumer, know who he is, and what turns him on and turns him off; then you have him.

As an example — a group of Wisconsin real estate students recently visited a project in Chicago. The developers had analyzed the housing market into nine different groups. They realized that what was going on in Chicago reached only four out of the nine groups. So they built a project essentially of attached single-family, detached homes — you have to think about that for a while — and they merchandized them to the divorced person, the single person, the empty nester and the never-nester, as they call them. Each model was decorated in imagery codes that would ring the bell of one of these household groups. They could not stop selling so they raised the price overnight by $15,000, and their absorption rate

never changed. The developer closed out 213 units in six months when he had planned a two-year absorption period. This is the first time he had used market research and merchandising research to profile a consumer group and rifle the design, decorating, site plan, advertising, etc., directly to specialized micro-market groups. This is a classic demonstration that there is no reason why the "three approaches to value" has to work. There is no reason that the price at which you can sell a project has to be equal to the cost of production. It just isn't so. Price depends on the market position of buyer and seller and that fact structures our approach in the graduate appraisal class.

Following the Kinnard-Ratcliff concept of alternative uses suggesting most probable use, appraisal develops a concept of most probable buyer. Profile of the most probable buyer then suggests criteria for selection of comparable sales or decision simulation to predict most probable price at which property will sell.

Once you have found an opportunity with a merchandising target with monopoly characteristics, then you need a program to capture that opportunity. In real estate that means that you need something that is compatible with the legal and political constraint, with the community (i.e., with ethical and aesthetic constraints), with the physical and technical constraints of the site and structure and, of course, consistent with financial constraints of effective demand priorities. Once all that has been tested for fit, then, in systems parlance, we construct a program. In real estate that step is called property development. At the point we have the program constructed, the systems engineer says that the operational phase of the program begins. Real estate calls it property management.

Finally, the systems people have a monitoring and feedback process to refine values, objectives, and selection criteria. And, of course, we call that real estate research. But notice five out of the eight constraints are the issues around which feasibility and appraisal are concerned. What are the strategy and tactics of the decisionmaker? What is the market trend? Who is the merchandising target? What are the constraints imposed on the site? What kind of feedback do we have from previous experience, previous inference from the marketplace in terms of research in order to determine what is going to happen next? Now, whether we are talking about appraisal, whether we are talking about development, or whether we are talking about feasibility, the process is the same. And it is useful to go back into industrial engineering to pick up a systematic way of going about it.

REAL ESTATE—APPLIED SOCIAL SCIENCE

The most sophisticated real estate firm in the country, I believe, is a firm called Gruen, Gruen & Associates in San Francisco. They state that essentially their business is the business of applied social science. That is their business—applied social science. The two senior partners are Claude and Nina Gruen; Claude is a Ph.D. in Economics, and Nina is a Ph.D. in Sociology. Their problems range from estimating markets for sludge from the San Francisco Sewer Plant to doing merchandising research for Irvine, California; much of their work is policy and land use issues for the governments in California. Notice that their discipline, while nominally real estate, is applied social science. Essentially real estate is the field of applied social science.

Now at a university where there are many departments in liberal arts and environmental sciences, there are a series of areas in which the interest is on problem identification, but which are without much help in problem solution at the applied level. Real estate probably could be at home as a subject area in a variety of applied sciences at the university. However, business schools and engineering schools — and to some degree architectural schools — are much more interested in teaching problem solution rather than identification. Identification is only the first step in the approach to the problem. The school of business offers the student a unique opportunity to integrate a variety of disciplines to find operational solutions. That requires that our curriculum should be multidisciplinary. The rigor — the final discipline — on the necessary integration is cash solvency of the parties that are involved. To find solutions which destroy one party or the other because they cannot bear the costs is not to find the solution at all, but simply to shift the problem outside the scope of the party at interest.

The objectives of the administrative process — the constraints under which business is operating — really represent values that are determined well beyond the control of business. Although there is now a school of psychology which indicates that business itself begins to impact on the value judgments of the community in which it is operating, it is necessary to sensitize the student, I think, to the

elements of power in the environment within which the enterprise is expected to operate. Therefore, I think that it is almost imperative that the business school program open up some flexibility in allowing its students to integrate natural science, psychology or behavioral science, philosophy and political science with management decisionmaking. One approach is to offer introductory courses within the school of business which knock down traditional departmentalization lines and Ph.D. degree specialties. The other approach is to push business students at the senior level into contemporary issues courses outside the school of business. At Wisconsin's School of Business we have been partially successful in both approaches to social science and business. The real estate program has managed to fight its way clear, and our students are ranging far and wide in terms of inter-disciplinary studies. At the same time, we have had to handle behavioral organization, consumer behavior and architecture within the School of Business because the Liberal Arts and Sciences Departments did not want to offer courses with some integration of business applications. This, I think, is unfortunate because it breaks down the possibility of a family of scholars. Business students talk only to business students and psychology students talk only to psychology students; you have reinforcement of misunderstandings about each other's discipline.

Real estate education should be eclectic, but traditional real estate departments do not subscribe to integrated education. In real estate the subjects have been traditionally divided among functional specialties: real estate finance, real estate appraisal, real estate marketing, and the like. You only have to take three out of six, or something like that, to have a degree in real estate. I do not know how you are going to be a real estate professional with only three out of six of the various specialties. For that matter, I do not know how you are going to be a real estate professional unless you have been able to synthesize and integrate all of the other disciplines into what you are doing. In fact, I think the fun of real estate is that one can be so eclectic. You can be going into one discipline or another almost constantly: the chemistry of floor cleaning — which is a fairly elaborate chemistry — at one moment and behavioral analysis of a survey research study the next. Moments later you may be smashing some architectural scheme flat because the energy conservation systems are inadequate or the style incompatible with community architectural history.

In essence, the producer of that artistic enterprise called the real estate project has to be conversant in all related specialties, if he is going to have the attention and the respect of a multitude of technicians and specialists. He must be able to recognize when he is being hornswoggled because of the professional enthusiasm of one of his specialists. At the very least, our undergraduate program should mass-produce real estate gurus. Our graduate program, of course, expects to produce a master who has the creativity of Leonardo da Vinci, the sensitivity of John Muir, certainly the political savvy of David Brower, and the social humanity with cash management of James Rouse. The object, of course, is to do well by doing good. Finally, the Ph.D. student and the real estate professor should be something a little bit more than the graduate student. In fact, sometimes I wonder what God would have done with a Ph.D. in land use planning and the ability to handle capital budgeting.

OVERCOMING BUSINESS SCHOOL COMPARTMENTALIZATION

Compartmentalization in the traditional educational field of real estate is just totally incompatible with the product that we wish to graduate. One way to realize them is to find the real estate student more subject matter outside the normal school of business subject matter. In some cases we bring those disciplines into the department. Our faculty at Wisconsin now consists of five individuals; one of whom is a graduate architect and graduate city planner who is completing his Ph.D. in finance. One is a political scientist and lawyer from Harvard with a specialty in land use control law. One is an environmental resource economist who does macro-economic modeling systems of regions and river basins as well as retail trade areas, and so forth. One is really a public economist in the classic urban land tradition. Then there is me: a developer and appraiser who is doing penance as a professor and as part of my penance I am expected to be department chairman.

The cost of operating a business school in traditional ways is to discriminate against the architect, who is not welcome as an architect. By the same token I am not allowed to have a lawyer. I am not allowed, for example, to hire a political scientist in the School of Business. I have to get someone who is an accountant, or someone who is a finance major, or someone who is operating in the other traditional

fields of business. Those of us who have degrees from our brethren in the School of Business or Economics are accepted. But those who have much to say in other disciplines of inquiry, which are very much needed in business, are not. Most university schools of business could not hire non-business professionals except for various subterfuges and for non-tenure positions. The insular character of a school of business, I think, tends to produce mechanics rather than true managers — people who are sympathetic with the enterprise system and environment.

The second method of synthesis by means of integration of disciplines is to attract students from the non-business disciplines into our courses, if only to keep our own students honest. We can do that by avoiding prerequisites, by accepting increased teaching loads as a result, and by providing explicit recognition to the role of the sciences and arts in the various courses. At Wisconsin, our introductory course, The Real Estate Process, is now required in Environmental Science; it is required in Political Science, Economics, Civil Engineering and others. We give explicit recognition to the role of soils, politics, design arts, engineering, and the sociology of social disorganization as they impact real estate. Most of these non-business students go on to take additional courses in real estate.

Universities resist this kind of synthesis of disciplines because it is incompatible with their accounting systems, with resource allocation. If you go to any college in Boston, you can register in any one of the other colleges. The fact is that if one school gives a good course and a lot of students from the other colleges show up, they either discontinue the course, reschedule it at a rather obscure time of day, or find some other reason to impede enrollments. While the students come in, the tuition stays behind where they are registered, and as a result, there is no resource following the burden of teaching a student. The cash-solvency oriented dean cancels the program. Cash solvency, not value, means equilibrium for any enterprise, even schools.

At the University of Wisconsin we have very much the same problem. The students register for our urban land course in whatever school they are; we are cross-listed in about six different schools. But the School of Business does not get the funds. Because the money I am allocated is based on the number of business students in my courses, I have two alternatives as a department chairman. I can make only business students welcome so that, in fact, the only students I am teaching are business students. The other alternative, which my faculty have agreed to support, is to accept teaching loads which are double the norm in order to encourage synthesis of student disciplines within the course.

A third approach to multidisciplinary education is to march real estate majors out of the school of business into the other disciplines and require that they take civil engineering with the civil engineers and so on. We find that this has two valuable impacts. One, real estate majors find that they can hold their own with these other disciplines; that they do not have to be defensive about civil engineers or planners or lawyers or social psychologists and the like; and that they can operate within the context and vocabulary of these other disciplines. Secondly, our real estate students can police the professors with axes to grind in other disciplines. The students can lay out the facts of business and real estate life to them in terms of economics and cash flow. By the same token, our students can begin to see the premises and misconceptions from which the other disciplines are coming at real estate. This by itself is useful. So the interaction goes on, if you force it to go on, by either luring the other disciplines into your field or by forcing your students to go out and meet them.

You might call that exporting of business student missionaries a form of artful guidance, although my students would probably call it channeled demand through intimidation. We start with some of our students as freshman, even though they do not come into the School of Business officially until they are juniors. We make sure that pre-business science courses include chemistry, soils, geology for engineers, and climate and man — these types of topic areas. We "channel" them into social science electives such as social disorganization, urban sociology, survey research, psychology of space, architectural history, and so on. In engineering, a variety of programs have developed in the engineering school such as science of materials, environmental pollution control techniques for non-engineers, surveying for non-engineers, soils for land use planning and so forth.

In political science many of our students go into courses stressing the municipal government issues, the legislative process, demography in politics, or urban geography, and the like. (If you can handle demography in politics, you can handle demography for retail trade profiles as well.) One of the fast rising

firms in the area of market research for real estate actually had its start predicting elections. Their political scientists have developed survey research techniques, which they find relevant to real estate. Geography courses have many course topics which are relevant in terms of urban patterns, resource distribution, and so on.

Despite these efforts, our program is still in transition from traditional-functional compartmental to realistic integration of all disciplines bearing on real estate. What we would eventually like to evolve to is a junior-senior series of five credit courses in which we would teach a real estate workshop as in an architectural school design lab and begin to unravel all of the threads of the real estate decision with an increasing sophistication. At our graduate level, we are approaching that. We start with a commercial property appraisal in the fall, in which we dissect the facts as a feasibility of alternative uses and in terms of our contemporary appraisal theories. By the time they are done with the appraisal, they are frustrated with what they know about the retail trade areas. That appraisal becomes the base for doing the retail trade and merchandising research in the spring. We also take the lender financing apart in the fall, and in the spring the equity investment course parallels the spring course in Commercial Property Development.

Ultimately, the School of Business is going to let me have a lab room, if you will, where every student has a desk or a drafting table just like the design disciplines because the students learn more from each other than they do from the faculty. As instructors, we will set up situations which will channel the interactions on which they concentrate and then the students begin to teach each other. They will share information and viewpoints and opinions on the property. I would like to have my juniors, seniors, and master's students all in one main room like the classic drafting room for the design school. The juniors are going to come along much faster because they are already going to be eavesdropping on the seniors and master's students. The master's students are going to be pushed to demonstrate why they are master's students because pretty soon the seniors are going to be as smart as they are. We will generate a much faster interaction and synthesis going on with that kind of device than by the classic class lecture methods. Admittedly, there are high teaching risks for faculty needing the security of set lecture patterns and office hours. There are risks for the students when the faculty leaders misjudge the capacity of the real estate assignment to focus creative student interaction within analytical channels provided by the faculty. Some subject matter is more efficiently presented by lecture and assigned readings, but the test is still application.

The Urban Land Institute (ULI) has just set up, for the first time, a program for liaison with colleges to encourage schools to have a more positive approach to the teaching of development in real estate related subjects. They have chosen two schools of design and two schools of business — the Harvard and Pennsylvania Schools of Design, and the Wisconsin and Stanford Schools of Business — in which to bring that about. Pennsylvania and Harvard Schools of Design would like to have better relations with their Schools of Business, but their Schools of Business have avoided them because they have not been able to have the money follow the student load. Therefore, ULI is going to entice the business schools to cooperate with the design schools by giving the design schools some money with which to buy the services of the business schools. I think that real estate could be equally well housed in the design school that was open-minded in terms of definition of the design context, or in the business school that was not too provincial or insular in its policies in terms of what are proper subjects for business students. At the same time I am beginning to see many more ties and linkages back into engineering, both mechanical and civil. I would say the students who are being placed at the highest salaries out of our master's program are those who are coming to us with either mechanical or civil engineering degrees or architectural degrees, and then have a master's in real estate on top of that.

When industry hires those with a miltidisciplinary background and endows open-minded, non-traditional academic specialties, universities will take notice and respond to their ultimate sponsors, markets, and patrons. Real estate education offers more exciting opportunity to students who wish to operate in a civilized and urbane enterprise than most other management specialties, if it exploits the inherent merger of applied social sciences and business enterprise that occurs in the real estate process. Thus, real estate faculty can make a significant contribution in the reform of university faculty attitudes and habits about university administration.