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Graaskamp: A Holistic Perspective

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Executive Summary

James A. Graaskamp (1993-1988) had a tremendous and enduring impact on the real estate industry. This article explores his contributions from a holistic perspective, using a comprehensive approach to highlight some of his key intellectual underpinnings, explore his pedagogical practices, and summarize his industry activities. Of particular note is the discussion of his multidimensional approach to the real estate asset class. The discussion explores the theoretical areas he drew on, including urban land economics, behavioralism, decision making, social responsibility and risk-management. A brief review of some "Graaskampianisms" -selected definitions, sayings and concepts he coined- precedes a profile of his academic contributions. He straddled both industry and the academy and envisioned real estate as a multidisciplinary field and real estate education as belonging in a university setting. His industry activities are reviewed, along with www.ratemyprofessors.com the various approaches he used to promote change and innovation. Special attention is paid to his contributions to appraisal, feasibility, institutional investment analysis, and the development process. Throughout the chapter, his strong social consciousness and the challenges he posed for the academic and professional communities are noted.

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Introduction

Background

Dr. James A. Graaskamp, affectionately known as "Chief" by many of his colleagues, students and friends, had a tremendous and enduring impact on the real estate industry. This impact was left by both the professional and academic communities, which Graaskamp believed should be inextricably intertwined. Even though it is more than 10 years since his death, many of his contributions are still being played out by his legions of alumni and industry supporters who continue to apply many of the principles that he espoused. This enduring nature is a testament to the dynamic, process-oriented, behavioral approach that permeated much of his work and provides us with a framework that can be extended to contemporary decision-making needs. Indeed, as we move into the next millennium, real estate professionals and academicians are well advised to study the principles that he espoused and extend them to emerging challenges. The objective of this chapter is to bridge the gap between his tenure and contemporary times, to build on the foundation he laid, to close the widening gap between the professional and academic communities, and to advance the real estate discipline.

This chapter looks at Graaskamp's contributions from a holistic perspective. That is, rather than concentrating on his many achievements, this paper takes a comprehensive view that highlights some of his key intellectual underpinnings, explores his pedagogical practices, and summarizes his industry activities. Although somewhat eclectic, this strategy is similar to his approach to the real estate discipline itself. This holistic perspective also provides needed insight into some of the factors that influenced his thinking, which will help observers understand the subtleties embedded in many of his positions, help place them in proper perspective, and allow them to be validly extended to contemporary problems.

Graaskamp left no formal institutional means to build on his contributions to the discipline. While the current Wisconsin Program continues to be recognized as one of the leading real estate programs, it has done so by developing its own distinct identity. This sense of rebirth and repositioning is a natural part of the institutional process. Although the current faculty and growing alumni group appreciate the contributions that Graaskamp and his predecessors made, the reality is that the "changing of the guard," after his untimely death, broke the chain of continuity that the Program had enjoyed in the past. Up to that point, the banner was personally passed on to each successor, providing a continuous linkage to the past, beginning with Ely and extending to Ratcliff to Andrews to Graaskamp. Regardless of how committed the new real estate leadership at Wisconsin was, and is, to the Wisconsin tradition, some of the subtleties of its heritage were lost in the transition. The responsibility of carrying on Graaskamp's message falls on those of us fortunate enough to have known him, to understand and share his vision, and to have first-hand knowledge of the Wisconsin tradition to which he added his own considerable stamp of progress. (DeLisle, 1994, 1995; Fraser and Worzala, 1994; Grissom and Liu, 1994; Jarchow, 1991).

The challenge of documenting, explaining, and extending Graaskamp's contribution to real estate is somewhat of a daunting task. Ironically, it is even more difficult for those of us who worked with him and watched him change with the times. His continuous ability to adjust to the changing environment and develop new and innovative approaches to problem solving made him a moving target. Furthermore, he was a master at approaching problems with an open mind, constantly seeking new and innovative solutions. Thus, his work was both evolutionary and revolutionary, making it particularly difficult to chronicle in a cohesive manner. Fortunately, the task of documenting contributions is simplified somewhat by the fact that his mission, and the research process he brought to bear on problems, were constants throughout his career. It is the opportunity to capture the essence of this disciplined, systematic approach to issues that makes this effort worthwhile.

Graaskamp had a penchant to take on industry and academy issues in his constant attempt to force the profession out of its staid mindset. Sometimes he was able to get some changes made in his first attempts, but once he realized that a particular battle could not be won, he set it aside. Then he merely waited until the stars were more in line, so that when the opportunity presented itself, he could pick up where he left off, taking advantage of the new situation and piling on the new ammunition that he had accumulated since the prior skirmish. Although this chapter documents some of these efforts and points out many of the individual contributions he made to the real estate discipline, it should be noted that his real impact is best appreciated as part of a continuum. As might be expected, many of the efforts that he undertook were left in various stages of completion. Other efforts that he did complete have only partially been harvested and have not yet surfaced in mainstream real estate thought. This chapter and other efforts to document his contributions will help us carry on his charge, and that of the Wisconsin real estate tradition, for the benefit of space users, space providers and society at large.

The Multidimensional Man

Graaskamp was a complex individual with a number of attributes, which in the aggregate, distinguished him from his colleagues. These attributes included:

- A mission and an intense passion for his work that drove him to seek excellence,
- A pride in his chosen profession and the drive necessary to help him develop Wisconsin as the premier real estate program in the country,
- An intellectual curiosity that drew him to a wide variety of issues that piqued his curiosity and helped him see real estate as a multidisciplinary field,
- An eclectic, creative style and a voracious appetite for learning that helped him develop new and innovative solutions to complex real estate decisions,
- A strong social consciousness that made him a crusader who tried to help maintain the delicate balance between current needs of users and investors and the needs of future generations,
- A strong personality, presence, quick wit, and intellectual storehouse of knowledge that enabled him to spar openly with academics and professionals on their own playing fields, and
- A sense of urgency and personal responsibility.

In addition to his personal sensitivities, Graaskamp had a pragmatic style that focused in on the bottom line. When coupled with his formative theoretical real estate training at Wisconsin, this pragmatism enabled him to blend the academic rigor of the theorist with the street-smart savvy of the dealmaker. This combination also helped him emerge as a futurist who was uniquely qualified to identify issues and develop thoughtful positions that were often way ahead of their time.

Graaskamp he had a strong dislike for obstructionists and a lack of tolerance for incompetence. As such, he was a self-described "pain-in-the-petunia" of special-interest groups with self-serving messages. He flourished in public forums, and "suffered no fools" who tried to stand in the way of progressive thinking to protect some artificial status quo or vested interest. Rather than relying solely on his academic credentials, he used his strong presence, quick wit, and intellectual storehouse of knowledge enabled him to spar openly with academic and industry professionals. He realized that most real estate decisions had to be made under conditions of uncertainty, in an imperfect market in which transactions were the result of negotiated settlements rather than fixed pricing. He recognized these negotiations were influenced by a number of factors ranging from the individual needs and subjective opinions of the affected parties, to the legal, political, economic, and tax environments that defined the financial context within which the parties operated.

Theoretical Foundation and Contributions

Overview

As noted, the primary goal of this paper is to help build on some of the key contributions that Jim Graaskamp made as an academic innovator and as an industry leader. However, before dealing with those topics, it is important to explore some of the theoretical foundations he drew on in formulating his approach to real estate as a distinct asset class. This background is necessary to help readers decipher some of the more subtle dimensions of his work. It is also necessary to help set the record straight, since some of his academic brethren incorrectly saw him as anti-theoretical. This misunderstanding surrounding his theoretical orientation was due in part to his reputation as a pragmatist who focused on applied research that could be translated to decision-making rather than on academic research that could be translated to positive tenure votes. This emphasis on applied research can be traced back to a recognition of the limitations of early land economics research as summarized by Chryst and Back (1996, p. 16):

> What is basic and what is applied in economic research are matters of degree rather than kind. In our view, the seeking of knowledge for its own sake, rather than knowledge to apply to a particular problem situation, is inadequate as a characterization of basic research and its distinction from applied… The fact that we now have a subject with limited substance, a mass of research publications giving us a limited understanding of current and future problems and situations, attests to the small degree of "basicness" in past research efforts of land economists.

Graaskamp openly lamented the absence of a theoretical foundation that was sufficiently broad to enfold the overall discipline. This limitation was especially confining in light of the idiosyncratic nature of the asset class, and the need for a distinct, multidisciplinary body of knowledge. He felt this void resulted in research that was often well intended and quantitatively solid, but theoretically and pragmatically useless.

Graaskamp realized that the absence of an overlap between the early theorists in real estate and contemporary empiricists placed the academic community up against an impenetrable wall. That is, due to the lack of connection with the pioneering work in urban land economics and other related disciplines that occurred at Wisconsin and some of the other landmark institutions, the discipline was disconnected from its roots. Because of this disconnect, many academics who taught real estate had little training in real estate theory. In this void, they turned to the theories they had learned in finance, economics, and other disciplines for theories that could be extended to the real estate asset class (DeLisle, 1993). Some observers viewed the growing integration of real estate with finance and economics as part of the natural evolution of the discipline. However, even though these related disciplines were clearly a key part of the multidisciplinary real estate field, the absence of a critical mass of more traditional real estate programs made it difficult to establish a proper balance. The end result was a disconnect between real estate programs built on urban land economics and planning that Graaskamp espoused and the new genre of finance- and economics-oriented programs. This dichotomy and the absence of a distinct, unified approach to real estate caught the eye of Harry Markowitz, the Nobel Prize-winning father of modern portfolio theory, in a roundtable discussion with some of the leading real estate industry researchers. (Reinbach, 1993). In that forum, Markowitz (1993, pp. 31-32) stated:

> I don't know why finance gets to be a department in a university but real estate doesn't. That is just historical accident. Real estate is a big sector of the economy, and it's a very interesting operations research problem. It is not exactly like the portfolio selection problem. You really have to start from scratch, use whatever methodology the problem calls for… What I am saying is you folks ought to develop your own real estate theory which addresses itself very much to the illiquidities of the problem, and you want a theory that is practical.

The implications of what Markowitz noted have significant implications for the real estate discipline. In particular, he suggests that real estate is more than a subset of any discipline, including finance. Rather, it is a distinct, multi-dimensional discipline that draws on economics, law, finance, planning, architecture, engineering, and marketing.

Institutionalism and Urban Land Economics

It is understandable why, as an outsider to the real estate asset class, Markowitz might have suggested that the discipline should start from scratch to build a theoretical body of knowledge. Fortunately, urban land economics and institutionalists laid a fertile ground of theory upon which the discipline can be built. The University of Wisconsin was one of the pioneers in applied urban land economics theories (Burgess, 1925; Commons, 1934; Hoyt, 1964; Ratcliff, 1949, 1976; Weimer, 1984). These efforts were initiated by Ely and carried on by Andrews, the chairman of the real estate and urban land economics program immediately preceding Jim Graaskamp. (Ely, 1898, 1922; Andrews, 1971). The three major theoretical streams of urban land economics thought that were most germane to the Wisconsin tradition of the real estate discipline were documented in detail in a series of discussion papers prepared by Andrews. (Grissom and Liu, 1994) These theories included the following:

- *Structure Theory* The analysis of the distribution of land uses and users, focusing on the investigation of the composition of the urban form as viewed from various perspectives. (Andrews, 1984, 1985, 1986, 1987, 1988, 1989).

- *Succession Theory* The analysis of the evolution and change of urban land utilization over time broken down to various levels of real estate aggregation. (Andrews, 1980, 1981, 1983).
- *Situs Theory* The analysis of decision-making processes by which entities make real estate location decisions. (Andrews, 1980, 1981, 1982, 1983).

Ratcliff provided further insight in his summary of the key points in a paper on institutional economics by Edwin Witte (1954), a labor economist trained by Ely. He noted that institutional economics is not a complete, self-contained and connected body of thought. Rather, he noted that it is problem-oriented; it moves beyond solely economic motives and includes whatever leads man to action; it is interdisciplinary and recognizes that institutions are man-made and changeable; it is heavily inductive and is based on a direct observation of all the facts; and it comprehends the associational aspects of our society which lead to group patterns of thinking and action (Ratcliff, 1972).

Behavioralism

Graaskamp's behavioral bent was nurtured by his early exposure to Ratcliff who he described as his mentor and the preeminent theorist in real estate appraisal over the past several decades (Ratcliff, 1965, 1972). Ratcliff, a true pioneer in the area of behavioral real estate, found Graaskamp a willing student who also became a strong proponent of the behavioral approach. This interest in behavioralism can be traced back to the work of John Commons, an institutional economist and professor at Wisconsin who concluded that the focus of economic research should be the transaction, which creates a going concern by transferring future rights (Commons, 1934). In the imperfect real estate market in which transactions are negotiated settlements, the emphasis on transactions pointed Ratcliff to the importance of identifying the most likely market participants who would be drawn to various real estate opportunities. Once these potential parties were identified, he argued that attention could be focused on developing sufficient empathy with them to understand their motivations and decision-making processes. By applying such efforts to both parties to a transaction, he contended an analyst could develop more valid and reliable predictions of how real estate transactions would ultimately be resolved.

Graaskamp was naturally drawn to behavioralism by his inherent curiosity regarding what made various players tick, and his pragmatic orientation that piqued his interest in the street aspects of deal-making. Behavioralism helped him explain why many real estate decisions were made that, on the surface, seemed irrational. This line of inquiry was consistent with the observation by Robinson (1993, p. 301) that influenced the early land economists at Wisconsin: "If individuals act in an erratic way only statistical methods will serve to discover the laws of economics, and if individuals act in a predictable way, but from a large number of complicated motives, the economist must resign his task to the psychologist. "

Graaskamp realized that although such real estate decisions might not appear rational in a strict economic sense, they were rational from the perspective of the decision-makers. He offered two explanations for real estate decisions that, on the surface, might appear irrational. First, many decision-makers confronting real estate problems approached them in a short-sited manner, neither aware of, nor sensitive to, the complex, enduring and often irreversible nature of their decisions. This discovery was particularly troubling to Graaskamp, who had a strong social consciousness and sense of environmental responsibility regarding real estate utilization. Second, many forecasters had difficulty predicting real estate outcomes because they failed to understand the "rationale" that drove individual decision makers. He argued that researchers should turn to behavioral research to try to understand the driving forces of the decision makers, the models they used, and the situational context within which they made decisions.

Decision-Making

Graaskamp realized the private, inefficient nature of the commercial real estate market limited the ability to predict transaction outcomes by relying solely on quantitative models. However, he noted that real estate was devoid of articles that probed the qualitative aspects of problem-solving processes. To fill this void, he turned to the information processing and decision-making fields of study. He focused his efforts at figuring out how to extend these methods to real estate and to bring them down to the level of individual and institutional space users, space producers and infrastructure providers. He noted that there were five components of real estate problem solving: the decision-maker, the controllable variables, the uncontrollable variables, and finally, the possible outcomes of various choices. Rather than approach these components sequentially, he drew on Ackoff (1978), who noted that planning requires dealing holistically with a number of interacting problems while maintaining a prospective perspective.

Given the unique nature of many real estate decisions, Graaskamp concluded that many problems could be best approached by working through analogy (Gordon, 1961). He also noted that before approaching a problem, analysts needed a framework that they could use to classify it into an appropriate category. This approach was drawn in part from the work of Hildreth and Castle (1966, p.20), who noted that the beginning of research is the identification of the question the researcher asks himself: "this formative aspect of the research process, consists of the following principal parts: (1) problem classification, (2) isolation of crucial questions, (3) methods of problem recognition, (4) some questions of value, (5) the dynamic nature of science, and (6) the question of relevance."

In developing his seminal work in classifying real estate research problems, he turned to management systems theory introduced by Beckett (1971) for its basic structure (Graaskamp, 1991g). He echoed Beckett's conclusion that the ultimate test of the enduring success of an enterprise is the power of management to modify the decision environment within which it must operate to respond to changing competitive forces. He also noted the similarity between feasibility analysis and the process of physical design, noting that in both cases clients have control over only a finite number of the variables that affect the success of a venture (Alexander, 1964). Thus, the process of finding a good fit was incumbent on arriving at solutions to the controllable variables that are complementary or compatible with the uncontrollable variables. He concluded successful real estate problem solvers must not only satisfy demands of space users but also must neutralize the incongruities or negative outcomes of the uncontrollable variables.

In addition to his strong personal drive, his perfectionism, and his awareness of the social responsibilities vested with real estate, his drive for excellence was influenced in part by some of the early pioneers in business planning and value creation. In the early 1980s, when he was revising his approach to feasibility analysis, his eye was caught by Brandt's (1981) discussions regarding putting excellence in management and cultivating a corporate culture that could achieve and sustain success. He echoed

Brandt's summary of four basic strategies in the search for a competitive advantage: technical superiority, premium for quality, providing a primary advantage in terms of support services, and price. In the real estate domain, he added "pace" as a strategy, noting the vulnerability of local markets to periods of over saturation. This contribution set the stage for the early stream of research into real estate cycles that has recently come back into vogue (Grissom and DeLisle, 1999).

Drawing on his training in creative writing, he learned how to step back from the current situation and bend the problem-solving approach through the application of poetic contradictions. To expand his horizons, he turned to Gordon's work in the field of synectics, which converted the strange and new to the familiar, using analogies as strategy (Gordon, 1961). He also discovered that by restating a problem and reversing it, he could begin to understand the causality and linkages among the variables. This insight enabled him to learn how to remove a particularly difficult study from the realm of ill-defined problems, to simplify it so a systematic approach to problem solving could be applied. He attributed this creative approach in part to Hayes (1981), who noted that when dealing with ill-defined problems, the analyst must contribute to the definition of the problem. Graaskamp referred to this reversal as "challenging the implicit assumptions," a concept that became a fundamental tenet to his approaches to real estate appraisal and feasibility analysis. His work on the Transferable Development Rights (TDRs), in which he introduced the notion of "cubernetics" is an example of how he blended creative thinking with real-world problems (Graaskamp, 1991h). This work also set the stage for his classification of real estate as a space-time, money-time construct. Roulac (1994) provided an interesting synopsis of Graaskamp's extension of decision-making to the discipline, highlighting some of the specific caveats and perspectives it introduced to the real estate process.

Social Responsibility

Graaskamp had a very high social consciousness, one that stemmed from his personal beliefs and from the Wisconsin tradition he embraced. This tradition was pointed out by Ratcliff (1972, p.7), who on the occasion of a symposium that honored the contributions that he and Paul F. Wendt made to the discipline stated:

> I am inclined to believe that the area of the social sciences concerned with urban economics and urban land will respond to the merging nature of urban problems. After all, social scientific effort would be pointless if it did not serve in solving social problems and in the advance of social well-being… I am sure that you share with me a constant exposure to writings on the urban crisis, ad infinitum, ad nauseum. Since most people now live in cities, the urban crisis is essentially co-extensive with the social crisis.

Graaskamp started his academic career as somewhat of a crusader and never stopped to put the flag down. His initial effort at fighting social causes in the academic arena was his dissertation in which he took up the charge of the pension employee (Graaskamp, 1964). In one of his early academic pieces, he illustrated the sense of balance of individual versus social welfare that he tried to maintain in addressing social issues. In commenting on the issue of "vesting" for private pension funds, he noted that employers had the right to terminate plans in order to be able to promote commerce and respond to changing market and economic conditions. Thus, the essence of the problem was determining the extent to which an employee should bear the risk of termination and of funding adequacies. He stated, "Since vesting problems of voluntary termination are a function of loyalty, incentives and other considerations, concern in these lines is for the greater potential of inequities of involuntary termination" (Graaskamp, 1991u, p. 539) He concluded that the employee should bear some of the risk when he or she initiates the termination but not when the employer is the cause.

Graaskamp's early foray on behalf of pension beneficiaries echoed some of the concerns of his predecessors at Wisconsin and offers another testimony to the importance of continuity to the Wisconsin tradition. Indeed, some of Graaskamp's irascible nature and crusading style can be traced back to the influence of Ely, who integrated economics with ethics and sociology. Ely demonstrated his strong social orientation disdain for the system when he secured a post at Wisconsin for John Commons, had lost his teaching job at Syracuse University after rich patrons of the university were angered by his defense of labor unions and the common worker (Needy, 1980, p.165). Indeed, Ely was himself attacked at Wisconsin for defending the rights of workers to the disdain of business interests.

Within the domain of real estate, Graaskamp's sense of social responsibility was heightened by his recognition that, due to the capital-intensive nature of real estate and the enduring nature of improvements, real estate usage decisions were frequently irreversible from an investment perspective. That is, although bricks and mortar could be scraped from a site, the implicit cost of land would include the present value of the future net income stream from the existing land use. In many cases, this premium would make recycling real estate non-economic, leading to the continued operation of sub-optimal facilities.

Graaskamp noted that, in the aggregate, individual real estate decisions create the urban form. Although government land use controls and infrastructure investment could help skew development toward a harmonious blend, there was no guarantee that such a goal would ever be achieved. He sought to sensitize his students and professional audiences to the need to approach real estate decisions as resource-management issues. He summarized his sense of social commitment regarding real estate rather elegantly in a television interview he granted toward the end of his career (Wisconsin Real Estate Alumni Association, 1998, CD-video):

> Man is the only animal that builds his terrarium about him as he goes and real estate is the business of building that terrarium. So we have a tremendous ethical content, tremendous social purpose. The student is looking for a field in which entrepreneurship and a way of life can be integrated into social purpose. We like to argue that the entrepreneureur of tomorrow is going to be the individual who can inventively implement social policy.

One of the key "synthesizing" themes that helped Graaskamp operationalize his social concerns was the notion of cash solvency. He noted that the real estate process involves the constant interaction of three groups: space users, space producers, and public infrastructures. In turn, members of each of these three groups represented organized, rational undertakings that, in a systems context, can be referred to as an enterprises. These enterprises each begin with some resource base, add value, and then exchange finished products or services. Regardless of whether the various enterprises had profit orientations, they all focused on maintaining solvency. In this context, he (Graaskamp, 1991c, p.232), stated:

> Therefore, a basic axiom for determining real estate actions is that a desirable real estate program permits maximum satisfaction of the consumer within an affordable structure, while respecting environmental limits of the natural resources and permitting the public infrastructure and space production groups to achieve cash solvency, termed a cash break-even or default point in financial planning.

In looking forward, Graaskamp argued in the 1980s that social ethics would enter into the real estate equation in the next decade to a greater extent than it had in the prior decade. This prediction came through as evidenced by rising congestion, pollution, crime and urban blight that plague many of our cities. In addition to social drivers, he felt that ethics would be forced in through external pressures associated with institutional monetary reforms, changing sources and access to capital, and increasing institutional investment in the asset class. He argued that the ultimate benchmark for testing real estate actions should be a real estate program that permits satisfaction of the consumer within an affordable price structure while respecting environmental limits of the natural resources and public infrastructure. From the private market side, he noted that profit centers in development are repayment for expertise and that equity ownership should be defined as the right to control or divert capital. However, he also contended that the public has the ultimate right to divert capital through its right to tax and control the utilization of real estate, and should be approached as a preferred partner. He concluded that land could be allocated according to the most probable use and that risk management approaches would become increasingly important to real estate decision-makers.

Risk-Management

Graaskamp's philosophical perspective was dramatically influenced by his risk-management training as a Ph.D. candidate at Wisconsin. His dissertation provided an early statement of the influence of risk management on his approach to real estate decision-making. He recognized the fundamental tenet that most parties in real estate transactions accept significant levels of risk due to the capital-intensive, long-term nature of the asset class. He noted that the parties who succeeded the most often, and the most consistently, were the ones who made special efforts to validate their assumptions over controllable variables and then insulated their positions against uncontrollable variables and unexpected risks. In 1981 he lamented that "there is great irony that the mortgage lenders expect insurance premiums to be paid in advance in the case the project should burn down but typically require nothing in the way of original research to discover whether the project will rent up" (Graaskamp, 1991r, p. 219). He also urged lenders to not rely on the track record of a developer. He concluded that ultimately, each development was an enterprise that must stand on its own and on its future ability to provide ongoing satisfaction of demand. In terms of investing, he argued that real estate should be included in institutional portfolios and that "risk management by avoidance" was not acceptable from a diversification standpoint. To reduce real estate risk exposures, he suggested applying the following risk management techniques:

- *Forecasting* Improving forecasts through behavioral and statistical research to validate critical assumptions and reduce the risks inherent in cash flow assumptions (Robbins, 1989).
- *Aggregating* Combining risks by pooling resources, by diversifying, and by managing through economies of scale (such as through the Private Mortgage Guarantee Insurance) (Graaskamp, 1991l).
- *Insurance* Shifting risks by insurance contract, making the tradeoff of the certain loss of the insurance premium in return for control of the unpredictable loss from catastrophic events (Graaskamp, 1991b).
- *Transfer* Managing risks through the use of contract covenants and terms as exemplified by lease escalation clauses, construction cost overrun covenants, guarantees, and contingency claims.
- *Limiting* Limiting liability through the form of ownership or the use of exculpatory clauses in which one party seeks relief from the other party.
- *Hedging* Using a variety of financial engineering and structuring techniques to protect against future price fluctuations or other external shocks.

Graaskampianisms: Selected Definitions, Sayings and Concepts

Graaskamp added to the body of knowledge in real estate by coining a number of sayings. These sayings or phrases were encapsulated expressions of complex situations that are both compelling in their simplicity and clear in their connotation. Over time, as these sayings accumulated, he created a unique vernacular that helped bridge the gap between prior knowledge and experiences and contemporary real estate problem solving. These types of contributions are best illustrated by examining some of his unique definitions, sayings and concepts.

- *The real estate construct* Graaskamp defined real estate as artificially delineated space over time with a fixed reference point to the earth. In essence, he viewed real estate as having two key dimensions: space-time and money-time (Graaskamp, 1991o).

- *The real estate process* Graaskamp realized that real estate creation, valuation, and transfer occur through a process that requires the interaction of space users, space producers, and public institutions (Graaskamp, 1991e, 1991f). He had a strong social consciousness and recognized that real estate decisions should satisfy a high ethical standard in terms of future generations. He argued that rather than maximize the position of any member of the triad, real estate professionals should remain committed to the solvency of each of the key parties.

- *Real estate as an enterprise* Graaskamp contended that real estate activities and projects could be treated as cash-cycle operations that link the spatial and economic dimensions over time. This insight was one of the driving forces behind the development of discounted cash-flow analysis that he pioneered. It also explained the emphasis that he placed on developing a better understanding of the economic assumptions of the respective parties about future operations and market conditions.

- *Pleasure, pain and bailout principle* One of the more telling principles that Graaskamp coined was the pleasure, pain and bailout (PPB) principle, which linked risk management, to real estate investment analysis and options theory (Jarchow, 1991). The PPB principle is fairly robust and applies to any ongoing arrangement in which two or more parties are engaged in some form of contractual relationship regarding real estate interests over time. The principle recognizes that the parties to a real estate activity will typically have different motivations, sensitivities and operating styles that must be reconciled to ensure proper alignment of interest. The principle also recognizes that a bailout becomes the key safety mechanism, since most parties are judgment proof with respect to capital-intensive real estate investments.

- *Most fitting and most probable use concepts* Graaskamp coined several key phrases regarding real estate utilization. He introduced the notion of most fitting use, which he defined as the normative use that represents the optimal reconciliation of consumer demands, producer and investor requirements, and fiscal and environmental considerations. He concurred with Kinnard that a more achievable standard was most probable use, which recognizes constraints imposed by political forces, capital markets, real estate market conditions, and investor requirements (DeLisle, 1985a; Grissom, 1983; Kinnard, 1968).

Academic Contributions

Overview

During Graaskamp's relatively long tenure at the helm of the Wisconsin Program, the academic real estate community struggled with finding its niche in a university setting. Indeed, even before he took the reigns at Wisconsin, traditional real estate academics pondered the fundamental question of how best to teach real estate in a university and in a business school setting (Weimer, 1956; Wendt, 1949). During his early reign, his peers raised the flag regarding an impending crisis in the educational function, especially as it applied to real estate appraisal (Kinnard, 1968). Going into the decade of the 1980s, academicians continued to debate whether real estate was a distinct discipline, or whether it was merely a subset of one of the other disciplines (Dasso and Woodward, 1980). In the absence of a unified body of thought, these efforts culminated in a number of fundamental approaches to the discipline (Garrigan and Wardop, 1981). During the early 1980s, academic real estate programs were developed along several fundamental lines, ranging from programs that treated real estate as a subset of other business disciplines to programs that echoed Graaskamp's multidisciplinary philosophy (Grissom, Kuhle and Ramsey, 1982). These debates continued throughout his career and remain unresolved today. (Black, Carn, Diaz and Rabianski, 1996; Carn and Rabianski, 1986; Diaz., 1993; Grissom and Liu, 1994; Nourse, 1990). Despite this ambiguity, the academic community did make a number of significant advances during the 1970s and 1980s when Graaskamp was a significant force in the industry as well as a devil's advocate for real estate programs (Graaskamp, 1991k, 1991n).

Academic/Industry Straddle

As suggested, Graaskamp made a number of significant academic contributions that are noteworthy. However, his most significant contributions to the academic world were not constrained to the academic domain but emanated from his straddle position in which he served as a vital linkage between the academic and industry positions. Due to the esteem in which he was held in industry circles, he became one of the leading spokespersons for the academic community. As a consequence, he was subjected to intense scrutiny from both sides, creating a healthy tension that he used to help keep on track and not sway too far in either direction. He addressed this need for balance when he stated: "A contemporary curriculum for real estate in a school of business administration at a major university should be relevant to current needs of the student, to future needs of the real estate industry, and to the larger responsibilities of a university institution (Graaskamp, 1991n, p. 40).

As an academic, Graaskamp approached his stewardship at Wisconsin as the focal point of his career. He began with the existing program as a foundation and then added his own knowledge and pragmatic business sense, along with inputs garnered from the eclectic mix of colleagues that he brought to the program. To help ensure that his goals for real estate education were realized, he made special efforts to sensitize his colleagues to his philosophy. He also sought to expose his real estate students to outside thought, and introduce non-business students in his courses to the importance of achieving socially acceptable, but cash-solvent, goals.

He used three key strategies to achieve his goals for the Wisconsin Program. First, he assembled a faculty team that personified the multidisciplinary nature of real estate that he espoused. Rather than bring in mainstream business or real estate professors, he recruited academicians from such diverse areas as demography, land economics, law, and engineering. Second, he forced real estate students outside of the School of Business into non-business courses in related disciplines. Third, he actively solicited non-business students for real estate courses. The objective of these latter two approaches was to develop more discriminating consumers and more informed citizens who would be sensitive to the impacts of land use policies. He noted, "This way the lambs will have the abilities needed to deal with the lions, and the lions will have the consciousness of the professional in dealing with the lambs" (Graaskamp, 1991k, p. 72).

Throughout his academic career, he continued to refine his pedagogical style and adjust the structure of the Wisconsin Program to respond to the changing times. During the 1960s and early 1970s, graduate real estate students took formal courses in urban land economics to make sure they had an adequate theoretical foundation for real estate decision-making. By the mid-1970's, however, the rising importance of other fields dictated by industry advances, increasing institutional investment, and greater alignment of real estate with the capital markets created a new set of skills necessary to compete in the real estate industry. These competing demands forced Graaskamp to rethink the curriculum. As a result, with the exception of his Ph.D. students, students taking courses in urban land economics were changed from core courses to electives. To ensure that underlying urban land economics took them as electives and not as core courses. However, to ensure underlying urban land economics principles were still passed on to Wisconsin students, the key concepts were built into the core real estate courses. To help ensure the proper level of integration was achieved, he recruited faculty members who could help students make the linkage between urban land economics and traditional finance and economics.

Graaskamp's (1991s) vision regarding the role of real estate education had a strong pragmatic orientation. He had four major objectives for his program:

- To train real estate enterprise managers who can synthesize multiple disciplines,
- To instill an ethic in tomorrow's managers in terms of land as a finite resource,
- To recruit and motivate young talent for careers in land use-related enterprises, and
- To provide students with the techniques that will make them productive employees in the public and private sectors immediately upon graduation.

In addition to laying a proper intellectual foundation for students, he used the classroom as a tool in helping ensure that they would be able to stay current with the continuously evolving and maturing market, as well as changes in the legal, political, regulatory and capital markets. In a 1988 memo, he stated: "The Wisconsin program in Land Economics and Real Estate has remained at the cutting edge of education in land ethics, analytical techniques, and improved definition of concepts, business opportunities, and social rules for the real estate industry." This objective was reinforced by his use of "reading packets" to supplement textbooks. This strategy helped him broaden out the relatively narrow scope of traditional real estate courseware to enfold his multidisciplinary approach, as well as help sensitize students to the laboratory environment in which they lived.

Graaskamp's emphasis on developing technical competency distinguished him from many of his peers, who saw such efforts as too pedestrian for the lofty academy. Ironically, his critics missed his position on the goal of education. Rather than concentrating on technical or tactical training, Graaskamp focused on the more strategic, decision-making processes necessary to succeed in the profession. This emphasis led to the development of a number of decision-support tools, ranging from qualitative approaches to help understand the subjective values of the various parties, to quantitative approaches that helped automate mass appraisals, to economic models that discounted future benefits to a common present value denominator. Furthermore, he taught his students that formal academic study was merely a point of departure rather than the end-point of learning. This emphasis on "continuous learning" explains in part the ability of the program to change over the years to incorporate emerging concepts and trends, as well as his students' ability to develop career paths that endured across various stages of the real estate market cycle.

Multidisciplinary Approach

Graaskamp's recognition of the multidisciplinary nature of real estate dictated that his students be exposed to a wide range of disciplines. Although they did not need to be proficient in all of the areas to which they were referred, Graaskamp felt that students should at least be aware of the fundamental premises of the various disciplines and understand how they relate to the real estate process. The need to synthesize inputs from these diverse disciplines created the need for a generalist approach to real estate education. Under this model, students would develop a basic understanding of the related disciplines and the underlying theories embedded in each of them. This background was intended to ensure that real estate decisions would benefit from the appropriate level of professional practices drawn from each of the relevant disciplines. The theoretical demands embedded in this broad, multidisciplinary framework were much higher than demands of those who approached real estate as a narrow field or as a subset of finance or economics. Thus, real estate professionals had to be capable of drawing from those related disciplines and applying the relevant concepts. Furthermore, they had to be able to make the appropriate adjustments to extend these concepts to the imperfect and idiosyncratic real estate market. His ultimate goal was to empower his students to be able to ask the appropriate questions of the experts from the related disciplines that would ultimately have to be called upon to put together a deal.

In his 1982 unpublished revision to *A Guide to Feasibility Analysis*, Graaskamp (1991f, p.106) held some hope that "the individual with sufficient scope of technical expertise, professional elan, and imagination for specific problem solving may yet be produced by modernized university programs for real estate and urban land economics." But he argued that to achieve this goal, continued efforts would have to be made to overcome business school compartmentalization. Graaskamp posited that there were three functional areas to which students must be exposed under his multidisciplinary model. These areas include the physical sciences, the behavioral sciences, and traditional business administration. In the physical sciences, Graaskamp's students were exposed to such diverse areas as soils, architecture, civil engineering, remote sensing, environmental science, and computer science. In the behavioral sciences, students were encouraged to take courses in sociology, demography, economic geography, planning, political science and psychology. Within business administration, students were encouraged to take courses in law, finance, risk management, accounting, marketing, market research, statistics, organizational theory, and management information systems. He demanded that his students have a firm anchor in finance, tax and marketing and that they use this training as a building block upon which they could layer on their broader, multidisciplinary real estate knowledge base. To accommodate the needs of the non-business students that were drawn to his program, he internalized key concepts in finance, taxation and marketing and built them into his core courses. This strategy ensured that all of his students would be able to grasp fundamental business concepts without compromising their attention to other fields that were critical to his "renaissance man" view of the modern real estate professional.

Academic Freedom

Academic freedom was critical to Graaskamp's success and his ability to endure in a system in which he constantly challenged institutional convention, both in the university and in the industry. In terms of research, Graaskamp was a strong proponent of academic freedom. However, he also recognized the fine line between purely theoretical work that had little industry relevance and purely industry work with little theoretical or empirical support. He argued for independence of faculty research and teaching, devoid of internal, external and peer group pressure (Graaskamp, 1991k, p.70):

> Educators are short on funds and political sophistication and therefore are vulnerable to those with money who would proselyte their own point of view through education. I believe we have the best program at the University of Wisconsin because we have been free to search, to speak, and to teach without any debts to the industry.

While some within the university system saw his attitude as cavalier, it was a natural by-product of his commitment to establish a truly multidisciplinary real estate program in a business school setting. Several examples provide insight into his program strategy and explain the rationale behind some of his approaches to stewardship of the Wisconsin Program. The first example can be drawn from his departmental staffing strategy. As a small department in terms of body count, he realized that he had to bend traditional rules of protocol in terms of academic pedigree to create a multidisciplinary faculty pool. Rather than drawing from the limited supply of business-trained real estate faculty candidates, he focused on recruiting colleagues with non-business backgrounds. Although he knew he was drawing his outside recruits into a potentially hostile environment in terms of traditional promotion and tenure models, he felt he could not afford the luxury of hiring redundant talent. In terms of faculty survival, he believed that strong industry support and the success of his cadre of students would allow him to override any political concerns that would cloud the tenure process, letting the merit of his colleagues speak for itself. On a parenthetical note, it should be pointed out that while this approach worked well during his reign, it also introduced risk in terms of "succession plans" that could have helped ensure that the Wisconsin Program he helped create would endure beyond his tenure.

The second example of how Graaskamp defied university convention centered on his outreach activities in terms of student access to real estate courses. He firmly believed that part of the mission of the Wisconsin Program –indeed of the School of Business-- was to expose non-business students to business concepts. Of particular importance was teaching basic finance to enable them to understand the economic drivers underlying real estate investment and understand the need for cash solvency for all parties. While the system allowed him to accept non-business students in his courses, there was no allocation of resources to support the additional teaching load. As a departmental chair, the logical response to such resource constraints would have been to constrain his courses --and the Program's reach-- to business majors for whom the department received credit. However, to achieve his mission he chose "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" (Graaskamp, 1991n, p.65). He also eroded his "faculty purchasing power" by skewing his students to other disciplines, as well as to force them to mingle with professionals outside of their chosen field.

A third example of his constant challenge to academic convention emanates from the periodic debates that he had regarding the proper domicile for real estate programs. He argued if university real estate programs did not respond to the needs of the industry, then real estate professionals would ultimately move outside of business schools or create their own educational systems. Unfortunately, despite an increase in the number of real estate programs within traditional university settings, this scenario is being played out with many of the major trade associations developing their own educational systems to support members' needs. In support of locating real estate programs in business schools, Graaskamp argued that cash solvency of the various parties was the common denominator that drove all sides of the real estate process, with some having a profit margin and others operating at breakeven. On the other hand, he noted that real estate enterprise decisions have a material impact on the "physical terrarium of our society," suggesting that some real estate programs could be also properly housed in design schools. This option for positioning a real estate program in a design school, had some appeal since it could take advantage of the emphasis on intermingling, interaction and process techniques that focus on the built environment, the ultimate by-product of the real estate process. He noted that there was no unique solution to the issue: "Perhaps a contemporary real estate program could have its home base in either a school of physical design or a school of business administration, so long as it was permitted to be inductive, multidisciplinary, and problem solving" (Graaskamp, 1991n, p. 49).

Industry Contributions

Industry Activities

Graaskamp made significant contributions to the real estate discipline through his direct involvement in the professional arena. These contributions can be organized into several types of activities. First, he was very involved in professional associations including the Urban Land Institute, Lambda Alpha, Pension Real Estate Association (PREA), the Real Estate Counselors, and the Society of Real Estate Appraisers. Within these industry organizations, he was an active participant and a strong spokesman for the academic community. He also carried his sense of irreverence for established mores into this domain, operating as a self-described "gadfly," especially with regard to the appraisal process. He also sought to affect change by working through the consumers of real estate services, a form of reverse marketing (Graaskamp, 1991i, p.194).

> As much as academics would like to believe that intellectual elegance and work quality are sufficient motivation to move a professional group forward, the fact is that improvements in technique occur only when social institutions become self-conscious about the inadequacy of a procedure because dissatisfaction makes the benefits of improvement apparently greater than the costs of implementation.

To complement his direct involvement in the trenches, he also had an opportunity to reach professionals from the pulpit, serving as a keynote speaker at various trade associations and national meetings. Drawing on his intellect, wit and presence, he used these opportunities to explore emerging issues and help sensitize professional groups to the challenges before them. He also urged the industry to develop better linkages to the academic community and vice versa.

Through his efforts to reach out to the industry, Graaskamp opened the doors for many of his students and fellow colleagues to get involved with key industry issues. However, he also cautioned that a balance in industry-academic linkages must be carefully struck (Graaskamp, 1991k, p.69).

> If the integrity of education and thus the advancement of professionalism are to survive, real estate educators must remain independent of the politics involved in the industry. While educators must rely on a certain amount of financial help from the outside, the choosing of instructors, text, and subject matter should rest wholly with an independent body of real estate educators.

On the academic-to-industry front, Graaskamp helped close the gap by producing graduate students and Ph.D.s who could successfully operate in either arena. He viewed the crossover rate of some of his Ph.D.'s as a mixed blessing. On the one hand, it drained the academic world of intellectual talent to the advantage of industry. He noted, "We've already lost two professors to the business world. It appears those who can are going, and that is a terrible precedent for teachers" (Kerch, 1991, p.18). On the other hand, crossovers provided a strong testimony to the strength of the program in terms of its ability to produce industry leaders. On more than one occasion, Graaskamp counseled his former students that a sojourn to the "dark side" could be an extremely valuable educational experience. He also was acutely aware of economic pressures and noted that industry exposure could provide them with the economic self-sufficiency to be able to afford to return to their chosen professions. In several cases, this author included, the loop has been completed.

To complement his academic activities, Graaskamp ran a very successful consulting operation, Landmark Research, Inc. Landmark focused on real estate appraisals and feasibility analysis, in addition to a wide range of consulting assignments. Due to his early success, he was able to be very selective in the assignments he accepted, balancing the need for capital with the need for intellectual challenge and personal growth. To a great extent, his work at Landmark provided him with a self-funding R&D capability through which he could develop innovative approaches to contemporary real estate problem solving. In addition to providing a professional benchmark against which others could be compared, his consulting experiences ultimately filtered into his real estate program in the form of cases and lectures.

Graaskamp complemented his consulting activities with expert witness and testimony. On the witness stand, he had few peers. In addition to drawing on his personal reservoir of knowledge, he would often conduct his own research, making him a formidable witness. Further, rather than be constrained to a narrow role, lawyers also quickly realized that he could make meaningful contributions to the development of a legal strategy to help achieve a client's objectives. In taking on consulting and expert-witness assignments, he carefully avoided cases in which he did not agree with the client's position from either a social or ethical perspective. Through these for-profit efforts, he was able to maintain strong industry linkages and operate on the cutting edge of the discipline, positioning himself to be able to lead in the diffusion of innovation as he passed his lessons-learned on to his students and colleagues.

Real Estate Appraisal

To many observers, Graaskamp was first and foremost a real estate appraiser. One of the more significant contributions he made to appraisal was his ability to help interject some of Ratcliff's behavioral contributions into the appraisal vernacular, thus carrying on the strong Wisconsin tradition he inherited. Unlike many of his contemporaries, he recognized that appraisal was a behavioral art that was focused inherently on stochastic market artifacts. Furthermore, he noted that prices are set through the negotiations between buyers and sellers and that to predict the outcome of these negotiations one had to first define the most probable buyers for the specified real estate rights. Once the likely buyers were identified, the analyst could reconstruct the logic that would determine the buyer's and seller's subjective valuations. These respective values became the anchor points for the negotiations within the seller-buyer dyad, with the end result determined by the situational context driving their decision-making. This insight helped him realize the importance of such externalities as taxes, capital markets, and macroeconomic environments to real estate pricing. He captured these drivers in his discounted cash flow models combining quantitative and qualitative approaches to forecast future net income flows and discount rates.

Graaskamp extended this behavioral approach to feasibility analysis, changing his focus from the transaction side of the equation to that of the tenants or space users. He found that by turning attention to the parties who actually paid the rent, rather than merely the producers of real estate who sought profits through transaction fees or the control of cash flows, he could better quantify demand on an individual project basis.

One of the more significant contributions to the evolution of appraisal that Graaskamp made was his role in the profession's adoption of the notion of "most-probable selling price" as the object of appraisal. To operationalize this concept, appraisers had to interject behavioral methods into the appraisal process along the lines suggested by Ratcliff. For example, under the new model highest-and-best use analysis would begin with the identification of the most probable use to which a property would be placed. Once this step was completed, the appraiser could turn attention to profiling the most probable buyer type that would be drawn to the specified real estate rights. Once identified, the appraiser could then extract the pricing parameters of the most likely user. In addition, the appraiser would also recognize that pricing was inherently stochastic, and that an appraisal should be targeted at the central tendency of the range of values held by the probable buyer and the seller rather than a point estimate of value. Thus, the appraiser would have to consider each parties' financial strength, access to capital, and economic versus user orientation that would determine their subjective values. Once the subjective values were established, the appraiser could turn his attention to the situations surrounding the key parties to estimate how the transaction would most likely be priced and the range of a value to be expected.

Another area in which Graaskamp distinguished himself was in his pioneering effort in the development of computer-assisted comparable-sales analysis models. These advances were exemplified by the MKTCOMP program developed on the EDUCARE Network in the 1960s. In essence, the MKTCOMP model allowed appraisers to identify significant variables relevant to the valuation of particular types of real estate, quantify those variables for sold transactions, and select properties from the database that had the most similarity to a given subject property. As the MKTCOMP model was refined, the selection rules for comparables were relaxed to move away from pure minimization of differences. Thus, rather than relying on mere similarity, these modifications to the program allowed the appraiser to focus on "substitutability" as defined by the most probable buyer's search rules (DeLisle, 1984). Many of Graaskamp's contributions to appraisal theory and computer-assisted analysis are illustrated in his report on the appraisal of wilderness tracts and in his demonstration appraisal report for 25 N. Pinkney (Graaskamp and Robbins, 1991; Graaskamp, 1977a).

In addition to the individual advances he made in appraisal practice, Graaskamp also routinely interjected his thoughts on the state of the appraisal industry. In a publication he wrote in association with the Lincoln Institute of Land Policy, he argued that there was a critical need for a redefinition and a reform of the appraisal process (Graaskamp, 1997j). He noted that the appraisal function, especially property tax assessment and other mass appraisal assignments in which a database can be established, are really a subset of the larger disciplines of information processing and decision-making. Despite the contributions that could be made by borrowing from these two fields, he noted that progress was being thwarted by failure of the profession to address constraints that inhibited advances in appraisal compared to many of the other functional areas of real estate (Graaskamp, 1991j).

Despite his frustration over the failure of the appraisal industry to move forward, he noted that there were several institutional forces at work that would ultimately bring about change within the industry. The first was movement away from monolithic service organizations, which in turn, opened the door for newer, more innovative appraisal companies. The second was the increasing acceptance of the real estate asset class by institutional investors, a trend he supported (Graaskamp, 1991p; Graaskamp and Miles, 1991). He believed increasing institutional involvement would lead to a situation in which consumers of appraisal services -- who as fiduciaries bore the risk of unexpected changes in value-- would ultimately demand improvements in the appraisal process.

In addition to observing these "evolutionary forces," Graaskamp also promoted change through the legislative process, as exemplified by his efforts to expand the scope of Employment Retirement, Income Security Act of 1974 (ERISA) legislation to make it enfold real estate. He also used his appearance before the subcommittee of the U.S. House on the Real Estate Appraisal Act to plead for change (Graaskamp, 1991r). In his testimony, he argued that much of the impending collapse of financial institutions could have been avoided if the users of real estate appraisal services had demanded -- and paid for-- more professional appraisals. He also pointed out the institutional pressures brought to bear on appraisers to support investment and mortgage transaction volume. In many cases, this pressure was particularly insidious, since it operated through the market mechanism whereby companies could unilaterally change appraisal firms to seek out ones who were perceived as more pro-business. This implicit threat was especially strong on the smaller firms, for whom a loss of institutional clients could be extremely detrimental to their financial success. In the face of this market reality, he argued appraisers and, in turn, the overall industry would benefit if they had some legislative guidelines to fall back on to insulate them from the risk of business loss stemming from the ability of clients to "shop" for appraisals.

On another frontier, Graaskamp sought to stimulate improvement in appraisal processes by working to educate investors. He pursued this mission in one-on-one contact, as well as in more public forums, serving as a public speaker and working as a change agent through institutional investment organizations such as PREA and NCREIF (Graaskamp, 1991r). In addition to general education, he worked directly with the trade organizations to help modify the standard letter of engagement, which investors used to retain appraisal services. This model letter of engagement identified property interests, defined key terms, established minimum appraisal methods and reporting requirements, and clarified the business relationship between the appraiser and the asset manager (Graaskamp and Gibson, 1986).

Feasibility Analysis

Graaskamp made a number of noteworthy contributions to feasibility analysis. Many of these contributions were summarized in 1970 in *A Guide to Feasibility Analysis*, his seminal piece on feasibility analysis. Although he continually updated his approach to feasibility analysis in practice and in the classroom during the ensuing years, he never got around to updating the actual manual until 1982. Unfortunately, the update was never formally published, although he did spin off a handful of articles, essays, and lectures on feasibility analysis during this time, including "A Rational Approach to Feasibility Analysis" (Graaskamp, 1991m) and "Feasibility Analysis: The Father of Appraisal" (Graaskamp, 1991n). This latter title was particularly prescient, since many believed that if feasibility analysis was indeed the father of appraisal as he contended, then Graaskamp was the father of the feasibility analysis.

Graaskamp viewed feasibility analysis as the culmination of the overall real estate process, drawing on, and synthesizing the myriad of analytical, behavioral, and quantitative tools to answer a particular question. He explained feasibility analysis by noting (Graaskamp, 1991e, p.80) "A project is feasible when the real estate analyst determines that there is a reasonable likelihood of satisfying explicit objectives when a selected course of action is tested for a fit to a given context of specific constraints and limited resources."

He dissected this definition and pointed out some of its critical implications. First, client objectives are unique and must be extracted by the feasibility analyst in order to correctly define the problem against which the various alternative solutions will be evaluated. Second, the term *likelihood* explicitly recognizes that forecasting is involved in feasibility analysis and that such forecasts require subjective judgments that have an inherent degree of risk. Third, the notion of "satisfying" addresses both the tangible dimensions of economic solvency as applied directly to the client, as well as the intangible dimension of the social implications and externalities created by the real estate. Fourth, constraints on the utilization of property should be recognized, but only after the initial constraints are challenged to determine whether or not they can be modified in a cost-effective, socially acceptable manner. Finally, limited resources, which include financial requirements, talent, and time, should be factored into the research design. He classified feasibility problems into three basic types of problems: a use or user in search of a site; a site in search of a use or user; and an investor in search of an opportunity.

Graaskamp approached feasibility problems by taking the "problem as stated" as a starting point, rather than the ultimate objective of an assignment. He recognized that clients typically could not correctly state specific objectives that they were trying to satisfy, much less lay out a problem in terms of its full dimensionality. Thus, he would listen to the problem as stated and then put clients through a series of questions to help him understand the implicit objectives and constraints the client faced. Under this model, each feasibility assignment began with the client and then turned attention to the underlying real estate question. In addition to customization dictated by this client-orientation, he noted that a "feasibility study" could not be merely pulled off the shelf and applied to a new case. He recognized that the nature of studies needed by the market was rather broad and made a major contribution to the discipline by helping to organize them into rational clusters (Graaskamp, 1991g). These clusters encompassed such diverse projects as strategy studies, market analyses, merchandising studies, legal studies, compatibility studies, engineering studies, planning studies, and financial studies.

Consistent with his characterization of the real estate process as inherently multidisciplinary, Graaskamp pointed out the fact that collaboration among professionals was a necessary condition to valid feasibility analysis (Graaskamp, 1991m). This linkage was important for several reasons. First, it provided access to cutting edge skills the specialized areas needed to satisfy professional standards at any point in time. Second, it helped ensure that changing professional standards or the emergence of new "best practices" could be brought to bear on individual decisions. This was especially important in light of changing market conditions, institutional forces, and capital markets. In this dynamic environment surrounding real estate decisions, he concluded that feasibility studies should be grounded on systematic decision-making processes that could be adjusted to new situations or concerns, rather than frozen by rigid heuristics.

Unlike many who lamented the dearth of data in real estate, Graaskamp argued that one of the challenges the analyst faced was the development of a research design that would allow him to effectively sift and winnow the data to pick only the relevant information necessary to the decision at hand. He also noted that real estate decision-making was targeted at reducing risk and uncertainty rather than seeking a definitive conclusion that was inherently elusive in the inefficient real estate market. As such, he contended that researchers should approach projects in light of time and budget constraints. At the same time, however, he pointed out that analysts would have to understand the risks of the underlying decision to avoid compromising the objectivity and validity of the results due to excess resource constraints. He argued that systematic problem simplification could not be at the expense of valid forecasting upon which the success or failure of the decision depended.

In 1982, Graaskamp stepped back and looked at the contributions that he had made in his initial effort over the prior decade (Graaskamp, 1991f). He took great pride in the fact that the American Institute of Real Estate Appraisers had embraced his definition of feasibility in the appraisal terminology textbook (Boyce, 1975). However, he was troubled by the fact that the authors had added the condition that "feasibility" is normally related to the economic potential of a project. He lamented that this change in emphasis confused the issue of feasibility and financial viability and softened the emphasis he placed on the social obligations of real estate decision-makers. However, he was encouraged by the fact that real estate had ultimately become recognized as an applied social science, which combines applied social science or the dynamics of behavioral systems with the physical systems of nature and manufactured artifacts. He felt a sense of accomplishment in the fact that there had been a gradual acceptance of his categorization of real estate problems that he had identified as elements of feasibility analysis. Finally, he appreciated the fact that reviewers recognized the importance of the holistic approach that he espoused in his original manuscript.

Institutional Investment Analysis

Graaskamp's recognition of the importance of related business disciplines to the real estate process distinguished him from many of his more traditional colleagues and helped him emerge as a pioneer in the area of investment structuring and financial engineering. A telling example of his contributions to investment analysis was the MR-CAP discounted cash flow program that he orchestrated in concert with Mike Robbins, a systems professional that he lured to the Wisconsin Program to provide computer support and round out his multidisciplinary team. The instructional tool they developed, along with all its bells and whistles, synthesized finance, tax and cash flow forecasting into a cohesive package. Over time, the package became a calling card for Wisconsin grads and in the late 1960s, began to filter out into the industry as former students began to use the program in their new positions. In addition to helping operationalize one of his basic tenants to "avoid, defer and lower" taxes, his financial models also provided a tool by which the interrelated nature of much of his philosophy could be brought to a common denominator. That is, by mastering discounted cash-flow models, analysts could solve for the cash solvency position for each of the key parties, using their respective costs of capital, risk tolerances, expectations, and economic drivers.

Despite the sophisticated modeling built into the MR-CAP package, Graaskamp found he needed a more intuitive means of developing financial solutions that reconciled the cash-solvency requirements of each of the key parties engaged in the real estate enterprise. He found this tool in the development of the front-door/back-door models of investment analysis that became known as the Wisconsin method (DeLisle, 1988; Graaskamp, 1991d). In effect, the front-door model is the producer's approach to real estate analysis, establishing the required net income stream necessary to adequately reward the capital used to create, or acquire, the real estate interest. This net income could then be converted to required rental levels by grossing the number up to allow for reasonable operating expenses. The back-door model, on the other hand, begins with the likely rent that a certain bundle of real estate could command. This market rent was a function of competitive conditions and effective tenant demand (that is, the will and ability to pay). This gross rent could then be reduced to net income by deducting operating expenses, with the resultant net income being converted to a justified investment value. Thus, the analyst had the inputs for the "ask" (required rent) and the "bid" (affordable rent) sides of the negotiating table. Using this framework, a series of simultaneous equations were developed that allowed the analyst to solve for a mutually agreeable cash-solvency positions for the demand and supply sides based on a simplified, before-tax analysis. Using these inputs as starting points, analysts could then turn to more sophisticated after-tax discount models to fine tune the numbers and optimize the ultimate decision.

Graaskamp argued for a responsible approach to real estate development, which if followed, would have helped the market avoid much of the real estate crisis that surfaced in the late 1980s and early-1990s. He stated that (1991e, p.228) "the best risk-management device for the producer group, which is usually the lead group in the initiation of a project, is thorough research so the development product fits as closely as possible the needs of the tenant or purchaser, the values of the politically active collective consumer, and the land-use ethic of the society." He recognized that the development of each parcel must be considered in a broader context and is surrounded by uncertainties. He noted that the developer who succeeds most often is the one who "takes most care to validate the assumptions over which he has some control and to cushion the enterprise with tolerance for surprise and those changing conditions over which there is little control" (Graaskamp, 1991f, p.121). His approach to forecasting net income flows in discounted cash-flow analysis emphasized real estate supply and demand fundamentals, drawing heavily on an understanding of market processes. In the domain of investment analysis, this approach differed somewhat from how it was applied in appraisal in the sense that the feasibility analyst approached the problem from a positive perspective (that is, what will likely be) rather than a behavioral perspective that considers what the various players "think" will be the reality. This is particularly important since differences in normative value based on solid research can significantly differ from values that are actually assigned to a project in the inefficient, largely private commercial market. This variation can stem from differences in estimates of future earning power or from differences in economic drivers (such as tax situations and costs of capital), temporal preferences, and debt appetites that affect the discount process. This market inefficiency creates an arbitrage opportunity that the astute real estate player can capture, assuming both sides of the equation (that is, most likely net income and perceived net income) can be modeled. Furthermore, these intrinsic differences could be used to the advantage of both parties, creating win-win negotiations in which one party names the price and the other names the terms.

While option-pricing models are currently popular in financial analysis, Graaskamp recognized their importance early on in his career. He argued that real estate development, investment and usage had a number of embedded options that could have significant impacts on the risk-return equation. For example, he noted that commercial real estate mortgages are effectively options, consisting of a call on the appreciation for the developer-owner and a put to the lender. This "put" was particularly significant, since although one could look to a borrower or a guarantor to provide some safety, the underlying real estate would ultimately be all that collateralized a loan. Despite his skills in investment structuring and risk management, he argued that investors should focus on the marketability of the underlying resources rather than relying on contractual relationships or financial engineering that could create a disconnect between the spatial and capital sides of the market.

In addition to his contributions to the analytical side of the investment process, Graaskamp also helped advance the industry through his success in advocating increased institutional real estate investment. However, he also cautioned that such investment must be carefully managed, both at the property and at the portfolio level. This caveat was pointed out in an unpublished essay entitled "Strategic Planning Approach to Major Real Estate Decisions" (Graaskamp,1991q). In that article, he also introduced the notion of investment positioning as a framework that could help guide institutional investment strategy (DeLisle, 1985b).

Graaskamp's encouragement of institutional investment spanned both the debt and equity sides of the equation. For example, on the debt frontier, he helped support the development of the private mortgage insurance guarantee industry (Graaskamp, 1991l). With respect to institutional equity investment, he was a strong proponent of investment in the real estate, which he regarded as a distinct asset class (DeLisle, 1993). To gain acceptance of the asset class, he worked through the key trade associations, including the National Council of Real Estate Investment Fiduciaries (NCREIF) and the Pension Real Estate Association (PREA). He also was more directly involved in promoting institutional investment as a member Board of Directors of the Wisconsin Housing Finance Authority, as well as a consultant to the State of Wisconsin Investment Board (SWIB). In addition to encouraging institutional investment on the basis of attractive returns, he also pointed out that investors should consider the risk side of the equation. This emphasis on risk began to turn attention to risk-adjusted returns and set the stage for the extension of portfolio management principles to the real estate asset class (Graaskamp, 1991). These efforts culminated in his support of a standard letter of engagement for real estate appraisers that was intended to help ensure that appraisals would reduce uncertainty and sponsor risk (Graaskamp, 1991a).

Conclusion

In this chapter we explored some of James A. Graaskamp's contributions to the real estate discipline. We applied a holistic approach to the project to establish a framework of reference for professionals, academics and future researchers. As we have discussed, he made significant, enduring, and ongoing contributions to real estate. In the theoretical domain, he made a major contribution by extending traditional urban land economics to contemporary real estate, continuing the evolution of behavioralism and problem solving, and introducing a plethora of his own definitions, concepts and principles.

In the academic arena, he argued strongly for recognition of real estate as a distinct, multidisciplinary field. He made a number of attempts to help advance the state of the academic community at large but focused most of his efforts on the Wisconsin Program. He carefully nurtured the Program forward, using the advances made by his predecessors as a foundation upon which he built a broad-based curriculum. Given the lack of a consensus of thought as to how to best approach real estate education, he leaned toward the use of case studies and other contemporary readings rather than traditional textbooks.

In the industry environment, he served as an important linkage between the academic and professional communities. He made major contributions to a number of functional areas of real estate, with the most significant contributions in the areas of appraisal, feasibility analysis, and investment analysis. His work continues through his students and the professionals that he touched. Through his cumulative efforts, Graaskamp laid a solid foundation that should be drawn upon to reaffirm our roots and move the discipline forward.

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