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Agency Theory: An Assessment and Review

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Agency theory is an important, yet controversial, theory. This paper reviews agency theory, its contributions to organization theory, and the extant empirical work and develops testable propositions. The conclusions are that agency theory (a) offers unique insight into information systems, outcome uncertainty, incentives, and risk and (b) is an empirically valid perspective, particularly when coupled with complementary perspectives. The principal recommendation is to incorporate an agency perspective in studies of the many problems having a cooperative structure.

One day Deng Xiaoping decided to take his grandson to visit Mao. "Call me granduncle," Mao offered warmly. "Oh, I certainly couldn't do that, Chairman Mao," the awe-struck child replied. "Why don't you give him an apple?" suggested Deng. No sooner had Mao done so than the boy happily chirped, "Oh thank you, Granduncle." "You see," said Deng, "what incentives can achieve." ("Capitalism," 1984, p. 62)

Agency theory has been used by scholars in accounting (e.g., Demski & Feltham, 1978), economics (e.g., Spence & Zeckhauser, 1971), finance (e.g., Fama, 1980), marketing (e.g., Basu, Lal, Srinivasan, & Staelin, 1985), political science (e.g., Mitnick, 1986), organizational behavior (e.g., Eisenhardt, 1985, 1988; Kosnik, 1987), and sociology (e.g., Eccles, 1985; White, 1985). Yet, it is still surrounded by controversy. Its proponents argue that a revolution is at hand and that "the foundation for a powerful theory of organizations is being put into place" (Jensen, 1983, p. 324). Its detractors call it trivial, dehumanizing, and even "dangerous" (Perrow, 1986, p. 235).

Which is it: grand theory or great sham? The

purposes of this paper are to describe agency theory and to indicate ways in which organizational researchers can use its insights. The paper is organized around four questions that are germane to organizational research. The first asks the deceptively simple question, What is agency theory? Often, the technical style, mathematics, and tautological reasoning of the agency literature can obscure the theory. Moreover, the agency literature is split into two camps (Jensen, 1983), leading to differences in interpretation. For example, Barney and Ouchi (1986) argued that agency theory emphasizes how capital markets can affect the firm, whereas other authors made no reference to capital markets at all (Anderson, 1985; Demski & Feltham, 1978; Eccles, 1985; Eisenhardt, 1985).

The second question is, What does agency theory contribute to organizational theory? Proponents such as Ross (1973, p. 134) argued that "examples of agency are universal." Yet other scholars such as Perrow (1986) claimed that agency theory addresses no clear problems, and Hirsch and Friedman (1986) called it excessively narrow, focusing only on stock price. For economists, long accustomed to treating the or-

ganization as a "black box" in the theory of the firm, agency theory may be revolutionary. Yet, for organizational scholars the worth of agency theory is not so obvious.

The third question is, Is agency theory empirically valid? The power of the empirical research on agency theory to explain organizational phenomena is important to assess, particularly in light of the criticism that agency theory is "hardly subject to empirical test since it rarely tries to explain actual events" (Perrow, 1986, p. 224). Perrow (1986) also criticized the theory for being unrealistically one-sided because of its neglect of potential exploitation of workers.

The final question is, What topics and contexts are fruitful for organizational researchers who use agency theory? Identifying how useful agency theory can be to organizational scholars requires understanding the situations in which the agency perspective can provide theoretical leverage.

The principal contributions of the paper are to present testable propositions, identify contributions of the theory to organizational thinking, and evaluate the extant empirical literature. The overall conclusion is that agency theory is a useful addition to organizational theory. The agency theory ideas on risk, outcome uncertainty, incentives, and information systems are novel contributions to organizational thinking, and the empirical evidence is supportive of the theory, particularly when coupled with complementary theoretical perspectives.

Origins of Agency Theory

During the 1960s and early 1970s, economists explored risk sharing among individuals or groups (e.g., Arrow, 1971; Wilson, 1968). This literature described the risk-sharing problem as one that arises when cooperating parties have different attitudes toward risk. Agency theory broadened this risk-sharing literature to include the so-called agency problem that occurs when cooperating parties have different goals and di-

vision of labor (Jensen & Meckling, 1976; Ross, 1973). Specifically, agency theory is directed at the ubiquitous agency relationship, in which one party (the principal) delegates work to another (the agent), who performs that work. Agency theory attempts to describe this relationship using the metaphor of a contract (Jensen & Meckling, 1976).

Agency theory is concerned with resolving two problems that can occur in agency relationships. The first is the *agency problem* that arises when (a) the desires or goals of the principal and agent conflict and (b) it is difficult or expensive for the principal to verify what the agent is actually doing. The problem here is that the principal cannot verify that the agent has behaved appropriately. The second is the *problem of risk sharing* that arises when the principal and agent have different attitudes toward risk. The problem here is that the principal and the agent may prefer different actions because of the different risk preferences.

Because the unit of analysis is the contract governing the relationship between the principal and the agent, the focus of the theory is on determining the most efficient contract governing the principal-agent relationship given assumptions about people (e.g., self-interest, bounded rationality, risk aversion), organizations (e.g., goal conflict among members), and information (e.g., information is a commodity which can be purchased). Specifically, the question becomes, Is a behavior-oriented contract (e.g., salaries, hierarchical governance) more efficient than an outcome-oriented contract (e.g., commissions, stock options, transfer of property rights, market governance)? An overview of agency theory is given in Table 1.

The agency structure is applicable in a variety of settings, ranging from macrolevel issues such as regulatory policy to microlevel dyad phenomena such as blame, impression management, lying, and other expressions of self-interest. Most frequently, agency theory has been applied to organizational phenomena

Table 1
Agency Theory Overview

Key idea	Principal-agent relationships should reflect efficient organization of information and risk-bearing costs
Unit of analysis	Contract between principal and agent
Human assumptions	Self-interest Bounded rationality Risk aversion
Organizational assumptions	Partial goal conflict among participants Efficiency as the effectiveness criterion Information asymmetry between principal and agent
Information assumption	Information as a purchasable commodity
Contracting problems	Agency (moral hazard and adverse selection) Risk sharing
Problem domain	Relationships in which the principal and agent have partly differing goals and risk preferences (e.g., compensation, regulation, leadership, impression management, whistle-blowing, vertical integration, transfer pricing)

such as compensation (e.g., Conlon & Parks, 1988; Eisenhardt, 1985), acquisition and diversification strategies (e.g., Amihud & Lev, 1981), board relationships (e.g., Fama & Jensen, 1983; Kosnik, 1987), ownership and financing structures (e.g., Argawal & Mandelker, 1987; Jensen & Meckling, 1976), vertical integration (Anderson, 1985; Eccles, 1985), and innovation (Bolton, 1988; Zenger, 1988). Overall, the domain of agency theory is relationships that mirror the basic agency structure of a principal and an agent who are engaged in cooperative behavior, but have differing goals and differing attitudes toward risk.

Agency Theory

From its roots in information economics, agency theory has developed along two lines:

positivist and principal-agent (Jensen, 1983). The two streams share a common unit of analysis: the contract between the principal and the agent. They also share common assumptions about people, organizations, and information. However, they differ in their mathematical rigor, dependent variable, and style.

Positivist Agency Theory

Positivist researchers have focused on identifying situations in which the principal and agent are likely to have conflicting goals and then describing the governance mechanisms that limit the agent's self-serving behavior. Positivist research is less mathematical than principal-agent research. Also, positivist researchers have focused almost exclusively on the special case of the principal-agent relationship between owners and managers of large, public corporations (Berle & Means, 1932).

Three articles have been particularly influential. Jensen and Meckling (1976) explored the ownership structure of the corporation, including how equity ownership by managers aligns managers' interests with those of owners. Fama (1980) discussed the role of efficient capital and labor markets as information mechanisms that are used to control the self-serving behavior of top executives. Fama and Jensen (1983) described the role of the board of directors as an information system that the stockholders within large corporations could use to monitor the opportunism of top executives. Jensen and his colleagues (Jensen, 1984; Jensen & Roeback, 1983) extended these ideas to controversial practices, such as golden parachutes and corporate raiding.

From a theoretical perspective, the positivist stream has been most concerned with describing the governance mechanisms that solve the agency problem. Jensen (1983, p. 326) described this interest as "why certain contractual relations arise." Two propositions capture the governance mechanisms which are identified in the positivist stream. One proposition is that out-

come-based contracts are effective in curbing agent opportunism. The argument is that such contracts coalign the preferences of agents with those of the principal because the rewards for both depend on the same actions, and, therefore, the conflicts of self-interest between principal and agent are reduced. For example, Jensen and Meckling (1976) described how increasing the firm ownership of the managers decreases managerial opportunism. In formal terms,

Proposition 1: When the contract between the principal and agent is outcome based, the agent is more likely to behave in the interests of the principal.

The second proposition is that information systems also curb agent opportunism. The argument here is that, since information systems inform the principal about what the agent is actually doing, they are likely to curb agent opportunism because the agent will realize that he or she cannot deceive the principal. For example, Fama (1980) described the information effects of efficient capital and labor markets on managerial opportunism, and Fama and Jensen (1983) described the information role that boards of directors play in controlling managerial behavior. In formal terms,

Proposition 2: When the principal has information to verify agent behavior, the agent is more likely to behave in the interests of the principal.

At its best, positivist agency theory can be regarded as enriching economics by offering a more complex view of organizations (Jensen, 1983). However, it has been criticized by organizational theorists as minimalist (Hirsch, Michaels, & Friedman, 1987; Perrow, 1986) and by microeconomists as tautological and lacking rigor (Jensen, 1983). Nonetheless, positivist agency theory has ignited considerable research (Barney & Ouchi, 1986) and popular interest ("Meet Mike," 1988).

Principal-Agent Research

Principal-agent researchers are concerned with a general theory of the principal-agent relationship, a theory that can be applied to employer-employee, lawyer-client, buyer-supplier, and other agency relationships (Harris & Raviv, 1978). Characteristic of formal theory, the principal-agent paradigm involves careful specification of assumptions, which are followed by logical deduction and mathematical proof.

In comparison with the positivist stream, principal-agent theory is abstract and mathematical and, therefore, less accessible to organizational scholars. Indeed, the most vocal critics of the theory (Perrow, 1986; Hirsch et al., 1987) have focused their attacks primarily on the more widely known positivist stream. Also, the principal-agent stream has a broader focus and greater interest in general, theoretical implications. In contrast, the positivist writers have focused almost exclusively on the special case of the owner/CEO relationship in the large corporation. Finally, principal-agent research includes many more testable implications.

For organizational scholars, these differences provide background for understanding criticism of the theory. However, they are not crucial. Rather, the important point is that the two streams are complementary: Positivist theory identifies various contract alternatives, and principal-agent theory indicates which contract is the most efficient under varying levels of outcome uncertainty, risk aversion, information, and other variables described below.

The focus of the principal-agent literature is on determining the optimal contract, behavior versus outcome, between the principal and the agent. The simple model assumes goal conflict between principal and agent, an easily measured outcome, and an agent who is more risk averse than the principal. (Note: The argument behind a more risk averse agent is that agents, who are unable to diversify their employment, should be risk averse and principals, who are

capable of diversifying their investments, should be risk neutral.) The approach of the simple model can be described in terms of cases (e.g., Demski & Feltham, 1978). The first case, a simple case of complete information, is when the principal knows what the agent has done. Given that the principal is buying the agent's behavior, then a contract that is based on behavior is most efficient. An outcome-based contract would needlessly transfer risk to the agent, who is assumed to be more risk averse than the principal.

The second case is when the principal does not know exactly what the agent has done. Given the self-interest of the agent, the agent may or may not have behaved as agreed. The agency problem arises because (a) the principal and the agent have different goals and (b) the principal cannot determine if the agent has behaved appropriately. In the formal literature, two aspects of the agency problem are cited. *Moral hazard* refers to lack of effort on the part of the agent. The argument here is that the agent may simply not put forth the agreed-upon effort. That is, the agent is shirking. For example, moral hazard occurs when a research scientist works on a personal research project on company time, but the research is so complex that corporate management cannot detect what the scientist is actually doing. *Adverse selection* refers to the misrepresentation of ability by the agent. The argument here is that the agent may claim to have certain skills or abilities when he or she is hired. Adverse selection arises because the principal cannot completely verify these skills or abilities either at the time of hiring or while the agent is working. For example, adverse selection occurs when a research scientist claims to have experience in a scientific specialty and the employer cannot judge whether this is the case.

In the case of unobservable behavior (due to moral hazard or adverse selection), the principal has two options. One is to discover the agent's behavior by investing in information systems

such as budgeting systems, reporting procedures, boards of directors, and additional layers of management. Such investments reveal the agent's behavior to the principal, and the situation reverts to the complete information case. In formal terms,

Proposition 3: Information systems are positively related to behavior-based contracts and negatively related to outcome-based contracts.

The other option is to contract on the outcomes of the agent's behavior. Such an outcome-based contract motivates behavior by coalignment of the agent's preferences with those of the principal, but at the price of transferring risk to the agent. The issue of risk arises because outcomes are only partly a function of behaviors. Government policies, economic climate, competitor actions, technological change, and so on, may cause uncontrollable variations in outcomes. The resulting outcome uncertainty introduces not only the inability to preplan, but also risk that must be borne by someone. When outcome uncertainty is low, the costs of shifting risk to the agent are low and outcome-based contracts are attractive. However, as uncertainty increases, it becomes increasingly expensive to shift risk despite the motivational benefits of outcome-based contracts. In formal terms,

Proposition 4: Outcome uncertainty is positively related to behavior-based contracts and negatively related to outcome-based contracts.

This simple agency model has been described in varying ways by many authors (e.g., Demski & Feltham, 1978; Harris & Raviv, 1979; Holmstrom, 1979; Shavell, 1979). However, the heart of principal-agent theory is the trade-off between (a) the cost of measuring behavior and (b) the cost of measuring outcomes and transferring risk to the agent.

A number of extensions to this simple model are possible. One is to relax the assumption of a risk-averse agent (e.g., Harris & Raviv, 1979). Research (MacCrimmon & Wehrung, 1986) indicates that individuals vary widely in their risk

attitudes. As the agent becomes increasingly less risk averse (e.g., a wealthy agent), it becomes more attractive to pass risk to the agent using an outcome-based contract. Conversely, as the agent becomes more risk averse, it is increasingly expensive to pass risk to the agent. In formal terms,

Proposition 5: The risk aversion of the agent is positively related to behavior-based contracts and negatively related to outcome-based contracts.

Similarly, as the principal becomes more risk averse, it is increasingly attractive to pass risk to the agent. In formal terms,

Proposition 6: The risk aversion of the principal is negatively related to behavior-based contracts and positively related to outcome-based contracts.

Another extension is to relax the assumption of goal conflict between the principal and agent (e.g., Demski, 1980). This might occur either in a highly socialized or clan-oriented firm (Ouchi, 1979) or in situations in which self-interest gives way to selfless behavior (Perrow, 1986). If there is no goal conflict, the agent will behave as the principal would like, regardless of whether his or her behavior is monitored. As goal conflict decreases, there is a decreasing motivational imperative for outcome-based contracting, and the issue reduces to risk-sharing considerations. Under the assumption of a risk-averse agent, behavior-based contracts become more attractive. In formal terms,

Proposition 7: The goal conflict between principal and agent is negatively related to behavior-based contracts and positively related to outcome-based contracts.

Another set of extensions relates to the task performed by the agent. For example, the programmability of the task is likely to influence the ease of measuring behavior (Eisenhardt, 1985, 1988). *Programmability* is defined as the degree to which appropriate behavior by the agent can be specified in advance. For example, the job of

a retail sales cashier is much more programmed than that of a high-technology entrepreneur. The argument is that the behavior of agents engaged in more programmed jobs is easier to observe and evaluate. Therefore, the more programmed the task, the more attractive are behavior-based contracts because information about the agent's behavior is more readily determined. Very programmed tasks readily reveal agent behavior, and the situation reverts to the complete information case. Thus, retail sales clerks are more likely to be paid via behavior-based contracting (e.g., hourly wages), whereas entrepreneurs are more likely to be compensated with outcome-based contracts (e.g., stock ownership). In formal terms,

Proposition 8: Task programmability is positively related to behavior-based contracts and negatively related to outcome-based contracts.

Another task characteristic is the measurability of the outcome (Anderson, 1985; Eisenhardt, 1985). The simple model assumes that outcomes are easily measured. However, some tasks require a long time to complete, involve joint or team effort, or produce soft outcomes. In these circumstances, outcomes are either difficult to measure or difficult to measure within a practical amount of time. When outcomes are measured with difficulty, outcome-based contracts are less attractive. In contrast, when outcomes are readily measured, outcome-based contracts are more attractive. In formal terms,

Proposition 9: Outcome measurability is negatively related to behavior-based contracts and positively related to outcome-based contracts.

Finally, it seems reasonable that when principals and agents engage in a long-term relationship, it is likely that the principal will learn about the agent (e.g., Lambert, 1983) and so will be able to assess behavior more readily. Conversely, in short-term agency relationships, the information asymmetry between principal and agent is likely to be greater, thus making out-

come-based contracts more attractive. In formal terms,

Proposition 10: The length of the agency relationship is positively related to behavior-based contracts and negatively related to outcome-based contracts.

Agency Theory and the Organizational Literature

Despite Perrow's (1986) assertion that agency theory is very different from organization theory, agency theory has several links to mainstream organization perspectives (see Table 2). At its roots, agency theory is consistent with the classic works of Barnard (1938) on the nature of cooperative behavior and March and Simon (1958) on the inducements and contributions of the employment relationship. As in this earlier work, the heart of agency theory is the goal conflict inherent when individuals with differing preferences engage in cooperative effort, and the essential metaphor is that of the contract.

Agency theory is also similar to political models of organizations. Both agency and political perspectives assume the pursuit of self-interest at the individual level and goal conflict at the organizational level (e.g., March, 1962; Pfeffer, 1981). Also, in both perspectives, information

asymmetry is linked to the power of lower order participants (e.g., Pettigrew, 1973). The difference is that in political models goal conflicts are resolved through bargaining, negotiation, and coalitions—the power mechanism of political science. In agency theory they are resolved through the coalignment of incentives—the price mechanism of economics.

Agency theory also is similar to the information processing approaches to contingency theory (Chandler, 1962; Galbraith, 1973; Lawrence & Lorsch, 1967). Both perspectives are information theories. They assume that individuals are boundedly rational and that information is distributed asymmetrically throughout the organization. They also are efficiency theories; that is, they use efficient processing of information as a criterion for choosing among various organizing forms (Galbraith, 1973). The difference between the two is their focus: In contingency theory researchers are concerned with the optimal structuring of reporting relationships and decision-making responsibilities (e.g., Galbraith, 1973; Lawrence & Lorsch, 1967), whereas in agency theory they are concerned with the optimal structuring of control relationships resulting from these reporting and decision-making patterns. For example, using contingency theory, we would be concerned with whether a firm is organized in a divisional or matrix structure.

Table 2
Comparison of Agency Theory Assumptions and Organizational Perspectives

Assumption	Perspective				
	Political	Contingency	Organization Control	Transaction Cost	Agency
Self-interest	X			X	X
Goal conflict	X			X	X
Bounded rationality		X	X	X	X
Information asymmetry		X		X	X
Preeminence of efficiency		X	X	X	X
Risk aversion					X
Information as a commodity					X

Using agency theory, we would be concerned with whether managers within the chosen structure are compensated by performance incentives.

The most obvious tie is with the organizational control literature (e.g., Dornbusch & Scott, 1974). For example, Thompson's (1967) and later Ouchi's (1979) linking of known means/ends relationships and crystallized goals to behavior versus outcome control is very similar to agency theory's linking task programmability and measurability of outcomes to contract form (Eisenhardt, 1985). That is, known means/ends relationships (task programmability) lead to behavior control, and crystallized goals (measurable outcomes) lead to outcome control. Similarly, Ouchi's (1979) extension of Thompson's (1967) framework to include clan control is similar to assuming low goal conflict (Proposition 7) in agency theory. Clan control implies goal congruence between people and, therefore, the reduced need to monitor behavior or outcomes. Motivation issues disappear. The major differences between agency theory and the organizational control literature are the risk implications of principal and agent risk aversion and outcome uncertainty (Propositions 4, 5, 6).

Not surprisingly, agency theory has similarities with the transaction cost perspective (Williamson, 1975). As noted by Barney and Ouchi (1986), the theories share assumptions of self-interest and bounded rationality. They also have similar dependent variables; that is, hierarchies roughly correspond to behavior-based contracts, and markets correspond to outcome-based contracts. However, the two theories arise from different traditions in economics (Spence, 1975): In transaction cost theorizing we are concerned with organizational boundaries, whereas in agency theorizing the contract between cooperating parties, regardless of boundary, is highlighted. However, the most important difference is that each theory includes unique independent variables. In transaction cost theory these are asset specificity and small

numbers bargaining. In agency theory there are the risk attitudes of the principal and agent, outcome uncertainty, and information systems. Thus, the two theories share a parentage in economics, but each has its own focus and several unique independent variables.

Contributions of Agency Theory

Agency theory reestablishes the importance of incentives and self-interest in organizational thinking (Perrow, 1986). Agency theory reminds us that much of organizational life, whether we like it or not, is based on self-interest. Agency theory also emphasizes the importance of a common problem structure across research topics. As Barney and Ouchi (1986) described it, organization research has become increasingly topic, rather than theory, centered. Agency theory reminds us that common problem structures do exist across research domains. Therefore, results from one research area (e.g., vertical integration) may be germane to others with a common problem structure (e.g., compensation).

Agency theory also makes two specific contributions to organizational thinking. The first is the treatment of information. In agency theory, information is regarded as a commodity: It has a cost, and it can be purchased. This gives an important role to formal information systems, such as budgeting, MBO, and boards of directors, and informal ones, such as managerial supervision, which is unique in organizational research. The implication is that organizations can invest in information systems in order to control agent opportunism.

An illustration of this is executive compensation. A number of authors in this literature have expressed surprise at the lack of performance-based executive compensation (e.g., Pearce, Stevenson, & Perry, 1985; Ungson & Steers, 1984). However, from an agency perspective, it is not surprising since such compensation should be contingent upon a variety of factors including information systems. Specifically,

richer information systems control managerial opportunism and, therefore, lead to less performance-contingent pay.

One particularly relevant information system for monitoring executive behaviors is the board of directors. From an agency perspective, boards can be used as monitoring devices for shareholder interests (Fama & Jensen, 1983). When boards provide richer information, compensation is less likely to be based on firm performance. Rather, because the behaviors of top executives are better known, compensation based on knowledge of executive behaviors is more likely. Executives would then be rewarded for taking well-conceived actions (e.g., high risk/high potential R&D) whose outcomes may be unsuccessful. Also, when boards provide richer information, top executives are more likely to engage in behaviors that are consistent with stockholders' interests. For example, from an agency viewpoint, behaviors such as using greenmail and golden parachutes, which tend to benefit the manager more than the stockholders, are less likely when boards are better monitors of stockholders' interests. Operationally, the richness of board information can be measured in terms of characteristics such as frequency of board meetings, number of board subcommittees, number of board members with long tenure, number of board members with managerial and industry experience, and number of board members representing specific ownership groups.

A second contribution of agency theory is its risk implications. Organizations are assumed to have uncertain futures. The future may bring prosperity, bankruptcy, or some intermediate outcome, and that future is only partly controlled by organization members. Environmental effects such as government regulation, emergence of new competitors, and technical innovation can affect outcomes. Agency theory extends organizational thinking by pushing the ramifications of outcome uncertainty to their implications for creating risk. Uncertainty is

viewed in terms of risk/reward trade-offs, not just in terms of inability to preplan. The implication is that outcome uncertainty coupled with differences in willingness to accept risk should influence contracts between principal and agent.

Vertical integration provides an illustration. For example, Walker and Weber (1984) found that technological and demand uncertainty did not affect the "make or buy" decision for components in a large automobile manufacturer (principal in this case). The authors were unable to explain their results using a transaction cost framework. However, their results are consistent with agency thinking if the managers of the automobile firm are risk neutral (a reasonable assumption given the size of the automobile firm relative to the importance of any single component). According to agency theory, we would predict that such a risk-neutral principal is relatively uninfluenced by outcome uncertainty, which was Walker and Weber's result.

Conversely, according to agency theory, the reverse prediction is true for a new venture. In this case, the firm is small and new, and it has limited resources available to it for weathering uncertainty: The likelihood of failure looms large. In this case, the managers of the venture may be risk-averse principals. If so, according to agency theory we would predict that such managers will be very sensitive to outcome uncertainty. In particular, the managers would be more likely to choose the "buy" option, thereby transferring risk to the supplying firm. Overall, agency theory predicts that risk-neutral managers are likely to choose the "make" option (behavior-based contract), whereas risk-averse executives are likely to choose "buy" (outcome-based contract).

Empirical Results

Researchers in several disciplines have undertaken empirical studies of agency theory. These studies, mirroring the two streams of theoretical agency research, are in Table 3.

Table 3
Summary of Agency Theory Studies

Author(s)	Research Stream	Sample	Agency Variables	Companion Theory	Dependent Variables	Results
Amihud & Lev (1981)	Positivist	309 Fortune 500 firms	Manager vs. owner controlled	None	Conglomerate mergers & diversification	Support
Walking & Long (1984)	Positivist	105 U.S. firms	Management's equity & options	Shareholder welfare & other controls	Managerial resistance to takeover bid	Support
Anderson (1985)	Principal-Agent	159 sales districts in 13 electronics firms	Importance of non-selling activities, length of selling cycle, & difficulty evaluating sales performance	Transaction cost	Representative vs. corporate sales force	Mixed
Eisenhardt (1985)	Principal-Agent	54 retail stores	Information systems, cost of outcome measurement, & outcome uncertainty	Organizational control	Salary vs. commission	Support
Eccles (1985)	Principal-Agent	150 interviews in 13 chemical, electronics, heavy machinery, & machine component firms	Decentralization	Equity	Type of transfer price	Inductive model
Wolfson (1985)	Positivist	39 oil & gas limited partnerships	General partner's track record	Tax effects	Share price	Support
Argawal & Mandelker (1987)	Positivist	209 major corporations	Executive stock holdings	None	Acquisitions, divestitures, & debt/equity ratio	Support

Table 3 (continued)
Summary of Agency Theory Studies

Author(s)	Research Stream	Sample	Agency Variables	Companion Theory	Dependent Variables	Results
Kosnik (1987)	Positivist	110 major corporations targeted for greenmail	Proportion of outside directors, equity held by outside directors, & outside directors with executive experience	Hegemony	Payment of greenmail (Yes/No)	Mixed
Eisenhardt (1988)	Principal-Agent	54 retail stores	Job program-mability, span of control, & outcome uncertainty	Institutional	Salary vs. commission	Support
Conlon & Parks (1988)	Principal-Agent	40 dryads	Monitoring	Institutional	Performance-contingent compensation	Support
Barney (1988)	Positivist	32 Japanese electronics firms	Employee stock ownership	Size & growth controls	Cost of equity	Support
Singh & Harianto (in press)	Positivist	84 Fortune 500 firms	Managerial stock ownership & takeover threat	Managerialist	Golden parachute contracts	Support

Note. This set of studies was developed through contacting other agency researchers, scanning journals, and following up referenced articles. Although the list is not exhaustive, it includes many of the relevant studies.

Results of the Positivist Stream

In the positivist stream, the common approach is to identify a policy or behavior in which stockholder and management interests diverge and then to demonstrate that information systems or outcome-based incentives solve the agency problem. That is, these mechanisms coalign managerial behaviors with owner preferences. Consistent with the positivist tradition, most of these studies concern the separation of ownership from management in large corporations, and they use secondary source data that are available for large firms.

One of the earliest studies of this type was conducted by Amihud and Lev (1981). These researchers explored why firms engage in conglomerate mergers. In general, conglomerate mergers are not in the interests of the stockholders because, typically, stockholders can diversify directly through their stock portfolio. In contrast, conglomerate mergers may be attractive to managers who have fewer avenues available to diversify their own risk. Hence, conglomerate mergers are an arena in which owner and manager interests diverge. Specifically, these authors linked merger and diversification behaviors to whether the firm was owner controlled (i.e., had a major stockholder) or manager controlled (i.e., had no major stockholder). Consistent with agency theory arguments (Jensen & Meckling, 1976), manager-controlled firms engaged in significantly more conglomerate (but not more related) acquisitions and were more diversified.

Along the same lines, Walking and Long (1984) studied managers' resistance to takeover bids. Their sample included 105 large U.S. corporations that were targets of takeover attempts between 1972 and 1977. In general, resistance to takeover bids is not in the stockholders' interests, but it may be in the interests of managers because they can lose their jobs during a takeover. Consistent with agency theory (Jensen & Meckling, 1976), the authors found that managers who have substantial equity positions within

their firms (outcome-based contracts) were less likely to resist takeover bids.

The effects of market discipline on agency relationships were examined in Wolfson's (1985) study of the relationship between the limited (principals) and general (agent) partners in oil and gas tax shelter programs. In this study, both tax and agency effects were combined in order to assess why the limited partnership governance form survived in this setting despite extensive information advantages and divergent incentives for the limited partner. Consistent with agency arguments (Fama, 1980), Wolfson found that long-run reputation effects of the market coaligned the short-run behaviors of the general partner with the limited partners' welfare.

Kosnik (1987) examined another information mechanism for managerial opportunism, the board of directors. Kosnik studied 110 large U.S. corporations that were greenmail targets between 1979 and 1983. Using both hegemony and agency theories, she related board characteristics to whether greenmail was actually paid (paying greenmail is considered not in the stockholders' interests). As predicted by agency theory (Fama & Jensen, 1983), boards of companies that resisted greenmail had a higher proportion of outside directors and a higher proportion of outside director executives.

In a similar vein, Argawal and Mandelker (1987) examined whether executive holdings of firm securities reduced agency problems between stockholders and management. Specifically, they studied the relationship between stock and stock option holdings of executives and whether acquisition and financing decisions were made consistent with the interests of stockholders. In general, managers prefer lower risk acquisitions and lower debt financing (see Argawal & Mandelker, 1987, for a review). Their sample included 209 firms that participated in acquisitions and divestitures between 1974 and 1982. Consistent with agency ideas (e.g., Jensen & Meckling, 1976), executive security holdings (outcome-based contract) were related to acqui-

sition and financing decisions that were more consistent with stockholder interest. That is, executive stock holdings appeared to coalign managerial preferences with those of stockholders.

Singh and Harianto (in press) studied golden parachutes in a matched sample of 84 *Fortune* 500 firms. Their study included variables from both agency and managerialist perspectives. Consistent with agency theory (Jensen & Meckling, 1976; Fama & Jensen, 1983), the authors found that golden parachutes are used to coalign executive interests with those of stockholders in takeover situations, and they are seen as an alternative outcome-based contract to executive stock ownership. Specifically, the authors found that golden parachutes were positively associated with a higher probability of a takeover attempt and negatively associated with executive stock holdings.

Finally, Barney (1988) explored whether employee stock ownership reduces a firm's cost of equity capital. Consistent with agency theory (Jensen & Meckling, 1976), Barney argued that employee stock ownership (outcome-based contract) would coalign the interests of employees with stockholders. Using efficient capital market assumptions, he further argued that this coalignment would be reflected in the market through a lower cost of equity. Although Barney did not directly test the agency argument, the results are consistent with an agency view.

In summary, there is support for the existence of agency problems between shareholders and top executives across situations in which their interests diverge—that is, takeover attempts, debt versus equity financing, acquisitions, and divestitures, and for the mitigation of agency problems (a) through outcome-based contracts such as golden parachutes (Singh & Harianto, in press) and executive stock holdings (Argawal & Mandelker, 1987; Walking & Long, 1984) and (b) through information systems such as boards (Kosnik, 1987) and efficient markets (Barney, 1988; Wolfson, 1985). Overall, these studies sup-

port the positivist propositions described earlier. Similarly, laboratory studies by DeJong and colleagues (1985), which are not reviewed here, are also supportive.

Results of the Principal-Agent Stream

The principal-agent stream is more directly focused on the contract between the principal and the agent. Whereas the positivist stream lays the foundation (that is, that agency problems exist and that various contract alternatives are available), the principal-agent stream indicates the most efficient contract alternative in a given situation. The common approach in these studies is to use a subset of agency variables such as task programmability, information systems, and outcome uncertainty to predict whether the contract is behavior- or outcome-based. The underlying assumption is that principals and agents will choose the most efficient contract, although efficiency is not directly tested.

In one study, Anderson (1985) probed vertical integration using a transaction cost perspective with agency variables. Specifically, she examined the choice between a manufacturer's representative (outcome-based) and a corporate sales force (behavior-based) among a sample of electronics firms. The most powerful explanatory variable was from agency theory: the difficulty of measuring outcomes (measured by amount of nonselling tasks and joint team sales). Consistent with agency predictions, this variable was positively related to using a corporate sales force (behavior-based contract).

In other studies, Eisenhardt (1985, 1988) examined the choice between commission (outcome-based) and salary (behavior-based) compensation of salespeople in retailing. The original study (1985) included only agency variables, while a later study (1988) added additional agency variables and institutional theory predictions. The results supported agency theory predictions that task programmability, information systems (measured by the span of control), and outcome uncertainty variables (measured

by number of competitors and failure rates) significantly predict the salary versus commission choice. Institutional variables were significant as well.

Conlon and Parks (1988) replicated and extended Eisenhardt's work in a laboratory setting. They used a multiperiod design to test both agency and institutional predictions. Consistent with agency theory (Harris & Raviv, 1978), they found that information systems (manipulated by whether or not the principal could monitor the agent's behavior) were negatively related to performance-contingent (outcome-based) pay. They also found support for the institutional predictions.

Finally, Eccles (1985) used agency theory to develop a framework for understanding transfer pricing. Using interviews with 150 executives in 13 large corporations, he developed a framework based on notions of agency and fairness to prescribe the conditions under which various sourcing and transfer pricing alternatives are both efficient and equitable. Prominent in his framework is the link between decentralization (arguably a measure of task programmability) and the choice between cost (behavior-based contract) and market (outcome-based contract) transfer pricing mechanisms.

In summary, there is support for the principal-agent hypotheses linking contract form with (a) information systems (Conlon & Parks, 1988; Eccles, 1985; Eisenhardt, 1985), (b) outcome uncertainty (Eisenhardt, 1985), (c) outcome measurability (Anderson, 1985; Eisenhardt, 1985), (d) time (Conlon & Parks, 1988), and (e) task programmability (Eccles, 1985; Eisenhardt, 1985). Moreover, this support rests on research using a variety of methods including questionnaires, secondary sources, laboratory experiments, and interviews.

Recommendations for Agency Theory Research

As argued above, agency theory makes contributions to organization theory, is testable, and

has empirical support. Overall, it seems reasonable to urge the adoption of an agency theory perspective when investigating the many problems that have a principal-agent structure. Five specific recommendations are outlined below for using agency theory in organizational research.

Focus on Information Systems, Outcome Uncertainty, and Risk

McGrath, Martin, and Kukla (1981) argued that research is a knowledge accrual process. Using this accrual criterion, next steps for agency theory research are clear: *Researchers should focus on information systems, outcome uncertainty, and risk.* These agency variables make the most unique contribution to organizational research, yet they have received little empirical attention (Table 3). It is important that researchers place emphasis on these variables in order to advance agency theory and to provide new concepts in the study of familiar topics such as impression management, innovation, vertical integration, compensation, strategic alliances, and board relationships.

Studying risk and outcome uncertainty is particularly opportune because of recent advances in measuring risk preferences. By relying on the works of Kahneman and Tversky (1979), MacCrimmon and Wehrung (1986), and March and Shapira (1987), the organizational researcher can measure risk preference more easily and realistically. These techniques include direct measures of risk preference such as lotteries and indirect measures using demographic characteristics such as age and wealth and payoff characteristics such as gain versus loss. (See March and Shapira, 1987, for a review.)

Key on Theory-Relevant Contexts

Organizational theory usually is explored in settings in which the theory appears to have greatest relevance. For example, institutional and resource dependence theories were developed primarily in large, public bureaucracies in which efficiency may not have been a pressing

concern. The recommendation here is to take the same approach with agency theory: *Key on theory-relevant contexts*.

Agency theory is most relevant in situations in which contracting problems are difficult. These include situations in which there is (a) substantial goal conflict between principals and agents, such that agent opportunism is likely (e.g., owners and managers, managers and professionals, suppliers and buyers); (b) sufficient outcome uncertainty to trigger the risk implications of the theory (e.g., new product innovation, young and small firms, recently deregulated industries); and (c) unprogrammed or team-oriented jobs in which evaluation of behaviors is difficult. By emphasizing these contexts, researchers can use agency theory where it can provide the most leverage and where it can be most rigorously tested. Topics such as innovation and settings such as technology-based firms are particularly attractive because they combine goal conflict between professionals and managers, risk, and jobs in which performance evaluation is difficult.

Expand to Richer Contexts

Perrow (1986) and others have criticized agency theory for being excessively narrow and having few testable implications. Although these criticisms may be extreme, they do suggest that research should be undertaken in new areas. Thus, the recommendation is to *expand to a richer and more complex range of contexts*.

Two areas are particularly appropriate. One is to apply the agency structure to organizational behavior topics that relate to information asymmetry (or deception) in cooperative situations. Examples of such topics are impression management (Gardner & Martinko, 1988), lying and other forms of secrecy (Sitkin, 1987), and blame (Leatherwood & Conlon, 1987). Agency theory might contribute an overall framework in which to place these various forms of self-interest, leading to a better understanding of when such behaviors will be likely and when they will be effective.

The second area is expansion beyond the pure forms of behavior and outcome contracts as described in this article to a broader range of contract alternatives. Most research (e.g., Anderson, 1985; Eisenhardt, 1985, 1988) treats contracts as a dichotomy: behavior versus outcome. However, contracts can vary on a continuum between behavior and outcome contracts. Also, current research focuses on a single reward, neglecting many situations in which there are multiple rewards, differing by time frame and contract basis. For example, upper level managers usually are compensated through multiple rewards such as promotions, stock options, and salary. Both multiple and mixed rewards (behavior and outcome) present empirical difficulties, but they also mirror real life. The richness and complexity of agency theory would be enhanced if researchers would consider this broader spectrum of possible contracts.

Use Multiple Theories

A recent article by Hirsch et al. (1987) eloquently compared economics with sociology. They argued that economics is dominated by a single paradigm, price theory, and a single view of human nature, self-interest. In contrast, the authors maintained that a strength of organizational research is its polyglot of theories that yields a more realistic view of organizations.

Consistent with the Hirsch et al. arguments, the recommendation here is to *use agency theory with complementary theories*. Agency theory presents a partial view of the world that, although it is valid, also ignores a good bit of the complexity of organizations. Additional perspectives can help to capture the greater complexity.

This point is demonstrated by many of the empirical studies reviewed above. For example, the Singh and Harianto (in press) and Kosnik (1987) studies support agency theory hypotheses, but they also use the complementary perspectives of hegemony and managerialism. These perspectives emphasize the power and political aspects of golden parachutes and green-

mail, respectively. Similarly, the studies by Eisenhardt (1988) and Conlon and Parks (1988) combine institutional and agency theories. The institutional emphasis on tradition complements the efficiency emphasis of agency theory, and the result is a better understanding of compensation. Other examples include Anderson (1985), who coupled agency and transaction cost, and Eccles (1985), who combined agency with equity theory.

Look Beyond Economics

The final recommendation is *that organizational researchers should look beyond the economics literature*. The advantages of economics are careful development of assumptions and logical propositions (Hirsch et al., 1987). However, much of this careful theoretical development has already been accomplished for agency theory. For organizational researchers, the payoff now is in empirical research, where organizational researchers have comparative advantage (Hirsch et al., 1987). To rely too heavily on economics with its restrictive assumptions such as efficient markets and its single-perspective

style is to risk doing second-rate economics without contributing first-rate organizational research. Therefore, although it is appropriate to monitor developments in economics, it is more useful to treat economics as an adjunct to more mainstream empirical work by organizational scholars.

Conclusion

This paper began with two extreme positions on agency theory—one arguing that agency theory is revolutionary and a powerful foundation (Jensen, 1983) and the other arguing that the theory addresses no clear problem, is narrow, lacks testable implications, and is dangerous (Perrow, 1986). A more valid perspective lies in the middle. Agency theory provides a unique, realistic, and empirically testable perspective on problems of cooperative effort. The intent of this paper is to clarify some of the confusion surrounding agency theory and to lead organizational scholars to use agency theory in their study of the broad range of principal-agent issues facing firms.

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