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The New Logic in Building Isomorphic Theory of Management Decision Realities

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The New Logic in Building Isomorphic Theory of Management Decision Realities

Abstract

Purpose — This article describes ethnographic theory and research that maintains the integrity of the individual case while generalizing to multiple cases in research on management decisions. The study aims to provoke and prod management decision researchers to employ ethnographic research tools rather than relying only or mainly on the dominant logic of variable-based empirical positivism.

Design/methodology/approach — Details of two studies of multiple cases in two task environments inform explicit statements of the principles necessary for bridging the gap between management decision practice and research. Six principles serve as pillars for this bridge.

Findings— Averages mislead. Partial regression coefficients inform about the impact of variables but mislead in hinting at the sufficiency of individual variables for all cases when high or low values on any one variable are not sufficient or necessary for a high or low outcome on a dependent variable. Research on management decisions must maintain the integrity of the individual case in analyzing and reporting findings on management decisions. Research tools are available now to accomplish these principles.

Research limitations/implications — Get out and into task environments of management decision makers and collect multiple rounds of emic-etic-emic-etic interpretations of management decision processes and outcomes. Go to fsQCA.com to learn how to do qualitative

comparative analysis of alternative causal recipes leading to relevant management decision outcomes.

Originality/value — This article describes and calls for a paradigm shift from the current empirical-positivistic matrix-algebra dominant logic to a new case-based Boolean-algebra logic for management decision researchers.

Keywords — ethnography, case study research; management decision; theory; principles

Paper type — conceptual

Introduction

This article shows how the researcher can maintain the integrity of the individual case while generalizing to multiple cases in the study of management decisions. First, the article offers a thesis to explain the gap between management decision practice and research. Second, the article describes two studies of multiple cases in two task environments which build useful theories of management decisions. Third, the article offers six principles for advancing ethnographic theory and methods into management decision realities. The article concludes with recommendations for theory-building and empirical research in management decisions.

The gist of the thesis here is that two principal and related reasons support the continuation of “the gap between management practice and research” (Starkey, Hatchuel, and Tempest, 2009; Bartunek, 2011). The first reason is the lack of widespread knowledge of advances in theory that describes, explains, forecasts, and controls real-life decisions and outcomes in naturally occurring contexts. The second is the continuing dominant logic and use of analytics that deconstruct/destroy knowledge of the individual case in reporting the influence of individual independent variables on one or more outcome variables.

The analytical tools that a study uses influences theory building and revisions; the application of different tools (e.g., multiple regression analysis and structural equation modeling versus fuzzy-set qualitative comparative analysis and system dynamics modeling) in analyzing the same study’s data affects what the researcher perceives in the findings—dramatically—and in revising theory.

A behavioral antecedent to the lack of realistic theory to explain actual outcomes is the widespread failure among academic researchers to get-out into the field (i.e., naturally occurring

contexts where executives attempt to make sense, decide, implement, and interpret outcomes) by management, marketing, and operations (MMP) academics. The dominance of asking questions far from the real-life contexts under study and the widespread use of etic-generated 7-point scaled responses, rather than “being there” and using “direct research” (Mintzberg, 1979) methods continues to support the gap and contribute to the lack.

“Ethnography” is the study of naturally occurring thinking, behavior, and outcomes in real-life contexts. Ethnographic research includes direct observation and asking open-ended questions face-to-face to build and revise ethnographic decision tree modeling (EDTM) of how decision processes occur for specific contexts. Such research provides models that forecast specific choice outcomes of executives using paths that occur earlier in their sensemaking that leads to alternative choice outcomes (Howard and Morgenroth, 1968; see Gladwin, 1989; Woodside, 2010). A key point here is that ethnography-based theory includes and goes beyond seeking to describe and explain behavior in real-life contexts; EDTM reports forecast outcomes.

While the same objectives apply to MMP studies that employ analysis of variance (ANOVA), multiple regression analysis (MRA) and structural equation modeling (SEM), EDTM and similar methods (e.g., fuzzy set qualitative comparative analysis, fsQCA, see Ragin 2008; degrees of freedom analysis, DOFA, see Woodside, 2010) differ fundamentally from these more popular approaches to data analysis. The dominant analytic methods (ANOVA, MRA, and SEM) deconstruct individual (case) data into variables using matrix-algebra calculations while the less well-known analytic methods (EDTM, fsQCA, DOFA) maintain the integrity of the individual cases in the data set in applying Boolean-algebra calculations.

The dominant methods most often ask and answer questions concerning the “net effects” of individual simple antecedent variables on an outcome variable. While an MRA model might

report the “total effect” via summing the direct and indirect net effects on an outcome variable, the model often is not relevant for any particular case in the data set. The empirical MRA model over reports the value of some variables that are significant statistically but not relevant to many specific cases in the data set; the same model under reports the value of some of the variables found to be non-significant in the model but are necessary ingredients in some causal recipes leading to particular outcomes of interest.

Maintaining the Integrity of the Individual Case While Generalizing to Multiple Cases

EDTM, fsQCA, and DOFA recognize the necessity of maintaining the integrity of individual cases in analyzing management decision data. These methods also recognize the necessity of generalizing beyond the individual case—not only to theory (as done by DOFA) but also to representative sets of cases—as done by EDTM and fsQCA. Advances in case-based analytics include dynamic generalization across occurrences within and across cases via system dynamics modeling (e.g., Huff, Huff, and Barr, 2001).

While studies building on a theory-method employing matrix algebra calculations report on net effects and struggle when reporting three-way, four-way and higher interaction effects (see Ragin, 2008) among variables, theory-methods employing Boolean-algebra report multiple causal recipes (i.e., conjunctive statements) that usually include two-to-six ingredients (i.e., simple antecedent conditions). While one simple antecedent condition rarely is sufficient for a high score in an outcome condition, the causal recipes are sufficient but not necessary in forecasting a high score for a specific outcome condition.

To deepen understanding of causal path analysis using Boolean algebra consider the following two examples. Both examples are studies of management decisions in different business-to-business (B2B) contexts.

The first example is a business-to-business study that seeks to understand, explain, forecast, and generalize across the various new products different manufacturers bring before the committee (Montgomery, 1975). The study informs insight in alternative strategies for manufacturers that lead to approval as well as rejection by customers of new product strategies. Figure 1 is a visual of the set of alternative causal paths leading to acceptance versus rejection of a new product offering by manufacturers by a supermarket buying committee.

Figure 1 here.

Note that twelve paths appear in Figure 1. Table 1 describes the recipes for each of the twelve paths. Table 1 includes notation from Boolean algebra and qualitative comparative analysis (QCA) to express the alternative twelve conjunctive paths.

Table 1 here.

Each path represents a complex causal recipe. A “complex causal recipe” is a conjunctive statement that includes two or more simple antecedent conditions. A central proposition that follows from ethnographic theory and research on management decisions is that a simple antecedent condition (i.e., a “strong manufacturer’s reputation” such as Proctor & Gamble’s reputation) alone is rarely sufficient for a high score in an outcome condition—such as acceptance of a new product by the buying committee.

For the model of management decisions by the buying committee, no simple antecedent condition appearing in this model is a “deal-breaker”, that is, the absence (or appearance) of the

condition is sufficient to cause a new product to be rejected by the buying committee. For some management decisions, the presence or absence of a particular simple antecedent condition is sufficient to cause a negative outcome. For example, Doug Flutie's, a Boston College and professional quarterback for American and Canadian football teams for many years, short height was sufficient to cause his rejection by all National Football League (NFL) members for several years. Only after Flutie played professionally for many years in the Canadian Football League (CFL) and won the CFL's "Most Valuable Player" twice was he finally offered a quarterback job by an NFL team. His height (5'10" or 1.78 meters) was a deal-breaker for all NFL teams for most of his professional career.

Note in the management decision model for the supermarket buying committee that a manufacturer's reputation can be weak – need not be "strong" or "average" – and the committee will still decide to carry the new product, if the advertising support is strong for the new product. This path is a rare occurrence for the buying committee: $\sim R \bullet \sim RA \bullet S$ (see Table 1 for the key to the letters and symbols that explain this path. Most manufacturers having weak reputations do not have the financial resources to combine strong advertising support with their new product introductions. Advertising budgets two+ standard deviations above the norm for new product introductions are representative of "strong advertising support." Reluctantly, the buying committee feels compelled to accept a new product following this path many store customers might ask for the new product and will be surprised and disappointed if the product is unavailable in the firm's stores.

Competitors' carrying the product and the quality of the sales presentation for the new product are relevant issues for some, but not all paths, in the model. Consequently, rather than concluding that such issues are unimportant or not significant statistically, research using QCA

identifies conjunctive statements where they are relevant as well as additional situations where they are irrelevant to management decisions. A free software program with manual is available (fsQCA.com) for testing the consistency and coverage of alternative causal recipes for predicting high scores (e.g., adoption of new products as the outcomes).

Rather than “critical success factors” and “key success factors” (Cooper and Kleinschmidt, 2007) some of the conjunctive statements in Figure 1 and Table 1 suggest “key success paths” are necessary for manufacturers to consider. While a high score on a conjunctive statement may be sufficient but not necessary for achieving high score on an outcome condition, no one factor is sufficient or necessary. A factor in a firm’s profile may block its ability to follow a specific path (the lack of a strong reputation) but its absence does not doom the firm to failure. Management decision implementation requires high-quality conjoined executive of all factors found in a specific path.

Consequently, a conjunctive score for a path is the lowest value occurring for any one factor included in the path—the axiom that a strategy is as strong as its weakest link applies to QCA. Thus, using fuzzy set scores (such scores range from 0.00 to 1.00 for all simple antecedent conditions and the outcome condition with the outcome conditions $\geq .75$ indicating acceptance of a new product by the supermarket buying committee), consider a particular case where the manufacturer’s reputation is low ($R = 0.20$; the newness of the product this manufacturer presents to the committee is low ($N = 0.10$); this manufacturer is offering free samples with this new product ($F = 1.00$). The causal recipe score for the combination $R \cdot N \cdot F$ equals 0.10—the lowest score of the three simple antecedent conditions; the scores of 0.10 represents how much the three conditions share in common in this conjunctive statement. A score equals to 0.10 indicates low sufficiency for a high score of an outcome condition.

However, path 3 in the findings indicates that a conjunctive statement that includes the negation of newness results in a high conjunctive score in combination with high R and F scores. A negation score equals 1 minus the observed score. Thus, for $N = 0.10$; $\sim N = 1.00 - 0.10 = 0.90$. Consequently, the combination of $R = 0.95$, $\sim N = .90$, and $F = 1.00$ provides a conjunctive score equal to .90. This score indicates sufficiency for a high score in the outcome condition, that is, acceptance of the new product by the buying committee. Subsequent testing of conjunctive scores confirms that $R \bullet \sim N \bullet F \geq .75$ is sufficient for the occurrence of high scores for the outcome condition. The two scatter plots in Figure 2 show the distribution of observed scores for twenty cases of manufacturers' new product offerings to the supermarket buying committee. Plot A shows low consistency in the association of the conjunctive scores and the outcome condition; Plot B shows high consistency—for all cases where $R \bullet \sim N \bullet F$ are above .75, the outcome condition is above .75.

Figure 2 here.

For plot B in Figure 2, all six cases with high scores for the conjunctive statement, $R \bullet \sim N \bullet F$, have high scores for the outcome condition, accept the new product offering. Note also in Figure 2, the relationship between scores for $R \bullet \sim N \bullet F$ and the outcome condition is asymmetrical—while high scores for $R \bullet \sim N \bullet F$ associate with high scores for the outcome condition, both low and high scores occur for the outcome condition with low scores for $R \bullet \sim N \bullet F$. Unlike the assumption of symmetrical relationships in tests based on matrix algebra, QCA makes no assumption about low scores on the antecedent condition being associated with low scores on the outcome condition. The asymmetric relationship assumption matches with the reality that other paths exist along with high scores for $R \bullet \sim N \bullet F$ and high scores for the outcome condition.

What should a manufacturer do if the firm does not have a strong reputation and the manufacturer's new product is not significantly new? Figure 1 and Table 1 provides implications for strategic planning for this and additional case scenarios. A path may be available that this manufacturer may plan to follow (e.g., path 10 in Table 1). The manufacturer may need to convince the customer (supermarket buying committee) that path 10 applies to his her specific case.

Such analysis provides useful description, explanation, prediction, and control implications. QCA for developing and testing the business model concept in the study of firm behavior (cf. Tikkanen, Lamberg, Parvinen, and Kallunki, 2005) serves to deepen and expand the interplay between theory and research while providing practical strategic implications of what to do in each of several case-level situations.

The second example is an application of ethnographic theory and research to the American office furniture industry. Woodside (2003) conducted interviews, observed meetings with customers and sales representatives, attended sales meetings within a major office furniture distributor, alone with customers, and meetings with members of the office furniture distributor and manufacturers' salespersons. Field work took place two-days per week, every week for three months. The distributor has offices in three cities in the state and multiple face-to-face interviews by Woodside (2003) were collected at all three locations as well as customer firm locations.

Figure 3 is a summary of the contingency paths in the observed business model of the office-furniture distributor firm. Figure 3 represents a generalized firm-level model that explains alternative relationships with different customers. The discussion here highlights a few findings in Woodside's (2003) study. The model indicates that bids in proposals by the firm to a

customer include prices for the same furniture items that vary over a wide range depending on the context of the individual case.

Figure 3 here.

For example, if a Steelcase distributor is bidding for the contract, the bid will typically include lower prices—Steelcase is an office furniture manufacturer that the distributor under study does not represent; Steelcase is known throughout the industry to support aggressive price bids by its distributors. Box 5 in Figure 3 refers to this behavior.

If the contract is very large (i.e., \$100,000+) the customer firm is not asked to pay for design work related to the architecture layouts of selected furniture in the customer's office. Box 9 in Figure 3 relates to this issue. While giving the appearance possibly of great detail; Figure 3 is a broad summary of alternative paths in the business model of the firm. See Woodside (2003) for the nitty-gritty details.

Figure 3 provides information on how customers make sense of bids received from office furniture distributors. The practice of giving “preferred suppliers” a second chance to revise their bids before the customer firm makes a choice (box 14) results in “out-suppliers” frequently have little chance of replacing a “preferred supplier”. “Out-suppliers” are vendors who sometimes bid in response to request for proposals (RFPs) but rarely receive contracts. An out-supplier for one customer may be a preferred vendor for other customers.

Table 2 shows how the paths taken by the firm associate with prices in bids for contracts awarded to the firm. The paths in Table 2 describe the conjunctive recipes that one distributor experiences; this distributor is not always the firm that the oval (numbered 20) at the bottom of Figure 3—a competing distributor sometimes win the contract.

Table 2 here.

Table 2 shows how paths associate with different shares of activity and different averages for bids made by the study's focal distributor. Comparing path 1 and 3 in Table 2 indicates that the presence versus absence of Steelcase as a competitor in a particular case and path associates with a lower average bid price.

Six Principles for Ethnographic Theory and Methods into Management Decision Realities

The following six principles may serve as useful guideposts for researchers seeking to apply ethnographic theory and methods in their studies on management decisions. The listing is tentative and incomplete but sufficient for guiding and motivating both novices and advanced researchers.

Do Direct Research in Management Decision Contexts

Ethnographic research requires physical entry by the researcher into real-life management decision contexts. Simon (1990, p. 7) most famously reports, "Human rational behavior is shaped by a scissors whose two blades are the structure of the task environment and the computational capabilities of the actor."

Ethnographic researchers recognize the necessity of describe and explain contextual influences in management decision processes. Nonconscious and conscious thinking and actions by executives ("actors") in management decisions change as their task environments change. Also, unguarded and highly insightful comments by executives sometimes are heard by the researcher while being present in the task environment—such comments represent meaningful data that are rarely obtained from self-completed surveys.

Collect Emic Reporting and Emic-Etic-Emic-Etic Reporting to Achieve High Accuracy

For management decision ethnographic theory and research, an “emic” report is an executive’s own description and assessment of a management-decision task environment, process, and outcome. An “etic” report is a researcher’s description and assessment of a management-decision task environment, process, and outcome.

Ethnographic theory and research frequently includes multiple rounds of emic-etic-emic-etic reporting. First the actor (i.e., executive) reports aloud and responds to questions by the researcher. The researcher prepares a preliminary decision tree diagram or decision systems analysis (DSA) map (Howard, Hulbert, and Farley, 1975; Woodside and Samuel, 1981) that describes and explains the information from the actor. This researcher shows this preliminary report to the actor and other actors participating in the task environment. These actors assist in revising the preliminary report by correcting mistakes and adding missing details to the initial report.

The researcher revising the tree diagram and/or DSA and returns a third time to the show the revisions to actors in rounds 1 and 2 and the researcher may show the findings to additional actors relevant to the task environment who did not participant in the first two rounds of meetings. This process might continue for several additional rounds; Morgenroth (1964) reports on twelve rounds of data collection mostly with the same decision makers in reporting his ethnographic decision tree map (EDTM) of the task environment, processes, and outcomes for gasoline pricing decisions (also see Howard and Morgenroth, 1968).

Do Property Space Analysis and Theory-Driven Sampling

Ethnographic researchers seek to study both typical and rare-but-important cases. The researchers examine the conjoining of all possible task environments, decision processes, and outcomes.

These researchers recognize that averages mislead. For example, the average American adult takes one trip by air for personal reasons annually (Woodside, 2012). However, about two-thirds of Americans do not travel by air annually and 3 percent take 30 percent of the air trips (Woodside, 2012). Consequently, to study antecedents leading to air travel behavior and highly frequently air travel behavior requires a biased sampling plan.

The distributions of management decisions in all task environments are similar to air travel in that the decisions are not normally distributed. The actors making the decisions are distinct from other actors in the firm; consequently, a survey sent by a researcher via the internet or postal mail is likely to miss the relevant actor and the multiple actors having direct involvement in the management decision. The ethnographic researcher works hard to collect data by interviews and direct observations with actors directly participating in the management decision under study.

“Property space analysis” (PSA) is identifying all conjunctive combinations of antecedent conditions that are theoretically possible (see Lazarsfeld, 1937). A PSA identifies highly likely to occur task environments and decision paths as well as environments and paths that occur frequently. The ethnographic researcher examines for the possible occurrence of theoretically possible but seemingly practically impossible occurrence of rare combinations; the researcher is likely to over-sample or study all cases found that were thought to be impossible to occur. For example, consider the combination of massive fraud (\$20 billion+ theft of investors’ funds) by an investment firm coupled with frequent (5+) investigations finding no evidence of fraud by a

regulatory agency (e.g., Securities and Exchange Commission) of the same firm before and during the times when the frauds were being committed. While such a conjunction of massive fraud and finding no evidence of fraud might be rare, such a case was uncovered while the fraud was occurring (Markopolos, 2011).

Report Key Success Paths, Not Key Success Factors

Ethnographic theorists recognize that a few key success paths (KSPs) are sufficient for a specific outcome to occur (e.g., a highly profitable year for a specific product line) but no path is necessary. Key success factors are not sufficient or necessary for a specific outcome to occur.

Data analyses in studies on key success factors (KSFs) for successful product development indicate that no one factor correlates perfectly ($r=1.00$ or even highly (e.g., $r > .60$) with success (e.g., Di Benedetto, 1999; Cooper and Kleinschmidt, 2007). Also, some KSFs relate positively to other KSFs; a few major groups of KSFs represent some amount of independence in influencing success versus failure. But attempting to separate-out the independent influences of KSFs on success/failure is an unrealistic objective and an objective less insightful in comparison to alternative research approaches.

Specific key failure paths (KFP's) are identifiable, describable, and explainable. No one factor is sufficient or necessary for a failure to occur. The statements here about KFPs and KSPs are propositions central to creating mid-range ethnographic theories of management decisions.

Build Theories of Sufficiency not Necessity

Multiple routes (i.e., paths) occur that lead to a focal outcome (e.g., adoption of a manufacturer's new product by a supermarket buying committee). Ethnographic researchers seek to describe and explain all such paths. They often seek to describe and explain paths

leading to alternative outcomes as well (e.g., rejection of a manufacturer's new product by the same supermarket buying committee).

Do Case-Based, Not Variable-Based, Analysis

Reporting one or two MRA models do not necessarily identify any conjunctive recipe fitting any specific case leading to any specific outcome. Similar to averages significant partial regression (i.e., b) coefficients in model findings for MRA and SEM are misleading because a high or low value of each variable has no influence for some of the cases—no one independent variable is sufficient or necessary for the occurrence of the specific level of the dependent variable. Deconstructing the data to a variable-base rather than a case base analysis prevents the description of cases that are sufficient in leading to specific outcome by alternative routes.

Recommendations for Theory-Building and Empirical Research in Management Decisions

Maintain the integrity of the individual case in data collection, analysis, and reporting is the principle recommendation for bridging the gap between management decision practice and research. The dominant logic of deconstructing cases to analyze variables is anathema to sound reasoning of combinations of antecedent conditions leading to focal outcomes—such as successful and unsuccessful decisions.

Get out! If your research focus is on management decisions, the second recommendation is to get out from well-known academic environments and into the task environments of real-life management decision-makers (Woodside, 2011). This article describes a few of the many studies that include getting out and into such task environments. Woodside (2010) reviews some of this literature in detail.

References

- Bartunek, J. M. (2011), "What has happened to Mode 2?" *British Journal of Management*, Vol. 22, pp.555–558.
- Cooper, R.G., and Kleinschmidt, E.J. (2007). "Winning businesses in product development: The critical success factors." *Research-Technology Management* (http://www.proddev.com/downloads/working_papers/wp_6.pdf); downloaded on 10 December 2009.
- Di Benedetto, C.A. (1999), "Identifying the key success factors in new product launch," *Journal of Product Innovation Management*, Vol. 16, pp.530-544.
- Gladwin, C. (1989), *Ethnographic decision tree modeling*, Thousand Oaks, CA: Sage.
- Howard, J. A., J. Hulbert, and J.U. Farley (1975), "Organizational analysis and information systems design: A decision-process perspective", *Journal of Business Research*, Vol.3, pp.133–148.
- Howard, J. A., and Morgenroth, W. M. (1968), "Information processing model of executive decision", *Management Science*, Vol. 14, pp.416–428.
- Huff, A. S., Huff, J. O., and Barr, P. (2001), *When firms change direction*, New York: Oxford University Press.
- Lazarsfeld, P. F. (1937), "Some remarks on the typological procedures in social research," *Festschrift fur Sozialforschung*, Vol. 6, pp.119–139.
- Markopolos, H. (2011), *No one would listen*. New York: Wiley.

- Mintzberg, H. (1979), "An emerging strategy of 'direct' research", *Administrative Science Quarterly*, Vol. 24, pp.582–589.
- Montgomery, D. B., (1975), "New Product Distribution: An Analysis of Supermarket Buyer Decisions," *Journal of Marketing Research*, Vol. 12 (August), pp.255-264.
- Morgenroth, W. M. (1964), "A method for understanding price determinants", *Journal of Marketing Research*, Vol. 1, pp.17–26.
- Ragin, C. C. (1997), Turning the tables: How case-oriented methods challenge variable-oriented methods, *Comparative Social Research*, Vol. 16, pp.27–42.
- Ragin, C. C. (2008). Redesigning social inquiry: Fuzzy sets and beyond. Chicago: Chicago University Press.
- Simon, H. A. (1990), "Invariants of human behavior," *Annual Review of Psychology*, Vol. 41, pp.1–19.
- Starkey, K., A. Hatchuel, and S. Tempest (2009), "Management research and the new logics of discovery and engagement," *Journal of Management Studies*, Vol. 46, pp. 547–558.
- Tikkanen, H., J.-A. Lamberg, P. Parvinen, and J.-P. Kallunki (2005), "Managerial cognition, action and the business model of the firm," *Management Decision*, Vol.43, pp.789-910.
- Woodside, A.G. (2003), "Middle-range theory construction of the dynamics of organizational marketing-buying behavior," *Journal of Business & Industrial Marketing*, Vol.18, pp.309-335.
- Woodside, A.G. (2010), *Case Study Research: Theory, Methods and Practice*, Bingley, UK: Emerald.

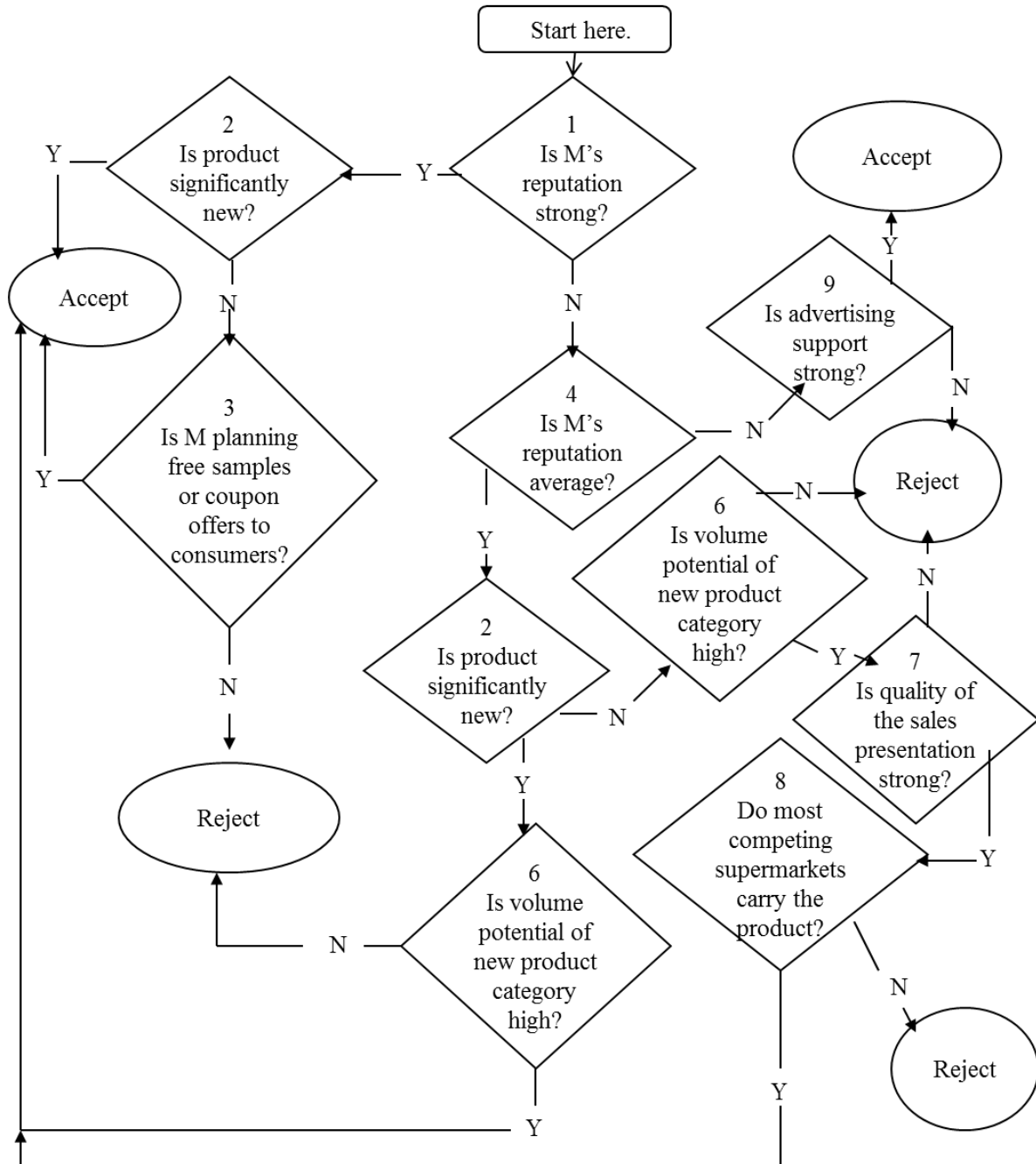
- Woodside, A. G. (2011), “Responding to the severe limitations of cross-sectional surveys: Commenting on Rong and Wilkinson’s perspectives”, *Australasian Marketing Journal*, Vol. 19, pp.153-156.
- Woodside, A.G. (2012), “Case study research of Large N Survey data”, *Field Guide for Culture, Tourism and Hospitality Research*, K. Hyde, C. Ryan, and A.G. Woodside (Eds.), Bingley, UK: Emerald, forthcoming.
- Woodside, A. G., and D. M. Samuel (1981), “Observation of centralized corporate procurement”, *Industrial Marketing Management*, Vol. 10, pp.191–205.

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Figure 1

**An Ethnographic Decision Process Model
of Supermarket Committee Buying Decisions of a
Manufacturer's (M's) New Product Offering**



Source: adapted from Montgomery (1975).

Table 1
Management Decision Paths Leading to Supermarket Buying Committee
Adopting versus Rejecting Manufacturers' New Product Proposals

Path	Boolean Expression	Key
1. 1-2	$R \cdot N \rightarrow A$	R = Reputation; N = New; A = Accept
2. 1-2-3 (a)	$R \cdot \sim N \cdot F \rightarrow A$	F = Free samples
3. 1-2-3 (b)	$R \cdot \sim N \cdot \sim F \rightarrow R$	\sim = Not; R = Reject
4. 1-4-9	$\sim R \cdot \sim RA \cdot S \rightarrow A$	RA = Reputation average; S = ad support
5. 1-4-9 (b)	$\sim R \cdot \sim RA \cdot \sim S \rightarrow R$	
6. 1-4-2-6 (a)	$\sim R \cdot RA \cdot N \cdot V \rightarrow A$	V = Volume potential
7. 1-4-9-6 (b)	$\sim R \cdot RA \cdot N \cdot \sim V \rightarrow R$	
8. 1-4-2-6 (b)	$\sim R \cdot RA \cdot \sim N \cdot \sim V \rightarrow R$	
9. 1-4-2-6-7	$\sim R \cdot RA \cdot \sim N \cdot V \cdot \sim Q \rightarrow R$	
10. 1-4-2-6-7-8	$\sim R \cdot RA \cdot \sim N \cdot V \cdot Q \cdot C \rightarrow A$	Q = quality of sales presentation
11. 1-4-2-6-7-8 (a)	$\sim R \cdot RA \cdot \sim N \cdot V \cdot Q \cdot C \rightarrow A$	C = Competitors' carry new product
12. 1-4-2-6-7-8 (b)	$\sim R \cdot RA \cdot \sim N \cdot V \cdot Q \cdot \sim C \rightarrow R$	

Notes. Mid-level dot (“•”) indicates the conjunctive “and”. The horizontal arrow (“→”) points to an accept or reject outcome.

Figure 2
Scatter Plots of Cases (n = 20) for Manufacturers' New Products
and Supermarket Buying Committee's Decisions
for Two Different Causal Recipes

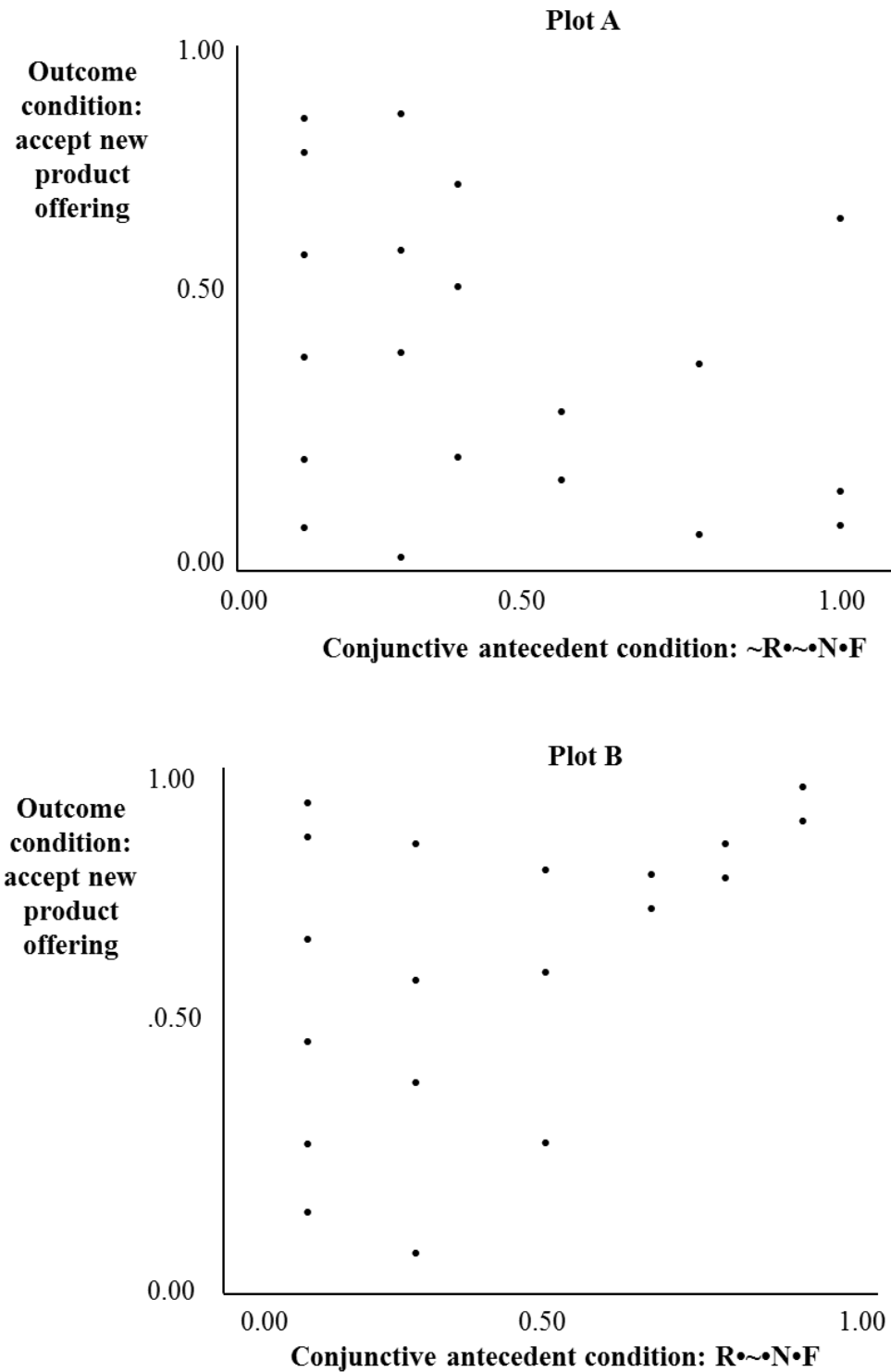


Figure 3
Contingency Pricing Strategies and Customer Responses in Office Furniture
Manufacturer-Distributor Channels for Larger Order Bids

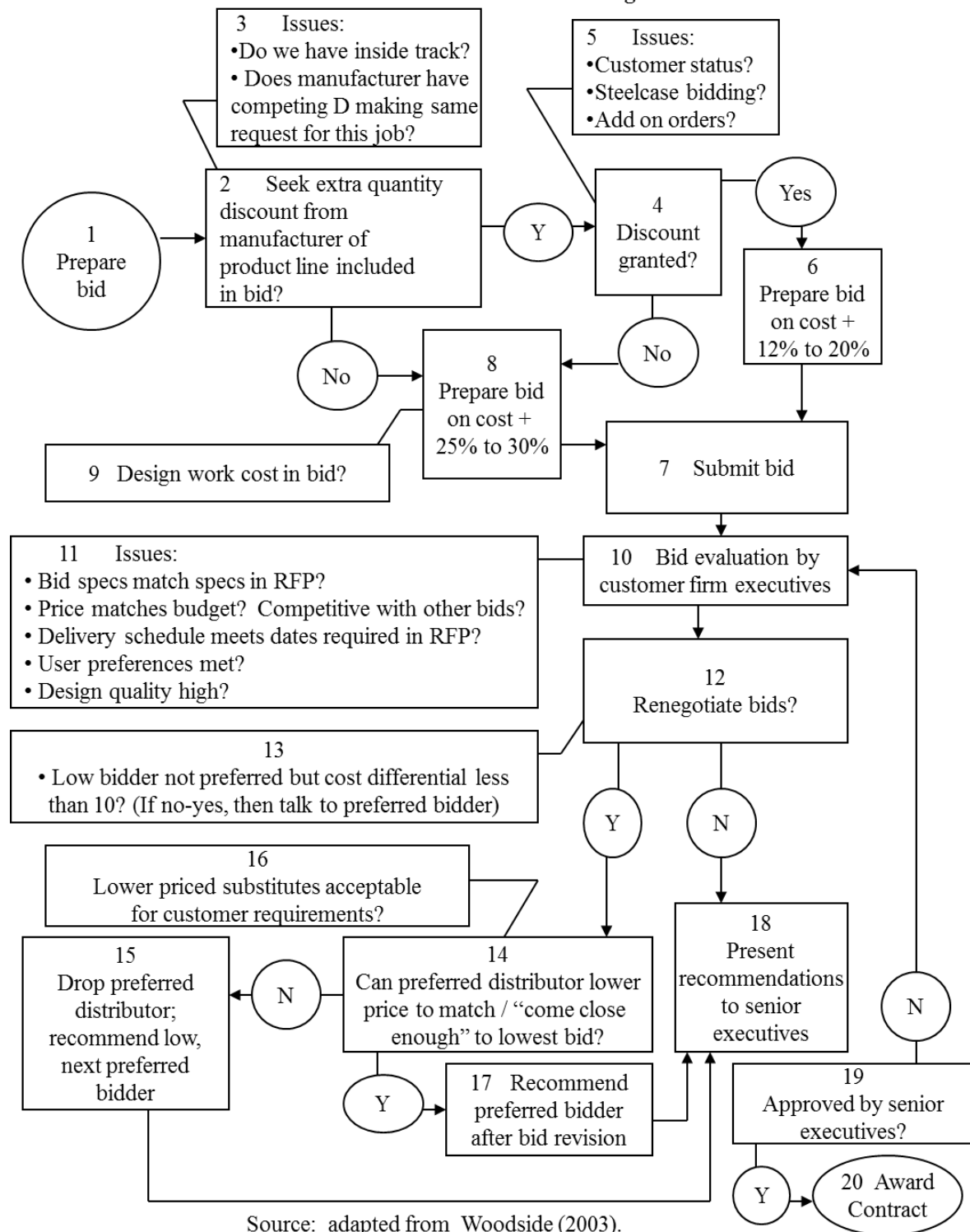


Table 2
Summary of Main Contingent Pricing Decision Paths for Large Order Bids
Made by a Distributor in the Office Furniture Industry

Summary of Pricing Decision Path	Path	Average Bid (\$)	Frequency in Percent (n = 80)
Inside track, no renegotiations	1-2-8-7-10-12-18-19-20	\$ 53,500	35 %
Two distributors representing same manufacturer product lines with Steelcase active, plus additional competitors' bids	1-2-4-6-7-10-12-14-17-19-20	\$ 92,000	9
Inside track (no Steelcase) renegotiations successful	1-2-8-7-10-12-14-17-18-19-20	\$ 80,400	23
Inside track, renegotiations unsuccessful	1-2-8-7-10-14-15-18-19-20	\$ 117,300	6
Two distributors representing same manufacturer's product lines with Steelcase inactive, plus other competitors' bids	1-2-4-8-7-10-12-14-17-19-20	\$ 83,900	14

Source: adapted from Woodside (2003.)