Organizing Visions for Information Technology and the Information Systems Executive Response

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ABSTRACT: Making sense of new information technology (IT) and the many buzzwords associated with it is by no means an easy task for executives. Yet doing so is crucial to making good innovation decisions. This paper examines how information systems (IS) executives respond to what has been termed organizing visions for IT, grand ideas for applying IT, the presence of which is typically announced by much “buzz” and hyperbole. Developed and promulgated in the wider interorganizational community, organizing visions play a central role in driving the innovation adoption and diffusion process. Familiar and recent examples include electronic commerce, data warehousing, and enterprise systems.

A key aspect of an organizing vision is that it has a career. That is, even as it helps shape how IS managers think about the future of application and practice in their field, the organizing vision undertakes its own struggle to achieve ascendancy in the community. The present research explores this struggle, specifically probing how IS executives respond to visions that are in different career stages. Employing field interviews and a survey, the study identifies four dimensions of executive response focusing on a vision’s interpretability, plausibility, importance, and discontinuity. Taking a comparative approach, the study offers several grounded conjectures con-
cerning the career dynamics of organizing visions. For the IS executive, the findings help point the way to a more proactive, systematic, and critical stance toward innovations that can place the executive in a better position to make informed adoption decisions.

KEY WORDS AND PHRASES: information systems management, information technology innovation, innovation diffusion, institutional theory, sense-making.

INNOVATING WITH INFORMATION TECHNOLOGY (IT) presents substantial challenges to information systems (IS) executives. Prominent among these is the need to stay abreast of new technologies as they roll up like waves across their enterprises. Making good management sense of new IT and the many buzzwords associated with it is by no means easy. Simply grasping the basic technology itself may require breaking with established ways of thinking. Reconciling different interpretations and spins provided by competing vendors and consultants presents further difficulty, as does filtering out the hype and wishful thinking surrounding adoption accounts reported in the trade press. The need to respond to a chief executive who might suddenly point to an article from an airline magazine and exclaim, “Why don’t we have this in our organization?” only compounds the challenge [28]. Notwithstanding an abundance of claims, it may be difficult to pin down the likely benefits to be gained from a particular innovation. Finally, it may be hard to judge whether newly reported implementation problems and failures signal that the innovation may not have been such a good idea after all.

Yet IS executives face these challenges daily as an important part of their jobs. How do they cope? How do they respond? How do they determine what their organizations’ positions should be on the innovations of the day? In the research reported here, we take a closer look at these concerns and lay some new foundations. We build specifically on the work of Swanson and Ramiller [36], who point to the importance of certain grand ideas, or organizing visions, in driving innovation in the IS arena. Taking an institutional view,1 as described in detail below, these authors define an organizing vision simply as “a focal community idea for the application of information technology in organizations” [36, p. 460]. Familiar and recent examples of organizing visions include electronic commerce, data warehousing, client-server computing, business process reengineering, and enterprise systems. A departure from classical treatments of innovations (for reviews, see [10, 11, 35]), which tend to take the innovation as something given and stable, the organizing vision concept aims to enrich our understanding of the innovation’s construction and promulgation within the broader corporate community. In promoting a clearer recognition of the innovation’s complex, dynamic, and problematic character, the concept also invites consideration of the ways in which its effects on prospective adopter organizations and their executives are felt.
One of the key elements of Swanson and Ramiller’s thesis is that organizing visions have careers. That is, an organizing vision develops substantively over time, as interested parties contribute to its conceptual elaboration and refinement. As this takes place, the organizing vision also experiences shifting fortunes relative to its acceptance and to its impact on practitioners’ thinking and practice. This paper reports on a study of this aspect of the dynamics of organizing visions. In particular, it examines at a single point in time the IS executive response to a selection of recent organizing visions, specifically those associated with computer-aided software engineering (CASE), client-server computing, and electronic commerce. By “executive response” we refer to the executive view of, or perspective on, an organizing vision. Employing a combination of field interviews and exploratory survey, the study identifies and characterizes four dimensions of executive response, which speak to a vision’s interpretability, plausibility, importance, and discontinuity. In comparing reception on these dimensions across the three visions, the study ventures some broad conjectures concerning career patterns in organizing visions. The paper concludes by drawing some implications for the purposeful monitoring of organizing visions as a practical means for managers to prepare and orient their organizations toward innovation opportunities and challenges.

Organizing Vision: Revisiting the Concept

Organizing visions originate in a broad interorganizational field [32], hence the notion of “community” in the definition for organizing vision given above. In that wider field they attract attention, generate discussion, stimulate invention and experimentation, and, ultimately, promote the advancement and diffusion of material applications and practices. An organizing vision serves three broad functions: interpretation, particularly relative to the innovation’s essential nature and purpose; legitimation of the innovation as good organizational practice attuned to business needs; and mobilization of the entrepreneurial and market forces necessary to support the material realization of the innovation [36]. From the perspective of the systems practitioner, then, organizing visions are important in shaping thinking about the opportunities (and threats) that may lie ahead, in establishing expectations concerning what constitutes effective, proper, and up-to-date practice, and in motivating the action that will help to create the future of IT application and practice.2

While an organizing vision serves these functions, it may do so relatively well or poorly, and its effectiveness in this regard is likely to vary over time. This is, again, one sense in which an organizing vision can be said to have a career. Prominence is achieved by the community attention invested in the organizing vision, giving the vision a certain carrying capacity for the innovation with which it is associated. The more “high-flying” the organizing vision is, the greater its prominence and the more widespread and profound its impact on the corporate imagination. With sufficient prominence, an organizing vision attracts not only the curious but also potential adopters, as well as vendors and consultants seeking to market associated wares and expertise. Commerce
among firms and the material diffusion of the innovation thus follow the flows in the community’s ongoing discourse on the organizing vision. And so the career of the organizing vision unfolds, until the discourse eventually comes to lose its fervor and energy, either because the innovation becomes accepted and taken for granted or because it falls into disfavor.3

The notion that an organizing vision’s career is by turns ascendant and descendant is thus tied to the level and tenor of the discourse about it. It is further tied to the vision’s maturity, as the youthful and undeveloped vision may or may not achieve ascendance, whereas the older and established vision, once having achieved ascendance, ultimately faces decline. However, against this broader life cycle, an organizing vision may also be expected to undergo smaller fluctuations in prominence, multiple ups and downs, over its career.

As the preceding discussion suggests, the organizing vision is best viewed as a discursive construction. That is, it is the product of ongoing community discussion, rather than a material entity of the sort more commonly evoked by the phrase “technological innovation.” The organizing vision, moreover, is rhetorical in nature: its generative discourse is commonly full of disputation, contradiction, challenge, and attempts to persuade. This kind of tension arises because the organizing vision invites the attention of a heterogeneous set of commercial and professional interests, including vendors, consultants, industry pundits, academics, and prospective adopters, all intent upon talking the associated innovation into existence [9] in one or another form or shape. Thus fostered in a complex and expanding web of arguments, the organizing vision struggles both for consistent form and for legitimacy on the community stage [15].

The vision’s legitimacy is reflected, ultimately, in how it is received by practitioners and works its way into their assumptions and practices. This is where the current study comes in. As the introduction notes, we examine here how senior IS managers viewed a selection of recent organizing visions. In keeping with the conceptualization of organizing visions as discursive constructions, such views are formally regarded as instances of critical reception. The term reception, borrowed from the field of rhetoric [25], refers to how an audience responds to, interacts with, and is affected by, a text, where text is broadly conceived [29]. The use of reception here expresses the notion that the interested parties stand in relation to the organizing vision’s discourse as an audience stands to a text. The term critical, then, acknowledges that the audience is likely to regard an organizing vision as fact-like and taken for granted only to a degree, leaving the way open for individuals and organizations to position themselves critically and strategically toward the organizing vision.

With this broader goal in mind, the current study has two more specific operational objectives. First, it aims to uncover the structure of reception, that is, to generalize about the types of judgments making up the executive response to organizing visions. Second, drawing on this structure it aims to develop grounded conjectures about the careers of organizing visions, relative to their impact and influence over time.

The study’s research design is described in the following section. The findings and a discussion of them follows.
Research Approach

The study reported here is exploratory in character. Rather than seeking to test a set of preconceived constructs, it aims to discover, or infer, what field data may have to say about the dimensions of executive reception.

The research project combined field interviews with a large-scale survey as outlined in Figure 1. The field interviews were the starting point, providing a feel for the scope of the issues involved in practitioners’ reception of organizing visions. The interview transcripts also furnished a textual source for subsequent use in developing survey items. The survey then provided a more systematic analysis of the structure of reception, it allowed the comparison of reception across organizing visions, and it supported the subsequent development of conjectures concerning organizing vision careers. As the figure suggests, data from the interviews reentered the analysis again at two subsequent points: they aided in the interpretation of the dimensions of critical reception, and they complemented the survey findings when organizing visions were compared. Details of the various steps shown in Figure 1 are provided next.

The Field Interviews

We conducted one-on-one interviews with 16 senior IS managers and 10 senior systems consultants, drawn from a variety of professional contacts facilitated by a university research program. For complementary perspectives from the broader community, 10 additional interviews were also conducted: four with other business executives (a CEO, a CFO, a vice president of marketing, and a vice president of operations), two with sales and marketing representatives from technology vendors, two with senior editors of IS trade journals, and two with senior marketing representatives of IT research firms. Overall, the interviewees came from a large variety of industries, including health care, food packaging, insurance, financial services, entertainment, computer manufacturing, wholesale distribution, retail, education, and assorted other services.

The interviews were conducted over an eight-month period, beginning in November 1994, and concluding in early July 1995. Thirty of the 36 interviews took place in person, the remaining six by phone. Interviews ranged in length from about half an hour to one and a half hours.

In the spirit of exploration and theory-building, all interviews were conducted in the manner of “focused interviewing” recommended by Spender. This approach combines unstructured interviews with a loose pattern of agreement with the interviewee about the context of inquiry. . . . It gives the subject the opportunity to express himself about matters of central significance to him rather than those presumed important by the interviewer. [33, p. 79]

In the present case, the “context of inquiry” was set by means of a standard introduction that described the research project as a study of some of the prominent ideas for innovation in the IT arena and how IS managers and other interested parties go about
making sense of them as practical opportunities. The interviewer noted that such “grand ideas” for innovation are commonly accompanied by a significant measure of hoopla and hyperbole, and so one point of research interest was how IS managers “sort the wheat from the chaff,” where these ideas are concerned. Finally, the interviewer identified a selection of ideas of current or recent interest—CASE, client-server computing, data warehouse, and business process reengineering—and invited the informant to reflect, in an open-ended way, on his or her observations and experiences with one or more of these.

Beyond this standard introduction, no formal interview protocol was used. However, a checklist was employed to keep track of basic subject areas that prior reading and conceptual foundations suggested might be pertinent. The checklist included: the informant’s understandings of what the subject innovations consisted of; the informant’s opinions about them; the informant’s personal and organizational experience with practical use or implementation of the innovations; how the informant kept up on such innovations; and the informant’s professional background. Interviews did not proceed in order by these subject areas but developed their own conversational flow and structure. The interviewer acted predominately as a curious listener, giving

![Figure 1. The Research Process](image-url)
the informants broad range to express their views. Care was taken not to interject theory into the discussion. Typically, all areas were covered with minimal elicitation. (In addition to the checklist described here, Appendix A provides samples of actual questions and remarks used during interviews in prompting informants and guiding the conversations. These samples will give the reader a more concrete feeling for the character of the interviews and how they served as the foundation for the rest of the study.)

The interviews addressed a variety of innovations, with a particular focus on CASE, client-server computing, data warehouse, and business process reengineering. Also frequently discussed were workflow management, object-oriented software development, continuous improvement, rapid application development (RAD), open systems, information architecture, and electronic commerce.

Twenty-eight of the interviews were tape-recorded and transcribed in full. For the remaining eight, detailed notes were written by hand during the conversations and then typed up immediately afterward, filling in additional detail from memory. Quotations used later in this paper come from the verbatim transcripts.

The interview transcripts (and notes) were subsequently examined line-by-line, and all instances of evaluative statements related to innovative ideas were identified, coded, and indexed. Provisional codes (categories) were assigned based on a list of descriptors gleaned from Swanson and Ramiller’s work [36], as well as concepts provided in sources on managerial cognition, technology transfer, the social construction of technology, and rhetorical studies. Such concepts reflected on the qualities of the organizing vision’s constitutive discourse [8, 17, 20, 24, 30], its relationship to accepted knowledge and belief [13, 40], and what it appeared to say about practical organizational opportunities [3, 7, 12, 18, 19]. The purpose of the provisional codes was not to decide the issue of what constitutes reception; rather, their role was to serve as conceptual sensitizers, ensuring the identification of the broadest collection of informant statements that may relate to aspects of reception.

The Field Survey

Working from the coding index, we systematically reviewed the interview transcripts and recorded several hundred raw statements relating to the reception of organizing visions. Then, with the aid of a confederate (a mid-career IS professional), we reduced this initial collection of statements by about half through recombination, abstraction, and editing. Two rounds of pretesting using systems professionals and managers permitted successive reductions of the collection to a set to 45 items showing promising levels of variance across both pretesters and organizing visions, while largely preserving the scope of the original collection.

The final survey instrument inquired about CASE, client-server computing, and electronic commerce. This set of visions offered attractive variation with respect to maturity, currency, and organizational scope of impact. With regard to career maturity, CASE was most mature, having been featured in an important general news publication as early as 1988 (New York Times, May 8, 1988). Client-server computing was
relatively less mature, achieving significant prominence around 1993 (Business Week, March 15, 1993). Electronic commerce was least mature, already recognized broadly in 1994 (Economist, July 9, 1994), but with greater fanfare yet to come (Business Week, August 24, 1998).

Relative to the paired concepts of ascendancy and descendancy introduced earlier, our reading of the trade and business literature from around the time of the survey suggested that the career of electronic commerce was then in early ascent, with the vision drawing increasing community attention and enthusiasm. Meanwhile, the career of client-server computing appeared to be in late ascent, with attention to the vision peaking, whereas that of CASE appeared to be in descent, with attention falling off. To subsequently validate this characterization, we undertook a systematic search of the published business literature over the years 1985 to 2001. Following a procedure suggested by Wang [38], borrowing from Abrahamson and Fairchild’s [2] study of management fashions, we counted articles published on electronic commerce, client server, and CASE, as documented by the ABI/Inform Global database.6 Figure 2 summarizes the findings from this search and in effect provides a sketch of the three career paths, which are seen to be consistent with expectations. CASE articles peaked in 1991, well before our study. Client-server articles peaked in 1995, coincident with our interviews and just before our January 1996 survey. Electronic commerce articles did not peak until 2000, well after our study. Thus, at the time of our study, electronic commerce was clearly in early ascent, client server was peaking in late ascent, and CASE was in descent.

Returning to the survey instrument, the 45 items were framed in an agree–disagree Likert-type format, using a seven-point scale (ranging from +3 to –3), with the midpoint representing the neutral (zero) position. Respondents replied to each item three times, once for each of the three organizing visions.

The survey was mailed in January 1996 to a convenience sample of 1,475 senior IS managers in the United States that featured substantial diversity along such lines as industry, company size, and geographical locale. The sample comprised a composite CIO mailing list developed to support the research of the sponsoring university institution. The list is biased toward larger firms and toward individuals with whom the university has had some previous contact. A total of 143 usable surveys were returned, giving a response rate of 10.4 percent after adjusting for those returned with bad addresses (101). The resulting respondent sample reflected the diversity of its sampling frame. More specifically, respondents reported from firms with annual revenues ranging from a few hundred thousand dollars up to the billions, with broad representation across industries. With respect to primary industry: 14 respondents worked in electronics and related businesses, nine in chemical and allied manufacturing, 14 in other types of manufacturing, six in transportation services, 12 in utilities and related manufacturing and services, five in wholesale distribution, 15 in retailing, 10 in banking, 13 in insurance, nine in other (or unspecified) financial services, 15 in travel, media, or other entertainment businesses, five in health care, seven in professional and technical services, four in government agencies, three in natural resources-based industries, one in construction, and one in philanthropy. With regard to possible
response bias, it may reasonably be assumed that the respondents are the more willing and active participants in the community’s discourse about its activities and innovations. This likely bias should be borne in mind; the broader community may be less openly opinionated than our respondents.

Data Analysis and Interpretation

Analysis of the survey data began with an item factor analysis, using a principal components approach. Returns were adequate to support this form of analysis. Given three responses to each item for each of 143 respondents, the ratio of sample size to item in the current study was $(3 \times 143/45)$ or around 9.5. This exceeds the 5:1 ratio of sample size to items considered sufficient for exploratory work [6], and approaches the 10:1 ratio recommended for refined psychometric work [22]. Pooling of the responses across the three visions necessarily presumed a stable underlying factor structure.

Using prior communality estimates of one, eigenvalues of the correlation matrix for the 45 reception items were obtained in table and scree plot form. Breakpoints after the third and sixth eigenvalues suggested, respectively, conservative and aggressive analyses. The more aggressive six-factor solution was chosen, following recommendations to extract a relatively large number of factors where exploratory research is involved [6, 14]. The six factors thereby obtained explained 53 percent of the common item variance. Appendix B reports the rotated factor pattern matrix, individual eigenvalues and proportions of variance explained. A non-orthogonal (promax) rotation was employed, given a lack of theory specifying that the underlying constructs should be independent [34].

The rotated factor pattern matrix was examined for sizable coefficients, that is, coefficients running about 0.45 in absolute value and larger. We found that 14 items loaded cleanly on Factor 1—“cleanly” meaning that the largest secondary item-coef-
ficient was less than two-thirds the magnitude of the primary coefficient. Five items loaded cleanly on Factor 2, five loaded cleanly on Factor 3, and six loaded cleanly on Factor 4. Three items had sizable primary coefficients and also secondary coefficients ranging 0.37 and higher, thereby split-loading across factors. Meanwhile, only two items loaded cleanly on Factor 5 and only one on Factor 6, insufficient in both cases to support further analysis. Factors 5 and 6 were accordingly dropped from further consideration.

The last step in our analysis involved comparing reception across the three organizing visions. This required settling beforehand on measures for the dimensions of reception. Whereas full factor scores represented one option, constructing measures based on a simple averaging of selected contributing items was chosen as more straightforward, easier to grasp intuitively, and less awkward to carry forward into future research [34]. Moreover, while any questionnaire item with a sizable coefficient (or loading) may be of potential value in interpreting a factor, items chosen for measures would need to provide good discrimination among the underlying constructs. Accordingly, items loading principally on single factors were favored for the measures.

Measure refinement was guided by the calculation of Cronbach alphas. Specifically, a questionnaire item was dropped from a measure when doing so would raise the value of alpha. Applying this criterion, one item was dropped from the measure relating to Factor 2. All other items were retained. Item 47, with a modest but clean loading, was added to the measure for Factor 4 in order to raise its alpha to satisfy the standard of 0.70 for exploratory research [22]. Appendix B documents the final item selections. We present the retained items, 33 in all, in our discussion of our findings on the four dimensions of reception below (Figure 3a–d).

Finally, in order to compare the critical reception of the three organizing visions—CASE, client-server computing, and electronic commerce—mean responses on the reception dimension measures were calculated for each vision. The differences in means across the organizing visions were then examined for statistical significance. Intercorrelations among the reception dimensions were similarly computed and compared across the innovations for consistency. The substantive results of this analysis are discussed momentarily.

Findings and Discussion

AS THE STUDY’S FINDINGS DEPEND ON INTERPRETATION, their presentation and discussion are combined. We first address the structure of critical reception, beginning with its constituent dimensions and then turning to the interrelationships among these dimensions. We then compare reception across the three organizing visions.

The Structure of Critical Reception

The factors identified above guide our identification of the dimensions of critical reception. We interpret and name each factor in turn by examining the survey items
contribution to it, considering both the diversity of meanings represented in those items and what common themes they appear to share. We draw from our basic notions about organizing visions and their critical reception, as discussed earlier. Interview material amplifies the interpretations. The discussion has been organized for clarity of exposition, taking the fourth factor first.

Interpretability

*Interpretability* (Factor 4) reflects how intelligible and informative the executive finds the representations of the organizing vision in its associated public discourse. As the items in Figure 3a suggest, interpretability revolves around such aspects as clarity, consistency, richness, and balance. Items 29, 5, and 8 further hint that interpretability is linked in some degree to the observed makeup of the discourse community. That is, whether the “full story” is being told is construed in part from observations about who, in effect, is doing the talking.

That an organizing vision’s interpretability can be problematic is strongly corroborated by field study informants. Concerning client-server computing, for example, various managers remarked:

What the hell does “client server” mean? (IS manager 2, p. 9)

The biggest buzzword that’s a problem is client server. You know, what’s the definition of client server? That one drives everybody nuts! (IS manager 8, p. 4)

everybody’s tryin’ to move towards client server . . . whatever that is. (Consultant 3, p. 15)
Client server is . . . I don’t know what you mean. [Informant and interviewer laugh.] There are at least five or six definitions! Take your pick! Even in my own mind I have different definitions. (IS manager 5, p. 3)

So, you get into client-server . . . what is it, really? And if you ask ten people, you get ten answers. Even today, you ask ten people, you probably get eight answers. (IS manager 15, p. 2)

Comments of this type were not limited to client-server computing. For instance:

“Open systems” is another term . . . what the hell does that mean? Um, it means a lot of different things to a lot of different people. And the majority of people, I believe, don’t really know what these buzzwords mean. (Consultant 3, p. 15)

So Gartner asks us, “How strong are you in information highway?” We say, “Well, exactly what do you mean by that?” And they don’t know. I mean, it’s a bit of a joke. They don’t know! (Consultant 9, p. 15)

In short, as Weick has argued for new technology more broadly, an organizing vision “admits of several possible or plausible interpretations and therefore can be esoteric, subject to misunderstandings, uncertain, complex, and recondite” [39, p. 2].

Plausibility

The concept of plausibility (Factor 2) complements interpretability. Both address qualities of the community discourse that builds and sustains the organizing vision. Whereas interpretability concerns the intelligibility and informativeness of the discourse, plausibility focuses on distortions in the discourse, emphasizing in particular the burdening of the organizing vision with misunderstandings, exaggerations, and misplaced claims. As Figure 3b indicates, the contributing items are suggestive, on one hand, of honest confusion and basic lack of knowledge (see especially items 26,
Remarks from field study informants suggest that plausibility is indeed a key hurdle an organizing vision must surmount. For example, one informant took issue with the vision of business process reengineering in this way:

[Reengineering] . . . it’s a nice concept. But I don’t know whether it’s reality . . . it would be nice. I mean, it would be really nice if you could just totally re-engineer the business. But . . . every organization is focusing on growth and trying to manage the growth and trying to keep all of the people focused on change . . . . How can you re-engineer your entire business at the same time? I mean, the company can assimilate only so much change. (IS manager 10, pp. 10–12)

A number of informants questioned the basic plausibility of CASE. One of the more trenchant comments was:

CASE is another situation where technoids have found some technoid stuff to do which is pretty grim and not very sophisticated. There’s a nice intellectual belief here, that you can start with strategic goals and decompose systematically down to logical, robust models, and then generate code. But there’s a massive disconnect in the middle. (Consultant 11, pp. 1–2)

Informants also noted that an organizing vision’s plausibility may be undermined by the self-interested exploitation of its associated discourse:

There’s no question there’s a lot of B.S. Buzzwords’ll come out, and people will just . . . they want to sell their products, so they say, “We’re that, too!” (IS manager 15, p. 5)

So instead of just talking about business applications and maybe decision support applications, all of a sudden everybody’s gonna build a “data warehouse,” and you have to change your whole marketing strategy to meet that requirement. But nothing’s changed except the words! (Technology vendor representative 1, p. 15)

Importance

As seen in Figure 3c, what we term the *importance* dimension (Factor 1) brings together a diverse set of judgments. Importance here “implies the power of influencing or the quality of having evident value either generally or in a particular relation and often by merely existing” (*Webster’s Seventh New Collegiate Dictionary*). To explore this diversity and aid in interpretation, we conducted a secondary factor analysis that enabled the identification of three sub-dimensions of importance, which we call *business benefit, practical acceptance,* and *market interest.* Specifically, we forced a factor analysis of the 14 importance items, taking the same exploratory approach as in the analysis of the larger item set. A three-factor solution emerged, explaining about
two-thirds of the importance variance. As would be expected, the sub-dimensions are significantly correlated. (We note that although this analysis supports the present interpretation, it is also ad hoc and suggests that more comprehensive research is needed to provide validation, both of the importance attribute and of the broader factor structure.) For presentation and discussion purposes, we have grouped the items into the sub-dimensions with which they were most strongly associated.

Perhaps the most dominant theme among the items is the business impact of the organizing vision. The centrality of business benefit in defining the importance of an innovation was brought out by a number of informants:

> Everybody has the latest and greatest, um, mousetrap. What you really have to do is to be able to figure out what’s real and what’s usable, and not be just...
sucked in. . . . You got to be able to say what’s most important, what gives you
the biggest bang for the buck. You just can’t be chasing technology. (IS man-
ger 9, p. 11)

It only has meaning if it’s doing something for the business. (Consultant 3,
p. 34)

When you pick up these PC magazines, or these journals, or [go to] seminars,
you’re right-on: “information warehouse,” “client server,” “CASE technol-
gy” . . . all these buzzwords. They don’t mean a damn thing until you relate
them to money, in the business world. You relate them to money, it really sepa-
rates the wheat from the chaff. (IS manager 8, pp. 1–2)

For me, being state of the art, or current, is a wasted exercise. When I don’t
think what we’re talking about puts money on the client’s table . . . the applica-
tion of the concept . . . I’m just not interested. (Consultant 7, p. 17)

We note (from item 46, in particular) that a sense of urgency is also associated
with business benefit, suggesting that, more commonly than not, something worth doing is
better done sooner than later. For example, IS managers remark about client-server
computing and data warehouse:

If you also look at the application software development vendors, they’re all
developing client server applications that you’re not gonna be able to take ad-
vantage of. That means you’re going to be behind . . . the people left standing
are the ones that will have made that transition. (IS manager 3, p. 14)

[Data warehouse] is really getting a lot of people excited and impressed . . . If
you’re in a company that hasn’t done anything with that yet, you’re probably
gonna be a little bit behind the 8-ball, if you wait to do it. And every year that
you don’t do it, you’re gonna get way behind it. And you’re not gonna be in the
business arena, you’re not gonna be able to compete. You’re just plain not gonna
be able to compete. (IS manager 8, pp. 7–8)

Along with business benefits, the practical acceptance of the organizing vision also
contributes to importance. As suggested in Figure 3c by the items associated with this
sub-dimension, some innovations may be characterized more by technology push,
than by need pull. Indeed, whether the innovative concept transfers well to practical
application may still be in question, undermining the sense of its basic importance.
Understandably, in such circumstances the vision may be a “hard sell” to manage-
ment, and its practical acceptance may be weak.

Finally, items that relate to the market’s interest in the organizing vision also help to
define the importance dimension. That respondents would take market interest to
indicate importance is consistent with the institutionalist prediction that people will
fall back on market response as a proxy for a direct, “rational” calculation of perfor-
ance or benefit, when means-ends claims for an innovation are difficult to evaluate
[1]. Beyond mere proxy, however, market signals can be substantively informative. A
relative lack of market interest, for instance, may reflect real and persistent problems of practical acceptance.
One informant offered explicit statements on the use of market signals:

A lot of my information comes from the vendors and what they want me to believe. But then, look at the marketplace, how does the marketplace react. And that really tells you a lot, too. (IS manager 15, p. 6)

In the case of client server, you see so many different vendors coming at it... And whenever you see two lines intersect, it says something. In the case of client server, 300 lines intersect. Every line you look at intersects. From the hardware vendors, they're goin' after it. From the software vendors, are going at it. From the systems integrators, they're goin' at it. From the industry side, they're goin' at it. So tell me again it's not worthwhile. (IS manager 15, p. 10)

In a similar vein, a variety of informants commented on how importance can be reflected in the public standing of the organizing vision. Note the references to "industry," "nobody," and "people" in the following remarks about CASE:

I don’t think of CASE. We’re past CASE, so I would say. The industry is past CASE. (IS manager 4, p. 9)

Nobody is jumping on the CASE bandwagon anymore, so... I mean, this is old history. (IS manager 6, p. 8)

CASE is almost... well, maybe abandoned is too harsh a word, but there obviously is no more movement to CASE... people have walked away from it. (Consultant 3, p. 20)

The notion that an innovation is or is not worthy of the community’s interest, and accordingly its attention, is thus fundamentally tied to the vision’s received importance.

Discontinuity

Items measuring discontinuity (Factor 3) shown in Figure 3d, suggest two closely related notions, conceptual discontinuity (reflected by items 41, 40, and 35) and structural discontinuity (reflected by items 30, 39, and 25). In the first case, how great a conceptual departure does the organizing vision pose? In the second, how much difficulty is entailed in implementing it? That conceptual change and implementation challenge should covary is a commonplace in the management of technological change. Reflecting on the discontinuity posed by CASE, an informant remarked:

People don’t have a clue what they’re getting into when they sign up for a CASE program. One company I was with—it just basically turned the organization upside down. I think people enter into these programs completely uneducated, untrained, unknowledgeable about what they’re getting into... I think there’s a real knowledge-transfer problem. (Consultant 10, pp. 12–13)
Concerning client-server computing, we hear:

Well, you move it to this client server . . . you got a complicated network, you got bridges and routers and lines and, and . . . LANs and WANs [laughs] and . . . just all this stuff, all of which can break, all of which can cause delays, um . . . and so it’s a whole ‘nother dimension of cost . . . [an] evolving set of tools, a complete retraining for the IS staff. . . . So, this is not something we’re used to. And there’s just a whole bunch of worrying associated with client server. (IS manager 13, pp. 8–9)

Relationships Among the Reception Dimensions

Since the factor analysis employed a non-orthogonal rotation (see above), the underlying dimensions that emerged revealed a pattern of interrelationships. Figure 4 summarizes this pattern in terms of the correlations among the reception dimensions for each of the organizing visions. In all but one instance, the correlations are consistent across organizing visions.

Specifically, we see that interpretability and plausibility are positively correlated, suggesting an unsurprising linkage between the perceived informativeness of the community’s organizing vision discourse and its basic sensibility. Plausibility exhibits a straightforward, positive relationship with importance. This, too, is unsurprising, given that a lack of sensibility (which may accompany a high degree of distortion and hype) will tend to diminish an organizing vision’s received importance.

Discontinuity is negatively correlated with interpretability and plausibility, but shows no relationship to importance. That a more extreme departure from the familiar would predict lower interpretability and lower plausibility (or greater implausibility) seems reasonable. Meanwhile, the lack of correlation of discontinuity with importance suggests that the degree of change posed by an organizing vision does not necessarily affect executives’ beliefs in its significance. In short, executives recognize that important developments may come in radical packages.

**Figure 3d. Questionnaire Items for Discontinuity (Factor 3). Note:** [rc]: reverse-coded.

<table>
<thead>
<tr>
<th></th>
<th>Factor pattern coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>41. ____ involves a huge paradigm shift.</td>
<td>0.83</td>
</tr>
<tr>
<td>40. ____ calls for a fundamentally different way of thinking.</td>
<td>0.79</td>
</tr>
<tr>
<td>35. ____ seems to require some kind of wizard to get it all to work out. [rc]</td>
<td>-0.62</td>
</tr>
<tr>
<td>30. Doing ____ basically turns an organization upside down.</td>
<td>0.54</td>
</tr>
<tr>
<td>39. The resources necessary for doing ____ are hard to come by. [rc]</td>
<td>-0.54</td>
</tr>
<tr>
<td>25. Complexity increases significantly when you undertake ____</td>
<td>0.49</td>
</tr>
</tbody>
</table>
Finally, interpretability shows a mixed relationship to importance, with a negative correlation for CASE and positive correlations for client-server computing and electronic commerce. We discuss this interesting finding next, when we compare reception across the organizing visions.

Comparative Reception Across Visions

We compare the respondents’ critical reception of the three organizing visions. Recall first that the three visions are ordered in terms of their relative maturity, CASE being the most mature, electronic commerce the least mature, and client-server computing in between. In the present comparison, any differences in reception between organizing visions can therefore be attributed to two possible sources: (1) the comparative maturity of the organizing visions and (2) their inherent differences.

For example, if respondents perceive discontinuity to be higher for client-server computing than CASE, the claim may be made that the difference arises because many respondents’ organizations were, at the time of the survey, deeply engaged in implementing client-server computing, whereas most had already taken the implementation of CASE as far as they intended to. We will label this type of explanation an innovation-career argument, because it explains differences in reception based on differences in the position each organizing vision occupies in its career.

Alternatively, one may propose that client-server computing is by its very nature conceptually more radical, or more difficult to implement, or organizationally more disruptive. We will label this type of explanation an innovation-character argument, because it focuses on the fundamental and enduring differences among organizing visions.

It is innovation-career phenomena that are of principal interest here. Moreover, it is important to emphasize that it is not our intention to test competing innovation-character and innovation-career arguments for the observations at hand. Indeed, non-longitudinal data will not support such testing [27]. Rather, the goal here is to propose
some innovation-career effects for future elaboration and testing, using patterns in
the current data inductively.

Figure 5 presents a comparison of the mean values on the four reception dimen-
sions for CASE, client-server computing, and electronic commerce, using the mea-
sures specified earlier. The results generally make sense in terms of the relative maturity
of the organizing visions. To begin with, interpretability was clearly less problematic
for CASE than for the other visions—a reasonable finding given that CASE had en-
joyed the longest history of discussion and was the vision about which people were
most likely to have made up their minds.

With regard to plausibility, client server was the most problematic. This finding
readily invites both innovation-character and innovation-career arguments. Client
server may, by its very nature, be more subject to exaggerated or distorted claims than
CASE and electronic commerce. On the other hand, electronic commerce in particu-
lar might have been enjoying a kind of “honeymoon period” at survey time. Perhaps
respondents were granting the community discourse forbearance because not enough
was yet known to properly evaluate it for its level of hyperbole and distortion. Or,
possibly its discourse was as yet relatively free of cynicism-provoking hype, whereas
for CASE, the days of excessive hype were over.

Importance was lowest for CASE and highest for electronic commerce. The com-
munity standing of CASE on this dimension was consistent with contemporaneous
reports from the trade press, conversations with IS practitioners, and observable lev-
els of advertising and conference activity associated with it. It is less clear why elec-
tronic commerce should score higher in importance than client-server computing.
Perhaps respondents simply found electronic commerce a better, more impressive, or
more promising idea—possibly because the business impact could be seen more di-
rectly (another innovation-character argument). On the other hand, given that invest-
ments in client-server computing were far more extensive at the time of the survey,
perhaps people’s assessment of its importance had suffered some in the light cast by the rigors of serious implementation (an innovation-career argument).

Implementation activity also provides a likely explanation for the more pronounced discontinuity indicated for client-server computing. One interpretation is this: there is nothing like trying to actually do something to make one realize how radical and disruptive it is. The higher discontinuity perceived for client-server computing, then, is perhaps not so much an expression of its inherent organizational effect, as it is a reflection of the immediacy, tangibility, and familiarity afforded by active engagement [40].

As a last step in the comparison, we consider again the relationships among the dimensions. Recall from Figure 4 that the relationship between importance and interpretability differs across the organizing visions, being positive for client-server computing and electronic commerce and negative for CASE. This is a small effect, but nonetheless curious and deserving of further consideration.

At the time of this study, CASE as an organizing vision was well on the road to decline and abandonment, and its waning discourse was rife with critique and pessimism. Its negative interpretability–importance correlation suggests that for an organizing vision that is poorly regarded by most, an IS manager with a relatively high regard for its importance will judge the interpretability of its discourse to be relatively lower. We can readily envision what is going on in the discourse at this point in time: the talk is about disappointing results, scaled-back expectations, reduced scope of benefits, more limited applicability, and the like. Such a reconceptualization effectively does not make sense to a stubborn champion of the vision. Meanwhile, an IS manager with a relatively low regard for the organizing vision’s importance will judge its interpretability to be higher, since the discourse is relatively consistent with his or her judgment. For such a manager, interpretability may in fact even be moot, since the issue is settled in his or her mind.

The reverse pattern will be seen for an organizing vision that is on balance viewed in a positive light in the wider community, as we witness for client-server computing and electronic commerce. The manager with positive regard for the vision will find its discourse relatively interpretable, whereas the manager with low regard for it will find it relatively uninterpretable. Thus, in sum, the relationship between importance and interpretability appears to be contingent on whether the individual’s own stance concords with the wider state of opinion.

Conjectures on the Careers of Organizing Visions

Drawing from the above findings and discussion, we venture several conjectures about the careers of organizing visions. The four dimensions of reception—interpretability, plausibility, importance, and discontinuity—frame these conjectures. Following earlier remarks, we make reference to careers that are ascendant or descendant as reflected by the amount, quality, and substantive character of the community’s discourse. Specifically, we consider careers in early ascent (e-commerce), late ascent (client server), and descent (CASE). For ease of reference, we first summarize the findings presented in the previous section in Table 1.
### Table 1. Comparative Reception: Summary of Findings

<table>
<thead>
<tr>
<th>Dimensions of reception</th>
<th>Early ascent (e-commerce)</th>
<th>Late ascent (client server)</th>
<th>Descent (CASE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpretability</td>
<td>Somewhat low</td>
<td>Somewhat low</td>
<td>Somewhat high</td>
</tr>
<tr>
<td>Plausibility</td>
<td>Somewhat low</td>
<td>Low</td>
<td>Somewhat low</td>
</tr>
<tr>
<td>Importance</td>
<td>High</td>
<td>Somewhat high</td>
<td>Somewhat low</td>
</tr>
<tr>
<td>Discontinuity</td>
<td>Somewhat high</td>
<td>High</td>
<td>Somewhat high</td>
</tr>
<tr>
<td>Interpretability × plausibility</td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
</tr>
<tr>
<td>Interpretability × importance</td>
<td>Positive</td>
<td>Positive</td>
<td>Negative</td>
</tr>
<tr>
<td>Interpretability × discontinuity</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
</tr>
<tr>
<td>Plausibility × importance</td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
</tr>
<tr>
<td>Plausibility × discontinuity</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
</tr>
<tr>
<td>Importance × discontinuity</td>
<td>Unrelated</td>
<td>Unrelated</td>
<td>Unrelated</td>
</tr>
</tbody>
</table>

**Notes:** The top half of the table draws from Figure 5 and summarizes average values on the dimensions of reception. The descriptors “high” and “low” indicate reception means with absolute values equal to or greater than one; “somewhat high” and “somewhat low” indicate reception means with absolute values less than one. Statistically significant differences in the data map to the different descriptors, which are used here for summary purposes only. The bottom half of the table is derived from Figure 4 and summarizes the correlations between the dimensions of reception.
As a reminder, the summarized findings represent the community’s reception of each vision at the time of the survey. Note that although these findings reflect central tendencies and dimensional covariance in community member reception, they do not consider whether reception may in fact be differentiated among identifiable groups.

In now speculating on the career progress of organizing visions, we shall want to consider this possibility and then put this notion to a modest post hoc test.

The question can be posed: Through what process does the community’s reception of an organizing vision change over time? Introducing the notion of differentiation, we venture that relative to the community majority’s reception of a vision, identifiable supporters and detractors may play a key process role. Supporters are defined as those within the community apart from the majority, who regard the vision as relatively important, its potential impact as significant and its likely benefits as real and desirable. Detractors are those apart from the majority, who regard the vision as relatively unimportant, its potential impact as insignificant and its touted benefits as largely illusory. The majority, meanwhile, relative to supporters or detractors or both, holds to a more uncertain, qualified, and ambivalent position on the vision.

We introduce this differentiation in part for exploratory analytical convenience, recognizing that groups may not always be sharply drawn. Indeed, as we shall see, either or both supporters and detractors may in some cases be difficult to distinguish from the majority.

We posit that supporters and detractors constitute two opposite poles that help to “charge” or “discharge” the broader community’s discourse about the vision. One or the other group, supporters or detractors, may have the dominant voice at a given point in an organizing vision’s career, providing leadership for the majority’s view. Overall, supporters should have the dominant voice when the vision is ascendant, whereas detractors should dominate during the vision’s descent. During early ascent, as with electronic commerce in our study, supporters will command the floor as hope and expectations wax. During late ascent, as with client-server computing, the vision will confront problematic progress in adoption and implementation, and detractors will gain a larger voice—even while the majority view remains on balance positive and the vision retains significant support. Finally, in descent, as with CASE, detractors gain the upper hand and the community’s discourse is ultimately discharged and the career of the organizing vision wanes. In developing conjectures on the careers of organizing visions, we make use of the notion that the community’s reception may be differentiated by a majority view in conjunction with supporter and detractor views. Our first two conjectures are anchored in the majority view, as reflected by the means summarized in the top half of Table 1. Succeeding conjectures bring in the influence of supporters and detractors to account in part for the findings in the bottom half of Table 1.

Again, to say that an organizing vision’s career is ascendant or descendant is to make a statement about the level and tenor of the community discourse that defines, shapes, and positions it. The organizing vision’s reception, then, among IS managers—and their regard, more specifically for its importance—can be expected to paral-
lel the status of the vision as ascendant or descendant. We use “parallel” advisedly. We expect the causal relationship between reception and ascendancy/descendancy to be complex in its particulars and mutual overall. Whereas the tenor and level of energy in the discourse will help to command attention and shape the response of managers in prospective adopter firms (in short, the discourse holds persuasive power), those managers also represent an influential segment among the heterogeneous interests that, we noted earlier, participate in shaping the organizing vision discourse itself.\textsuperscript{12}

Thus, as our first conjecture, we propose that the majority’s regard for the vision’s importance will tend to parallel the status of the vision as ascendant or descendant:

\textit{Conjecture 1. An organizing vision’s career will be ascendant when the community’s majority receives the vision as relatively important. It will be descendant when the community’s majority receives the vision as relatively unimportant.}

Importance reflects the community’s essential interest in the organizing vision (recall Figure 3c) and so lies at the core of the vision’s career struggle. Here, we propose, the majority rules, while supporters and detractors, however few or numerous, position themselves at the margins to influence the evolving direction of the community’s regard for the vision. By definition, supporters will regard the vision as more important than will the majority, whereas detractors will regard it as less important. The majority’s interest in the vision will accordingly be closely associated with the vision’s relative discursive prominence.

We note that the majority is apparently willing to declare a vision relatively important even where it declares it also relatively uninterpretable. In the present research, for example, managers viewed both electronic commerce and client-server computing as more important than CASE, while they simultaneously viewed CASE as more interpretable (see Table 1). They further viewed the youthful electronic commerce vision as more important than client-server computing, though not more interpretable. Lack of interpretability is evidently not a barrier to a vision’s being judged to be important early in its career. Drawing further, then, on the surmised connection between importance and ascendancy, we propose:

\textit{Conjecture 2. An organizing vision’s career may be ascendant even though the community’s majority receives the vision as relatively uninterpretable. It may be descendant even though the community’s majority receives the vision as relatively interpretable.}

We venture further that, apart from the majority, whether supporters or detractors find the discourse relatively more interpretable also reflects the status of the vision. Specifically, where a vision is ascendant, as with electronic commerce and client server, supporters will find the associated discourse more interpretable, detractors less. However, where the vision is descendant, as with CASE, and leadership is reversed, the vision’s detractors will now find the discourse to be more interpretable, its supporters less. In short, the organizing vision’s reception by supporters and detractors on the dimension of interpretability may provide an important career marker:
Conjecture 3. When an organizing vision’s career is ascendant, the vision’s supporters will receive it as relatively more interpretable than will the community’s majority, whereas the vision’s detractors will receive it as relatively less interpretable. However, when an organizing vision’s career is descendant, the vision’s detractors will receive it as relatively more interpretable than will the community’s majority, whereas the vision’s supporters will receive it as relatively less interpretable.

Moreover, we propose that the interpretability of an organizing vision will tend, in general, to improve over time, as practitioners’ familiarity with it increases, community knowledge of it expands, and questions and issues clouding its clarity are resolved. In contrast, the importance of the vision may tend to peak relatively early in its career and then decline, as growing familiarity with the contingencies, complexities, and costs of its implementation undermine its early idealization. However, in the absence of data from a longitudinal study, we choose not to offer this (perhaps too) simple contrast as a formal conjecture, noting that it suggests a rather smooth career progress that may or may not be characteristic of organizing visions more broadly.

On the dimensions of plausibility and discontinuity, extrapolating from our findings we suggest first that supporters should consistently find the vision to be more plausible than should the community’s majority, whereas detractors should find it less plausible. We speculate that this association will tend to hold throughout an organizing vision’s career:

Conjecture 4. Whether or not an organizing vision’s career is ascendant or descendant, supporters of the vision will find it to be more plausible than will the community’s majority, whereas detractors of the vision will find it less plausible.

Relative to discontinuity, we note again the across-the-board lack of association between judgments of discontinuity and importance (refer again to Table 1). We therefore speculate that supporters and detractors will tend not to differ with the majority as to the vision’s discontinuity:

Conjecture 5. Supporters and detractors will not differ from the community’s majority, on the average, in their evaluation of the discontinuity of the organizing vision.

Finally, it is possible that the community may view an organizing vision’s plausibility as relatively strong early in the vision’s life, reflecting a general openness to the possibilities it suggests, as with electronic commerce in our study. However, plausibility may subsequently be seen as increasingly problematic, as practitioners cultivate a more critical sense of the issues (and contributors) involved and become a more demanding audience of the discourse. The data for client-server computing in the current study is suggestive of this. However, whether this is a mid-career phenomenon, subject to correction with increased and successful diffusion of the innovation, is an open question, as our present data offer no evidence to this point (CASE not being successfully diffused).
Similarly, the organizing vision’s received discontinuity may tend to be highest when the community is most extensively and deeply committed to implementing the innovation, as active engagement affords practitioners and their organizations the clearest view of the structural and conceptual gaps dividing the new from the old. Again, this is consistent with our study findings for client-server computing. To the extent that the implementation experience itself successfully promotes learning, discontinuity may then decline. But again, our present data cannot speak clearly to this point.

Post Hoc Analysis

As our research findings above did not specifically address supporters and detractors, to probe our conjectures we undertook a small post hoc analysis. We explored whether supporters and detractors of electronic commerce, client server, and CASE may be systematically identified from our data. Specifically, we undertook cluster analyses of responses across the four reception attributes, finding apart from majority clusters, neither supporter nor detractor clusters for electronic commerce and CASE, but both supporter and detractor clusters for client server, as shown in Table 2.

We see from Table 2 that supporters and detractors of client-server position themselves with respect to the majority’s reception of the vision, at opposite ends of the prevailing spectrum on each attribute. The majority may be characterized as reserved in its overall reception, holding client server somewhat important, although of rather high discontinuity and low plausibility. The majority is relatively neutral on the issue of interpretability. Supporters of client server, in significant contrast, not only regard the vision as more important than does the majority, they further regard it as relatively plausible and interpretable, while maintaining neutrality on discontinuity. In a further interesting contrast, detractors of client server do not receive the vision as unimportant; rather they take a neutral position (which suffices to establish their relative pessimism). Detractors do receive the vision to be even more discontinuous and implausible than does the majority. And, they further receive it as substantially uninterpretable.

These findings provide modest support for our conjectures above (with the exception of Conjecture 5, concerning discontinuity), but of course they are limited to the single case of client server in its late ascent. What about electronic commerce and CASE? Although we might not have expected from our analyses to identify detractors of electronic commerce, or supporters of CASE, we might well have expected to more easily see their opposites. Why did we not? Where were the supporters of electronic commerce and the detractors of CASE as distinct from the majorities in each case? We can only venture a guess. Perhaps the views of supporters and detractors are expressed and distinguished most easily from the majority when they are accompanied by their polar opposites. In the absence of such polarization, which may be most likely during the period of a vision’s late ascent, the community’s view would tend to be more homogenous. Hence the single clusters.
Table 2. Reception Clusters for Client Server in Late Ascent

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Importance</th>
<th>Discontinuity</th>
<th>Interpretability</th>
<th>Plausibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Supporters)</td>
<td>13</td>
<td>1.55</td>
<td>0.01</td>
<td>0.96</td>
<td>0.71</td>
</tr>
<tr>
<td>2 (Majority)</td>
<td>123</td>
<td>0.76</td>
<td>1.42</td>
<td>–0.20</td>
<td>–1.40</td>
</tr>
<tr>
<td>3 (Detractors)</td>
<td>7</td>
<td>0.03</td>
<td>2.79</td>
<td>–2.14</td>
<td>–2.88</td>
</tr>
</tbody>
</table>

Notes: N indicates group size. Reception entries indicate group means on attribute measures. Between-subject factor effects are significant at the 0.001 level for each reception attribute.
Finally, we return to the matter of an organizing vision’s importance. The present research suggests that this dimension may dominate in its implications for the vision’s career, being most clearly associated with its ascendance. This suggests to us that the greatest threat to an organizing vision’s career may be a decline in the vision’s received importance, however it may be precipitated. Where a vision suffers such a decline, the community’s discourse will tend to deflate. This drop in engagement in the discourse may subsequently precipitate a further decline in importance and so on, cyclically. Recovery may be problematic, as more youthful and exciting visions compete more effectively for the community’s scarce attention—both in general and in the specific problem domain the older vision addresses. The latter seems to be the case now with new commitments to Internet-based electronic commerce displacing earlier commitments to client-server computing. However, we take pains again to point out that the present cross-sectional study offers no direct evidence concerning any one vision’s decline in importance, and we therefore leave further exploration of this concept of a “downward spiral” to future research.

Conclusion

As an exploratory work, the current study has some clear limitations. First, the dimensions of reception were identified using a relatively small set of organizing visions. Confirmation, correction, and elaboration of this analysis should be undertaken over a larger set. Second, although the data permitted the inductive development of some conjectures, these must be considered highly provisional. Here again the consideration of a larger set of organizing visions would clarify the status of these conjectures, and likely point the way to amending and supplementing them. Notably missing from the current set was a relatively more mature vision that, in contrast to CASE, was approaching a successful culmination to its career.

Moving beyond the static comparative strategy used here and conducting longitudinal study would almost surely uncover more patterns, and reveal nuances and complexities yet unidentified. In short, the limitations of the current study point toward a two-way extension of this work: expanding the scope of the organizing visions considered and extending data collection over time.

Despite its limitations, the current study previews the possibilities for inquiry into the influence of organizing visions. The organizing vision concept recasts the IT innovation as a more complex and problematic phenomenon than conventional, materialistic notions of the technological innovation allow for. It thereby speaks more clearly to the challenge IS executives face as they struggle to translate the IT innovation from its generalized representation in community discourse into the richly detailed, locally adapted concept required for implementation under real organizational conditions.

It was proposed here specifically that IS executives consider organizing visions for their interpretability, plausibility, importance, and discontinuity. These terms constitute a helpful (if provisional) vocabulary for use in future research aimed at examining the practical effectiveness of IS-executive sense-making when confronting the
grand ideas for innovation with IT. It also provides a conceptual schema for use in exploring the role of contextual factors in shaping the substantive positions IS executives take on such innovations in different organizational settings.

From a practical perspective, the present research has implications for managers who would monitor organizing visions relatively early in their own innovation-decision process, especially in the “knowledge stage” where they first gain exposure to them [31]. Here managers may be advised to attend more closely and critically to the wider community discourse, explicitly employing the specific dimensions identified here. Doing so would help make more salient the fact that the vision is a construction-in-progress and the weight of public opinion may shift about significantly over time. We envision as central to such managerial attention an effort to track the organizing vision’s received importance, along with the associated substantive rationales that appear in its public discourse. The wider public image of the organizing vision is prime fodder for organized internal discussion and the development of an organization’s own critical stance toward the innovation. Managers will also want to be alert to issues of interpretability, taking care not to overestimate the broader stock of knowledge, as vision proponents will certainly gloss over areas of confusion, contradiction, and unresolved difficulty. Discontinuity, by contrast, may be subject to systematic underestimates at certain stages, whereas plausibility may be overstated, particularly in the first blush of a vision’s public discussion. In general, in taking greater cognizance of the qualities of the vision as a discursive construction, managers will be in a better position to make an informed adoption decision.

Ironically, such improved cognizance may be especially crucial when it comes to interpreting the community’s discourse about organizing visions enjoying the greatest prominence. In this regard, we reference the Gartner Group’s “hype cycle,” which is “designed to help enterprises make intelligent decisions about when to implement emerging technologies” [21, p. 2]. The hype cycle recognizes in effect that an ascendant vision may eventually experience a “peak of inflated expectations,” from which a “trough of disillusionment” is likely to follow. For example, Gartner points to customer relationship management (CRM) as “just beginning the fall into the Trough of Disillusionment” [21, p. 1], even while Business Week (June 18, 2001) identifies CRM as a hot application software growth area for 2001 and beyond. Will many IS executives therefore be taking the CRM plunge at precisely the moment when the fashion has just about run its course? How much corporate money will be spent pursuing CRM in its late ascent as an organizing vision? More important, how wisely will this money be spent, and what insights will be gained about negotiating the gap between CRM fictions and CRM facts?

And so, the present study of how IS executives regard organizing visions also opens a window on to the dynamics of the organizing vision’s own career. If an organizing vision is a kind of tidal force acting on application and practice in the IS field, then understanding how its patterns of influence shift over time is essential to understanding its role in shaping the landscape of opportunities and risks linked to innovating with new IT.
Acknowledgment: The authors are grateful to Yutaka Yamauchi for his research assistance.

NOTES

1. Orlikowski and Barley point to the relative absence to date of IT research taking an institutional view. They argue: “By expanding (their) focus to include insights from institutional theory, IT researchers might develop a more structural and systemic understanding for how technologies are embedded in complex interdependent social, economic, and political networks, and how they are consequentially shaped by such broader institutional influences” [23, p. 154].

2. See, for example, Tillquist’s [37] study of one firm’s struggle with the business process reengineering (BPR) vision, and Pozzebon’s [26] discussion of the “rhetorical closure” associated with enterprise resource planning (ERP) and its consequences for firms’ implementation decisions.

3. The career of the organizing vision thus parallels the diffusion of the innovation itself. How it may be tied to the classical S-shaped diffusion pattern has not been empirically studied. But the vision’s ascendance as reflected by the community’s discourse likely anticipates the innovation’s rate of early adoption, possibly being highest where the greatest number of organizations are in the “knowledge” and “persuasion” stages of their own innovation-decision processes [31].

4. A sample interview transcript and a complete list of the codes used—more than 70 in all—is available from the authors.

5. From this set, some 33 items that ultimately contribute to our findings are presented further along in the paper. We use their original questionnaire item numbers, which range between one and 50. This reflects the inclusion of five additional items pertaining to “rhetorical strength,” which are not relevant to the present analysis, in addition to the 45 items relating to reception. The complete questionnaire is available from the authors.

6. The ABI/Inform Global database offers indexing, abstracting, full-text, and imaging for over 1,500 business-related periodical publications since 1971. Included are academic journals, trade publications, and the popular press. We searched only on titles and abstracts, employing several terminological variants of CASE, client server, and electronic commerce. The article counts provide a crude but effective metric for tracking community attention and discourse [2].

7. Taking such an assumption as a starting point is sound practice in exploratory research, where the initial concern is to uncover constructs at a relatively high level of taxonomic interest [5]. Such is the case here, where we seek to compare the visions in common terms. From a theoretical perspective, this also seems a reasonable first step in light of the near omnipresence of certain factors in the related area of individual-level adoption and diffusion [31]. Still, whether the factor structure is indeed stable across visions should be addressed in the future by additional, confirmatory research.

8. For a solution based on non-orthogonal rotation, the factor pattern matrix provides values that are analogous to standardized regression coefficients. That is, for a given cell defining the relationship of a survey item to a factor, the influence of the other items is partialed out. The factor pattern matrix is helpful both in interpreting factors and in selecting items to use in measures of the underlying constructs.

9. A more elaborate process for developing construct measures is generally called for where confirmatory (hypothesis-testing) research is involved (e.g., see [4]). Calculation of alpha reliabilities was deemed sufficient for the exploratory work undertaken here.

10. Responses were reverse-coded for some items prior to factor analysis, so that the item in question would contribute in a positive way to the interview coding category with which it was initially associated. Three items (35, 38, 39) nevertheless had negative factor pattern coefficients in this analysis; they were further reverse-coded in computing the simple-average attribute measures.

11. The current data set does not cover the case of an organizing vision that is ultimately successful and becomes institutionalized as accepted practice. Such a vision also eventually
experiences descent and a fading away of its discourse. But this, obviously, is not led by detractors.
12. This type of mutual causation has been identified for discourse phenomena more broadly. See, for example, Fairclough’s [9] work on media discourse.
13. We employed an agglomerative hierarchical method with average (squared Euclidian) distance linkage. We sought three-cluster solutions in each case, allowing majority, supporter, and detractor clusters to emerge. For electronic commerce and CASE, the solutions generated only a few outliers in addition to the majority, insufficient to be considered significant minority clusters. We repeated the analysis using Ward’s method [16], with substantially the same results for client server. For electronic commerce and CASE, significant groupings were found; however, for electronic commerce no detractor group was identified, whereas for CASE the majority were in effect detractors.

REFERENCES


Appendix A. Interview Elements

This appendix further elucidates how the interview materials served as a foundation for the development of the survey instrument and, later, as an aid to the factor interpretations. Also, refer again to Figure 1, which identifies the role of the interview data in the overall study.

Readers are reminded that no formal interview protocol was used, in keeping with the “focused interviewing” approach [33] followed in this exploratory study. Instead, a checklist of topics (see the discussion of the field interviews, above) provided an overall guide to the conduct of the interviews. Below are a variety of interviewer promptings, drawn verbatim from the transcripts, that illustrate the manner in which informants were encouraged to address and expand on the topics identified in the checklist. Samples of the surrounding conversations are also included in some cases, to help give a feeling for the open and free-form character of the interviews and to show the larger context for the interviewer’s question. As for the interview material elsewhere in this paper, the source is identified by transcript and page number. These, again, are just samples—the collection of full transcripts runs to several hundred pages.

Illustrating Openings and Transitions

**Interviewer:** Okay, I think what I’d like to do is basically cycle through and take each of these innovations, or big ideas, one at a time. Uh, your choice: would you like to talk about BPR or CASE first?

**Informant:** Let’s try CASE. Initially, I would say CASE became sort of a hot button in around 1988. And it got a lot of hype. It was generally focused in what I would call the extraction of requirements, figuring out what the requirements were. (IS manager 1, p. 1)

* * *

**Interviewer** (directly after introducing the general objectives of the study and presenting the list of subject innovations): As a point of departure, it might be interesting to pick the one . . . that you maybe feel most skeptical about, have the greatest reservations about . . . and then maybe draw a contrast to one on the list that you think is especially compelling or, uh . . . about which you’re pretty convinced that it’s important or, I don’t know, reality.

**Informant:** The reality one would be definitely client server. We just installed a client-server based payroll system. (IS manager 9, p. 1)

* * *

**Informant:** Um, let’s see. Another one that might be interesting to talk about is that BPR you talked about.
Interviewer: Yeah, I noticed when I gave you my little starting list, you smiled when I came to that one.

Informant: The reason being, we just went through, this past year, a thing we called “work redesign.” (IS manager 9, p. 7)

* * *

Interviewer: Do you want to talk about CASE for a couple of minutes, because here is a buzzword or a grand idea that, relative to these other three is . . . a bit in disfavor [Informant: Uh-huh.] these days.

Informant: I had the greatest, the greatest hope in CASE. I thought CASE was gonna be my godsend. CASE tools. From an IS perspective. . . . It hasn’t work out that way. (IS manager 10, p. 14)

* * *

(In the following instance, the informant returns on his own to a key theme raised at the beginning of the interview.)

Informant: You had another question earlier about how do I, as a systems executive, uh, separate the wheat from the chaff. [Interviewer: Yeah.] . . . Well, I have a very eclectic process. One, I . . . I won’t say I read a lot of magazines, a better term would be I shred a lot of magazines. By that I mean I get a lot of magazines, and I immediately go to the table of contents. If I see anything there that looks interesting, I rip it out, and I throw away all the rest. There’s just too much that comes in. (IS manager 1, p. 7)

Illustrating Inquiry into Aspects of Innovations

Interviewer: so the question arises, How original are these things as they come along, for example, BPR. What’s really new about this? Is it just a repackaging, or . . . ?

Informant: I think there’s something genuinely new about BPR, there is a core commonsense component that you’ll see having arisen before, but never raised to the heights that BPR raises it. And to me it is: cross-functional thinking. (IS manager 2, p. 4)

* * *

Interviewer: When some big idea is very prominent on the horizon and becomes the topic of discussion in the press, you hear it at your professional association meetings, and so forth . . . is the meaning of that thing, whatever it might be—data warehouse or BPR or CASE or whatever it happens to be—is the meaning of that problematic? Are there very different opinions about . . .

Informant: Oh, there’s no question. I mean, what the hell does “client server” mean? (IS manager 2, p. 9)
* * *

**Interviewer:** I noticed you pointed at “CASE” [refers to a diagram informant had drawn] when you said “mainframe.” Is that, uh . . .

**Informant:** Well, no, we’re looking for application development tools in the client-server environment, so . . .

**Interviewer:** But when you see “CASE,” that’s not what you’re thinking . . .

**Informant:** I don’t, I don’t think of CASE. We’re past CASE, so I would say. The industry is past CASE. So we’re looking for a prototyping tool. (IS manager 4, p. 9)

* * *

**Interviewer:** I gather that you think there are also certain technical, hmm . . . “barriers” may be too strong . . . challenges, right now, to actually accomplishing the data warehouse ideal.

**Informant:** I think the technology’s there to do it. I mean, all’s you do is pull in the clinical data and the financial data and everything like that, and you pull it into a database. Uh, that you can do fairly easily. It’s just that, if you or I are on a vacation, um, somewhere, wouldn’t it be nice if you’re in an automobile accident, they could instantaneously through a cellular phone or through a personal computer be able to pull up everything about you. (IS manager 9, p. 4)

* * *

**Interviewer:** You’ve mentioned, uh, once or twice here, the idea of re-engineering as involving some fairly dramatic change. And I’m aware that this is certainly how Hammer talks about it. Uh, don’t automate, obliterate. [**Informant:** Right. Yep, yep.] Um, is this, uh . . . do you see this as being a realistic way of looking at re-engineering, or . . . is it kind of an overstatement?

**Informant:** It think it’s only as realistic as the CEO wants it to be. And if the CEO is not going to be comfortable with obliterate, and I think ours is not, then . . . (IS manager 6, p. 19)

* * *

**Informant:** So, I would think that data warehouse would be the thing I’m most comfortable with, in terms of a concept. Uh . . .

**Interviewer:** First of all, tell me . . . just kind of give me a thumbnail sketch of what that concept consists of.

**Informant:** Well, to me data warehouse is another way of talking about decision support. Another way of talking about information centers. It’s probably the concept that has existed the longest in the 30-odd years I’ve been in this business. (IS manager 11, p. 3)
Illustrating Inquiry into Personal Observation and Experience

*Informant:* the top systems guy was just absolutely devoted to the Ask Man-Man system. I mean, he was completely convinced that it was god’s gift, and had really just inserted it into the company, without getting the users involved, without getting any buy-in, and so forth. So the users were ready to shoot him . . . he was a very bright person, technically, but had no clue at all how to deal with human beings.

*Interviewer:* Let me ask you something, and this is based on your observing other managers and executives . . . I wonder if the more technically oriented, less business oriented, IS managers are maybe a little more gullible with respect to, kind of, buying in, swallowing hook-line-and-sinker, these bandwagons that come along, these big ideas.

*Informant:* I think there’s no question about it. The more technical ones—now, I’m an electrical engineer, ex-circuit designer, and so forth, back in the dark ages . . . but at some point I realized that I was being paid by a company that had to sell a product, and that the job of systems were to facilitate that sale in a profitable manner. And to the extent we help the company do that, we’re doing our job. But, you know, my job is not to have the latest gee-whiz. (IS manager 1, p. 9)

* * *

*Interviewer:* It’s clear the choice was obvious to go with a client server architecture, here . . . and basically create an infrastructure for a new company. Why was that choice obvious?

*Informant:* Um, because of the data requirements of our customers. We’re so . . . driven by responsiveness to our customer. (IS manager 10, p. 4)

* * *

*Interviewer:* So, looking in particular at data warehouse, I get the general idea that it represents an effort to . . . to make important data available to the decision makers and the action takers, without necessarily knowing in advance what’s really going to be important . . . That seems—difficult.

*Informant:* It is difficult because, uh . . . if we sit back and wait for, uh . . . I’m of the belief that our customers don’t know what they want. If they don’t know ’til they get out there and they start looking at the data and it’s like, No, I don’t really want that, I want to see it now—this format. (IS manager 10, p. 6)

Illustrating Inquiry into Sense-Making Strategies

*Interviewer:* To get back to the buzzwords and the big visions and the big ideas, let me ask you if you have a kind of approach or strategy . . . for learning about
them. Do you have, you know, certain sources of information that you go to, sources of opinion that you go to, to sort it out? (IS manager 2, p. 7)

* * *

Interviewer: When you’re face to face with a big idea that could well have some importance for your company, such as client server or data warehouse, something like that comes along . . . what are the kinds of sources of information, perspective, and opinion that are most important to you? And what are helpful secondary sources? Where do you plug in to the information stream, to sort things out? (IS manager 10, p. 17)
### Appendix B. Reception Items, Factor Pattern, and Metrics

<table>
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<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
<th>Factor 6</th>
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Notes: Boldface type factor coefficients indicate items incorporated in reception metrics, computed as simple item averages. Alpha’s indicate metric reliabilities. Item numbers exclude five items not incorporated in the analysis.