

## WHITE PAPER



# Communication in the Policy Process

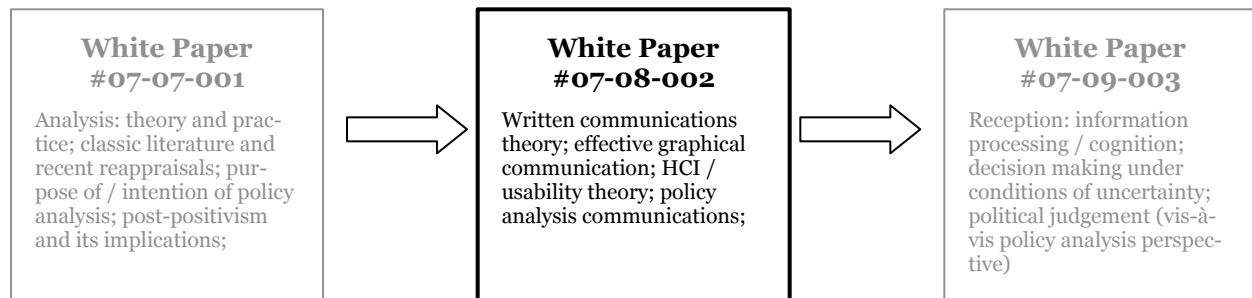
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author: Justin Longo

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# From Briefings to eBriefings in the Pursuit of Effective Support of Public Policy Decisions

The study of public policy is broadly concerned with the processes of identifying and analyzing public issues, the means by which a course of action (or inaction) is taken in response to perceived public problems, how effect is given to that course of action, and what affect the entire process has on the issue or problem being addressed. This set of three white papers is narrowly focussed on the “early” aspects of the public policy cycle centering on the questions of whether and how to address (or not address) the issue at hand, specifically those aspects dealing with policy analysis (white paper #07-07-001), its communication from analyst to decision maker (white paper #07-08-002), and the ways that analysis interacts with political decision making (white paper #07-09-003). While these aspects are dynamic and interactive, figure 1 simplistically illustrates the heuristic sequence of the three papers.



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# Communication in the Policy Process

This paper surveys the literature surrounding the act of transmitting policy analysis into the political decision making arena through the presentation of textual and visual information, as deployed across a range of mediums from traditional paper documents to modern electronic multimedia interfaces. For simplicity, and given the context of the overall eBriefings.ca research agenda, I refer to the tangible artefacts of this act as “briefing notes”<sup>1</sup> and limit the application of that term to a one-way, static content, document flow from sender (the policy analyst) to receiver (the decision maker) in isolation. Thus, I am not considering here orally delivered and interactive briefing conversations between analysts and decision makers, nor group deliberation (e.g., amongst members of a cabinet, jury or deliberative forum). And while ‘e-briefings’ presented using interactive computer interfaces that allow the user to explore a policy issue through the use of hyperlinks to more detailed supporting material are included, this survey does not cover in great detail approaches such as information visualisation and dynamic content interfaces that generated unique outputs based on user inputs through techniques such as simulations or database queries.<sup>2</sup> Also, to be clear, briefings are a type of *expository document* (to borrow a term from communications studies) that have as a general goal the laying out of a body of ideas that enable a reader to understand and remember them; thus, they are distinct from *functional documents* – e.g., legislation, regulations, procedures and agreements – that record details and instructions that support implementation, whether they cover a constitutional principle or instructions on clearing a photocopier paper jam (Flower *et al.*, 1983: 41).

The limited framing of this review admittedly leaves out much of what has historically been included under the concept of policy briefings – especially oral briefings<sup>3</sup> and the iterative development of policy analysis that incorporates feedback from decision makers following initial and subsequent briefings (where policy analysis is seen as a dialectic process) – as well as what may possibly come to be included under the heading in the future. Therefore, prospective approaches to policy analysis, communication and decision support – e.g., decision-maker initiated policy

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<sup>1</sup> On the etymology of the term “briefing notes” as it is used in policy analysis (variously referred to as briefing notes, policy issues papers, and policy memoranda, amongst other terms), it appears that its origins lie in legal “briefs” and the derivative “military briefings”; the Oxford English Dictionary (Simpson and Weiner, 1989) provide the following:

brief, *n.*

**7. a.** *Law.* A summary of the facts of a case, with reference to the points of law supposed to be applicable to them, drawn up for the instruction of counsel conducting the case in court.

**7. b.** = “briefing, *vbl. n. 2.*”

**1949** *Economist* 27 Aug. 465/1 The last touches have been put to the brief which Sir Stafford Cripps and Mr Ernest Bevin will be taking with them for the Washington financial talks.

brief, *v.*<sup>2</sup>

**3. b.** To give instructions or information to. Cf. BRIEFING *vbl. n. 2.*

**1866** LEVER *Sir B. Fossbrooke* xlv, They had not been well ‘briefed’, as lawyers say, or they had not mastered their instructions.

briefing, *vbl. n.*

**2.** The action of giving information or instructions relating to a particular situation; information of this kind. Applied esp., in the war of 1939-45 and since, to pre-flight conferences.

**1940** *Times* 22 Aug. 5/6 Everything is ready for the ‘briefing’, which forms an indispensable part of every bombing raid.

<sup>2</sup> This distinction rests on the definition of “interactivity”: using a broad definition of interactivity, all documents are interactive – the user decides where to look; using a narrow definition, very little of the web is interactive. If the criteria for interactivity is hyperlinks, then reading is a non-computerised form of interactivity. This has implications for Fogg’s (2001) contentions about computers being a fundamentally different type of persuasive medium (though most of the examples he gives in his book are not interactive under a narrow definition).

<sup>3</sup> Obviously, this places the analyst at a disadvantage, but it is a constraint that the analyst must realistically face. Quade (1975: 255) laments that most analysts never get the opportunity to make an oral presentation. Tufte (1997: 46-47), in his review of the space shuttle Challenger case, notes that written information supplied by the makers of the shuttle’s rockets was followed by a disclaimer that the “information on this page was prepared to support an oral presentation and cannot be considered complete without the oral discussion.” The general perspective that emerged during the inquiry into the accident was that this standard legalistic caveat (colloquially, a ‘CYA notice’ – either interpreted to mean ‘call your attorney’ or ‘cover your ass’) serves to protect the company by essentially saying: ‘the document means what it says; however, we cannot accept responsibility for your interpretation of it.’

analysis through graphical interface simulation models and database access tools that allow non-expert users to ask simplified questions and receive projected results or synthesised information derived from large databases – are not focussed on here. These types of policy advice raise issues of information management and visualisation, interface design and human information processing that are certainly interesting but beyond the scope of this review. Also, these approaches are not highlighted because, I argue, they would represent the introduction of a policy analysis and advice model that is both significantly distinct from the traditional briefing model (thus posing problems for their adoption; see white paper #07-09-003) and potentially incompatible with the post-positivist policy analysis perspective (see Castelfranchi, 2000; Kuflik, 1999).

While white paper #07-09-003 in this series deals with how decision makers receive, process and make use of briefing notes, this paper follows from the conclusions of white paper #07-07-001 by clearly adopting the ‘persuasion perspective’ – *the ethical attempt to persuade a decision maker of the value of an analysis and/or recommendations* – in framing the analyst’s objective in the process of communicating policy analysis to decision makers. The assumption that the ideal goal of policy analysis is to persuade a decision maker of a particular view or course of action, even if framed within a tradition of responsible and ethical public service, will not sit well with some policy analysts and decision makers who might argue that the responsibility of the analyst is to provide factual information in an unbiased manner with the objective of supporting the decision maker in exercising their democratic rights and responsibilities (Meltsner, 1980: 127). However, the perspective adopted here on the policy analyst’s objective does not assume that the policy analyst has adopted the role of the agenda-driving policy advocate, manipulatively employing “the skills of rhetoric, persuasion, organization and activism” and intent on wielding influence in the decision making process in order to urge a government to pursue a particular policy that might serve some particular set of interests (Dye, 1984: 7). Rather, the persuasion perspective used here forces us to recognise that the image of policy analysts as technocratic problem solvers, who accept as relevant only the ends that are determined in the political process, fails to recognise that “to say anything of importance in public policy requires value judgments, which must be explained and justified” (Majone, 1989: 21).

Part of the problem with the application of rhetoric to policy analysis is semantic: for many, “rhetoric means (a) handbook rubrics on ‘how to’ write or ‘how to’ speak; (b) mendacious bombast” (Winterowd, 1968: v). John Locke, in his 1690 *Essay Concerning Human Understanding*, denounced rhetoric and figurative language as an “instrument of error and deceit”. And in policy analysis, persuasion is often equated with manipulation, deceit and clever sophistry (e.g., Dye, 1984). However, numerous authors have argued for the embrace of rhetorical skill by the policy analyst, where the ability to persuasively argue a position is as valuable as the analytical techniques which produce the argument (e.g., Majone, 1989<sup>4</sup>; Tribe, 1972; Fischer and Forester, 1987; Fischer and Forester, 1993; Dryzek, 1987; Stone, 1997; Roe, 1994). Rather than arguing that policy analysis can or should operate in an environment separate from political judgement, the persuasion perspective seeks to highlight the effect and responsibility of the analyst within the post-positivist policy process as an advisor to the decision maker. Though the persuasion approach advanced by Majone and others does imply that to engage in persuasive debate requires the participants to adopt an ethical frame, I explicitly add the criteria that persuasive policy advice must be undertaken from within a framework of responsible and ethical public service.<sup>5</sup>

Adopting this persuasion perspective has important implications for the literatures that are highlighted in this review. This survey represents an attempt to review and integrate a wide range of literatures related to the question of how to effectively communicate information developed in policy analysis to decision makers, in textual and graphical form and between paper and ICT mediums, taking as a touchstone the persuasion perspective described above. Without framing and bounding the literature to be surveyed, an attempt to encapsulate all of the subject areas that impinge upon communication would quickly grow unwieldy. For example, Griffen’s (2003) widely used textbook covers dozens of communication theories and covers 500 pages of text. By limiting this survey to the literature dealing with the practice of effective textual and graphic communication, and adopting a persuasion perspective, this survey will hopefully be made manageable. By necessity and as a consequence of the interdisciplinarity of this inquiry, this literature review will be introductory, superficial and impressionistic. My interest and objective here is to attempt to integrate these literatures into the policy analysis communication realm, to bring this literature to bear on the subject of persuasive communication in the policy analysis process – a subject that has been alternatively ignored, dismissed as a matter of personal style or institutional practice, reliant on the long-discredited ‘craft approach’ to writing and graphic design, or subject to axiomatic question begging – as in, ‘good briefings communicate well’.

<sup>4</sup> E.g., Majone (1988: 173) calls “persuasion ... a method of mutual learning through discourse.”

<sup>5</sup> One approach to operationalising this criteria has been adopted by the National Communication Association in their “Credo for Communication Ethics” (<http://www.natcom.org/conferences/ethics/ethicsconfcredo99.htm>).

I begin with an overview of the field of communication theory, focussing in particular on the communications research tradition of rhetoric in order to frame the discussion. The social-psychology approach to communications research is briefly addressed there, but a more thorough treatment is reserved for paper #07-09-003. Next is a survey of the literature on effective written communication, with a particular focus on the 'plain style' approach and measures of readability. Mirroring this is a review of some principles from graphic design from a rhetorical perspective, with a brief reference to the emerging concept of 'visual rhetoric'. This is followed by a survey of the relevant literatures from human-computer interaction (HCI) specifically as they relate to purposive attempts to persuade the user; the specific issue of interface usability is also addressed here. To put all of these literatures in context, I then review a number of articles, policy analysis textbooks and government guides that deal with the issue of effective communication in policy analysis. I conclude with observations on the persuasion perspective on policy communication in the post-positivist policy environment.

## Communication, Rhetoric and Persuasion

Superficial similarities between the development of the field of communication theory and policy analysis (see paper #07-07-001) are striking: with origins in military affairs and mid-century advances in technology, building on a long history of social interest in the problems of communication (e.g., wars and warfare, economic activity and development, and technological advances) and in particular the experiences of the Depression and World War II. The fields are also similar in the range of perspectives and interpretations that fall under their headings and, perhaps, the absence of any disciplinary coherence across the field (Griffen, 2003: 21). And at the risk of seeing connections everywhere, especially where they don't exist, in the conclusions to this paper I will argue that the two fields are also similar in the extent to which there exists a practitioner / academic dichotomy in both document design<sup>6</sup> (as between the 'craft' and 'rhetorical' traditions) and policy analysis (as between positivism and post-positivism).

Communication, simply defined as the transmission or constitution of a message between two or more people, involves a number of factors: sender; message; channel; receiver; perception; and feedback. Because the concern here is with the one-way communication of policy analysis through the briefing document, and because paper #07-09-003 in this series deals with the reception and processing of the analysis by decision makers, the focus here will be on the constitution and transmission of the message. Despite that simple definition, and even allowing for a narrowing of the factors considered, developing a comprehensive summary of a field with as much breadth as communication theory requires judicious pruning.

Emerging as a distinct discipline around World War II, the term *communication theory* was first used by electrical engineers to refer to the mathematical analysis of signals (e.g., Shannon and Weaver, 1949; Wiener, 1948). The technical vocabulary of information transmission and feedback that developed during this period soon spread to the social sciences, and communication came to figure highly in public debates about democracy, culture, mass media and interpersonal relations. With the growth of electronic media (and its current terminology of ICTs), communication has again come to focus on the technical aspects that gave rise to the field a half century ago, though having incorporated the concerns for human interaction at the point of the interface.

In attempting to conceptualise and understand a vast concept such as communication, two dominant models are employed in communication research: an older and widely employed transmission model, and a newer alternative, the constitutive model. The *transmission model* views communication as a process in which meanings – packaged in symbolic messages – are transported from sender to receiver. A transmission approach generally acknowledges that it is the interpretation by the receiver that determines what meaning will be given to the message; however, the transmission model is generally characterised as viewing communication as a technical process that can be evaluated for its effectiveness, and can be improved through better "packaging" or "transportation".<sup>7</sup> Under the *constitutive model*, the elements of communication – i.e., senders, receivers and the technical means of communication – are not fixed in

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<sup>6</sup> Defined below as the communication act of bringing together of prose and graphics aimed at instructing, informing or persuading a reader (Schriver, 1997: 10).

<sup>7</sup> Goodall and Roberts (2002) note that much of the knowledge management literature uses metaphors that suggest that knowledge has a solid nature – information is 'captured', 'stockpiled', 'dug', 'mined', and 'drilled'. Knowledge management has been characterised using a 'conduit model' (Boland and Tenaksi, 1995: 352): communication can be improved by "increasing the channel capacity; by redefining the procedures for encoding and decoding messages; by providing more reliable data storage and retrieval facilities; or by making the channel of communication more universally available." This conduit model supports those who see the potential for new technology to improve decision making.

advance, but instead are reflexively constituted by the act of communication itself. Communication thus becomes more than a technical question of efficiently achieving one’s objective, but rather a social issue with complex moral and political dimensions (see comments below on knowledge generation as an emergent property).

Under both models, a number of research traditions have developed. Most surveys of communication theory identify seven major traditions that primarily serve to describe different foci of communication theory and different approaches to research (e.g., Craig, 1999; Griffen, 2003). These traditions, briefly described in table 1, are: rhetorical, social psychology, cybernetics, semiotics, socio-cultural, critical and phenomenology.<sup>8</sup>

Table 1: Major Research Traditions in Communication Theory

Rhetorical	Rhetoric can assume a number of different postures: as a particular kind of communication (e.g., as persuasive or intentionally purposive communication); as a particular facet of the transmission model (e.g., as a manipulative technique for imposing one’s view); or as a constitutive social process.
Social Psychology	This tradition focuses on social influence and interaction in communication; can take either a transmission model approach (a receiver is influenced by a source) or constitutive model approach (interaction reciprocally changes the participants and leads to collective outcomes that would not otherwise have occurred). Has produced important insights into the effect of source credibility and the impact of audience perception of source expertise and character.
Cybernetics	Conceptualizes communication as information processing, a function of all complex systems, e.g. computers, plants and animals, humans, organizations, and societies. Sees little difference between human communication and other kinds of information processing systems. Focussed principally on the transmission of information, not the meaning or interpretation. Recent theorists have introduced concepts such as interactivity, power imbalance and feedback.
Semiotics	Semiotics views communication as a process that relies on signs (or words as symbols) to bridge the gaps between subjective viewpoints.
Socio-cultural	Socio-cultural communication theory views communication as a symbolic process that produces and reproduces shared meanings, rituals, and social structures. Communication involves the coordination of activities among social actors, and communication problems are revealed in difficulties and breakdowns of coordination.
Critical	The critical tradition views communication as a reflexive, dialectical discourse that hinges on the cultural and ideological aspects of power, oppression, and emancipation in society. Habermas has reconstructed critical theory around communicative action – discourse aimed at mutual understanding.
Phenomenology	Involves the intentional analysis of everyday life from the standpoint of the person living it. The basis for communication lies in our common existence with others in a shared world that may be constituted differently in experience.

In addition to the two alternative models of communication (transmission and constitutive) and these seven dominant research traditions, communication can be classified according to (a) the function it performs; (b) by the codes, media, or channels through which communication occurs; and (c) by the context or situation in which it happens. Some of the widely studied *functions of communication* include: persuasion, social influence, socialization, social support, entertainment, information processing and decision-making. Another concern here is with alternative media approaches – from traditional paper briefing notes to ICT-based ‘e-briefings’. And the context – policy advice in a political environment – is a crucial aspect addressed in paper #07-09-003. Thus, the approach adopted here views communication through a transmission model, functional perspective (persuasive communication), including a concern with the medium of communication, strongly oriented towards the rhetorical tradition operating at the boundary with research in social psychology.

*Persuasive Communication: The Objective of the Rhetorician*

The study of persuasion can be traced to Aristotle’s concern with the art of rhetoric, the act of using public speech to change listener’s moods and opinions and, ultimately, to motivate them to action. The Greco-Roman tradition of rhetoric distinguished the important elements to be mastered for persuasive communication: audience analysis; invention (developing convincing arguments); arrangement of the arguments; style; delivery or presentation; and

<sup>8</sup> Possible additions to this group of seven might include: feminist, aesthetic, economic, spiritual, ethical or media traditions (Griffen, 2003: 34).

memory.<sup>9</sup> While all of these elements are important, the key contribution focussed on here is rhetoric’s attention to the interests of the audience.

Aristotle identified the three means of rhetorical persuasion as logical proof, ethical proof and emotional proof. The logical proof of the argument is what the policy analyst will feel most comfortable with – the use of evidence and analysis that support the arguments and conclusions.

To establish ethical proof, the speaker must be perceived to be credible, as judged by the audience’s evaluation of the speaker’s intelligence (authoritativeness), character (trustworthiness) and goodwill. Perceived intelligence is largely based on whether the audience’s beliefs overlap with the speaker’s ideas. Character is a function of the perception of the speaker as a good and honest person. And goodwill rests on the audience’s judgement of the speaker’s intention or motivation. In the analyst / decision maker relationship, credibility is established through the policy analyst’s maintenance of strict objectivity - i.e., the belief that by communicating advice that was derived and presented without bias, the analyst will be perceived as a competent professional and thus be judged to be credible. (I will describe later how, from a post-positivist perspective, credibility is established primarily through a trust relationship between advisor and decision maker). Whether the perspective is positivist or post-positivist, credibility, or ethical proof, is the characteristic hardest to build and easiest to destroy.

Emotion proof, the feeling the presentation engenders in the audience, is evident in the degree to which the audience not only understands but also accepts or believes the argument of the speaker. However, it is this element that most distinguishes the persuasion approach from the rational/positivist policy approach. While the logical proof is the primary objective of positivist policy inquiry, and the ethical proof is ostensibly attended to by the policy analyst’s objectivity, the positivist position is essentially agnostic on the question of whether the decision makers believes the analysis or not. In this regard, the positivist argument goes something like this: ‘the analysis is correct (logical proof) and was correctly determined (ethical proof); if the reader chooses not to believe it, that is the reader’s failure. To understand the truth, but not believe it, is unreasonable.’<sup>10</sup> Paper #07-09-003 seeks to illuminate the numerous ways that understanding and belief (and, indeed, action) can reasonably diverge.

Despite the discrepancies between the positivist policy approach and the rhetorical approach, Aristotle’s rhetoric essentially rests on the assumption that the receivers of information make rational calculations about the logical, ethical and emotional value of a message. Walter Fisher (1984, 1987) has proposed an alternative to this in his narrative paradigm. Rather than rhetoric being a matter of evidence, facts, arguments, reasons and logic, the narrative paradigm proposes that providing a persuasive argument hinges on telling a compelling story. Compare the following lists:

Aristotle’s Rational View	Fisher’s Narrative View
• People are essentially rational	• People are essentially storytellers
• People make decisions on the basis of arguments	• People make decisions on the basis of good reasons
• The situation determines (legal, political, scientific) the course of the argument	• History, biography, culture and character determine what are good reasons
• Rationality is a function of how much we know and how well we argue	• Rationality is a function of the coherence and fidelity of a story
• The truth can be revealed through rational analysis	• The truth is created (and recreated) from the stories that we choose.

<sup>9</sup> When the Greeks referred to the rhetoric element of memory, they meant the rehearsing of the content in preparation for public delivery. When we moved to written and visual forms of rhetoric, human memory was no longer as important an element though other modern forms of “memory” – organisational, computer memory, distribution through mass media, etc. – have since entered the picture.

<sup>10</sup> The rhetorical approach might be: ‘I know (or am reasonably sure) that my analysis is right and was carried out with appropriate expertise. And I have worked with the Minister long enough to think that I understand her interests and concerns in this case. If she does not accept the analysis, then my advice is lacking the effective argumentation necessary for its acceptance. Given the opportunity, I might try again.’ Of course, the briefing note could possibly lack logical or ethical proof – that the analyst is a very persuasive writer, but has proven himself completely inept at analysis in this particular case and/or over a number of years, is a possibility that must be faced.

(source: Griffen, 2003: chapter 23)

Fisher's narrative paradigm resonates with the post-positivist policy position (e.g., Fischer and Forrester (1993) attempt to bring a narrative and argumentative approach together with the policy analysis approach), yet in doing so appears to reveal a second dilemma for the post-positivist policy analyst: in the first place, as I've already argued (see white paper #07-07-001), the attempt to break away from the positivist paradigm in policy analysis already holds the possibility that the policy advice will be met with a sceptical response from the advice / decision making system because of its divergence from established rational analysis techniques; but to move from the rhetorical position of building a persuasive argument to a narrative approach in line with Fisher (which appears to lean even more towards the romantic tradition) would, I will argue, further raise overarched eyebrows in the policy environment. While it may be true to say that "Charles Dickens may have produced more useful social policy analysis than any Memorandum to Cabinet ever has"<sup>11</sup>, it seems unlikely that even the most erudite post-positivist policy analyst would be given the latitude to begin a policy brief: *It was the best of times, it was the worst of times*.<sup>12</sup> To adopt a "story-telling" narrative approach under the current policy analysis model would likely diminish the analyst's most important asset – their credibility. However, to equate narrative with fictional story telling would misinterpret Fisher's argument. Under the narrative paradigm, a policy brief can constitute a persuasive story – and still qualify as appropriate under the current policy analysis model – if it has coherence (or argumentative strength) and fidelity (or believability).<sup>13</sup> To do so requires an embrace of the policy analysis and communication principles described thus far, not a rejection of them. Perhaps an even more useful way to consider the narrative paradigm is to think about what the politician does in trying to persuade the electorate of the rightness of a policy direction – whether in the act of seeking office or exercising power.

Aristotle's elevation of the importance of rhetoric diverged from the position of his teacher Plato, who considered rhetoric to be merely a clever form of pandering to an audience's prejudices. Plato's ideal discourse was the one-to-one elite dialogue known as *dialectic*, aimed at determining Truth with certainty, precision and finality. Aristotle considered rhetoric to be a modified form of dialectic, in which the rhetorician tries to demonstrate to a large audience a practical argument that has been determined to be probably true. Moving this distinction to the modern context of policy analysis, the Platonic tradition sees the development of "policy truths" through a dialectic process (perhaps extending past traditional discourse through to the use of modern ICTs such as simulation modelling and computer-supported deliberation systems) involving policy analysts, politicians and (ideally) citizens. The rhetorical approach I have adopted here separates the development of the policy argument (a dialectic process) from its communication to the decision maker in the synthesised form of the briefing note (a rhetorical act of attempting to persuade the reader of the correctness of the analysis), though as Majone argues, the rhetorical persuasiveness of the policy analyst is part of the dialectic of the policy process (Majone, 1989: 5-9). In recent years, this approach to "knowledge generation" has been conceptualised as an "emergent property" of a system where emergent knowledge is developed as the indirect product of the interactions of components in a complex system, where the product of such interactions cannot possibly be determined in advance (see Minsky, 1986). Again, the limited framing of this present discussion leads us to focus on the unidirectional transfer of the briefing document in order to model the policy advice process.

#### *Social Psychology on Rhetoric and Persuasion*

Since the time of Plato and Aristotle, the philosophy of rhetoric has swung between two poles – rhetoric as manipulative pandering, or as artful engagement of an audience. The renaissance sought amelioration: e.g., Bacon described rhetoric as the application of "reason to imagination for the better moving of the will". For centuries following this, however, the logic of rhetoric (invention, arrangement and memory) was made secondary to the artistry of style and delivery – thus the evolution of the semantics of terms like "mere rhetoric" as the logic of the scientific age progressed. In this section I briefly survey the social-psychological approach to studying persuasive communication, but reserve for white paper #07-09-003 a detailed description of the research literature.

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<sup>11</sup> While I may not be quoting this verbatim, the sentiment reflects a question often asked by my long-time policy analysis teacher, Rod Dobell.

<sup>12</sup> The British songwriter Billy Bragg was recently quoted as saying: "'At the House of Lords I am forever trying to explain things in metaphors.' But he's not quite convinced his method is fully effective in parliament. 'Although I find poetic metaphor much more interesting, it seems there is not much room in politicians' lives for poetry.'" Victoria News, p. B1, July 11 2003.

<sup>13</sup> Hodge (1995) describes "telling the story" as a crucial part of his approach to policy analysis.

The formal scientific study of persuasion communication (rhetoric) developed in the early 20<sup>th</sup> century, led primarily from social psychology, and has focussed on determining the communication activities and factors that cause people to change attitudes and behaviours. The technique of persuasion can be simply understood as the presentation of arguments, of reasoning and drawing conclusions, and setting out the projected positive results of following a course of action, all aimed at getting the audience to follow that course of action (Zimbardo and Leippe, 1991). More formally, persuasion can be defined as actions that the intentionally seek to “shape, reinforce, or change the responses” of the decision maker through communication (Miller, 1980; quoted in Stiff and Mongeau, 2003; 4); other definitions also stipulate that true persuasion is non-coercive, honest (i.e., not based on deception) and only extends to the intentional effects of the persuasion effort, not any unintended side-effects (e.g., Fogg, 2003). A broader definition of persuasive communication could encompass all communication as persuasive, but the perspective adopted here is limited to communication activities that are intended to affect the response of the receiver.

The persuasive communication literature is also delimited as a subset of the wider *social influence* literature. Using language that may be at odds with the common use of the terms influence and persuasion, social psychology characterises persuasion as communication that tends to focus on “detailed argumentation that is presented to individual recipients in a context with only minimal social interaction. Social influence appeals, in contrast, usually consist solely of information about the source’s position, but these are delivered in more complex social settings that may include interaction among participants” (Wood, 2000; 540).<sup>14</sup> In an interdisciplinary setting, this terminology engenders more miscommunication than necessary, but the distinction is important for understanding the particular orientation of the persuasive communication literature.

In persuasive communication, response-shaping applies to concepts, ideas or situations that are new to the recipient, response-reinforcement serves to maintain adherence to previously internalised messages, and response-changing messages seek to move the receiver from an existing established position to a new position. The concept of the decision maker’s response centres of the attitude system: emotions, perceptions, cognitions, beliefs, behavioural intentions and behavioural change. Whether practiced as influence or persuasion, the ultimate goal of an influencing agent is to change the recipient’s actions – i.e., their behaviour (Zimbardo and Leippe, 1991; Stiff and Mongeau, 2003).

## What Makes a Text Effective?

### *The Rhetorical Approach to Effective Written Communication*

The study of effective communication in written form is informed by three traditions: the craft, rhetorical and romantic perspectives. The craft approach, dominant from the late 19<sup>th</sup> century through the mid-twentieth century, highlights the writer’s mastery of fundamental technical skills, guidelines, principles, rules and procedures. The romantic tradition views writing as an essentially unteachable artistic activity in which a writer gives free expression to their inner vision; the best that a mentor can hope for is to provide a nurturing environment in which the writer’s gifts are allowed free expression. In some respects, the rhetoric tradition encapsulates elements of the craft and romantic perspectives: heuristic guides (what Aristotle called ‘strategies for making effective guesses’) and the belief that persuasive writing was a skill that could be taught are borrowed from the craft tradition; the art of invention – discovering what to say and arranging it effectively – resonates with the romantic tradition.

Effective communication in technical writing (the research area closest to the concern in this review with policy briefing notes) draws on two traditions: ‘plain style’ and measures of readability are both derived from the craft tradition of writing, however their recent adaptation as reader-focussed tools makes them useful approaches for describing the rhetorical approach to effective written communication. Readability scoring still draws heavily on a decidedly craft-driven approach, but new research on measuring readability through the eyes of the reader moves it towards a distinct rhetorical approach. The modern plain style approach has retained its focus on the importance of clear writing but has minimised the importance placed on rigid grammar and style rules, instead highlighting the importance of audience analysis, and the invention and arrangement of the arguments.

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<sup>14</sup> Alternatively, using the language of Habermas’ discourse theory, persuasion relies solely on the recourse to reason and the “unforced force of the better argument” (Habermas, 1996: 419); influence resides in the exercise of power or coercion and thus violates one of the conditions of Habermas’ “ideal speech situation” (see Longo, 1999). With respect to social influence, unless the policy analyst personally wields some influence by virtue of their personality or position (e.g., if the proponent is a senior deputy minister with a reputation for thoroughness and sound judgement), the effect of their analysis is constrained to the persuasiveness of the message being communicated.

## Plain Style

Referred to alternatively as the “plain style of writing”, “plain English” or “plain language”, the objective of the plain style of writing is to apply a number of heuristic guidelines to produce clear, precise writing. George Orwell, the patron saint of *inter alia* the plain style movement, warned against the misuse of language in his 1946 essay “Politics and the English Language”.<sup>15</sup> Orwell was not concerned “with correct grammar and syntax, which are of no importance so long as one makes one’s meaning clear” nor “with fake simplicity and the attempt to make written English colloquial.” Instead, he was concerned with two forces that make language less meaningful: laziness of habit, and political obfuscation. Orwell claims that examples of modern language that exhibit laziness are rooted in the ease with which such writing happens. Meaningless, stock phrases “are a continuous temptation, a packet of aspirins always at one’s elbow”. He also argues that “the whole tendency of modern prose is away from concreteness. ... If you simplify your English ... when you make a stupid remark its stupidity will be obvious, even to yourself. Political language ... is designed to make lies sound truthful and murder respectable, and to give an appearance of solidity to pure wind.”<sup>16</sup>

Where Orwell placed the onus on the writer to protect the language and avoid the mistakes of laziness, the “plain language movement”<sup>17</sup> has put the onus on writers to protect the reader by making texts more efficient. With the ‘citizen-centred governance’ or ‘reinventing government’ concepts of citizen-as-client providing a motivation for making writing more accessible,<sup>18</sup> plain style rests on an understanding of the purpose for the writing and an analysis of the audience as the basic elements in building a text that avoids misunderstandings and confusions. The objective underlying these directives is to make documents and forms more easily understood by ‘members of the general public’. Likewise, the legal profession has seen its own plain language movement aimed at making the law more accessible to non-experts. Focussing on the reader is central to plain language writing, and much of the agitation around the use of plain language comes from an expanded notion of the audience.<sup>19</sup>

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<sup>15</sup> All quotations are from: Orwell, George [Eric Blair]. 1946. “Politics and the English Language.” <<http://www.resort.com/~prime8/Orwell/patee.html>>

<sup>16</sup> Orwell offers a number of rules designed to “change the attitude of the writer”:

1. *Never use a metaphor, simile, or other figure of speech that you are used to seeing in print.*
2. *Never use a long word where a short one will do.* This rule takes aim at writers bent on the “elimination of simple verbs” and “banal statements [that] are given an appearance of profundity.”
3. *If it is possible to cut a word out, always cut it out.*
4. *Never use the passive where you can use the active.* Note the distinction between this and the more common rule: “Always use the active voice.”
5. *Never use a foreign phrase, a scientific word, or a jargon word if you can think of an everyday English equivalent.* Orwell decries the “pretentious diction” designed to “give an air of scientific impartiality to biased judgements” or “an air of culture and elegance”, and words meant to be emotive, but that are instead essentially meaningless (calling a country “democratic”, for example).
6. *Break any of these rules sooner than say anything outright barbarous.*

<sup>17</sup> See, e.g., the Plain Language Association International <<http://www.plainlanguagenetwork.org/>>

<sup>18</sup> Originating in the early 1970s, U.S. President Carter advanced the plain language movement with his Executive Order aimed at making “federal regulations clearer, less burdensome, and more cost effective.” His successor, President Reagan, rescinded the order in the early 1980s (Shriver, 1997: 27). In 1998, U.S. President Clinton again directed government agencies to use the plain language style in their writing and communications, “to make the Government more responsive, accessible, and understandable in its communications with the public”.

<sup>19</sup> In the specific context of this research, many basic elements of audience analysis can be inferred. If we understand the audience to be a single decision maker or small group of decision makers at the senior levels of government, we can assume: above average literacy skills; an appreciation of the general context; some degree of familiarity with the specific environment; above average levels of motivation or interest or at least an appreciation of the general importance of the issue; competition for attention from a number of similar documents; and significant time limitations. These assumptions have implications for the style of writing that differentiates it from the usual assumptions of the plain language movement.

The plain language approach also highlights the importance of clear, logical writing, ostensibly achieved by changing words or sentence structure, and the arrangement of the document's structure, messages and themes. Organising principles such as a table of contents, an introduction that provides a map to the document structure, headings and subheadings, and paragraph topic sentences are highlighted in the plain language approach.<sup>20</sup>

Lastly, the plain style approach attends to the presentation on the page – making standard recommendations about spacing, font selection and highlighting. One particular position concerns the use graphics, where the 'picture is worth a thousand words' heuristic is not as readily accepted. The principal concern is with the meaning given to a graphic by the audience and whether it reflects the intended meaning of the writer. The use of charts and graphics is also cautioned against, as it is argued that it requires some level of expertise to interpret them (Larkin and Simon, 1987).

### *Readability*

Readability can be defined as measures of the extent to which a reader operating under normal circumstances (alertness, time pressure, interest, etc.) can easily and quickly comprehend the intended meaning of a text (Huckin, 1983: 91). As an alternative to the rules-based plain style approach, readability formulas, most notably "Flesch's Reading Ease Scale" and Gunning's FOG Index"<sup>21</sup>, provided simple techniques for gauging the difficulty of written prose based on sentence length and word length. Readability, and formulas to measure it, has been very influential in the research and teaching of writing, and much of the discussion about a readable style is oriented towards readability. However, formulaic approaches to readability have long been dismissed in academic circles. Selzer (1983: 73) argues that the text-focused measurement approach to readability has led to an inordinate focus on word length and sentence length – that other factors should be highlighted in considering style and what makes a text readable. A careful reading of alternative reader-focused measurements of readability – e.g., reading time, amount recalled, con-

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<sup>20</sup> Some plain style guidelines include:

- use smaller words instead of big words ('find out' rather than 'ascertain')
- use fewer words if possible ('because of' instead of 'due to the fact that')
- avoid jargon or trendy words and phrases where possible
- avoid creating nouns from verbs
- write in the active voice.

<sup>21</sup> Flesch's Reading Ease Score =  $206.835 - 0.846wl - 1.015sl$ , where

wl = number of syllables per 100 words

sl = average number of words per sentence

The result is a number between 0 and 100, with 100 representing the easiest reading.

Gunning's FOG Index Reading Grade Level =  $0.4 (asl + \%pw)$ , where

asl = average number of words per sentence

%pw = percentage of polysyllabic words

My word processing program, Microsoft Word, also calculates the Flesch-Kincaid Grade Level score, the formula for which is  $0.39asl + 11.8awl - 15.59$ , where:

asl = average number of words per sentence

awl = average number of syllables per word

Both grade level scores indicate what grade level the analysed reading would be appropriate for.

As an example, an analysis of this present paper (using the Microsoft Word feature) shows that it obtains a maximum score of 12 on the Flesch-Kincaid Grade Level test and 17.3 (out of 100) on Flesch's Reading Ease Score, with 15% of sentences in the passive voice.

cepts understood, cloze testing<sup>22</sup> – show that short words in short sentences (in the absence of paying attention to other important stylistic issues) do not necessarily contribute to readability (Selzer, 1983).

What seems clear is that achieving readability is much more complicated than following a formulaic route to sentence and word length; readability is influenced by word factors (e.g., abstract words not commonly used by the audience decrease readability), sentence factors (increasing sentence complexity, which is primarily a function of clause length<sup>23</sup>, decreases readability), and elements beyond the individual sentence (where the use of topic sentences and the “given-new contract”<sup>24</sup> improve paragraph and document readability, and where the density of propositions decreases readability). And to further complicate the investigation of readability, Selzer (1983) concludes that the research approach has oversimplified the concept by assuming that all readers will respond to a text in the same way. What seems more likely is that a variety of factors – age, education, profession, interest, pre-knowledge, motivation, learning style, reading style, etc. – influence the readability of a document depending on the particular circumstances in which it is deployed. Thus, the writer must again consider her audience, using words the reader knows and making sentences appropriate to the issue and the audience. While we are not cut adrift amongst the currents of “good writing is what communicates well”, what seems clear is that mathematical readability scores do not provide a watertight measure of readability.

### What Makes a Graphic Effective?

#### *Graphic Design as Visual Rhetoric*

Switching gears from a focus on the text, here I review the use of graphics and the combination of graphics with text that serve to enhance the message in documents, provide an alternative explanation, and add complementary cues to the writing. More broadly, the term ‘visual’ refers to the general design of a document, the visual devices that direct attention, and visual representations of information (e.g., tables, figures, charts, illustrations or pictures).

In surveying the use of visual and graphic elements in communication, the particular context of this study – the communication of policy analysis from analyst to decision maker – again requires a rationalisation of the range of visual and graphic techniques that are considered. Specific techniques such as higher level, dynamic technologies that manipulate and display numerous variables housed in computer databases – such as geographic information systems

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<sup>22</sup> “Cloze testing” involves presenting a text to an audience with every  $n^{\text{th}}$  word left blank; the more the intended user can guess what word has been deleted, the higher the text’s readability.

<sup>23</sup> Odell *et al.* (1983: 21) describe an examination of “specific features of syntax that other studies had shown to vary with rhetorical context” including clause length, T-unit length (a T-unit is a measure of a main clause plus all of its modifiers), number of clauses per T-unit, and number of passive constructions per T-unit. One result of this approach was a finding that passive constructions were judged to be more “acceptable” by readers than active constructions, even though writing instruction consistently highlights the need to write in active voice. While the passive voice is the *bête noire* of the craft approach, there is no conclusive evidence to support the active voice mantra; depending on the context, the passive construction can actually increase readability (Selzer, 1983: 80-81). Situations in which the passive voice can be a useful construction include when the subject is assumed, unknown or unimportant (e.g., “The hitter was beamed by an inside fastball”; “Shots were fired at the embassy.”) or to avoid calling attention to the performer of the action – also known as the ‘institutional passive’ (“The budget documents were tabled.”)). The craft jeremiad of “always use the active voice”, citing as evidence the poor readability of academic and institutional writing, ignores a crucial observation: in formal writing, the passive voice can often represent the correct usage.

<sup>24</sup> The “given-new contract” is an implicit accord whereby the writer agrees to introduce new information only when tied explicitly to previously presented information. In the absence of previously “given” information, the communication of new information can be impaired (Selzer, 1983: 82).

(GIS)<sup>25</sup> and various modes of data visualisation<sup>26</sup> – are not covered in any depth here. As mentioned earlier, these approaches are very useful at the analytical stage of policy analysis (and can be useful in certain public deliberation settings), but using these approaches in the policy briefing environment does not suit the policy advice model as framed in this review.

It has long been assumed that visual explanations improve understanding, especially of complex information, through features such as repetition and reinforcement of textual information (i.e., first using text, and then repeated visually – see Gyselinck & Tardieu, 1999), and the presentation of multiple-coded information (e.g., combining visual and spatial information in graphic form<sup>27</sup> – see Paivio, 1971). “A picture is worth a thousand words” has evolved from advertising slogan to cultural myth (Mieder, 1990), and much research on the comparative utility of words and pictures has referred to the idea. A starting point for this literature is Larkin and Simon (1987), who describe the advantages that diagrams have over written propositions.

However, the use of visual imagery in documents has a much longer history. Graphical representations of tangible items were the earliest form of written communication – the oldest extant examples being cave drawings. With the invention of text-based writing, graphical representations were stylised into cuneiform, a system of writing that essentially served to record information (transactions, civil laws and scientific findings); communication of conceptual ideas and stories remained an essentially oral tradition.<sup>28</sup> The evolution of cuneiform into written languages such as Hebrew, Greek and Latin – especially as recorded in early versions of the Bible – reveal an almost total separation of graphical representations from ‘the word’, with artistic visual interpretations of the messages reserved for the walls of churches and synagogues or single-page graphics in Bible books that the priest could hold aloft during celebrations. With the introduction of elaborate graphical representations accompanying the text – e.g., in illuminated manuscripts such as the Book of Kells and the Lindisfarne Gospels, reaching its apex in the Irish monasteries of the dark ages but having older Anglo-Saxon and central Asian origins – these ‘gratuitous’ images were inserted more as an homage to the text than as interpretation – even as ironic commentary on the scribe’s daily life (Romer, 1988: 255-258).

Putting graphics into the text – to directly underscore the message, provide a complementary cue, and summarise concepts in visual form – would not come until the combination of inexpensive mass-reproduction (with graphics-ready printing technologies like linotype lagging far behind Gutenberg’s printing press), widespread liter-

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<sup>25</sup> Over the past 25 years, advances in GIS technology and theory have earned it a well-deserved reputation as a powerful tool for planning and management because of the technology’s abilities to store, analyse, display, query and overlay data. GIS has been adapted as Spatial Decision Support Systems (SDSS), designed to supplement basic GIS capabilities with structures, models of systemic interactions, analytical routines and a decision making interface.

<sup>26</sup> The field of information visualisation, along with its related fields of scientific visualisation and landscape visualization, are all derived from the broader field of human–computer interaction (HCI- see below). Scientific visualisation deals primarily with three-dimensional objects and processes. Landscape visualisation generates design representations of geographical landscapes, allowing a designer to build and explore a digital landscape as if it were a real landscape. Information visualisation, by contrast, is concerned with displaying data for abstract concepts such as market data, social networks, activity monitoring, and survey data. The power of visualisation lies in its interactivity, where users can explore data, test hypotheses and convey results to others. A list of leading sources for information visualisation can include: *Information Visualization* (Bederson and Shneiderman, 2003), *Semiology of Graphics* (Bertin, 1983), *Readings in Information Visualization: Using Vision to Think* (Card, Mackinlay, and Shneiderman, 1999) and surveys by Spence (2000), Ware (2000) and Chen (1999).

<sup>27</sup> Fauconnier and Turner (2002) illustrate the usefulness of visual imagery in addition to text by drawing upon a riddle:

*One day at dawn a Buddhist monk sets out on a path that leads from the base of a mountain to its summit. The monk arrives at the top of the mountain at sunset.... Make no assumptions about the monk’s pace during the trip; make no assumptions about any starts or stops that the monk makes along the path. Prove that there is a point at which the monk occupies the same location at the same time of day on the two separate journeys. (p.167)*

One can prove that such a point exists using verbal reasoning or symbolic logic. But the point of Fauconnier and Turner’s argument is that a visual explanation would be the simplest method for arriving at this proof, and the easiest explanation to explain to another. Podolny (2003: 169-170) cited this in his recent address to the annual meeting of the American Economics Association to argue that “the discipline of economics has essentially ignored the capacity of visual images to convey truths about the social world.”

<sup>28</sup> Egypt’s hieroglyphic script – more elaborately graphical, heraldic and poetic than cuneiform – and the sophistication of its artistic narratives preserved in pyramid paintings provide the exceptions that prove these general rules (Romer, 1988: 20-21; 44-45)

acy (providing a market for mass-produced printed material) and the growth of the consumer society. With the intersection of these elements, the graphic design movement – involving the combination of typography, illustration, photography and reproduction aimed at persuading, informing or instructing – was born (Schriver, 1997: 79). The field first developed in the service of the advertising industry, later spreading to journalism, book publishing and all mediums of document design.

Graphic design has been influenced by the same three traditions – craft, romantic and rhetorical – that influenced the development of writing. The craft approach focuses on the techniques and technologies of design – using tools (either real or virtual) to layout text and graphics into attractive, readable and effective documents. This has been the dominant approach to professional training in graphic design. However, the implication of this approach is that graphic design is a decorating activity that happens at the end of the communications planning process – leaving little room for the substantive input of the graphic designer. Also, the introduction of advances in graphic design software that are easily manipulated by untrained users has left the craft approach vulnerable. This ‘junior assistant’ approach to graphics mirrors the craft-approach to writing, that checking grammar and spelling are the only assistance a creator of texts needs.

The romantic tradition in graphic design has been more influential than it has been in technical, expository and functional writing. This approach is derived from the tradition of individual creativity of fine arts, and its essentially elements are the beliefs that design can be studied but not taught, that the artist’s gifts can be nurtured but not learned, and that the functional interests of the client are secondary to the value of form in the artistic expression. In contemporary document design, the romantic tradition finds its outlet in innovative presentation formats that are visually attractive, even arresting. Whether these new designs are effective is another question.

Again, the rhetorical tradition is of greatest interest to us here, and its influence has generally overtaken the craft approach in the modern graphic design world. The focus, as in the writing tradition, is on the needs, abilities and interests of the audience. Heavily influenced by the Bauhaus school’s maxim that ‘form follows function’, the rhetorical tradition emerged an essentially pragmatically romantic response to the industrial revolution. Approaches to typography, graphical elements, and ergonomics were typified by their focus on the needs and motivations of the reader or user. In the end, this rhetorical approach must contend with the question of valid knowledge – between commercial application and the reader’s preferences, and academic inquiry and the expert’s knowledge about form and beauty. This same question dogs the practice of policy analysis and the tension between public participation and expert-driven analysis.

Any contemporary survey of graphical excellence would include Edward Tufte, who *Wired* magazine calls “the reigning guru of information design”. Tufte has published three books on the art and craft of conveying information and concepts in visual form: *Envisioning Information* (1983), *The Visual Display of Quantitative Information* (1990), and *Visual Explanations* (1997). Introducing the third in this trilogy, he says the first is about how to depict data (pictures of numbers); the second is about how to depict things (pictures of nouns, such as maps); the third is a book about representing “mechanisms and motion, of process and dynamics, of causes and effects, or explanation and narrative” (Tufte, 1997: 10). In all of these, his primary concern is to present the information with honesty and integrity. In this, he stands in contrast to the approach of Huff (1954) who reveals the opaque and dishonest devices of purveyors of statistics, and Monmonier (1991) who contends that all mapping representations are essential distortions of reality.

Tufte clearly illustrates that knowledge of the principles of design and presentation are crucial for the modern graphic designer. Without knowledge of and attention to the fundamental presentation principles of scale, orientation and labels, computer visualisations often fail to adequately convey the context, precision and character of animated data – a process he calls “dequantification” (Tufte, 1997: 20). In this respect, his work is outstanding. However, where his approach is weakest is in understanding that information serves a number of different purposes and is used within a number of different environments.

In the central examples of this book, Tufte seeks to illustrate the difference between effective methods for displaying and analysing data, and catastrophically faulty methods. The two examples he uses are John Snow’s identification of the cause of a cholera epidemic in London in 1854, and the explosion of the space shuttle *Challenger* in 1986. In contrasting these two cases, Tufte elevates Snow’s visual analysis linking cholera deaths to a contaminated water pump to the status of heroic<sup>29</sup>; the launch of the space shuttle, however, was the result of the inability of rocket engi-

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<sup>29</sup> Tufte does clearly describe how Snow’s analysis, and the subsequent closing of the contaminated pump, did not end the epidemic that had already passed. His analysis was crucial, however, in reaching the conclusion that cholera was transmitted by drinking water, and not by air as previously suspected.

neers to effectively convey their correct analysis visually to the launch managers. For Tufte, the difference between these two cases comes down the persuasiveness of the evidence as presented visually.

Tufte is an enigma, an academic political scientist and statistician, he clearly loves visual design and approaches the field from what I would characterise as a romantic tradition: he speaks of “insight”, “brilliance”, “creation” and “artistry”. His approach amounts to presenting the best examples of elegant and precise displays of information, in the tradition of exploring principles through the eyes of the great masters. Though he does review the logic and historical antecedents of the principles that inform effective visual design, he does not highlight the insights from cognitive psychology that have sought to explain what works in the mind of the reader.

In his analysis of the space shuttle disaster, it seems curious that his background in political science does not lead him to highlight the political explanations of the launch decision (e.g., that the managers might have appreciated the arguments of the rocket engineers, but the political pressures they operated under were more influential<sup>30</sup> than the persuasive arguments of the engineers that postponing the launch was an appropriate response to the risk). Also, his comparison of the cholera and space shuttle examples fails to appreciate the different constraints the analysts operated under. In the Challenger case, the rocket engineers were working the night before the launch to analyse the data and convince the NASA decision makers to delay the launch. In the cholera case, John Snow finally convinced the public authorities to shut down the contaminated pump after the peak of the epidemic had passed. In the end, Tufte conceded that the poor information communication allowed “political and other mischief” to flourish (Tufte, 1997: 52). To say that the rocket engineers failed in their attempt to use visual explanations to persuade the launch managers does not excuse the fact that the launch manager ultimately chose not to act on the information. Learning the lessons of the visual display failures in the Challenger case is crucial, but so to are the organisational, political and decision making failures that preceded the explosion.<sup>31</sup>

To underscore the general approach to communication adopted in this review – the rhetorical tradition and the objective of persuasion – the perspective adopted here on effective visual communication follows the “visual rhetoric” approach that has emerged in recent years. Visual rhetoric is concerned with how images and document layouts act as persuasive texts, across mediums and cultures – film, television, advertising, journalism, scientific publications, public service information, technical documents and artistic expression. The formal analysis of a visual image (composition, background, foreground, lighting, layout, shape, etc.) and of the design of the page (proximity, alignment, repetition and contrast) are important in visual communication (Williams, 1994). But the visual rhetoric approach looks to the significance of the image and design in terms of the audience: e.g., what rhetorical purpose is served by choosing certain elements, perspectives, and approaches, and how can the author’s rhetorical purpose be furthered? Visual rhetoric is a framework or perspective; it is not a thoroughly developed field that offers specific advice or guidelines for writing effective persuasive documents. Again, the general advice remains: know thy audience.

At the intersection of rhetoric and usability is the emerging field of document design. Schriver (1997: 10) summarises the field, which she defines as the communication act that involves the bringing together of prose, graphics (including illustrations and photography), and typography aimed at instructing, informing or persuading a reader. By focusing on the reader, the science of document design is oriented towards the empirical determination of ‘what works’, rather than heuristic guidelines and formulaic measurements of readability, or subjective determinants of aesthetically engaging documents. Building on the criticisms of readability scores, and the sometimes simplistic approach of “plain language”, document design is primarily concerned with reader’s actual comprehension and use of documents – shifting the focus from short words and simple sentences to larger discourse structures. As well, document design expanded the concept of the document to the visual language of graphic design, typography and illustration.

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<sup>30</sup> Recall the earlier distinction between persuasion and influence.

<sup>31</sup> Margolis (2001: 97), in his review of Tufte (1997) states that policy analysis should pay “careful attention to finding ways to present complicated information in a manner that is fair, accurate, and effective.... anyone presenting such work who does not take a very serious interest in what makes for effective graphical aids in presentation of arguments and information is not taking his or her own work seriously enough.”

## Human-Computer Interaction (HCI): from readers to users

Human-computer interaction (HCI) has emerged out of computer science as a dynamic interdisciplinary field concerned with the design, evaluation and implementation of interactive computing systems as they relate to human use. What is generally referred to as HCI can take on a number of titles: human-computer interaction / interface, computer-human interaction / interface, man-machine interaction / interface, or human-machine interaction / interface; though HCI has generally come to be regarded as an umbrella initialism that covers the study of the interaction of human users with the interface of computer-based systems.

HCI has developed within and between several disciplines, each with its different emphases. For example: computer science is concerned with application design and the engineering of human interfaces; psychology looks at the application of theories of cognitive processes and the empirical analysis of user behaviour; and sociology and anthropology study interactions between technology, work, and organizational structure. Because human-computer interaction studies humans and machines in communication, it draws from supporting knowledge on both the machine and the human side: on the machine side, techniques in computer graphics, operating systems, programming languages, and development environments are important; and on the human side, communication theory, graphic and industrial design disciplines, linguistics, social sciences, cognitive psychology, and human performance are studied.

HCI is generally concerned with the productivity and efficiency of the user in performing a task. Ideally, the focus is on adapting the interface to serve the needs of the human user, rather than requiring users to respond to an optimally designed computer system. My primary interest here is in the ways that the user learns or receives information through the interface, though the efficiency with which that occurs is of course important. It is also important to understand the culture and environment of the user – where and how the interface is used and the characteristics of the user. The special characteristics and setting of the user population in this research will become apparent in paper #07-09-003 in this series when I review the use that policy analysis is put to in political decision making. The literature surveyed here will focus on three particular areas: the cognitive psychology of the user, the socio-cultural characteristics of the particular deployment environment under study here, and the usability criteria that informs interface design.

### *Cognitive Psychology*

Cognition, the processes of understanding, remembering, reasoning, attending, being aware, acquiring skills and creating new ideas, is the dominant framework that has characterised and influenced HCI research (Preece *et al.*, 1994: 62). A major part of the foundational work in HCI emanates from the “software psychology” research of the 1970s (Carroll, 1997: 502). The leading approach in cognitive psychology has viewed humans as information processors, with information entering through the senses<sup>32</sup> and proceeding linearly through a series of ordered stages (encoding, comparison, response selection, and response execution). Added to this model are the processes of perception, attention and memory. The study of visual perception has been approached from constructivist and ecological perspectives. From the constructivist approach, seeing is the combination of environmental information and memory. This approach can inform the design of information displays, making information more easily perceivable. Ecological theory argues that perception is wholly the result of information received from the environment. With so much information competing for our attention, research on how we filter and select from amongst all of the incoming information is important for designing effective interfaces. Attention can be improved through information structuring, spatial and temporal cues, windows, colours and visual and audible alerts. Memory research has long-ago offered a crucial implication for interface design in revealing the distinction between recognition and recall – i.e. the finding that we can recognise previously understood information far more easily than we can recall it from memory.

In recent years, the study of cognition has moved away from the information-processing framework, to be replaced by computational and neural network approaches. The computational approach models the cognitive system in terms of the goals, planning and action involved in performing a task to assess how information is organised, retrieved from memory and acted upon. The neural network approach avoids the computer metaphor of human information processing, instead conceptualising cognition as the result of interconnected nodes. More recently, distributed cognition has emerged to conceptualise cognition as situated within a particular group context and is generally

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<sup>32</sup> Interface design has usually focussed on visual stimulus, and to a lesser extent sound and, more recently, touch. The senses of taste and smell have not figured highly, with the DigiScents mania of the late 1990s having failed to live up to expectations. Characteristics of human vision (visual acuity and visual field, the ability to differentiate colour, contrast and luminescence; age-related differences), cultural characteristics (meanings given to different colours and symbols) have implications for design considerations (colour selection, font use), remembering, of course, that vision is not simply a product of what light the eye receives but how the brain interprets the signals received by the eye.

applied to situations where a number of actors are responsible for the monitoring and control of a particular technology.

Fogg (2003) has attempted to bring together the social psychology of persuasion research with work in human-computer interaction in a 'new' field he dubs *Captology* (computers as persuasive technology): the design, research and analysis of interactive computing systems designed to change people's attitudes and behaviours. In staking out this field, and claiming that understanding persuasiveness may someday become as important as understanding usability, Fogg claims that *captology* differs from traditional persuasive communication in two fundamental respects:

- interactivity: influence tactics can be adjusted as the situation evolves, based on user's inputs and needs.<sup>33</sup>
- Non-human: computers have six specific advantages over human persuaders – persistence, user anonymity, large data reserves, multiple modes, easy scalability, and ubiquity of place.

Computers can adopt three functions when acting as persuasive agents: as a tool, making the user's objective activity possible or more efficient; as a medium, to convey information or cues; and as a social actor exerting normative influence.<sup>34</sup> Arguing that a website's credibility is the key source of its persuasiveness, Fogg (ch. 6) has researched how a user ascribes credibility to a web site. Credibility matters most when the objective of a site is: to instruct or advise users; report measurements; provide information and analysis; report on work performed; report on the status of a device; run simulation; or render virtual environments.

Reflecting Aristotle's characterisation of the logical, ethical and emotional proof of an argument, Fogg cites the combination of perceived *trustworthiness* (ethical proof) and perceived *expertise* (logical proof) as crucial to a user's perception of a site as credible. Trustworthiness is a function of the truthfulness and fairness of the information as perceived by the user, and the degree to which the information resonates with the user's beliefs (reflecting the "selective exposure" response to cognitive dissonance). Expertise is judged by the knowledge, skill and experience of the source (based largely on titles – e.g., Dr., Ph.D. – record of achievements and a "professional appearance" for the site). It is possible for a site to be trusted without appearing to have expertise, but perceived expertise without trustworthiness will lead to low credibility.

Types of credibility that Fogg (2003) identifies include:

- Presumed: can be ascribed to a computer by some users; also, the site owner may have presumed credibility (e.g., health information from a Ministry of Health).
- Superficial: based entirely on the appearance of a site
- Reputed: based on third part endorsements
- Earned: based on continual evaluation by the user

#### *Socio-Cultural*

While the psychology of human-computer interaction has evolved an appreciation of the user as the key element in systems and interface design, a more recent trend has seen the inclusion of the wider user environment – the sociological and anthropological settings in which users and organisations operate – as important factors in design. Carroll (1997: 511-514) identifies four separate developments that have contributed to the search for cultural and social explanations.

First, the expectations placed on the cognitive approach, and the limitations that that approach revealed, has led to some disenchantment. Perhaps due to the emergence of HCI during (or because of) "the evangelical heydays of the cognitive paradigm" (p. 512), HCI developed a predominantly cognitive approach. But it was not long before this paradigm led to frustration as the cognitive models revealed serious weaknesses in explaining problems of learning in context, user error and recovery, and individual preferences.

Second, in order to reduce the reliance on the cognitive approach, approaches that looked at to social, cultural and organisational explanations came to the fore. This approach developed during the 1990s as anthropologists and sociologists joined the largely psychology-dominated field, and a European perspective on society and technology

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<sup>33</sup> In this respect, very little Web content is interactive; if clicking on a hyperlink is characterised as interactive, then all reading activity is interactive. Simulation tools like QUEST can be called genuinely interactive.

<sup>34</sup> This third function assumes that users will respond to a persuasive computer as if it were sentient. See, e.g., Kuflik (1999) and Castelfranchi (2000).

was added to the dominant American scholarship as more research attention was oriented towards situated cognition (e.g., Suchman, 1995). This trend also reflects the wider shift in social and behavioural science, which has moved towards the study of social phenomena and individuals in context. A leading approach in this respect is activity theory, which seeks to understand the 'activity system' – the combination of technological and social factors, community practices and values, and individual attitudes and experiences. This system is inherently dynamic, both mediating the development and introduction of technology, and being changed by its presence. Nardi (1995) brings together 13 contributions that present activity theory as a means of structuring and guiding field studies of HCI, from theoretical development to practical design. Activity theory brings together participatory design (i.e., the engagement of the user community) and ethnography (studying communities of practice *in situ*) in studying users in context.

Third, the widespread deployment of technology throughout organisations and society provoked a socio-political critique of workplace and social restructuring that were occurring. One origin of this perspective was the appreciation that the notion of engineering optimality that drove technology deployment was running into 'implementation difficulties' (to borrow a concept from policy analysis) when faced with the different perspectives of the user. Some of the most important conflicts that emerged were between different user groups, and tended to hinge on workplace power relationships.

Lastly, the potential of new technologies for cooperation and interaction amongst individuals, workgroups and organisations has outstripped our understanding of the human elements in computer supported cooperative work. Recent years have seen the expanding application of collaborative work technologies: from email, newsgroups and chat technologies, to electronic meeting spaces and virtual reality simulation settings, groups can now work cooperatively in many places at different times, leading to speculation about the future of work, education and social interaction. However, the technology has and will change much faster than the essence of interpersonal action will. Thus, the key challenges will continue to be the management of those interactions, not the efficient access to information.

### *Usability*

Usability refers to the combination of factors that affect the efficiency and effectiveness of the user's interaction with a technological interface. What most distinguishes usability from engineering approaches to HCI is the focus on the needs and perceptions of the user audience. Usability is a combination of factors that affect the user's experience with the product or system, including:

- usefulness (does the technology enable a user to accomplish her objective?)
- effectiveness (does the technology increase the user's productivity?)
- efficiency (what are the measures of task completion times and error rates?)
- learnability (how long does it take for the user to productively use a technology?)
- memorability (for infrequent users, can functions be remembered readily?)
- satisfaction (what are the user's attitudes and perceptions about the technology?)

Though usability engineering is a form of HCI, website usability presents different challenges than traditional software applications, and the nature of the Web poses new challenges to designers and developers who are trying to incorporate usability into their sites (Head, 1999: 98-99).<sup>35</sup> Also, much of the research and important applications out of HCI centre on action-based responses to interface information; usability has more prosaic targets and objectives – the communication of information.<sup>36</sup>

A number of principles of interface design have been developed in recent years. Faulkner (1998: 54-59) summarises the ideal characteristics of the interface:

- naturalness: intuitive, appropriate to the task or purpose of the user; reflect the user's syntax and semantics (e.g., "What is the issue? What is the solution?")

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<sup>35</sup> Many of these challenges – e.g., audience, technological configuration, breadth of the Internet – are not as acute in the proposed study, where the environment is more akin to an Intranet (see "Intranet Usability: Design Guidelines from Studies with Intranet Users" (Nielsen Norman Group Report, 2002), at <http://www.nngroup.com/reports/intranet/guidelines/>)

<sup>36</sup> Even in this simple objective, lack of attention to usability principles may result in users being unable to find the information they need. For example, in usability studies, users were able to find the correct answers to test questions only 42 percent of the time. See Jared Spool. 1997. "Why On-Site Searching Stinks." <http://world.std.com/~uieweb/searchar.htm>

- consistency: as between other systems or applications, and within the application as between tasks (e.g., a familiar format and layout)
- relevance: avoiding redundancy in inputs and outputs; put the user's needs first (e.g., avoid jargon, do not overload with unimportant information)
- supportiveness: information to the user should be sufficient and specific in order to allow the user to properly respond to input requests (e.g., to know what question to ask)
- flexibility: accommodate differences in user requirements, preferences and capacities
- Consistency of presentation and controls across the site
- Logical and natural organization of information: clear structure, systematic labels, clear and meaningful labels
- Contextual navigation: how much information is given for providing a context for the user
- Efficient navigation: the amount of time and effort the user needs to exert in order to move around the site
- Adequacy of feedback: are user interactions clear, are requests answered, do commands elicit the right response?
- Searchability: how effectively the site content can be sought in search engines

Key interface characteristics that Norman (1988) adds are:

- visibility: good mapping between control and effect
- affordance: what can be done with an object<sup>37</sup>

Usability depends upon the purpose and target audience of a particular site. Before employing any usability techniques, the first challenge is to define the Web site's target audience; the second challenge is then to find actual representative users to participate in design or testing activities. There are a number of methods of collecting information for audience definition, including focus groups, individual interviews, demographic research and collection of feedback from a pre-existing site. Techniques for testing a site's usability using actual users include surveys and focus group evaluations. However, for testing prior to the development of a prototype or finished site, and as an on-going means for evaluating usability, usability inspections can be employed as expert-oriented review techniques.

Usability inspection is the generic name for a set of methods that are all based on having evaluators inspect a user interface. Approaches include:

- Heuristic evaluation: an informal method, involves usability specialists judging a site based on established usability principles or 'heuristics'<sup>38</sup>
- Heuristic estimation: inspectors estimate the relative usability of competing designs
- Cognitive walkthrough: simulation of a user's problem-solving process, to assess whether a user will anticipate the next correct action
- Pluralistic walkthrough: group settings where users, along with developers and usability experts, walk through a scenario, discussing each dialogue element.<sup>39</sup>

The evolution of HCI over the past thirty years has seen the approach dramatically change from an engineering oriented optimal systems perspective, dismissive of usability and patronising of users, to a user-centred development process with usability as the driving goal. What can be frustrating about usability is the arbitrary and often didactic

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<sup>37</sup> In addition to these principles, there are a number of guidelines for specific design issues such as typeface choice, screen density, proximity placement, graphic cueing, and colour choice (e.g., Shriver, 1997: Appendix C).

<sup>38</sup> A number of usability heuristics are available for evaluating the design of a user interface. *Jakob Nielsen's 10 Usability Heuristics* (available at [http://www.useit.com/papers/heuristic/heuristic\\_list.html](http://www.useit.com/papers/heuristic/heuristic_list.html)), Keith Instone's *Usability Heuristics for the Web* (available at <http://webreview.com/97/10/10/usability/sidebar.html>) and Tognazzini's *First Principles* are three examples.

<sup>39</sup> See Jacob Nielsen's Summary of Usability Inspection Methods at [www.useit.com/papers/heuristic/inspection\\_summary.html](http://www.useit.com/papers/heuristic/inspection_summary.html)

nature of many recommendations of good design, drawn more from personal preference than from experimentation and usability testing (Head, 1999: 106).

What is perhaps more troubling is how to characterise usability, amongst the three traditions considered previously: the craft, rhetorical and romantic traditions. On the one hand, the lists of guidelines and recommendations for achieving 'good design' is exhausting, lending the whole endeavour an air of the archetypal craft approach (e.g., 'Thou shall not designate a link as "click here"'). Alternatively, the focus on the needs of the user resonates with the rhetorical tradition of audience analysis. Fogg (2002) extends the rhetorical tradition into usability through his development of the "persuasive technology" theme. But the romantic tradition, which I noted earlier is prevalent in graphic design, also resonates in interface design circles. Head (1999: 107) says that web design is primarily "about creativity and diversity". And Jakob Nielsen (see, e.g., Nielsen and Tahir, 2001), a reigning guru of usability, often takes a "study the masters" approach to good design, and while his weekly usability column often reveals his principles in applied settings, those principles sometimes reveal as much his preferences as any objectively researched criteria. In the end, the message of the importance of user testing will come to dominate and flush out the axiomatic arguments of 'well designed web pages exhibit good design characteristics.'

### Effective Communication in Practice

*Next to a political nose, and a logical brain, the most important skill of the good treasury man resides in his fine drafting hand. The concise, coherent and penetrating note is the final expression of all other talents. (Heclo and Wildavsky, 1974: 58; quoted in Meltsner, 1976: 229)*

Mirroring the dichotomy between the professional practice of policy analysis and the academic study of the policy process (as highlighted in white paper #07-07-001), empirical investigation has revealed the disparity between the way writing composition and communication are taught in academic settings and "what writers actually do" (Odell *et al.*, 1983: 17). Whereas instruction tends to focus on techniques and rules such as outlining, topic sentences, paragraph development, and comparison and contrast, writing in professional practice is heavily influenced by considerations of the type of audience (specifically, the reader's level of expertise and familiarity with the issue), the type of instrument (e.g., from informal notes to formal reports), and the objective or purpose of the writing. In educational settings, students are asked to produce experimental writings for an audience and context with which they have no experience; in the professional realm, the writer often has detailed knowledge about the audience, an expectation that their work will matter in the particular context and that the perceived quality of it will have implications for their professional status. While students will be concerned about their grade on a writing assignment, the difference in environment between the academic and professional realms has important implications for the way that writing is done – more so, perhaps than in other fields.

While one approach to judging the quality of a document is to examine its syntax, another approach can involve asking practitioners to evaluate what constitutes a well-written document. In interviews with legislative policy analysts focussed on their writing of briefing notes (called "bill memos" in this study<sup>40</sup>), Odell *et al.* (1983: 24-25) found that good writing is a function of how well a briefing answers the following questions:

- what the likely consequences of the proposed legislation are,
- how the proposed legislation relates to existing laws or procedures,
- whether the proposed legislation will achieve the sponsor's intent,
- whether the proposed legislation adequately addresses implementation issues.

Above all, the policy analysts were most concerned that the analysis represented a defensible investigation of the issue – i.e., that the analysis would be perceived to be careful and sound, and could be defended under questioning. In more systematic discourse-based interviews, the researchers found that the writer's knowledge and perceptions of the audience were crucial in their writing (e.g., wishing to write with a tone and content that would have the desired effect or convey the desired message), as was the writer's position within the bureaucracy. For example, the decision to use the pronoun *I*, as opposed to *we* – even if the singular is grammatically preferred – is strongly conditioned by the context, the audience and the status and intent of the writer (Odell *et al.*, 1983).

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<sup>40</sup> The study is reported on briefly in Odell *et al.* (1983), but is originally published as L. Odell, D. Goswami and D. Quick. 1981.

"Writing Outside the English Composition Class: Implications for teaching and for learning", pp. 175-194 in Richard W. Bailey and Robin Melanie Fosheim (eds.), *Literacy for Life: The Demand for Reading and Writing*. New York: Modern Language Association.

Based on this cognitive psychology research, Huckin (1983: 100-102) formulates the following guidelines for improving readability that are applicable to the policy briefing process:

1. State the issue explicitly and identify the purpose of the note at the outset.
2. Make the topic of each section and paragraph visually prominent (using headings, subheadings, and topic sentences at the beginning of paragraphs).
3. Keep the topic prominent by referring to it frequently (as the subject of sentences).
4. Anticipate what reading style the reader is likely to use and use techniques to support that approach.<sup>41</sup>
5. Structure the text according to the nature of the information you want the reader to pay attention to (to convey main ideas, use a hierarchical structure; to convey details use a list structure).
6. When you refer to something by a particular name, consistently refer to it by that name.
7. In communicating expert knowledge to non-experts, explicate the most important concepts through the use of metaphors, analogies, examples, operational definitions and other forms of imagery.
8. When the reader has some expertise in the issue, do not over-explain.<sup>42</sup>

These guidelines do not represent a radical departure from tradition writing pedagogy or practice (or from how policy briefings are generally practiced), but they are based on research in cognitive psychology and do offer a rigorous grounding for developing guidelines and offers resiliency in adapting to different communication situations.

### *Communicating Uncertainty*

One particular challenge in the post-positivist policy environment is the communication of uncertainty. When we say that ‘scientific research shows’ something, it gives the impression that we are certain that what has been demonstrated is true. While plausibly arguable for long-established scientific knowledge, science is more accurately described as a process of hypotheses, experiments, tentative theories and new hypotheses. Thus science is not definitive, but always in a state flux and marked by some degree of uncertainty with respect to the chain of causality. In policy analysis, a form of inquiry that is derivative of science in both knowledge inputs and methodology, this uncertainty is further complicated by the question of risk, which involves judgments about the probability of an event and the consequences of that event happening.

In the policy advice function, what is more important, beyond covering one’s backside, is to explain to the reader the nature and degree of the uncertainty. While the post-positivist response to uncertainty in policy analysis will involve the transparent acknowledgment of the uncertainty (U.K. 2000b), the question raised here addresses the means by which uncertainty can be acknowledge and accurately communicated. Using text to describe uncertainty usually involves terms such as balance of evidence, “‘almost certain’, ‘probable’, ‘likely’, ‘possible’, ‘unlikely’, ‘improbable’, and ‘doubtful’ ... along with variations on ‘high, medium, and low confidence’.” Except where uncertainty is expressed probabilistically using a confidence interval, there is no quantitative value to these different terms. (Schneider and Moss, 2000: 35).

An alternative approach to communicating uncertainty to non-experts is through graphical representations.<sup>43</sup> Morgan and Henrion (1990) devote an entire chapter of their book *Uncertainty* to the graphical representation of uncertainty in policy analysis, a subject that had received very little research attention as of the late 1980s (they provide a detailed review of the one experimental study they could find). The factors they identify as important for graphically communicating uncertainty in policy analysis include:

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<sup>41</sup> Reading theorists have identified at least five styles of reading: skimming (to get the general theme), scanning (to find specific information), search reading (paying attention to the meaning of specific items), receptive reading (for thorough comprehension), and critical reading (in order to evaluate). Readers can switch from one style to another, when reading the same document, depending on their purpose.

<sup>42</sup> Hypertext offers one potential route out of this dichotomy (see previous section on human-computer interaction and usability): e.g., the first level of text can be written for the high-level expert, and hyperlinks can be provided to fill in the implied information that a non-expert might miss.

<sup>43</sup> One particularly intriguing approach is the Bank of England’s use of “fan charts” to convey uncertainty distributions around economic projections. See Longo (1999: Annex 2)

- using clear graphic styles with easily understood formats
- making decisions about what information to display and what to omit
- treating information in deterministic and probabilistic forms appropriately
- choosing parameters so as to best convey insights. (p. 252)

While offering a number of observations and advice, the authors ultimately argue for the writer to select and use graphics appropriate for their intended audience. They quote Larkin and Simon (1987: 253), who argue that “diagrams are useful only to those who know the appropriate computational processes for taking advantage of them.” Therefore, graphics are most effective when the concepts are familiar to and understood by the user. Where the user does not understand the concept, a graphic can be counterproductive.

#### *The Policy Analysis Literature*

One of the leading textbooks in both the Canadian and U.S. graduate market is *Policy Analysis: Concepts and Practice* (Weimer and Vining, 1989, 1992, 1999), now in its third edition. At the conclusion to a section on “solution analysis”, they “offer several heuristics to guide [the] presentation of recommendations” (p. 289):

- recommendations should follow from the analyst’s evaluation of alternatives; as an obvious point, their intent is to stress that introducing new ideas as late candidates during the drafting of the recommendations risks having poorly-considered ideas slipping in.
- the advantages and disadvantages of the recommended policy should be briefly summarised; by clearly identifying benefits, costs and risks, the consequences of the decision are appropriately highlighted.
- A clear set of instructions for action must be included; these instructions may be short, as in the case of a legislator (e.g., “Recommend approving the proposed policy”) though decision makers with operational authority may require more detailed implementation instructions.

On the question of format, Weimer and Vining (1999) provide more detailed advice, citing the importance of the visual presentation in determining how effectively the ideas are communicated from analyst to decision maker. While acknowledging that readers will have different characteristics (knowledge, interest, capacity), they claim that all decision makers share three characteristics, and understanding these characteristics leads to a number of formatting considerations:

- a desire to be involved in the shaping of the analysis: share developing drafts with the reader in order to incorporate their concerns and perspectives (290-291).
- significant demands on their limited time: providing an executive summary and table of contents, using headings and subheadings, prioritising information<sup>44</sup>, and being succinct are some of the rules they identify. On the question of diagrams, tables and graphs, they argue that they should be used sparingly and should be understandable without reference to the text. Also included are a long list of “Dos and Don’ts”, including the familiar “use the active voice” (291-293).
- concerns that the decision maker, not the analyst, are ultimately responsible for the decision: this requires establishing credibility with the decision maker; recall Fogg’s (2003) argument that credibility can take the form of: presumed credibility (based on a characteristic of the source), superficial credibility (based entirely on appearance of the document or person), reputed credibility (based on third part endorsements) or earned credibility (based on continual evaluation by the decision maker).

Weimer and Vining (1999) clearly identify the presentation of policy advice as an extension of the rationalist mode of analysis (p.289). Under this model, analysis produces a recommendation as to the right course of action, and (following the systems model of communication) the objective of the analyst is to bring the decision maker into the analytical process with a minimum of noise, or to rectify the noise of the decision maker’s busy schedule.

Geva-May and Wildavsky (1997), in their operational guide to policy analysis, characterise the communication function as “articulated persuasion” – argumentation and advocacy efforts that are undertaken, not in the analytical realm, but on a “political and sociological platform” (p. 142). Effective argumentation skills are equated with effective

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<sup>44</sup> Weimer and Vining (1999: 292) claim that “a ten-page analysis is not nearly as useful to the busy client as a five page analysis with five pages of appendices.” By prioritising information between main text and appendices, part of the work has been done for the reader, while still allowing them to read the supplemental information if they so choose.

discourse skills: clear and concise writing, using language that the audience will understand (especially avoiding jargon), and using metaphor, anecdote and illustration to make the analysis understandable. Reinforcing Meltsner's (1980) argument (see below), Geva-May and Wildavsky (1997: 149) point out the need for the analyst to build up credibility, primarily through unassailable analysis and the confronting of "weaknesses and opposing arguments directly". Understanding the preferences of the audience is also highlighted; strategies include: selecting evidence and arguments that will resonate with the reader, framing arguments in the reference system of the reader, and speaking to the specific interests and dilemmas of the reader (pp. 151-154).

Meltsner's contribution to Majone and Quade's (1980) *Pitfalls of Analysis* stands as part of his effort during the 1970s to raise the profile of the communication act in policy analysis. Also of note is chapter 7 of his 1976 book *Policy Analysts in the Bureaucracy*. Meltsner (1976) centres on writing as the essential skill of the policy analysis, and the two challenges that must be met in applying that skill: to communicate technical material in non-technical terms, and be persuasive. However, Meltsner's advice is a mixture of anecdote, personal preference, and platitudes: "A little attention to language, pleasing quotations, headings, underlining, and organization can help in getting and keeping the client's interest" (p. 237). His approach resonates with the romantic tradition, advising policy analysts to read other analysts work, and seek to emulate it, though he also displays a touch of the rhetorician: the analyst must be politically astute – understand how the briefing will be read in political circles – and work to build their credibility with their readers through the establishment and cultivation of trust. Ultimately, he concludes that communication in policy analysis is by no means a simple process: "it is complicated, convoluted, probably lengthy, and with theoretical stages yet to be discerned." (p. 245-246).

In Meltsner (1980), the idea of communication is defined as "the act of gaining acceptance and asserting a claim on another person's beliefs" (p. 116), achieved through substantive argumentation – based on solid analysis – and the building of a social relationship between analyst and decision maker – based on the persuasiveness and credibility of the analyst, the trust between analyst and reader, and shared values and beliefs between the writer and her audience. Where both social and substantive factors are simultaneously absent or present, Meltsner claims that whatever problems might exist, they should not be identified as communication problems. His primary concern, however, is where an adequate substantive analysis is easily rejected because the reader does not accept the advice as credible<sup>45</sup>; he is less concerned with the alternative, where a trust relationship causes a decision maker to easily accept an inadequate analysis, claiming that "many clients are too intelligent and perspicacious to be easily deceived" (p. 118).<sup>46</sup>

Meltsner (1980), following the rhetorical tradition, separates the components of policy communication into audience analysis (pp. 119-126), argument development (pp. 126-131) and the means of communication (pp. 131-135). In understanding the audience, the analyst must appreciate time constraints (both their own and the readers), the competition for attention from other information, the organisational structure and its effect on the upward flow of information, the organisational culture that regulates how to create appropriate messages, the wider environment beyond the organisation, and the function that the analysis is intended to serve. In developing a persuasive argument, the analyst must disabuse themselves of a number of implicit assumptions: first, while policy analysis should of course be balanced, the objective of the analyst in communicating with the decision maker is plainly to persuade the reader; second, the fine line between knowing the audience and telling the reader only what he wants to hear must be acknowledged, and the rhetorical skill of opening the audience up to messages they might not want to hear should be cultivated; third, the means of communication – both medium and format – should be considered, though institutional practice, the rational policy approach, penalties for innovation and lack of resources often cause analysts to ignore or downplay the importance of communication efforts. Finally, Meltsner (1980: 133-134) concludes with some mechanical rules that the analyst should strive to break whenever it seems useful<sup>47</sup>: use short, declarative, simple sentences; use ordinary language and avoid jargon, avoid weasel words (*perhaps, likely, probably*).

In arguing that an effective policy communicator understands her audience, designs arguments to suit that audience, and employs effective means of communication in order to increase the use of that analysis (and in concluding

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<sup>45</sup> Meltsner (1980: 118) cites Kahn and Mann (1957: 45) who had previously identified the policy pitfall of "hermitism": "The problems of communication and persuasion are often ignored though they are central in getting recommendations translated into policy."

<sup>46</sup> Meltsner here identifies the elements of credibility that Fogg (2003) cites using the cognitive psychology literature (low trust + high expertise = low credibility; high trust + low expertise = can be credible), though he understates the degree to which "intelligent and perspicacious" readers are susceptible to the persuasive claims of sources that they perceive as trustworthy.

<sup>47</sup> Similar to Orwell's rule #6: *Break any of these rules sooner than say anything outright barbarous.*

with a quote from Aristotle's *Rhetorica*), Meltsner's approach here is clearly sympathetic to the rhetorical tradition. And he provides support to the combined rhetorical / psychological approach adopted here: "analysts will have to improve their understanding of rhetoric and the psychology of communication" (Meltsner, 1980: 136).

Soon to be released in its third edition, Dunn (1981, 1994) provides a useful introductory text for undergraduate policy analysis students, and has been widely adopted in American political science courses and graduate courses taking an introductory look at the policy process. The first edition of the text (1981) contained little mention in the text of the act of presenting policy analysis to decision makers, though it contained two appendices of four pages each on "preparing policy issue papers"<sup>48</sup> – the first being a set of guidelines and the second a checklist. In the second edition (1994), the issue is brought to greater prominence; there is a brief discussion of policy presentations in the introductory chapter, and the appended material has expanded to five appendices covering 28 pages, including a revised take on the original material plus new appendices on the executive summary, the letter of transmittal, the policy memorandum and the planning of oral briefings.<sup>49</sup>

Eugene Bardach's *Practical Guide for Policy Analysis* (2000) is a handbook for beginning practitioners that has recently been added to the graduate curriculum in schools of public policy, undergraduate courses in policy analysis, and executive and continuing education courses. Bardach adopts a narrative approach to policy analysis communication, using the metaphor of the "New York Taxi Driver Test"<sup>50</sup> to argue for clear, succinct and simplified explanations of the recommendations. "Telling your story" primarily requires that you understand your audience, while paying attention to the content, style, medium of presentation, formatting and graphical content. With respect to specific guidelines, Bardach includes the usual advice of executive summaries, tables of contents and appendices for longer documents with technical detail. Heading and subheadings are also advised, as is consistent and logical formatting for tables and graphics.

Bardach (2000), despite appearing as a 'cookbook' for policy analysis, draws on the Wildavskian tradition of policy analysis as a creative endeavour, and his approach to presentation follows from this. His approach has some resonance with Fisher's narrative paradigm (see above), while also drawing on the rhetorical tradition of seeking to convince the reader through an effective presentation.

Bardach has also contributed to this literature through a collection of papers he commissioned from policy practitioners and edited recently for the *Journal of Policy Analysis and Management* on the analyst's task of "educating the client" (Bardach, 2002). In one contribution, Breedlove (2002: 131) argues for the use of metaphors in policy communication: "Metaphors seem to appeal to clients and audiences because they: synthesize complex data and analyses into understandable ideas; allow audiences to draw their own inferences, without feeling as if the analyst told them what to think; are often remembered long after clients and audiences have forgotten the details of an issue; go better with rubber chicken than complicated charts and graphs, thereby allowing clients and audiences to join a pyramid scheme."

Musso, Biller and Myrtle (2000) present a manual to assist students in the practice of professional writing that appears to originate from the rhetorical tradition of communication (e.g., they take as their premise the contention of Majone (1989) that policy analysis is the art of using evidence to persuade). While they caution the student not to treat the guide as a template, arguing instead that it should be used as a reference in practicing the logic of argumentation, their laundry list of assertions and guidelines reads as a checklist of dos and don'ts that clearly identify their perspective as emanating from the craft tradition (their branding of the approach as "tradecraft" being a more obvious clue). Where their recommendations are not supported by research (they echo the standard "always write in the active voice"), they are vacuous ("create punch lines to describe charts and graphs").

While Musso, Biller and Myrtle's "tradecraft" manual is unsatisfying, it does not compete with the egregious "How to Create Superior Briefings" published by the Canadian Centre for Management Development (Quiney, 1991). Written as the "distillation of the accumulation of Ottawa experience on the subject" (p.1), this long bulleted list of assertions provides enough contradictory advice to keep any policy analyst either confused or mollified. And as bad as the Quiney article is, it at least exceeds the standard set by Mehta (1994) in his "Essential Guide to Policy Devel-

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<sup>48</sup> The "policy issue paper" is an artefact of the Planning-Programming-Budgeting System (PPBS) that was discussed in white paper #07-07-001. Quade (1975: 68-74) provides the prescriptive outline for the policy issues paper.

<sup>49</sup> A review of this text is awaits receipt of a copy through UVic inter-library loan service.

<sup>50</sup> This test, in which the analyst imagines trying to explain the problem and recommended solution to a taxi driver in one minute, is similar to my "grandmother test" (which some of my older colleagues call the "mother test").

opment and Analysis”: to call it a flagrant plagiarism of Dunn’s textbook would be kind (he could have at least redrawn the diagrams).

One final document reviewed here that deals directly with the act of communicating policy analysis to decision makers is the “Guidelines for Preparing Briefings” from the RAND organisation (1996). Prepared by RAND’s Communications Consulting Group, the document incorporates research insights from cognitive psychology, graphics, and linguistics to inform the act of presenting information. The primary concern is with oral briefings supplemented by projected or printed images<sup>51</sup>, though two principles derived from research in cognitive psychology that are applicable here are:

- *Use a top-down structure*: A hierarchical structure organizes information from more general to more specific dimensions, so that information at the top of the hierarchy is more general than information at the bottom. They provide references to a number of studies that demonstrate the value of a hierarchical structure for human comprehension, prioritisation and memory tasks.<sup>52</sup>
- *Use the introduction to motivate the problem and establish structure*: again referencing the literature in cognitive psychology, the document argues that an introduction (background, objective, approach, overview of findings) causes the audience to pay closer attention, understand more readily and remember the information longer.<sup>53</sup>

## Conclusions

*On the whole, the difficult thing about persuading others is not that one lacks the knowledge needed to state his case nor the audacity to exercise his abilities to the full. On the whole, the difficult thing about persuasion is to know the mind of the person one is trying to persuade and to be able to fit one’s words to it. (Han Fei Tzu, quoted in Meltsner, 1980: 125-126)*

The preceding review represents an attempt to integrate the communications theory literature, particularly from the rhetorical tradition, that deals with both written and visual forms, and across mediums from paper to electronic interfaces, with the literature from policy analysis and related fields in the specific context of policy analysis communications – what I have labelled the briefing process. The objective has been to provide a substantive grounding for a subject that has long been ignored or dismissed in policy analysis.

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<sup>51</sup> The remaining principles or concepts relate to the production of PowerPoint slides for oral briefings. PowerPoint has an especially strong hold on the military culture, still an important part of the RAND culture. The report authors felt it useful to remind readers that adding “clip art pictures (e.g., pictures of tanks) for decoration” (p. 15) usually does not serve an effective communication objective.

<sup>52</sup> The literature cited includes: Carpenter, P. A. and M.A. Just. 1977. “Integrative Processes in Comprehension,” in D. LaBerge and S. J. Samuels (eds.), *Basic Processes in Reading*. Hillsdale, NJ: Lawrence Erlbaum Associates; Meyer, B.J.F. 1981. “Basic Research on Prose Comprehension: A Critical Review,” in D. F. Fisher and C. W. Peters (eds.), *Comprehension and the Competent Reader: Inter-specialty Perspectives*, New York: Praeger, 1981; Meyer, B.J.F. 1977 “What Is Remembered from Prose: A Function of Passage Structure,” in Roy O. Freedle (ed.), *Discourse Production and Comprehension*, Ablex Publishing Corporation; Meyer, B.J.F. 1975a “Identification of the Structure of Prose and Its Implications for the Study of Reading and Memory,” *Journal of Reading Behavior*, Vol. VII, pp. 7–47; Meyer, B.J.F. 1975b. *The Organization of Prose and Its Effects on Memory*. Amsterdam: North-Holland, 1975b.; Kintsch, W. and J. Keenan. 1972. “Reading Rate and Retention as a Function of Propositions in the Base Structure of Sentences,” *Studies in Mathematical Learning Theory and Psycholinguistics*, Boulder, CO: Computer Laboratory for Instruction in Psychological Research, Publication No. 6; Kintsch, W. and T. A. van Dijk. 1978. “Toward a Model of Text Comprehension and Production,” *Psychological Review*, Vol. 85, pp. 363–394; Kintsch, W. and J. S. Yarbrough. 1982. “Role of Rhetorical Structure in Text Comprehension,” *Journal of Educational Psychology*, Vol. 74, pp. 828–834; Thorndyke, P. W. 1977. “Cognitive Structures in Comprehension and Memory of Narrative Discourse,” *Cognitive Psychology*, Vol. 9, pp. 77–110; Williams, J. 1981. *Style: Ten Lessons in Clarity and Grace*. Glenview, IL: Scott, Foresman.

<sup>53</sup> The literature cited includes: Ausubel, D. 1963. *The Psychology of Meaningful Verbal Learning: An Introduction to School Learning*. Grune and Stratton; Frase, Lawrence. 1969. “Paragraph Organization of Written Materials: The Influence of Conceptual Clustering upon the Level and Organization of Recall,” *Journal of Educational Psychology*, Vol. 69, pp. 394–401; McGeoch, J. A. and A. L. Irion. 1952. *The Psychology of Human Learning*. Longmans Green; Thorndyke, P. W. 1978. “Knowledge Transfer in Learning from Texts,” in *Cognitive Psychology and Instruction*, Plenum.

Why has this question been neglected? Meltsner (1980: 117) laments that his analysis of communication in the policy analysis function suffers from a

*lack of empirical literature dealing with the communication of analytical information. Ideally, I would have liked to discuss a range of behaviors associated with communication. This range could be determined by the kind of analyst ... the analyst's role in a specific organizational context ... the type of client ... and the choice of different means of communication (e.g., memoranda, briefings, formal reports, movies) ... few people besides students of rhetoric and social psychology have studied what works in communication, and to my knowledge no major study or body of literature evaluates the communication of analysis" (p.133).*

This review represents an attempt to map the empirical literature Meltsner sought; the objective of eBriefing.ca's research is to contribute to the still scant literature on effective communication in the policy advice function.

The essential message that emerges from this review is that, rather than revealing universal and generalisable rules and techniques for the creation of effective briefing documents, the rhetorical tradition primarily highlights the importance of understanding what the audience believes and how they might respond to an argument. While there are a number of heuristic guides derived from the rhetorical tradition that can serve to support the analyst in their writing task, the real challenge of persuasive argumentation analysis is in accurately analysing the audience – or in the particular case of the policy briefing, 'knowing the mind of the minister'. Again, we can hear the rising hackles of the positivist policy analysts. Does not the writing of policy advice that speaks to the mind of a particular minister simply mean pandering to the minister's prejudices and preferences, to the possible detriment of sound policy analysis? Does not persuasive argumentation risk diluting the objectivity and neutrality of policy analysis? Surely, you occasionally have to tell the Minister something she doesn't want to hear.

This perspective is completely reliant on the belief that properly executed analysis represents the truth. And under a rational model, the truth is not amenable to personal beliefs or preferences. However, the normative model developed in this series of papers rejects the positivist policy analysis perspective in favour of a post-positivist perspective. In making that switch, knowing how to build a persuasive argument through an understanding of the particular audience (in this case the Minister that the briefing note is being written for) becomes key.

However, this does not imply a reckless abandonment of what the analyst believes to be correct as an expedient means for appealing to the mind of the minister. The rhetorical approach to policy advising challenges the analyst to honestly argue their position, but to do so in a way that causes the minister to be more receptive to the message. The ultimate goal, though beyond the analyst's mandate, may be a change in behaviour (i.e., the minister's policy decision) with the interim objective being to persuade the minister that the analysis is correct (at least, given all of the caveats mentioned previously, as correct as the post-positivist policy analysis is willing to guarantee). But for a message that is significantly at odds with what the analyst knows or suspects about a minister, the first step is a foot in the door.

What does it mean to 'know the mind of the minister'?<sup>54</sup> This is accomplished through two routes: by specific appeal to what is known about the particular minister, and general appeal to what is known about the way that political actors process information and make decisions.

In taking the first route, a form of analysis can serve to make the advice more effective. The analyst seeking to appeal to a minister will follow the trail of evidence assembled from within the organisation and from outside: direct advice and requirements conveyed from superiors such as the deputy minister will combine with the observations and opinions of colleagues in helping to form an insider's profile of the minister; external evidence can be found in the media (reports of the minister's actions and opinions, opinion pieces written before assuming office, speeches delivered, etc.), Hansard (e.g., speeches and questions) and through the minister's status as a member of their political party (e.g., party manifesto, prime minister's preferences, counter-arguments to opposition party positions). We

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<sup>54</sup> As noted previously, in paper #07-07-001, while I imply throughout this set of papers that the recipients of policy briefings operate within the same environment as the analyst – i.e., policy analysts write briefings for their superiors – we must be mindful of those instances where briefing materials are created to support public deliberation. For example, Shulock (1999: 240) argues that "regardless of what the textbooks say, there does not need to be a client in order for ideas from policy analysis to resonate through the policy environment." Her research found "that we are well beyond the client-analyst model, even as that model continues to be taught in graduate schools." In cases of wider dissemination, audience analysis becomes more challenging as the number of participants increases and the foreknowledge of their individual information processing characteristics decreases. Under those circumstances, an appreciation of the general characteristics of human information processing and cognition (see white paper #07-09-003) becomes even more helpful.

would likely risk asking too much to require a new minister fill out a “learning style questionnaire” upon assuming office, but over time an advisory system will build up a profile of the most effective ways to brief a particular minister.

The second route to persuasive writing for a political decision maker is the subject of white paper #07-09-003: by understanding the socio-cultural, psychological and other decision-making forces that interact with the reception and processing of information and the way they make decisions, analysts can write more persuasive briefing notes even if they know very little about the particular minister. A related advantage of this approach is its applicability beyond the specific environment under study here; given the general applicability of the literature, the insights from white paper #07-09-003 should reveal how “briefings” can be made more effective for efforts such as informing public consultation and deliberation exercises.

In this paper I have argued that the rhetorical approach best serves the development of persuasive arguments. However, despite being dismissed in academic approaches to written communication, the craft tradition continues to enjoy strong support in practice-based circles and it is this craft tradition that is generally accepted in the workplace as the means by which writing should be created and judged. Thus, the rhetorical tradition, and its dominance in academic writing research, has not had the same impact in practice. In fact, the craft tradition seems as entrenched as ever, masked behind user-friendly interfaces and the appearance that the software can help anyone master the technical skills of effective document design. Placing electronic writing coaches on every user’s desktop, including easy readability score calculations in word processing programs and instilling the mantra of “smaller words in smaller sentences”, writers are misled into thinking that there is a formulaic route to readability. I argue that it is the ease with which readability scores are calculated, and the dominance of grammar and other writing-as-craft rules, that leaves the impression that effective writing is a straightforward technical exercise, rather than something that must be highly attuned to the particular audience. The same impression is left about graphic design, given the ubiquity of page layout software and presentation programs. There is a parallel then, I will argue, between the positivist / post-positivist dichotomy in policy analysis (where positivism is accepted in professional settings, but vanquished in academic circles) and the craft / rhetorical dichotomy (where the professional setting sees the craft approach as the valid means for determining effective writing, though rhetoric has long dominated academic discussions).

So we return to the question of effective communication in the policy advice function, and why the issue has been neglected as a research topic? Two reasons seem plausible, both emerging from the positivist / rational policy analysis approach: first that effective communication is unnecessary, and second that it is unwarranted. It is unnecessary because, if the analysis is correct, one does not persuade the reader through the art of rhetorical argumentation (if persuasion is what the writer does anyway) but through the demonstration of a rigorous methodology of analysis. It is unwarranted is because, if the objective of the policy analysis is to provide sound, objective, advice to a decision maker, using rhetorical argumentation to persuade the reader risks diminishing the analyst’s position.

However, having adopted the post-positivist policy analysis model and argued that the objective of the analyst should be to persuade the decision maker to accept the policy advice, I argue that effective communication is both warranted and necessary.

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