Curriculum and Case Notes

Matthew Auer
Editor

Submissions to Curriculum and Case Notes should be sent to Matthew Auer, Indiana University, School of Public & Environmental Affairs, 1315 E. 10th Street, Bloomington, IN 47405-1701.

INTERDISCIPLINARITY AND THE TEACHING OF PUBLIC POLICY

Rick Szostak

Policy is centrally about classification and differentiation (Stone, 1988, p. 308).

Abstract

De Leon and Steelman (2001) addressed three deficiencies in public policy programs. This paper focuses on the first of these, arguing that public policy students can and should be exposed to a comprehensive classification of types of ethical analysis. It then briefly addresses the two other deficiencies, again with recourse to recent interdisciplinary scholarship. Students can and should be exposed to the full range of types of ethical evaluation, theories, methods, and possible side effects of policies. © *2005 by the Association for Public Policy Analysis and Management*

INTRODUCTION

De Leon and Steelman (2001) identify three key deficiencies in the curriculum of policy programs. They also argue that public policy programs were originally grounded in the ideal of "the integration of knowledge across disciplines" (p. 184), but that these programs have strayed from this vision in important respects. This paper will suggest that recent scholarship concerning interdisciplinarity itself points to solutions to each of the three deficiencies identified by De Leon

Journal of Policy Analysis and Management, Vol. 24, No. 4, 853–875 (2005)

Published by Wiley Periodicals, Inc. Published online in Wiley InterScience (www.interscience.wiley.com)
DOI: 10.1002/pam.20146

and Steelman. The focus will be on the first deficiency. It is notable, though, that the solution in all three cases is the same: exposing students to the full range of possibilities.

NEGLECT OF ETHICS AND VALUES

De Leon and Steelman fear that public policy programs, in response to an increasing recognition that there is no societal agreement on the identification of the common good, generally ignore ethical considerations: thus "public policy programs often fail to teach the conceptual and intellectual tools necessary to make value decisions" (p. 165). De Leon and Steelman urge a much greater attention to values, but provide little concrete advice on how this might be accomplished. Likewise, Romero (2001, p. 771) urges a "concerted focus on competing value paradigms" as the only way of squaring a "post-positivist" emphasis on multiple perspectives with a "positivist" desire to communicate specific skills and tools to students. Romero finds that only 5 of 32 sample syllabi consulted attempted to do so. If Romero is correct that "public sector professionals are increasingly expected to emphasize a wide array of perspectives in the appraisal and choice of policy alternatives" (p. 773), then this is a serious oversight in professional education. Notably, similar arguments have been made with respect to political science and economics. Rothstein (1998), for example, bemoans the fact that classical political science focused on justice, rights, and tyranny, but modern political science pursues a value-free approach. He wonders about the value of political science if not in the pursuit of values such as justice. Romero's solution for public policy programs involves exposing students to three value paradigms: the "economic," the "subtle" (should animals or future generations be included in ethical evaluation?; any attack on Pareto-optimality), and the "alternative" (such as appeals to nationalism or religion). This solution is unsatisfactory: neither positivists nor post-positivists can be satisfied by an eclectic and non-exhaustive set of paradigms.

Carrow and others (1998) also argue that "social values" should be at the center of both public debate and policy analysis, and worry that the training of policy analysts stresses other skills. Notably they attribute this state of affairs to the fact that it is not entirely clear what "social values" are. They urge scholars to define and clarify these. Various authors in that volume worry that scholars need to distinguish universal from local values, that scholars should try to find a single common basis for value claims, and that scholars need to appreciate the need to balance conflicting values. They do not, however, show how this might be done.

Philosophers have, of course, long considered value paradigms, though they have tended to use different terminology. While individual philosophers tend to advocate only one approach to ethical evaluation, they generally argue for their favored view in opposition to other recognized approaches. There is thus widespread professional recognition of three broad types of formal ethical analysis: consequentialist approaches, which evaluate an act in terms of its consequences; deontological approaches, which evaluate an act in terms of some rule(s); and virtue-based approaches, which evaluate acts in terms of some set of virtues (what is commonly termed "process ethics" can be included here, for they share a concern with process rather than results). There is, however, a tendency to view these as substitutes, and argue that only one of them is correct (see, for example, Baron, Pettit, & Slote, 1997). Philosophers also tend to ignore two other sources of ethical evaluation: intuition and tradition (though virtue

theorists often applaud the latter). Yet not only are these approaches commonly used in everyday life—individuals often do what their "gut" tells them to do, and/or what they think is "the way things are done around here"—but one can find appeals to intuition and tradition across all world philosophies (see Cooper, 1996). Rothstein's (1998; p. 217) observation that the institutions of a society shape the values of its people also generally depends on an appeal to tradition and/or intuition.

Each of these broad types of ethical analysis subsumes a variety of approaches. Consequentialists can be selfish or concerned with the impact of their actions on the wider society; they can also disagree on what types of consequences to emphasize, though by far the most common variant of consequentialism, utilitarianism, focuses on human happiness. Virtue theories can emphasize a diversity of virtues (and these can conflict), and also disagree as to whether individuals should accept community-sanctioned virtues or arrive at their own orientation toward particular virtues. Leading deontological approaches include the Kantian categorical imperative, the Golden Rule, and a concern with rights (with disagreement over what set of rights to embrace); a variety of situation-specific rules—such as "be nice to strangers"—are also possible. Traditionalists can differ with respect to the degree to which individuals can/should question inherited tradition, and also how open they should be to the traditions of other societies; traditionalists may (or not) appeal to evolutionary arguments that beneficial traditions will be selected for, or argue that shared attitudes and behavior are essential to social cohesion. Intuitionists can argue that human intuition reflects life experience, genetic inheritance, or the will of a benevolent god. Notably, all ethical arguments across all world philosophies can be seen as reflecting one or more of these five types of ethical analysis: the exception that proves the rule is existentialism, which urges individuals to choose their own ethical guidelines (Szostak, 2005, Ch. 2). For example, social contract theory was in its original formulations a deontological exercise, but has in recent incarnations relied on tradition as scholars refer to actual contracts achieved in the real world rather than ideal contracts imagined to emanate from an ideal world.

While the five types of ethical analysis are flexible, they are nevertheless each clearly identifiable in terms of a distinct decision rule. Indeed, they reflect the five ways in which humans can make any decision: one can try to rationally evaluate outcomes, do what one's "gut" says, follow some sort of decision rule that one has found useful in the past, do what one sees others doing, or, finally, be more concerned with how one acts than what one accomplishes. In their daily lives most people have recourse to each and, indeed, habitually mix these, as when one wonders why one is attracted to a particular person, or disdains a particular fashion trend. Together, though, they exhaust the full range of decisionmaking options (Szostak, 2004).

Since each type of ethical analysis is grounded in a distinct decision rule, there is no logical argument that can prove that one of these is necessarily superior to the others. They must each be seen, then, as of equal validity. The fact that philosophers across diverse traditions, as well as billions of people in their daily lives, have had recourse to each of the five provides further evidence that each is valid. Solomon (1992) notes that no one type of ethical analysis is perfect: Consequentialists often see so many possible outcomes as to be unable to decide, deontologists can be compulsive, virtues can be taken to the extremes of obstinacy and foolhardiness, and reliance on intuition can lead to excesses of mysticism and sentimentality. To this list can be added the observation that blind adherence to

tradition can preclude beneficial changes in ethical guidelines. As Skorupski (1992) notes with respect to intuition, these problems cease to be so serious if ethical approaches are viewed as complements rather than substitutes.

Some authors, such as Ng (2000), urge policy analysts to focus on consequences, generally by maximizing social welfare or utility. It is usually difficult to estimate such optimal outcomes in practice, in large part because public policies generally create public goods and/or institutions that create opportunities for unforeseeable behaviors and actions. More centrally, it must be appreciated that people's impressions of optimal outcomes depend on traditions, values (whether embodied in rules or virtues), and intuition. A further disadvantage of a focus on consequences alone is that experts and decisionmakers can then all too easily be tempted to pursue selfish calculations at the expense of societal good.

The best evidence of the fact that these five approaches are complementary—and further evidence that they are equally valid—comes from the fact that each of them has tended to be justified in terms of one or more of the others. When the utilitarian Bentham was asked why an act should be evaluated in terms of its consequences for aggregate utility, he appealed to intuition: people intuitively pursue pleasure and avoid pain. Later utilitarians have not been able to eradicate this linkage. Moreover, the key question of why any individual would behave unselfishly—not just care about consequences for themselves—can only be answered in terms of the guilt one might feel for behaving selfishly, or in terms of religion (a type of tradition). Rule utilitarians, who recognize that consequential calculations are often both difficult and subject to bias, and thus advocate adherence to certain guidelines, provide a consequential justification for arguments from rules or virtues. Advocates of virtue commonly appeal to consequences: Aristotle argued that a virtuous life would be a happy life, Aquinas that a virtuous life would be the key to eternal life, the Epicureans that unvirtuous behavior often causes misfortune and pain, and Confucius that the pursuit of virtue was essential to an orderly society. Virtue theorists also often, along lines similar to Bentham, argue that human intuition informs individuals of virtue. Arguments for rights are grounded in one or more of four types of argument: appeals to rule utilitarianism, intuition, the virtue of respect for freedom, or a (tradition-based) appeal to a social contract (Almond, 1998; Solomon & Higgins, 1996). Supporters of tradition must, at least implicitly, believe that these have good consequences, and often appeal also to rules or virtues. Virtue theorists often hail loyalty to a community's traditions (for example, MacIntyre, 1981). Arguments from intuition generally recognize the potential biases in intuition, and thus urge attention to other possible justifications for one's actions. From the perspective of public policy, the key connection between the five approaches is that institutions—including government itself—judged to be unfair or offensive by citizens will not be supported, with often disastrous consequences.

One advantage of teaching students each of the five types of ethical analysis is that it will force them to reflect on their own (often subconscious) ethical predispositions, and how these may differ from the values of others; the value of such an exercise in its own right has been emphasized recently by Ryan (2003). Familiarity with the five types of ethical analysis will support policy analysis more directly as well. Policy analysts are commonly advised to pay attention to the political feasibility of policy proposals. In this respect, it is noteworthy that the five types of ethical analysis often point in the same direction (Szostak, 2005): in such circumstances one can anticipate widespread public support for proposed policies. In cases where ethical analyses diverge, policy analysts should

be guided to both respect and appeal to different types of ethical argument. For example, Ellis (1998) notes that cost-benefit analysis (a consequentialist approach) often generates results that some view as unfair; arguments from virtue or tradition or deontology may be a necessary complement in such cases. Political ideologies are each primarily grounded in one type of ethical analysis: conservatives value tradition, classical liberals are deontological, pragmatic liberals focus on consequences, socialists appeal to virtue, and populists, nationalists, and some environmentalists appeal to intuition (though environmentalists also stress consequences and nationalists tradition) (Szostak, 2002). Policy analysts who can speak to each type of ethical argument, and perhaps revise policy proposals so that they have broader appeal, are more likely to be successful in seeing their proposals adopted. Moreover, Rothstein (1998, p. 17), following Jon Elster, emphasizes that people will only act in accord with policies that they think are ethical; the success of a policy once adopted thus also depends on its appeal across the five types of analysis.

Three examples will illustrate how the five types of analysis could be applied to policy issues of varying levels of generality: in all cases they each suggest a unique and important set of questions. First, is democracy good? Consequential analysis is trickier here than many democrats like to admit: As Winston Churchill sagely advised, democracy is the worst system except for all the rest. Advantages—such as apparent limitations on injustice and abuse of power—must be balanced against the various imperfections in democratic decisionmaking. With respect to virtue, it can be argued that it is virtuous to actively participate in community decisionmaking. Alternatively, Plato had argued that the greatest virtue would come from a meritocratic elite ruling selflessly; students should discuss the difficulties with such an approach in practice. Rights theorists have generally seen democracy as the best protector of rights, though they have urged constitutional protections to prevent rights from being undermined in moments of crisis or political instability: Students should engage the question of why constitutional protections are necessary. In the West, tradition now supports democracy so powerfully that it is rarely questioned. Autocrats in other parts of the world suggest that democracy is inconsistent with their traditions. Is there merit in such arguments, or can one anticipate that democracy once experienced (recognizing that most successful democracies emerged slowly so that people could become gradually accustomed to both benefits and imperfections) will become supported by tradition universally? Finally, what of intuition? There is some survey evidence that people in democracies are slightly happier on average. While humans value autonomy, they have also likely been selected to appreciate hierarchy, and thus intuitive support for democracy may be very weak. Note that none of the five types of analysis point without question toward support of democracy: This is a general result, and reflects the simple fact that no ethical argument is unassailable. Students need to appreciate this simple fact. They should also appreciate that if, as arguably is the case for democracy, the preponderance of argument within all five types of analysis points in the same direction, this provides the most powerful evidence possible that a certain path is ethical.

Should governments fight social injustice? Almost all historical societies have attempted to combat some sources of injustice, such as disease and natural disasters. The ubiquity of such efforts suggests that humans intuitively recoil at injustice (but have a powerful ability to rationalize injustice as well). Consequentialists can argue that the benefits to those in need will outweigh the costs to others of fighting injustice (but then must carefully investigate issues such as

bureaucratic efficiency and adverse incentive effects). It is virtuous within all virtue theories to aid the less fortunate. Debate rages, however, as to whether such virtue is best expressed individually or collectively (a related question is whether virtue should ideally be expressed anonymously). The strongest objections come, however, from advocates of rights, who object to fighting injustice via taxation, which they view as an abrogation of one's right to property. This example illustrates for students the important fact that equally valid ethical analyses can yield opposing conclusions. Students should be encouraged in such cases to respect opposing views and seek policies that please as many as possible while limiting offense to others (a strategy that in principle can be supported by all five types of ethical argument—though the traditional support for consensus may be weak—but may in practice involve deviating from the conclusions of one or more of these). In this case, that may mean favoring certain types of taxation, limiting adverse incentive effects of redistributive policies, and working through non-governmental agencies.

Finally, what of government secrecy? Consequential analysis leads in a straightforward manner to a distinction (undoubtedly easier to draw in theory than practice) between secrets that serve society as a whole (such as not revealing the personal information on citizens that governments collect) from secrets that benefit government officials at the expense of society (such as covering up evidence of fraud) (Bok, 1982, p. 177). Bok notes that bureaucrats might be too cautious if not allowed to speculate on policy alternatives in private, but also that they might abuse a publicity principle by leaking one-sided information. Stiglitz (1998) enumerates various good consequences of reduced government secrecy (including financial stability as markets are less often surprised). Deontologists can argue that citizens have a right to information: A Kantian maxim in favor of freedom of information (again, with certain exceptions) is also easily constructed. It is clearly virtuous for a bureaucrat to disclose the second kind of secret. At present, though, individuals may feel a stronger loyalty to co-workers than to the citizens they serve. This may be a case when education on virtue is desirable. Intuition may be weak here again, in part because humans have not been selected to work in bureaucracies. As with democracy, arguably all five types of analysis point in the same direction: toward a reduction in governmental secrecy. However, in this case these arguments are less commonly appreciated and thus successful policy intervention may be inextricably tied to greater familiarity with ethical arguments by those implementing the policy.

MISUSE OF THEORY

"[Policy] Problems designate theory and methods, not the reverse, in sharp contrast to discipline-based inquiry" (Brewer & DeLeon, 1983, p. 13). Students of policy analysis need to be able to know how to select the theories and methods most appropriate to a particular inquiry. De Leon and Steelman worry that students are exposed to only a subset of relevant theories, but are too often given the impression that they have in fact been taught the full range of relevant theory. Moreover, students are often only exposed to the elements of theories relevant to particular cases, without these theories being placed in context: In particular, key assumptions of theories may never be addressed. As with types of ethical analysis, it is straightforward to argue for plurality but harder to see how a complete or comprehensive overview of theory can be provided. Schneider and Ingram (1997), for example, while desirous of establishing useful typologies to guide public policy, proceed no

further than outlining the shortcomings of the four broad types of theory most commonly taught in public policy programs. Linstone (1984, p. 36) had urged pursuit of technological, organizational, and personal perspectives, but despaired that there were myriad theories within each of these perspectives and no way to objectively identify the right ones to apply. Again, an exhaustive classification of theory types, especially if this highlights key strengths and weaknesses of different theories, is desirable.

A classification of "types of scientific theory" can be constructed by asking of any theory the "5W" questions: "Who, What, Why, Where, and When":

1. *Who is the agent?* There are two important distinctions here: non-intentional (including volcanoes or institutions) versus intentional agency, each of which can take the form of individual, group, or relationship agency.
2. *What does the agent do?* There are three broad answers, which map imperfectly onto the six types of agency: passive (re-) action, active action, changes in attitude.
3. *Why does the agent do this?* With nonintentional agents, action can only be understood in terms of their inherent nature. With intentional agents, scholars can explore the five distinct types of decisionmaking outlined above: rational, intuitive, process (virtue) oriented, rule-based, and tradition-based. For groups and relationships, scholars can also ask how individual preferences are aggregated.
4. *Where does the causal process occur?* The concern here is with the generalizability of the theory: there is a continuum between nomothetic (generalizable) and idiographic (situation- or causal-link-specific) theory.
5. *When does the causal process occur?* There are four broad time-paths that a causal process might follow: return to the original equilibrium, movement to a new equilibrium, change in a particular direction, or stochastic/uncertain.

Since complex social problems involve multiple types of agency, decisionmaking, and so on, the typology suggests that any one theory will give incomplete guidance. That is, the typology highlights the types of questions each theory (best) engages, and thus also their weaknesses with respect to other questions. Familiarity with the typology would guide both analysts and students to recognize the limitations of a particular theory, and to identify other theories with compensating strengths. Placing existing theories within the typology also highlights the fact that many human science theories are ambiguous about their answers to some questions. Action theory, for example, gives firm answers to "Who" and "What," but not "Where," while systems theory answers "Where" but not "Who." This highlights a weakness in these theories, and also helps policy analysts to appreciate the key differences both across theories and within (as action theorists debate "Where," for example).

At present, many of those who advocate theoretical plurality are unduly harsh in their criticism of, say, rational choice theory; such an attitude can discourage others from embracing plurality. The typology outlined here encourages an appreciation both of what rational choice theory can and cannot do. Notably, many authors—Yanow (1996); Stout (1996); Gowda and Fox (2002) among them—have called for public policy analysts to pay greater attention to attitude formation. The typology guides students to ask how important attitude formation is to a particular case, but not to therefore neglect theories that may be very good at explaining actions. Similar arguments can be made regarding other dimensions in the typology.

INAPPROPRIATE METHODS

De Leon and Steelman's third concern is harder to summarize, for it encompasses a disproportionate focus of policy programs on each of acontextual analysis, deductive theory, and quantitative methods. Theory was addressed above. Context will be addressed in the next section. With respect to methods, De Leon and Steelman recommend that students be exposed to the broad methodologies of various disciplines and subdisciplines. It is understandable that professors of public policy might despair that, given the number of disciplines and especially subdisciplines that exist in the academy, an exhaustive survey along these lines is impossible.

Happily, there are only a dozen distinct scientific methods: experiments (including natural or quasi-experiments), surveys, interviews, mathematical models (and simulations), statistical analysis (often, but far from always, associated with models), ethnographic/observational analysis, experience/intuition, textual (content, discourse) analysis, classification (including evolutionary analysis), mapmaking, hermeneutics/semiotics (the study of symbols and their meaning), and physical traces (as in archaeology). Some would treat evaluation of programs as distinct, though it can be seen as a combination of some of the above methods. Similar arguments can be made with respect to demography, case study, feminism, and perhaps also hermeneutics. Certainly, case studies involve the use of one or more of the above methods.

In order to evaluate all types of theory, methods are needed that can cope with each of the cells in the typology of theory. How well, then, does each of the dozen methods cope with the different types of agency, action, decisionmaking process, and time path enumerated in the typology of theory, and how generalizable is it? Note that if different methods are best suited to investigating different theory types, then in comparing one type of theory to another, one *must* have recourse to different methods. If only one method is used, the types of theory it is well suited to will be privileged. It is noteworthy in this regard that the method favored by economists, statistical analysis, is best able to identify those characteristics viewed as important by rational choice theory. Similar biases exist in other disciplines. As De Leon and Steelman note, public policy programs tend to emphasize only quantitative methods. The analysis above suggests that qualitative methods can provide unique insights into certain questions.

In thus asking the 5W questions of method, additional dimensions emerge along which methods can be evaluated. Some methods can study only a few agents (albeit in detail), and thus face severe sampling challenges. Methods also differ in how well they can identify causal relationships. Some methods are entirely deductive, while others leave scope for inductive insights. Finally, only some methods allow movements through space and/or time to be observed (Szostak, 2004).

Vaughn and Buss (1998) warn that social science is inherently imperfect. The analysis above shows that *no* scientific method is perfect. Importantly, it also shows that different methods have different limitations. While students may only become competent in the application of one or two methods, they should be capable of evaluating results from all methods. This suggests that confidence in a policy can be increased if multiple methods suggest that it has desirable results. This result accords well with the advice given by Hajer and Wagenaar (2003, p. 14) that policymakers should appreciate that no argument is perfect, but avoid the extreme relativist position that all arguments are equally valid. If different methods reach different conclusions, students are guided to tread carefully, and to seek evidence

from yet other methods. Policy experiments, if feasible, may be particularly valuable in such cases. If policy proposals are grounded in imperfect evidence, they should be subjected to rigorous and multi-faceted evaluation after the fact, and adjusted as necessary.

PLACING POLICY IN CONTEXT

As noted above, De Leon and Steelman worry that teaching in public policy programs abstracts away from the complexity of real-world contexts. Cases are taught in such a way that only certain key elements are highlighted. The student can all too easily be left with the impression that policy analysis is more straightforward than it is. It is perhaps not surprising, then, that failure to consider possible side effects is likely the greatest single source of errors in public policy. Levin (1997), for example, notes how governments devoted little effort to estimating side effects in the five case studies he performed. Given human fallibility, policymakers can never completely escape the cycle whereby policies create unexpected problems, which call forth new policies. Impact assessments were designed to address potential side effects, but these can be biased if possible side effects are ignored whether intentionally or through ignorance (De Vries, 1999). Students can be educated to be surprised much less often.

"Suffice it to say that if public policy programs focused on teaching techniques to create more contextually rich 'maps' for understanding the conditions that influence the problem, as well as devoting more attention to defining the problem, the solutions for consideration would be more appropriate for the problems defined" (De Leon & Steelman, 2001, p. 168). What, though, should such a map look like? A hierarchically organized table of the phenomena of interest to human scientists was developed in Szostak (2003) and reprised in Szostak (2004). The number of phenomena is large but finite. Like a phone book, it is unnecessary to memorize every entry in order to use the table; like the alphabet, the hierarchical organization makes it easy to establish where every entry fits. One can imagine some causal linkage between almost any pair of phenomena in the table. This suggests that the range of possible side effects of any policy is huge, though finite. In most cases policymakers can be confident that effects will be minimal; in many cases, though, a perusal of the table will suggest potential effects that deserve study. Vaughan and Buss (1998, p. 3) worry that postwar optimism that policy outcomes could be predicted has given way to a sense that "Human behavior is too complex to model accurately with confidence." The table suggests that complexity can be faced without abandoning hope of understanding.

MacRae and Whittington (1997) suggest that one productive way to approach policy challenges is to ask which causal links are most likely to affect the phenomena in question. Thus, the table could be used for identifying policy solutions as well as possible side effects. Researchers upon identifying the causal links they wish to affect could then look to the theories and methods best suited to investigating these.

CONCLUDING REMARKS

As MacRae and Whittington (1997, p. xii) emphasize, it is desirable that students be exposed to the "craft of policy analysis" as explicitly as possible, rather than being expected only to learn this informally in the course of projects or internships. In addressing the three problems identified by De Leon and Steelman, four

key steps in policy analysis have been outlined: analysts should evaluate goals in terms of diverse ethical criteria, suggest solutions grounded in multiple theories, evaluate these using multiple methods, and explore the widest possible range of side effects on a "map" of the phenomena of interest to human scientists (this last step may itself require the repetition of previous steps with respect to these side effects). With respect to each step, a classification that exposes students to the full range of possibilities can be introduced with little expenditure of class time. While neither students nor practitioners will be able to perform each step completely with respect to each case they address, it is nevertheless important that they understand the potential costs of omitting parts of one or more of these. Notably, most/all of the "rules of thumb" for policy analysis suggested in works such as Vaughan and Buss (1998) can be seen as being subsidiary to these four steps: The steps thus provide a structure in which much common-sense advice can be readily assimilated. These four steps in policy analysis also encompass various strategies associated with "critical thinking" (see Phelan & Reynolds, 1996; Halperin, 1997): Students would learn to distinguish assumptions, arguments, evidence, ethical statements, and conclusions; would have a clear "pattern of reasoning" to follow; would be aware of, and seek to overcome, ambiguity in word usage; would be alert to the limits of evidence, and hostile to assertions not backed by evidence; and, perhaps most importantly, would appreciate that there is generally some element of truth (and error) in competing arguments. There are, not surprisingly, parallels between the ideal steps to be taken in policy analysis and the steps that ideally would be taken in interdisciplinary analysis more generally. Linstone (1984, pp. 82–83, 367) felt that there was no clear way to integrate the insights of different theories or methods, and even suggested that policy analysts leave this step to decisionmakers; decades later policy analysts can turn to a burgeoning literature on how to integrate (Szostak, 2002a; Newell, 1998).

RICK SZOSTAK is Professor in the Department of Economics at the University of Alberta, in Edmonton.

REFERENCES

Almond, B. (1998). Exploring ethics: A traveller's tale. Oxford, U.K.: Blackwell.

Baron, M. W., Pettit, P., and Slote, M. (1997). Three methods of ethics. Oxford, U.K.: Blackwell.

Bok, S. (1982). Secrets. New York: Pantheon.

Brewer, G. D., & De Leon, P. (1983). The foundations of policy analysis. Homewood, IL: The Dorsey Press.

Carrow, M., Churchill, R. P., & Cordes, J. N. (1998). Democracy, social values, and public policy. Westport, CT: Praeger.

Cooper, D. E. (1996). World philosophies. Oxford, U.K.: Blackwell.

De Leon, P., & Steelman, T. A. (2001). Making public policy programs effective and relevant: The role of the policy sciences. Journal of Policy Analysis and Management, 20(1), 163–172.

De Vries, M. S. (1999). Calculated chance in policy-making: The theory and practice of impact assessment. New York: St. Martin's.

Ellis, R. D. (1998). Ethical foundations for policy analysis. Washington, DC: Georgetown University Press.

Gowda, R., and Fox, J. C. (2002). Judgments, decisions, and public policy. Cambridge, U.K.: Cambridge University Press.

Hajer, M. A., & Wagenaar, H. (Eds.). (2003). Introduction. Deliberative policy analysis: Understanding governance in the network society. Cambridge, U.K.: Cambridge University Press.

Halperin, D. F. (1997). Critical thinking across the curriculum. Mahwah, NJ: Lawrence Erlbaum Associates.

Levin, P. (1997). Making social policy. Buckingham, U.K.: Open University Press.

Linstone, H. A. (1984). Multiple perspectives on decision-making: Bridging the gap between analysis and action. New York: North-Holland.

MacRae Jr., D., & Whittington, D. (1997). Expert advice for policy choice: Analysis and discourse. Washington, DC: Georgetown University Press.

MacIntyre, A. (1981). After virtue. London: Gerald Duckworth.

Newell, W. H. (Ed.). (1998). Interdisciplinarity: Essays from the literature. New York: College Board.

Ng, Y.-K. (2000). Efficiency, equality, and public policy. New York: St. Martin's Press.

Phelan, P., & Reynolds, P. (1996). Argument and evidence: Critical analysis for the social sciences. New York: Routledge.

Romero, F. S. (2001). The policy analysis course: Toward a disciplinary consensus. Journal of Policy Analysis and Management, 20(4), 771–779.

Rothstein, B. (1998). Just institutions matter: The moral and political logic of the universal welfare state. Cambridge, U.K.: Cambridge University Press.

Ryan, P. (2003). Ethics and resignation: A class exercise. Journal of Policy Analysis and Management, 22(2), 313–315.

Schneider, A. L., & Ingram, H. (1997). Policy design for democracy. Lawrence: University Press of Kansas.

Skorupski, J. (1992). English language philosophy: 1750–1945. Oxford, U.K.: Oxford University Press.

Solomon, R. C. (1992). Entertaining ideas: Popular philosophical essays 1970–1990. Buffalo, NY: Prometheus.

Solomon, R. C., & Higgins, K. M. (1996). A short history of philosophy. Oxford, U.K.: Oxford University Press.

Stiglitz, J. E. (1998). Distinguished lecture on economics in government: The private uses of incentives and institutions. Journal of Economic Perspectives, 12(2), 3–22.

Stone, D. A. (1988). Policy paradox and political reason. Glenview, IL: Scott, Foresman.

Stout, C. E. (1996). Introduction. The integration of psychological principles in policy development. Westport, CT: Praeger.

Szostak, R. (2002). Politics and the five types of ethical analysis. International Journal of Politics and Ethics, 2(4), 275–290.

Szostak, R. (2002a). How to do interdisciplinarity: Integrating the debate. Issues in Integrative Studies, 20, 103–22.

Szostak, R. (2003). A schema for unifying human science: Interdisciplinary perspectives on culture. Selinsgrove, PA: Susquehanna University Press.

Szostak, R. (2004). Classifying science: Phenomena, data, theory, method, practice. Dordrecht: Springer.

Szostak, R. (2005). Unifying ethics. Lanham, MD: University Press of America.

Vaughan, R. J., & Buss, T. F. (1998). Communicating social science research to policymakers. Thousand Oaks, CA: Sage.

Yanow, D. (1996). How does a policy mean?: Interpretive policy and organizational action. Washington, DC: Georgetown University Press.

USING THE KALDOR-HICKS TABLEAU FORMAT FOR COST-BENEFIT ANALYSIS AND POLICY EVALUATION

Kerry Krutilla

Abstract

This note describes the Kaldor-Hicks (KH) tableau format as a framework for distributional accounting in cost-benefit analysis and policy evaluation. The KH tableau format can serve as a heuristic aid for teaching microeconomics-based policy analysis, and offer insight to policy analysts and decisionmakers beyond conventional efficiency analysis. © 2005 by the Association for Public Policy Analysis and Management

INTRODUCTION

This note introduces the Kaldor-Hicks tableau format as an aid for learning, teaching, and practicing microeconomics-based policy analysis. A Kaldor-Hicks tableau disaggregates the benefits and costs of a project or policy among stakeholders, and records all between-stakeholder financial transfers. The result is a complete, transparent, and conceptually consistent accounting framework at a chosen level of stakeholder representation. In providing a more complete representation of stakeholder impacts than more aggregate efficiency analysis, the Kaldor-Hicks tableau offers insights about the potential political ramifications of a project or policy, as well as a better understanding of its economic effects. This additional knowledge can increase the insight of students, teachers, analysts, and practitioners alike, thereby improving the quality of policy analysis.

Although the basic idea behind the Kaldor-Hicks (KH) tableau format is quite simple, the format is not commonly used in conventional cost-benefit studies, or policy analyses, conducted in the United States.[1] Even studies with some degree of distributional disaggregation typically represent a part—usually a small part—of the accounting picture represented in a completely specified KH tableau. Consistent with this state of the practice, standard texts in the fields of microeconomics, cost-benefit analysis, and policy analysis do not emphasize the KH tableau format, for example, Adler and Posner (2001), Boardman, Greenberg, Vining, and Weimer (2000), Gramlich (1997), Pindyck and Rubinfeld (2005), Schofield (1998), and Weimer and Vining (1998). An exception is the World Bank's *Handbook on Economic Analysis of Investment Operations* (World Bank, 1996). The thrust of this work, with its focus on distributional accounting, is quite consistent with the themes developed in this article.

The objective of this note is to introduce the KH tableau display format to an audience of students, teachers, analysts, and practitioners who, like me, may not have encountered the concept in the course of their academic training or practice.

[1] I have coined the term "Kaldor-Hicks tableau" for presenting the concept to students in cost-benefit classes. The terminology acknowledges the two pioneers whose aggregational assumption provides the standard metric for microeconomics-based policy analysis.

DOI: 10.1002/pam.20147

The next section begins to illustrate the KH tableau format using some simple conceptual applications. Conceptual Kaldor-Hicks tableaus profile a project or policy's fundamental economic structure, and identify affected stakeholders and the categories of impacts they will experience. In the following section, a simple numerical case study is used to further illustrate the KH tableau format. The subsequent section will elaborate upon some policy implications, applications, and extensions. The final section of the article will offer concluding remarks.

THE KH TABLEAU FORMAT

To illustrate the basic idea behind a KH tableau, consider an archetypal public project in which labor, L, is hired to produce some public good, Q, linked through a production function Q = f(L). Assuming this project is too small to have significant repercussions in related markets, the standard task of cost-benefit analysis is to determine the economic value of the output, the opportunity cost of labor, compare the two, and then recommend a project go-ahead if the benefits of the output exceed its labor opportunity cost. This kind of comparison deemphasizes the distributional impact of the benefits and costs, and ignores any financial transfers associated with the project—which will net to zero in the efficiency analysis under the standard Kaldor-Hicks aggregation procedure.

In contrast, a KH tableau will reveal the complete distributional picture. As shown in Table 1, benefits, B, represent the economic value of the output, W is the project's financing charge, and OC denotes the opportunity cost of worker time. Each column in Table 1 shows the distributional effect of the project's impacts on each of the project's stakeholders—here aggregated as "Project Beneficiaries," "Agencies Administering the Project," and "Labor." Summing down each column yields entries in the bottom row of the tableau showing the net effect of the project on each stakeholder. On the other hand, each row denotes a benefit, cost, or transfer category. Summing across columns yields a final net column whose entries indicate the net efficiency impact of each row.

Using the KH tableau in Table 1, one can determine the project's overall net efficiency effect in two ways. First, the conventional efficiency analysis, which compares benefits against costs, shows up in the final net column on the right-hand side of the tableau. Summing the cell entries in the final net-effects column yields the grand net effect, B–OC. This approach typifies the standard focus in most conventional project appraisals, and in many cost-benefit texts. Of course, this *default* sometimes gets modified to allow for the project's impacts on different income classes, and/or governmental revenue. In such cases, however, the

Table 1. Kaldor-Hicks tableau of archetypal public project.

	Stakeholders in Accounting Domain			
	Project Beneficiaries	Agencies Administering the Project	Labor	Net
Benefit	B			**B**
Financing charge		–W	W	**0**
Cost			–OC	**–OC**
Net	**B**	**–W**	**W–OC**	**B–OC**

representation is selective, and supplemental to the basic input-output valuation. In contrast, the Kaldor-Hicks tableau is comprehensive. The columns to the left of the final net-effects column show a complete dissaggregation of the project's benefits and costs among stakeholders, plus a complete representation of the financial exchanges among them. A consequence in the present case is that the KH tableau embodies both a fiscal impact analysis (in the column for "Agencies Administering the Project") and the conventional efficiency evaluation (final right-hand column). A greater level of stakeholder disaggregation could be chosen to illustrate the project's effects on different income classes, or to show intragovernmental revenue and cost impacts on different agencies when more than one agency is involved in the project's financing or administration.

The net-efficiency effect of the project can also be found by horizontally summing the stakeholder net effects in the bottom row of the Tableau to yield the net B–OC sum in the bottom row's rightmost cell entry. This approach is the algorithmic embodiment of the Kaldor-Hicks criterion, in which a project's net effect is determined by summing its net impact on all stakeholders. In contrast to the first method, the focus in this case is on the sum of the project's net distributional effects.

The second method is the standard approach used in microeconomics texts to illustrate the efficiency effects of governmental policy in markets, as well as the efficiency effects of monopoly, externalities, and other market distortions. To see how a KH tableau can be used in this context, consider a KH tableau of the economic effects associated with a common market distortion: the imposition of a commodity tax. Figure 1 indicates supply and demand curves for the market in which the

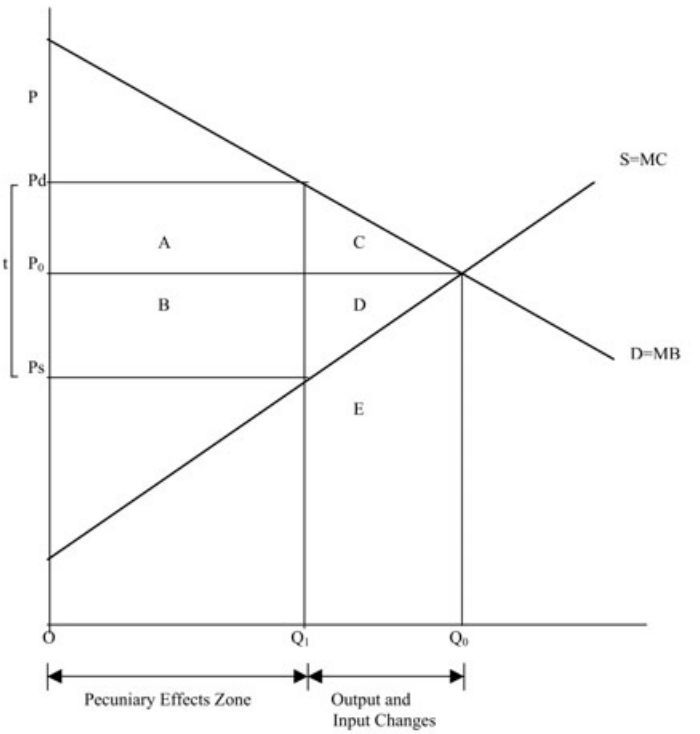

Figure 1. Impact of commodity tax.

tax is imposed. Q_0 and P_0 are the before-tax output and price levels, respectively; t is the commodity tax level, Q_1 is the after-tax output level, and Pd and Ps are the post-tax demand and supply prices, respectively, with Pd = Ps + t. Table 2 shows the KH tableau corresponding to Figure 1. For expositional convenience, this KH tableau identifies two output ranges: 0–Q_1, and Q_1–Q_0. Resources and output are not changing in the 0–Q_1 range; hence, only price effects are possible there. The Q_1–Q_0 range involves resource and output movement; thus, this is the zone where the policy's efficiency effect materializes.

As commonly described in microeconomics textbooks,[2] the deadweight cost of the tax –(C+D) is the sum of the consumer and producer surplus losses [–(A+C) and –(B+D), respectively], less the gain in tax revenue (A+B). Table 2 shows these magnitudes to be the bottom-row entries in the KH tableau.

The standard input-output valuation of conventional benefit-cost analysis will again show up in the right-most column of the KH tableau. In Table 2, this column indicates that the value of lost output (Q_1–Q_0) is –(C+D+E), while the value of the resource savings associated with the output reduction is +E. The sum of these two gives the net efficiency cost that would be identified in a conventional project appraisal: –(C+D). Of course, this net effect is consistent with the sum of producer and consumer surplus losses and tax revenue gains using the standard microeconomics analysis—as well as just the sum of producer and consumer surplus losses on the Q_1–Q_0 range.

Why this dichotomous emphasis in the analysis of efficiency in microeconomics and benefit-cost texts—the former focusing more on the sum of stakeholder net effects, the latter emphasizing to a greater degree the input-output valuation—is puzzling. But the KH tableau accounting in Table 2 incorporates both approaches as its boundary row and column, providing a more complete picture, and better intuition, than either of the usual methods used alone. Indeed, I would argue that a student who cannot describe the economic effects illustrated in Table 2 cannot fully understand the economic consequences of commodity taxation. In the past eight years, I have had more than 300 master-level students entering my cost-benefit classes with a standard intermediate microeconomics course as background. It is a rare student who, at the start of the course, is able to convincingly explain the full effects of a commodity tax, as illustrated in Table 2.

Before closing this section, it is worth discussing two design issues associated with KH tableau construction—specifically, the level of aggregation, and the establishment of a project's accounting boundary. The level of aggregation selected for the KH tableau involves both conceptual and empirical issues. Some degree of aggregation can be justified on conceptual grounds—it makes sense, for example,

Table 2. Kaldor-Hicks tableau of commodity tax.

	Consumers	Producers	Tax Payers	Net
Q_1–Q_0 range				
Benefit	–(C+D+E)			**–(C+D+E)**
Revenue	(D+E)	–(D+E)		**0**
Resource costs		E		**E**
0–Q_1 range				
Tax effect	–A	–B	(A+B)	**0**
Net	**–(A+C)**	**–(B+D)**	**(A+B)**	**–(C+D)**

[2] See, for example, Pindyck and Rubinfeld (2005), Chapter 9.

Table 3. Kaldor-Hicks tableau of archetypal public project; labor opportunity cost equals wage bill.

	Stakeholders in Accounting Domain		
	Project Beneficiaries	Agencies Administering the Project	Net
Benefit	B		**B**
Cost		–W	**–W**
Net	**B**	**–W**	**B–W**

to aggregate similarly affected individuals into one representative impacted class. It also makes sense to exclude stakeholders who a project will only marginally affect. For example, under the *default* pricing assumption—that market prices equal relevant opportunity costs—the labor wage bill, W, would equal, or nearly equal (allowing for the possibility of some infra-marginal rent), the opportunity cost, OC, implying that the project's net effect on workers, W–OC, is zero—or close to zero. In this limiting case, not much information is lost—and therefore, not much bias is introduced—by excluding workers from the tableau and using wages to represent labor opportunity costs (see Table 3).

On the other hand, there could be a significant economic surplus associated with labor, with W–OC > 0 if, for example, the project's labor is drawn from an unemployed pool with low time opportunity costs. With W–OC > 0, workers would be measurably impacted by the project, and should be represented in the tableau—as originally depicted in Table 1.

In addition to these kinds of conceptual issues, informational constraints will always come into play in actual empirical applications. Lack of information will ultimately limit the degree to which stakeholders can be separately identified and represented within the KH tableau framework.

The project's accounting boundary is another issue that will affect the representational scheme of a particular KH tableau. In Table 1, project beneficiaries, workers, and the governmental agencies involved in the project are all identified stakeholders. This representation implies that each of these groups is situated within the project's accounting boundary. Suppose the project in question is local, that the governmental agencies involved in the project are not local, and that the funds are specifically earmarked for this particular project; thus, increase the locality's funding above the no-project baseline by the amount W. Under these assumptions, the KH tableau representation in Table 4 would depict the local accounting reality. In this tableau, a party within the

Table 4. Kaldor-Hicks tableau of archetypal public project evaluated from a local perspective.

	Stakeholders in Accounting Domain		
	Project Beneficiaries	Labor	Net
Benefit	B		**B**
Financing charge		W	**W**
Cost		–OC	**–OC**
Net	**B**	**W–OC**	**B+W–OC**

domain receives the transfer, but no party within the accounting domain loses it. Thus, the project's net benefit becomes B+W–OC, reflecting the fact that the financing is now a local windfall. In this case, the standard input-output valuation would have to add the financial transfer effect to accurately depict the project's net benefits.

Since a project's accounting boundary has political and philosophic implications (Howe, 1986), it may be useful to evaluate a project using a number of accounting boundaries. The KH tableau format is ideally suited for these kinds of extensions.

A SIMPLE CASE APPLICATION

We now turn to a simple numerical case to further illustrate the applicability of the KH tableau format, and to highlight some basic points underlying KH tableau construction. Imagine a fictitious state in which three pulp mills discharge untreated effluent into a river.[3] This pollution loading increases the water treatment costs of a municipally run drinking water plant further downstream (located in "City Z"), and lowers streamside property values for area residents. A court has ordered the state to reduce untreated pollution at the plant by an aggregate amount of X tons, but has given the state the flexibility to implement the order by whatever means it chooses. The state is considering three alternatives to carry out the order. The first is a mandate to each pulp mill to reduce their pollution loading by X/3 tons. The second is to impose a pollution discharge tax. An analyst estimates that the effluent tax will cause two of the plants to reduce pollution discharges completely, thereby avoiding pollution tax payments, while the third will continue to pollute at its original level and pay the pollution charge. The sum of these responses will achieve the aggregate pollution control required. Finally, the state is considering a third alternative, which goes beyond the mandate: building a new treatment plant that will process all pulp-mill effluent. The prospect of receiving a federal grant that would partially defray the plant's cost has caused the state to consider this option. In this alternative, the pulp mills would be assessed a pollution treatment surcharge to help finance plant construction.

The conventional task for the analysis is to determine which alternative yields the highest Net Present Value (NPV). It is actually not prudent to begin this task by attempting to construct Kaldor-Hicks tableaus for each of the alternatives. The relative complexity of the distributional picture can obscure fundamental economic relationships. Rather, it makes sense to start with the conventional CBA approach. That is, to express the production-function relationship by itemizing the inputs and outputs of the project, and then attempting to value them.

Itemizing the inputs and outputs reveals the pattern of resource and output variation among the three options (Table 5), while valuing the inputs and outputs using economic data provided for the analysis gives the conventional project evaluation (Table 6). This evaluation shows that Option 2, the imposition of the effluent discharge taxes, yields the highest NPV. However, according to a budget analyst, Option 3 would also increase the state's receipt of federal effluent treatment grants by $.50 million above baseline funding levels. The receipt of these additional grant monies (not shown in Table 6) would be sufficient to tip the calculus in favor of the third alternative—assuming the evaluation is from the state, rather than the federal, accounting perspective.

[3] This example adapts a case study authored by a colleague of mine, Dr. Neal Johnson. I am indebted to him for sharing this case material.

Table 5. Inputs and outputs of project alternatives.

	Alternative 1	Alternative 2	Alternative 3
	Effluent Reduction Mandate	Effluent Discharge Tax	New Effluent Treatment Facility
Outputs	Qualitative improvement of streamside property	Qualitative improvement of streamside property	Qualitative improvement of streamside property
	Decreased input for drinking water treatment	Decreased input for drinking water treatment	Decreased input for drinking water treatment
Variable inputs	Waste water treatment input at pulp mills	Waste water treatment input at pulp mills	Operating input of waste water treatment plant
Fixed input			Land, labor, materials

Table 6. Benefits and costs of project alternatives (present value $ millions).

	Alternative 1	Alternative 2	Alternative 3
	Effluent Reduction Mandate	Effluent Discharge Tax	New Effluent Treatment Facility
Benefits			
Increased property value	0.50	0.50	1.00
H_2O treatment savings	1.50	1.50	2.50
Variable costs			
Waste water treatment	–2.30	–1.30	–1.00
Fixed costs			
Land			–0.50
Labor			–0.25
Capital			–1.50
Net	**–0.30**	**0.70**	**0.25**

The benefit of the conventional CBA approach illustrated in Tables 5 and 6 is its sharp focus on core resource tradeoffs, and the resulting net economic effect of the project alternatives. One can see that the key efficiency issue is whether reducing drinking water treatment costs provides greater benefits than the associated cost of shifting pollution control responsibility to pulp mills (Alternatives 1 and 2) or to a new treatment facility (Alternative 3). The environmental value associated with the shift—the qualitative improvement in property adjacent to cleaner streams—is also included in the analysis. One can see that the benefits of the trade-off are not worth the costs for Alternative 1, but that for Alternative 2, which yields the same level of benefits as Alternative 1, the benefits do exceed the costs. This outcome reflects the fact that the pollution tax cost-effectively distributes control responsibility among pulp mills. The benefits of the new treatment plant also exceed its resource costs (Alternative 3), but not by as much as using an effluent tax to reduce pollution discharges from the pulp mills themselves (Alternative 2). Again, though, the receipt of

the financial transfer from outside the accounting domain counterbalances this disparity, rendering the third alternative the option with the highest NPV from a local accounting perspective.

The cost of this conventional form of efficiency analysis is the complete disguise of the distributional picture. Disaggregating the benefits and costs and adding the financial transfers allows the construction of KH tableaus for each alternative (Tables 7–9). One can see that the distributional effect differs substantially among the alternatives, and becomes more complex going from the first to the third. The incidence of costs and expenditures on pulp mills is an important distinction among alternatives, as well as the fiscal impact on the state government. The third pulp mill, for which pollution control is relatively costly, is most negatively impacted in the first alternative—where it faces a mandate to reduce pollution. It does better in the second and third alternatives, because the financial charges associated with these

Table 7. Kaldor-Hicks tableau for alternative 1: Effluent reduction mandate (present value $ millions).

	Streamside Residents	Pulp Mill 1	Pulp Mill 2	Pulp Mill 3	City Z	Net
Benefits						
Increased property value	0.50					**0.50**
Drinking water Treatment cost saving					1.50	**1.50**
Costs						
Waste water Treatment		–0.40	–0.40	–1.50		**–2.30**
Net	**0.50**	**–0.40**	**–0.40**	**–1.50**	**1.50**	**–0.30**

Table 8. Kaldor-Hicks tableau for alternative 2: Pollution discharge tax (present value $ millions).

	Streamside Residents	Pulp Mills 1	Pulp Mill 2	Pulp Mill 3	City Z	State Government	Net
Benefits							
Increased property value	0.50						**0.50**
Drinking water treatment cost saving					1.50		**1.50**
Transfers							
Pollution tax				–0.40		0.40	**0.00**
Wages							
Costs							
Waste water treatment		–0.65	–0.65				**–1.30**
Net	**0.50**	**–0.65**	**–0.65**	**–0.40**	**1.50**	**0.40**	**0.70**

Table 9. Kaldor-Hicks tableau for alternative 3: New treatment plant (present value $ millions).

	Streamside Residents	Pulp Mills 1	Pulp Mill 2	Pulp Mill 3	City Z	Construction Labor	State Government	Net
Benefits								
Increased property value	1.00							**1.00**
Drinking water treatment cost saving					2.50			**2.50**
Transfers								
Pollution treatment surcharge		–0.40	–0.40	–0.40			1.20	**0.00**
Wages to construction labor						0.40	–0.40	**0.00**
Sewage treatment grant							0.50	**0.50**
Costs								
Operational sewage treatment costs							–1.00	**–1.00**
Land							–0.50	**–0.50**
Labor						–0.25		**–0.25**
Capital							–1.50	**–1.50**
Net	**1.00**	**–0.40**	**–0.40**	**–0.40**	**2.50**	**0.15**	**–1.70**	**0.75**

options are less than the pollution control costs incurred in the first alternative. The first and second pulp mills are most negatively impacted in the second alternative, which redistributes greater pollution control responsibility to them.

The state is most advantaged in the second alternative; it receives pollution tax revenue without incurring any cost (see Table 8). The first alternative does not fiscally impact the state, but the third has a net negative fiscal effect, since the levied finance charges and the receipt of out-of-state grant monies do not cover all outlays (see Table 9).

Streamside residents, who benefit from higher water quality, and the residents of City Z, who benefit from lower drinking water costs, are the clear project winners. They benefit in all alternatives, but most in the third, which reduces the most pollution. Labor will also benefit in the third alternative from the input demand associated with new facility construction.

IMPLICATIONS AND EXTENSIONS

The use of Kaldor-Hicks tableaus is obviously compatible with conventional input-output valuations emphasized in traditional benefit-cost analyses. As we have seen, the conventional efficiency analysis is embedded within the KH tableau format and, in fact, provides a good starting point for KH tableau construction. The question, then, is whether the incremental benefits of the expanded KH tableau framework is

worth its costs. In some cases, the parsimony of the input-output valuation might be appealing or the distributional effect of the project might not be significant enough, or relevant enough for the decisionmaking, to be worth revealing, or the additional information needed might be difficult enough to obtain to make expanding the accounting framework problematic. But as a *default*, I would agree with the point of view expressed in World Bank (1996) that a distributional accounting of project effects is a desirable analytic objective. And the incremental cost to produce the more complete accounting may well be relatively low, particularly for a relatively modest degree of stakeholder disaggregation, as illustrated in Tables 7–9.[4]

Beyond greater clarity and transparency of a project's overall economic effects are several other reasons to recommend the KH tableau framework. The first is that the framework can be useful for understanding the political ramifications of a particular project or policy. In this context, conventional analysts, as advocates for economic efficiency, might be the only observers involved in the project's assessment who will focus on the right-most column of the Kaldor-Hicks tableau, or the sum of the net effects in the tableau's bottom row. Every other stakeholder is likely to see the project's impact through the lens of his/her own particular column. Given this reality, it should not be surprising that the actual outcome of the political process, based on a distillation of stakeholder effects aggregated through a political, rather than economic system, will often differ from the recommended alternative in an efficiency-oriented benefit-cost analysis.[5]

We can use the KH tableaus in Tables 7–9 to consider the possible political implications of the project alternatives. We would expect streamside residents and citizens of City Z to lobby most for the third alternative, which yields the greatest environmental benefits. Construction workers would also favor the third option, as would efficiency-oriented analysts with a local accounting perspective. Given the incidence of the financial and cost impacts on the pulp mills illustrated, the third option would probably be a weakly dominant strategy in a political game among them, since it is better than the worst option for any of the pulp mills and the same as the next-best alternative for all of them. To the extent that they notice, however, other residents in the state might well object to the diversion of state funds into this particular project.[6] Indeed, the relative benefit of the third option for the pulp mills crucially reflects its distribution of financing to other residents in the state and nation. Were the state to raise the local financing charge at all, the pulp mills would diverge in their favored options, given the differential impacts of the first and second alternatives on relatively low- and high-cost pulp mills.

Such distributional issues can shape the way political actors or analysts perceive the analysis itself. An interesting illustration is found in Boardman, Vining, and Waters (1993). The authors define three perspectives that inform the analytic framework of bureaucratic agents who have some stake in the analysis of public projects. Using their terminology, "analysts" are agents who exhibit the conventional efficiency perspective. They would focus on the boundary rows and columns in the KH tableau. "Guardians," in our example, would be state budget officials who would tend to judge the project through the lens of its fiscal impact. They

[4] As noted, informational constraints will ultimately establish a point where the cost of additional stakeholder disaggregation is not worth its benefit. The question really is whether some level of stakeholder disaggregation should be attempted, and reflected within the KH tableau format.

[5] See Shepsle and Weingast (1984) for a classic analysis of this dichotomy.

[6] We could incorporate other state residents explicitly into the analysis to more fully assess the project's implications for them, as well as indicate informational constraints for different stakeholders, and the way impacts are concentrated or diffused among them, to more fully decipher the political implications.

would likely support the second alternative. "Spenders" are bureaucrats with a vested interest in project promotion, and in the constituencies who support public projects. They ignore project opportunity costs while focusing on conventionally measured benefits plus the pecuniary transfers constituent supporters receive (while counting pecuniary transfers constituents pay out as costs). In our context, Spenders would likely support the third option—not only for its larger benefits but also because of its perceived employment impact and otherwise larger resource opportunity costs. In the spender's accounting, resource opportunity costs are ignored as costs but are associated with factor payments to input suppliers—for example, wage payments for construction labor—which they count as benefits.

By fully revealing the project's distributional effect, a KH tableau can be used to identify transfer schemes to alter the project's distributional impact. In particular, it might be used to modify the pay-off structure of an economically efficient project that, in its original conception, was not politically acceptable. With the project losers identified, a compensation scheme could be added to a modified project proposal. Used in this way, the KH format could offer a useful aid for helping to reconcile economic efficiency with political acceptability.

Another potential use of the KH format is to assess the credibility of assumptions underlying a project or program's assumed social production function. Many projects or programs depend on some form of voluntary participation—for example, programs to encourage recycling, immunization, adult literacy, or worker training. Assumed participation rates are a key variable driving the level of net economic benefits of such programs. In developing countries, project implementation can also depend on the predicted behavior of key stakeholders. Implementation failure in developing countries may sometimes occur because the behavioral predictions made about stakeholders do not hold up in fact. In showing the distributional pattern of stakeholder impacts, a KH format can be used to judge the credibility of assumptions about stakeholder participation. For example, if stakeholders who are assumed to be voluntary participants emerge as losers in the KH tableau, their assumed participation reveals a contradiction between the actual economic incentives they face and the assumptions of the analysis. In this case, the KH tableau format could be used to redesign the project payoffs to assure that stakeholder incentives are congruent with the project appraiser's expectations of stakeholder behavior.

CONCLUSION

The KH tableau format can serve a number of useful purposes in the field of policy analysis. Its key benefit is to provide a complete representation of stakeholder effects within a conceptually consistent accounting framework at a chosen level of stakeholder representation. The KH tableau format underlies the two conventional analytic approaches used to measure economic efficiency, and subsumes them both within a comprehensive and conceptually consistent social accounting.

Such a framework can provide intuition about the effects of policies, projects, and programs, which should prove useful to students learning microeconomics, benefit-cost analysis, and policy analysis. By providing a more complete accounting framework than found in conventional efficiency analyses, the KH tableau format can also offer insight to policy analysts and decisionmakers.

Project appraisals that identify a project's winners and losers can help project designers craft compensation schemes to increase the political acceptability of economically efficient projects. Similarly, an analysis that identifies a project's distributional effects can improve a decisionmaker's understanding of a project's likely

implementation prospects, and suggest ways to modify stakeholder pay-offs for better project performance. The comprehensive accounting framework embodied within the KH tableau is ideally suited to provide the distributional information needed for making these kinds of project modifications.

ACKNOWLEDGMENTS

The author wishes to acknowledge useful comments from two anonymous reviewers. The usual disclaimer applies.

KERRY KRUTILLA is Associate Professor at the School of Public and Environmental Affairs, Indiana University, Bloomington.

REFERENCES

Adler, M. D., & Posner, E. A. (Eds.) (2001). Cost-benefit analysis: Economic, philosophical, and legal perspectives. Chicago, IL: University of Chicago Press Journals.

Boardman, A. E., Greenberg, D. H., Vining, A. R., & Weimer, D. L. (2000). Cost-benefit analysis: Concepts and practice. 2nd edition. Upper Saddle River, NJ: Prentice Hall.

Boardman, A., Vining, A. R., & Waters, W. G. (1993). Costs and benefits through bureaucratic lenses: Example of a highway project. Journal of Policy Analysis and Management, 12(2), 532–555.

Gramlich, E. M. (1997). A guide to benefit-cost analysis. 2nd edition. Englewood Cliffs, NJ: Waveland Press.

Howe, C. W. (1986). Project benefits and costs from national and regional viewpoints: Methodological issues and case study of the Colorado-Big Thompson Project. Natural Resources Journal, 26, 77–93.

Pindyck, R. S., & Rubinfeld, D. L. (2005). Microeconomics. 6th edition. Upper Saddle River, NJ: Prentice Hall.

Schofield, J. A. (1998). Cost-benefit analysis in urban & regional planning. London, UK: Unwin Hyman.

Shepsle, K. A., & Weingast, B. R. (1984). Political solutions to market problems. American Political Science Review, 78, 418–434.

Weimer, D. L., & Vining, A. R. (1998). Policy analysis: Concepts and practice. 3rd edition. Upper Saddle River, NJ: Prentice Hall.

World Bank. (1996). Handbook on economic analysis of investment operations. Washington, DC: Author.