

AN ECONOMIC FRAMEWORK FOR STATUTORY INTERPRETATION

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I

INTRODUCTION

Most economic analyses of the legislative process either implicitly or explicitly assume that statutes have clear-cut meaning once they are written. One important economic viewpoint assumes that statutes unambiguously allocate resources based on the relative political power and bargaining strengths of the competing private interests that influence the legislative process.¹ According to this theory, the particular sets of activities regulated by the statute and the parties who either gain advantage or shoulder additional burdens in the regulation process are clearly defined by the statute. Thus, the issue of judicial interpretation rarely enters these economic analyses.² In reality, however, there are numerous sources of ambiguity and vagueness in any statute, ranging from disputes concerning the meaning of simple statutory language to uncertainties about overall legislative intent.

The economic perspective that emphasizes the role of special interest groups and neglects uncertainty about statutory interpretation stands in marked contrast to traditional legal perspectives. The role of the judiciary in interpreting vague and sometimes conflicting laws is to determine the underlying public interest foundation, and hence, the public policy meaning, of statutes.³ The controversy in the traditional legal understanding of judicial interpretation is whether the judiciary should adhere to a strict construction of the statute or whether it should take a broader perspective of the legislature's intent so that situations not explicitly covered by the language of the statute may still lie within its scope.

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The authors are indebted to Robert Cooter and Richard Posner for comments on earlier drafts. Mr. Rizzo would also like to thank the Scaife Foundation for financial support.

1. Allocation of resources may be accomplished by granting privileges, altering taxes, or directing public expenditures toward a particular interest group. *See, e.g.*, G. STIGLER, *THE CITIZEN AND THE STATE* 114-22 (1975).

2. Economic models of the legislative process focus on the economic aspects of voting, log-rolling, and interest group politics. Within this context, any uncertainty concerning the nature of the "deals cut" in the legislative process obscures the central elements of the process that the literature seeks to explain. Hence, such complications are assumed away by the very structure of the models. *See, e.g.*, D. MUELLER, *PUBLIC CHOICE* 49-58, 153-54 (1979).

3. H. HART & A. SACKS, *THE LEGAL PROCESS* 1144-417 (1958).

Judicial interpretation of statutes from an economic perspective has been recently addressed in articles offering insight into the arguments for and against narrow or broad statutory interpretation.⁴ Some important questions remain unanswered, however, and some answers offered by the recent literature are not necessarily consistent with an economic understanding of the judiciary's role in interpreting statutes. As an initial attempt to fill this gap and to clarify the existing literature, this article presents an economic framework for analyzing both the role and the consequences of alternative rules for judicial interpretation. The article focuses on how judicial interpretation of statutes can be understood from an economic perspective, and on the normative question of the appropriate judicial interpretive position in different contexts. The economic theory of judicial interpretation developed in this article is one of *relative* interpretations; the framework suggests that interpretations should be broader in some areas and narrower in others. The analysis does not, however, indicate quantitatively how much narrower or broader judicial interpretations should be nor are particular methods of interpretation suggested. Rather, the proposed framework is one that assists in choosing from existing techniques of judicial interpretation, those that will produce a narrower or broader application of statutes.

The article is divided into three sections. Section II presents the assumptions on which the economic framework is based as well as a mode for analyzing alternative judicial interpretive rules. Section III explores the implications of using the economic model in judicial interpretation of different types of statutes. Finally, in section IV, this economic approach is compared with several analyses of judicial interpretation of statutes found in recent literature.

II

AN ECONOMIC MODEL FOR JUDICIAL INTERPRETATION OF STATUTES

Theoretical studies of judicial interpretation of statutes seek to define how the courts should interpret laws. Thus, most studies of statutory interpretation raise the following normative questions:

- (1) Should the court adopt a narrow interpretation of statutes or a broad one?
- (2) Does the appropriate judicial "interpretive stance" vary with background conditions, such as the type of statute involved?

Despite the obviously normative nature of the inquiry, some of the recent articles on statutory interpretation do not state, as clearly as we would like, the analytical foundations of defining the appropriate role of the judiciary in applying statutes to particular cases. Therefore, it is useful to begin the present analysis by clarifying these foundations and specifying a model for the

4. See, Posner, *Economics, Politics and the Reading of Statutes and the Constitution*, 49 U. CHI. L. REV. 263, 282-91 (1982); Posner, *Statutory Interpretation—In the Classroom and in the Courtroom*, 50 U. CHI. L. REV. 800, 817-22 (1983); Easterbrook, *Statutes' Domains*, 50 U. CHI. L. REV. 533, 544-51 (1983); Easterbrook, *Legal Interpretation and the Power of the Judiciary*, 7 HARV. J.L. & PUB. POL'Y 87, 94-99 (1984); Epstein, *The Pitfalls of Interpretation*, 7 HARV. J.L. & PUB. POL'Y 99-108 (1984).

interaction between written statutes and judicial application to specific circumstances.

A. Judicial Interpretation and the Decisions of the Costless Legislature

The present model assumes that, ideally, a court should interpret statutes so as to minimize the deviation of its decisions from the decisions that the legislature would have rendered had there been sufficient time, resources, and information to decide whether the statute should apply to the particular circumstances of the case. According to this model, the decision that a hypothetical "costless legislature" would have rendered is assumed to be the "correct answer" to the question whether the conduct or activities under scrutiny should be included under the statute. The idea of a costless legislature is a reference point relative to which errors in judicial interpretation can be defined.⁵

The hypothetical costless legislature has sufficient time, complete information, and perfect foresight to consider all possible future circumstances and to decide whether they fall under the purview of the statute. By thus removing a number of real world constraints on the legislative process, the correct answer to whether a particular set of circumstances is "covered" by a statute may be derived.⁶ The costless legislature produces *substantively* the same types of statutes as do real world legislatures, enacting both "public interest statutes" as well as "private interest" rules.⁷

The assumption that the judiciary attempts to minimize the deviations of its decisions from those that the costless legislature would have made does

5. The central purpose of the costless legislature construct is to motivate the concept of legislative intent as a guide to judicial interpretation. This construction assumes only that the costless legislature *could have decided* whether the particular case under study is covered by the statute and what the appropriate decision concerning the application of the statute to the case implies.

6. None of the assumptions defining the costless legislature eliminate the possibility of log-rolling in the legislative process nor do they imply the absence of legislation designed to benefit one set of parties at the expense of other parties.

It can be argued that there is no "correct" answer in some cases of judicial interpretation, as Easterbrook does in *Legal Interpretation and the Power of the Judiciary*, *supra* note 4, at 89. According to this argument, legislatures are composed of many individuals, each with his or her own constituency and agenda. Thus, searching for the correct interpretation in some cases amounts to a fallacy of composition, since legislatures per se never decide anything; groups of legislators do. This criticism is off the mark in the context of the present model precisely because it is the hypothetical outcome of the legislative process in a costless decisionmaking environment that is the assumed focus of judicial interpretive efforts. That is, it makes no difference to the present study that legislation is typically the product of political "give and take," rather than the result of unanimous decisions.

7. This division of legislation into public interest statutes and private interest statutes is standard in the literature. Public interest laws, such as motor vehicle statutes, are termed "public interest legislation" because most, if not all, of the population benefits from their enactment. Private interest laws, on the other hand, typically benefit one set of parties at the expense of others. For example, many laws erecting barriers to entry into an industry serve to restrict competition, and thus benefit current members of the industry at the expense of their customers. The present model of judicial interpretation is equally applicable to both types of laws since it makes sense when applying either type of statute to ask whether the conduct in question would have been included under the statute by the enacting legislature. See Posner, *Economics, Politics and the Reading of Statutes and the Constitution*, *supra* note 4, at 269.

not imply any knowledge of what those hypothetical decisions would have been. Instead, the present framework requires only that something be known about *how* judicial decisions may deviate from those of the costless legislature under different circumstances and in different areas of the law. The *structure* of judicial errors, that is, the propensities of alternative interpretive postures to deviate from the decisions of a costless legislature, is known. The model enables selection of a judicial interpretive posture which minimizes the cost of these deviations.⁸

The costless legislature approach assumes that, when deciding cases, the judiciary has no goals independent of the intent of the enacting legislature.⁹ This approach might be challenged on the ground that it undermines an important function of the court: to provide a check on the will of the majority through the court's ability to declare statutes unconstitutional. At first glance, this traditional function requires that the judiciary not simply act as an "arm of the legislature." The judiciary, however, can quite properly be understood as the arm of several different legislatures at once: the legislatures that passed particular statutes, as well as the "legislature" that drafted the Constitution. Indeed, one purpose of the present inquiry is to describe the circumstances under which, and the rationale for the power with which, a court may declare certain statutes or particular applications of statutes unconstitutional. Thus, based on an understanding of the court as both an arm of and a check on the legislature(s), the present economic model helps to resolve potential conflicts between statutes enacted by the same or different legislatures.

B. Statutory Interpretation as Judicial Cost Minimization

The assumption that the judiciary aims to minimize the deviations of its decisions from those that would be made by a costless legislature is a form of (restricted) cost minimization.¹⁰ Because the court attempts to determine

8. An analogy to the process of minimizing the deviations of the judiciary's decisions from those of the costless legislature can be found in standard econometric estimation procedures. In classical regression procedures, it is assumed that the structure of the error term in the regression is known. Given the standard assumptions concerning the error term in ordinary least squares, for example, the estimated parameters that result from the regression procedure should have the desirable properties of freedom from bias, efficiency, and so forth. Without the assumptions concerning the structure of the error term, such properties for the parameters do not follow. The present model of the judiciary's attempt to minimize deviations of its decisions from those of the costless legislature operates similarly. Information on the structure of deviations of judicial decisions from those of the costless legislature is used to determine whether the appropriate interpretive stance should be broader or narrower.

9. Landes & Posner, *The Independent Judiciary in an Interest Group Perspective*, 18 J.L. & ECON. 875, 879, 885 (1975).

10. The cost minimization is "restricted" in the sense that only one of the variables that produces the reach of the statute (the interpretive stance) is subject to direct control in the model. Statutory vagueness is assumed to be exogenous to the cost minimization problem. Thus, although the model produces the minimum cost of judicial errors by changing the interpretive stance, these costs might be even lower if the degree of statutory vagueness were reduced. On the other hand, implicit in the present formulation is that there is a reason for the degree of statutory vagueness, presumably related to the costs associated with the legislative process. A more detailed theory of the legislative-judicial process would take into account the relative costs of reducing vagueness at the statute writing stage versus the costs of judicial errors at the interpretation stage.

whether the enacting legislature would have included in the statute the particular circumstances in a given case, it is actually attempting to minimize the costs¹¹ of mistakenly “overincluding” or “underincluding” sets of circumstances within the purview of the statute. Therefore, assuming hypothetically that there exists a correct answer in any given case, judicial mistakes can fall into two categories:

- (1) Sets of circumstances that ought not to be included in the “reach” of the statute, so that they are “overincluded” if they are incorrectly judged to be covered by the statute, and
- (2) Sets of circumstances that ought to be included in the reach of the statute, so that they will be “underincluded” if they are incorrectly judged not to be covered by the statute.

Because the legislative process functions with limited time, information, foresight, and deliberate powers, statutes are necessarily vague. Words have different shades of meaning for different people, concepts are broad to some and narrow to others, and changing circumstances render the meanings of words obsolete or (apparently) inapplicable to modern cases. Thus, judicial error stems from the fact that the legislative process is *not* costless, so that judicial interpretation of statutes will not in all cases replicate what the costless legislature would have decided. The economic issue is how best to minimize the cost of those deviations. In the present model, the “tool” which the judiciary uses to minimize these costs is its interpretation of statutes.¹²

C. Vagueness, Interpretation, and Over- and Underinclusions

The model of judicial cost minimization is as follows. First, V is defined as the degree to which the statute under consideration is vague. According to the model, as the vagueness of a statute’s wording increases (for a given degree of narrowness or broadness of interpreting the statute), two consequences follow. First, there will be an increase in the set of cases and circumstances ruled to fall within the purview of the statute that, according to the intentions of a costless legislature, ought *not* to be included. That is, overinclusions rise with increased statutory vagueness. The second consequence is that there will be an increase in the set of cases or circumstances ruled to fall outside of the purview of the statute that *ought* to be included. That is, underinclusions also rise as statutory vagueness increases.

11. See Rizzo, *The Economics of Termination of Parental Rights: Santosky v. Kramer*, 2 SUP. CT. ECON. REV. 277, 281-303 (1983).

12. The assumption that courts attempt to minimize the costs of errors of interpretation is the key economic concept underlying the present model. This concept arises from the assumption that courts are an “arm of the legislature.” Therefore, it does not necessarily imply that courts attempt to minimize the *social* costs of errors because some types of legislation (especially private interest statutes) may not enhance social welfare as it is conventionally defined. Instead, courts tend to reallocate resources among competing parties in the political process, while at the same time wasting resources. Therefore, in the present model, courts are assumed to minimize the costs, as they perceive them, of deviating from the legislative intent of a statute regardless of whether the law improves economic efficiency.

By itself, however, the degree of vagueness of a statute does not determine the levels of over- and underinclusion errors. A codeterminant of these errors is the interpretive stance (I) of the judiciary in deciding cases brought under the statute. The consequences of the interpretive stance adopted by the court are as follows. For a given level of vagueness, the number of overinclusions declines, but the number of underinclusions rises, as the interpretive stance narrows. Conversely, a broader interpretive stance produces greater overinclusions and fewer underinclusions for a given degree of vagueness. Together, the vagueness of a statute and the interpretive stance of the judiciary define the "reach" of the law, in the sense that both are required to determine the classes of activities regulated by the statute. However, in the present model, the vagueness of statutes is given. Thus, the present model is one in which courts minimize costs by altering their interpretive stance given the degree of vagueness of different statutes.

The relationship between interpretive stance and different forms of error is intuitively appealing. By expanding the areas of social interaction that are judged to be within the purview of the statute, a broader interpretive stance is likely to increase the rate of overinclusion (failing to exclude when the costless legislature would have excluded), but decrease the rate of underinclusions (failing to include when the costless legislature would have included).

Two additional pieces of information are required before the model is complete. These are the costs of each over- and underinclusion error (α and β , respectively).¹³ The costs of failing to include a case when the costless legislature would have included it consist of reduced deterrence and reduced equity (because, for example, the injured party does not recover when it should). On the other hand, the costs of incorrectly including cases under the statute that the costless legislature would not have included consist of overdeterrence (because the added uncertainty concerning the division of social interactions into legal and illegal activities discourages people from undertaking welfare-enhancing actions) and, again, reduced equity (because non-wrongful conduct is proscribed).

The concepts of statutory vagueness (V), judicial interpretive stance (I), the overinclusion and uninclusion errors (O and U , respectively), and their relative costs (α and β , respectively), determine the total cost of judicial errors, C :

$$C = \alpha O(I, V_0) + \beta U(I, V_0)$$

In other words, this cost minimization problem requires that the courts select the level of interpretive stance (I) in view of a fixed degree of vagueness (V_0) in order to achieve the minimum cost of deviations from the decisions of

13. See Rizzo, *supra* note 11, at 290. In the current formulation α and β are assumed to be constant and independent of the levels of over- or underinclusion errors for simplicity only. Generally, the marginal costs of over- and underinclusions are not constant, especially across different types of activities incorrectly included or excluded from coverage under the statute. The implications of our model, however, are unaffected by this simplification.

the costless legislature. This minimum cost consists of the number of over- and underinclusions weighted by their respective marginal costs. By selecting a cost minimizing interpretive stance, the courts are determining the appropriate reach of the statute.

The total cost of judicial errors is at a minimum when the first order condition of the above objective function is set equal to zero:¹⁴

$$\alpha O_I + \beta U_I = 0$$

which implies that:

$$\alpha O_I = -\beta U_I$$

The discussion above establishes that O_I is greater than zero, that is, overinclusions increase as the interpretive stance becomes broader, and that U_I is less than zero, because underinclusions decrease as the interpretive stance broadens. The second partial derivative of the over- and underinclusion functions is assumed to be positive, so that as the interpretive stance becomes increasingly broad, the *rate* at which overinclusions rise increases and the *rate* at which underinclusions fall decreases.

In economic terms, the solution to the cost minimization problem embodied in the above equation means simply that the marginal cost of the increased overinclusion errors caused by broadening the interpretive stance should equal the marginal benefit of the reduced underinclusions caused by the same change in judicial interpretive stance. Thus, the appropriate reach of the statute results when, given a fixed degree of vagueness, the judiciary selects an interpretive stance so that the costs of marginal overinclusions balance the costs of marginal underinclusions. If this condition did not hold, then the cost of errors would not be at a minimum.

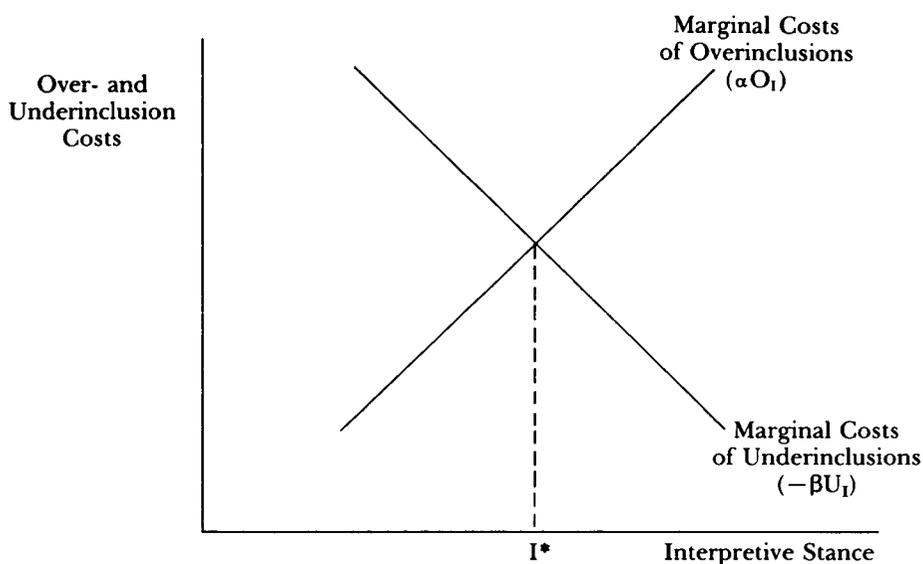
Judicial cost minimization (that is, selecting the broadness or narrowness of the interpretive stance) can be shown graphically, as in Figure 1. The figure portrays the costs of overinclusions and underinclusions for a particular statute's degree of vagueness (V_0) as functions of the narrowness or broadness of the court's interpretive stance (I). The horizontal axis measures the interpretive stance of the court, with the breadth of statutory interpretation increasing toward the right and points closer to the vertical axis representing narrower interpretive stances.

D. The Optimal Interpretive Stance

The vertical axis measures the costs of over- and underinclusion errors under the statute (given the degree of vagueness of the statute) for different interpretive stances. The cost functions drawn depend on two factors: (1) the

14. O_I and U_I , respectively denote the partial derivatives of the overinclusion and underinclusion functions. Specifically, O_I measures the degree to which a small broadening of the judicial interpretive stance increases overinclusions, and U_I measures the degree to which the same broadening of the judicial interpretive stance reduces underinclusions.

FIGURE 1
THE OPTIMAL INTERPRETIVE STANCE



number of over- or underinclusions, and (2) the marginal costs of the two types of errors.¹⁵

Given the degree of statutory vagueness, the judicial interpretation that minimizes costs is I^* , shown as the intersection of the upward sloping overinclusions function and the downward sloping underinclusions function. The optimum interpretive stance occurs at the intersection of the two curves because this is the point at which the decreased costs of the reduced underinclusions just offset the marginal costs of additional overinclusions, both caused by broadening the interpretive stance. Given the “technology” of judicial error production (O_b , U_I), the degree of vagueness of the statute, and the costs of over- and underinclusions, the above-outlined model yields the optimal judicial interpretive stance.

III

COMPARATIVE STATICS

The model developed in the previous section can be used to analyze the implications of different underlying conditions for the appropriate judicial interpretive stance. The model yields implications for the appropriate interpretive stance in two situations: those involving a comparison of different areas of law, which may be characterized by different degrees of vagueness or different costs of overinclusion and underinclusion errors, and

15. The cost functions in this and other diagrams in this paper are drawn linearly for convenience only. As the algebraic formulation indicates, they need not be straight lines.

those in which changes over time have caused corresponding changes in the underlying conditions that determine the appropriate judicial interpretive stance. This section presents several examples of applications of the model to both situations.

A. Statutes with Unequal Degrees of Vagueness

One statute may be written quite vaguely and another quite specifically. The present model can be used to determine whether the more vague statute should be interpreted more or less narrowly than the more specific statute. Compare, for example, a statute prohibiting “immodest” bathing attire with a statute prohibiting nude sunbathing and swimming. This comparison can be modeled in the framework as an upward shift of both the over- and underinclusion functions for the second statute relative to the first, as shown in Figure 2. The reason for these upward shifts is obvious. The more vague the statute (for a given interpretive stance), the greater the likelihood that both behavior that ought not to be included will be, and behavior that ought to be included will not be. That is, the more vague the statute, the greater the levels of both types of errors.

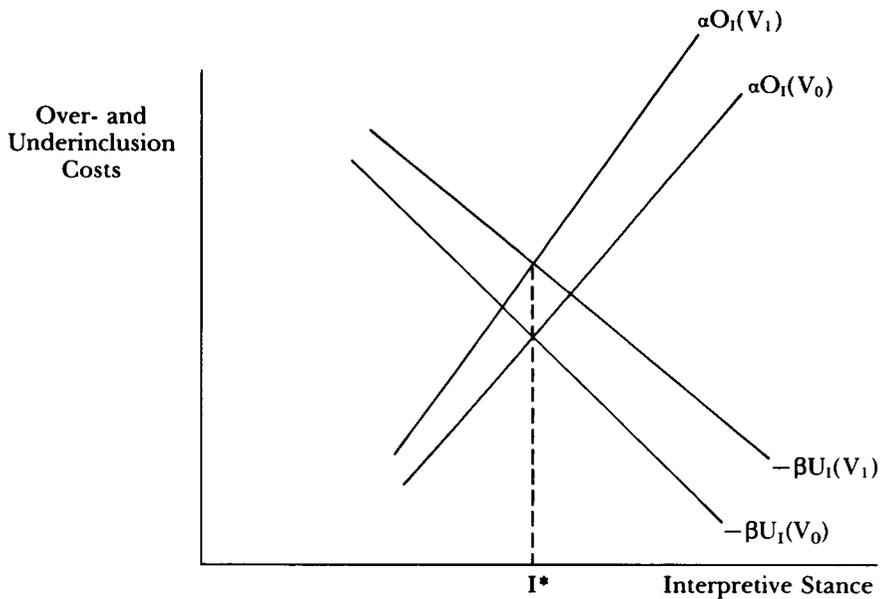
The shifts of the over- and underinclusion cost functions shown in Figure 2 are drawn under the assumption that the increases in over- and underinclusion errors are equiproportional. In other words, the numbers of over- and underinclusion errors at the new higher degree of vagueness (V_1) are each greater by the same percentage.¹⁶ For this reason, the intersection of the two new over- and underinclusion cost functions occurs at the same judicial interpretive stance (I^*). This conclusion follows from the fact that the original optimum interpretive stance (I^*) was derived from the following first order condition:

$$\alpha O_i = -\beta U_i$$

Increasing O_i and U_i by the same percentage leaves this equality unaffected. Hence, according to this assumption, the optimal interpretive

16. It seems reasonable a priori to suppose that, *ceteris paribus*, increases in vagueness will affect both overinclusions and underinclusions symmetrically. Thus, for example, if at one level of vagueness the amounts of over- and underinclusions are roughly equal, the increase in over- and underinclusions due to a slight increase in the level of vagueness will be about the same. On the other hand, if at one level of vagueness the number of overinclusions is far greater than the number of underinclusions, then a small increase in vagueness will increase overinclusions by more than underinclusions in an absolute sense. Thus, symmetry is assumed to mean equiproportionality. The other form of symmetry—equal absolute increases in both types of errors—leads to implausible results. Consider, for example, a very precise statute that, for whatever reason, is being narrowly interpreted. In this case, assume that there are two errors of underinclusion and one error of overinclusion in 100 applications of the statute. That is, the underinclusion rate is twice the overinclusion rate. Now imagine that the statute is rewritten, making it more vague. If increased vagueness adds, say, ten errors of each type, the ratio of underinclusion to overinclusion errors falls from 2:1 to 12:11, even though the interpretive stance has not changed. This does not seem plausible. A vague statute that is narrowly interpreted will be held inapplicable a great deal of the time. Hence, there is no reason to believe that the proportion of underinclusions will *fall significantly*. In view of this analysis, it seems better to assume the symmetrical effect of equiproportionality as in the text.

FIGURE 2
THE "IRRELEVANCE" OF VAGUENESS



stance does not change.¹⁷ The implication of the present model for the optimum judicial interpretive stance of an increase in statutory vagueness is striking: The optimum degree of broadness or flexibility in judicial interpretation remains unchanged.

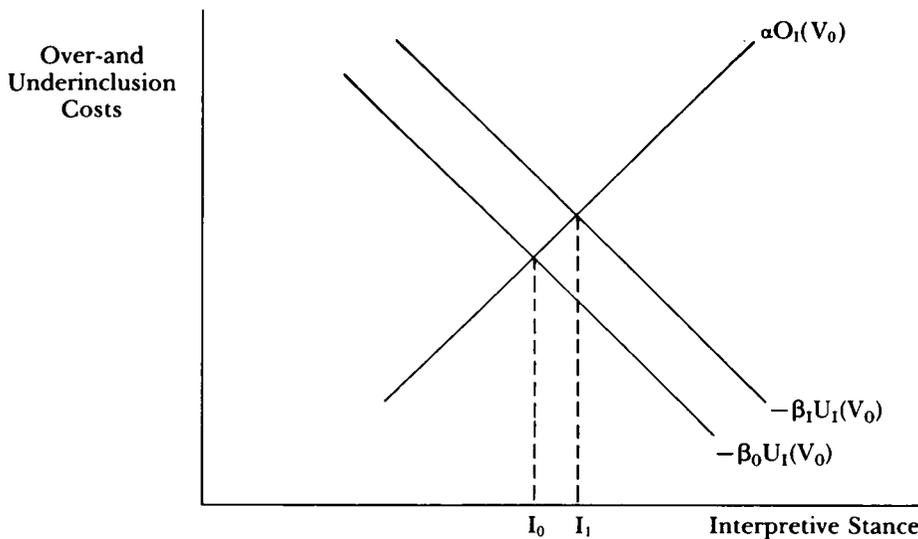
B. Different Relative Costs of Over- and Underinclusion

The implications for judicial interpretation of different costs of over- and underinclusion errors in two different areas of law may also be explored using the model. Suppose that the costs of underinclusion errors relative to overinclusion errors in one statute are higher than under another statute. Figure 3 shows the effect of a higher β , the cost of each underinclusion error, on the optimum judicial interpretive stance. Increasing β causes the underinclusions cost function to shift upward relative to the overinclusions cost function. This shift implies that the optimum judicial interpretive stance broadens (from I_0 to I_1) as the costs of underinclusions increase relative to the costs of overinclusions.

Good examples of cases in which underinclusion errors may be relatively more costly than overinclusion errors are those in which constitutional rights

17. The upward shifts of the over- and underinclusion functions need not be strictly equiproportional, although that is an attractive hypothesis. See *supra* note 16. If the shifts are not equiproportional, it might be reasonable to suppose that the overinclusions function shifts upward by more than the underinclusions function. In this event, the optimal interpretive stance becomes more narrow. Only if underinclusions rise by relatively more than overinclusions will the result be that the judicial interpretive stance should broaden.

FIGURE 3
RIGHTS SHOULD BE MORE BROADLY INTERPRETED



are at stake.¹⁸ In such cases, underinclusions are situations in which rights are incorrectly denied (and a statute upheld), while overinclusions are those in which rights are incorrectly bestowed (by striking down the statute). One reason for the existence of constitutional rights is that they embody rules that are viewed as more important than standard legislative pronouncements. Therefore, constitutional rights are “trumps” that overrule statutes when the two conflict. It is plausible that the incorrect denial of a constitutional right and the upholding of a statute (an underinclusion in our model) imposes a higher cost than the incorrect bestowal of the right and the nullification of a statute (an overinclusion in our model).¹⁹

The benefit of incorrectly upholding a statute and thereby denying a right exists in the value of upholding the statute in the specific circumstances. However, the cost consists of the loss of the valuable right. Thus, the *net* cost of underincluding a case in which a right is at issue equals the difference

18. Constitutional rights refers in this context to the right to be free of state interference in its various forms rather than claims on the state for positive benefits.

19. The present analysis appears to conflict with Posner’s point of view. Posner argues that the erroneous invalidation of a statute is generally more costly than the erroneous denial of a constitutional right. He reasons that, “it must generally be better to thwart the desires of a small group seeking to get from the courts what, by definition, it was unable to get from the political branches than to thwart the will of the majority, even if not every statute embodies the will of the majority.” Posner, *Economics, Politics, and the Reading of Statutes and the Constitution*, *supra* note 4, at 284. Posner’s rationale seems confusing because one reason for the existence of constitutional rights is precisely that they serve to protect the minority from the will of the majority in certain important circumstances. Moreover, it is unclear how the “minority” in the case could have gotten what it wanted from the Constitutional Convention given that the current minority did not attend the Convention.

between the value of (correctly) upholding the right less the value of upholding the statute. The net cost of overincluding, on the other hand, consists of the difference between the value of (incorrectly) bestowing the right and the value of upholding the statute. Hence, if the net cost of denying the right when it should be upheld exceeds the net cost of striking down the statute (and therefore incorrectly bestowing a right), then the cost of underinclusions exceeds the cost of overinclusions. This result seems likely given that (1) the rights at stake are important enough to have been codified in the Constitution, so that the value of correctly upholding such a right probably greatly exceeds the value of upholding any particular statute, and (2) the value of incorrectly bestowing a right is not likely to be much lower than the value of upholding any particular statute.²⁰ In this situation, the present model predicts that, relative to other areas of law (in which the relative costs of over- and underinclusions are likely to be more nearly equal), constitutional rights should be more broadly interpreted.²¹

This discussion should also make clear that the conventional wisdom that a narrow construction of statutes is less intrusive in private affairs holds only when the "intrusive" parts of statutes are considered. Many statutes and the Constitution tend to have *both* intrusive clauses and clauses that allow for exemptions, excuses, justifications, and defenses. *Narrow* construction of the former yields a narrow reach for the statute, but a *broader* interpretation of the second type of clause produces a narrower reach, in the sense that fewer private activities fall within the domain of the statute. Thus, broad construction of statutes does not necessarily imply a wider reach, and narrower construction does not always imply a smaller reach.

C. Changes in the Underlying Production Technology of Errors

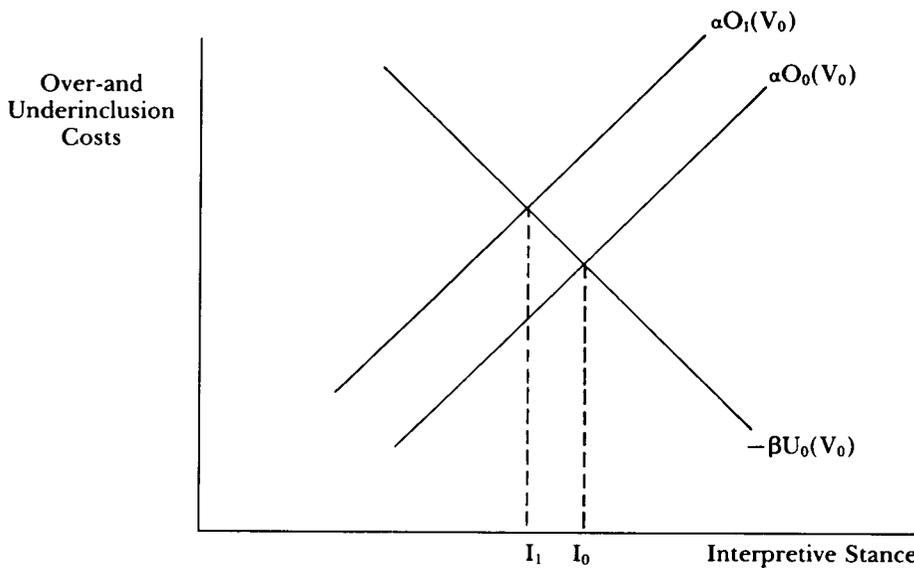
The present model also generates predictions about how the optimum judicial interpretive stance changes as the error generating structure of the world changes. Figure 4 illustrates the impact of a perceived increase in the

20. The relative values of correctly upholding a right, or upholding a statute, and of incorrectly bestowing a right asserted here can be understood in the context of the conventional distinction between general and specific interest legislation. Constitutional rights are clearly general interest legislation (codified by the Constitutional Convention) and have a high value to society. Most statutes, however, are special interest legislation which presumably has low social value. Incorrectly bestowing a right also appears to have the same general character as special interest legislation since some parties are presumably benefited by the incorrectly bestowed right. Hence, the social value of statutes and incorrectly bestowed rights is likely to be similar in magnitude, while the social value of correctly upholding a right is much higher.

21. To clarify this argument, suppose that the value of upholding the statute is s , the value of correctly upholding the right is γ , and the value of incorrectly upholding the right when it should not be bestowed is ϵ . Assume, as argued in the text, that γ is greater than s which is itself greater than ϵ . Using this notation, the net cost of overincluding equals the value of the statute, s , minus the value of the right when it ought not to be bestowed, ϵ , or $(s-\epsilon)$. Similarly, the net cost of underincluding is the value of the right, γ , minus the value of the statute, s , or $(\gamma-s)$. For the net cost of underincluding to be greater than the net cost of overincluding, $(\gamma-s)$ must exceed $(s-\epsilon)$. If γ is much greater than s and if ϵ is not much less than s , then the cost of underinclusion error will be greater than the cost of overinclusion error. To the extent that statutes are essentially special interest legislation, these relative values seem reasonable.

tendency of existing statutory vagueness and a particular judicial interpretive stance to produce a greater number of overinclusions relative to underinclusions (that is, O_I increases relative to U_I). Just as if α had increased, the overinclusions cost function shifts upward relative to the underinclusions cost function. The implication for the optimum interpretive stance is for more narrowness in interpreting the statute (the optimum interpretive stance moves from I_0 to I_1).

FIGURE 4
EFFECT OF A PERCEIVED CHANGE IN ERROR GENERATING STRUCTURE



The antitrust area provides examples of statutes whose error-generating structure has been perceived to change over time. Recent years have seen a shift toward a smaller reach of antitrust statutes, presumably in response to increased understanding of the nature of competition and to increased recognition of the many forms of competition that have been incorrectly interpreted as anticompetitive. In other words, courts have become aware that there are a larger number of overinclusions associated with any given interpretive stance than previously thought. Over time, the judicial propensity to identify business practices that violate the antitrust laws has fallen,²² that is, the interpretive stance of the antitrust laws has become more narrow, restricting the reach of these statutes.

22. See, e.g., R. POSNER, *ANTITRUST LAW* (1976); R. POSNER & F. EASTERBROOK, *ANTITRUST: CASES, ECONOMIC NOTES, AND OTHER MATERIALS* (2d ed. 1981).

IV

THE MODEL AND SOME RECENT LITERATURE

The implications of the model both contradict and support several recent views in the legal and economic literature concerning the appropriate interpretive stance in particular circumstances and for different statutes. This section reviews some areas in which the model is inconsistent with previous analyses and other areas in which the model lends support to these analyses.

One of the most important ways in which the present model diverges from that of the recent legal literature is in its implications for the appropriate judicial interpretive stance with respect to relatively vague statutes. A fashionable legal view is that the more vague a statute, the more broadly the law ought to be interpreted. In a sense, statutory vagueness is viewed as license for expansive or broad judicial interpretations.²³

The present model, on the other hand, implies that the appropriate interpretive stance may be independent of the vagueness of the statute. Because a vague statute results in an increase in *both* overinclusion and underinclusion errors, the cost minimizing judicial interpretive stance may remain unchanged. Moreover, the analysis of the alternative legal view under the present framework unambiguously implies that if the interpretive stance broadens at the same time that the vagueness of the statute increases, two problems will arise. First, the overall level of errors will increase due to greater vagueness, so that there is a tendency for both over- and underinclusion errors to increase. Second, overinclusions will increase relative to underinclusions, because increasing broadness of interpretation yields more overinclusions, but fewer underinclusions. If the proper function of the court is to attempt to minimize the costs of deviations of both kinds, this analysis concludes that a general rule of increasing broadness of interpretation in response to greater statutory vagueness is not appropriate.

Consequently, Posner's argument that more precisely written statutes should be interpreted more narrowly is inconsistent with the present model. Posner argues correctly that both over- and underinclusions (using the terminology adopted in this article) fall as the statute is more precisely written. However, he then concludes that a more narrow interpretive stance is appropriate for less vague statutes.²⁴ According to the present analysis, however, both over- and underinclusion errors fall as the vagueness of the statute declines but the appropriate judicial stance may remain the same. As long as the marginal costs of the two types of errors do not change when a

23. Easterbrook, *Legal Interpretation and the Power of the Judiciary*, *supra* note 4, at 87, 98. Easterbrook reports this view, but dissents from it.

24. Posner, *Economics, Politics and the Reading of Statutes and the Constitution*, *supra* note 4, at 281. Posner argues that the high costs of overdeterrence in the criminal law causes legislatures to draft these statutes more carefully, tending to reduce both overinclusions and underinclusions. Thus, in Posner's formulation, the higher overinclusion costs explain the reduced vagueness of the statute. However, Posner does not appear to support his recommendation that criminal statutes be construed more narrowly by reference to the relative costs of over- and underinclusions.

statute is written more clearly (and if the error-generating process remains the same), it would be improper to narrow the interpretive stance. This change would upset the optimal balance between over- and underinclusions, tending instead to produce relatively more underinclusions and fewer overinclusions.

The present model is consistent with Posner's analysis of the "rule of lenity," under which criminal statutes have traditionally been interpreted fairly narrowly.²⁵ Posner's analysis is consistent with the generally accepted assumption that in criminal law the costs of overincluding (that is, wrongfully convicting an innocent person) substantially exceed the costs of failing to convict a guilty person. In the present model's formulation, this means that α is greater than β for criminal statutes, so that, *ceteris paribus*, the appropriate judicial interpretive stance should be narrower than in the case of most civil statutes where α is equal to β or at least not much greater than β .²⁶

Finally, the present model also agrees with Easterbrook's argument that when the legislature explicitly states that the court should create common law in a particular area covered by a statute, the appropriate judicial interpretive stance should be broad.²⁷ In the present model, a signal from the legislature to adopt a broad interpretation of a statute can be understood as follows. Ordinarily, a broader interpretive stance, *ceteris paribus*, implies that overinclusion errors will increase relative to underinclusions. Normally, it is not desirable for the court to adopt this interpretive stance because this may not minimize the costs of deviations from the decisions of the costless legislature. Minimizing the costs of these deviations may require narrower interpretive stances in some areas of the law than in others. However, when the legislature explicitly "signals" the judiciary to adopt a broader interpretive stance, the legislature implies that the costs of overinclusions relative to underinclusions are lower than in other situations.²⁸ Hence, because the legislature knows that the judiciary will indeed interpret statutes more broadly when signaled to do so, lawmakers transmit these signals when the costs of overinclusions are low relative to underinclusions.²⁹

25. *Id.* at 280.

26. It is often argued, as in Rizzo, *supra* note 11, at 303, that the costs of overinclusion equal the costs of underinclusion in a civil context.

27. Easterbrook, *Legal Interpretation and the Power of the Judiciary*, *supra* note 4, at 93.

28. For a discussion of the general notion of "signaling" outside of the legislative context, see Spence, *Job Market Signaling*, 87 Q.J. ECON. 355 (1973).

29. Implicit in the present argument is the assumption that the costs of writing statutes in less vague terms are relatively greater in these circumstances than the costs of allowing the courts to develop a body of common law to resolve ambiguities. Indeed, one unexplored set of topics suggested by the present model is the interaction between *costly* legislatures and the behavior of the courts hypothesized in this article. The nature of these interactions, and their equilibrium properties are clearly topics that warrant attention. Further, the optimal characteristics of the judiciary's selection of interpretive stances in the face of dynamic interactions with costly legislatures may be important to explore. In a more elaborate theory of the legislative-judicial process, these interactions could be studied more fully, but they are beyond the scope of the present study.

V

CONCLUSION

This article has outlined an economic model for analyzing the judicial interpretation of statutes. It focuses on the relationship between the appropriate judicial interpretive stance and the degree of vagueness of statutes. The model represents only a beginning in the sense that it does not explicitly address several other important factors which may interact with judicial interpretation, such as standards of proof and legislative vagueness. Nevertheless, the model presented here yields interesting and potentially far reaching implications for the appropriate interpretive stance in a variety of circumstances. Some implications contradict, while others support, previous analyses of statutory interpretation. Regardless of its compatibility with recent literature or the correctness of the model's substantive conclusions, it offers, at a minimum, a consistent framework for analyzing a variety of questions that have as yet been treated in only an ad hoc fashion.