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CONTINUANCES AND UNCERTAINTY IN THE COURSE OF ADJUDICATION

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Continuances and Uncertainty in the Course of Adjudication

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Abstract. The myriad uncertainties common to the process of adjudication—concerning evidence that opposing parties will present, legal issues that will become relevant, illness of witnesses, and the like—lead to two social problems. First, when unanticipated events occur, the information that parties will be able to provide courts may be inadequate. And second, preparation effort invested by parties may be wasted: whereas parties will tend to prepare for numerous possible events in adjudication, many will not come to pass and thus much effort will be for nought. Both of these problems are addressed by the granting of continuances. Inability to present evidence for want of time will be directly remedied by the giving of continuances; and wasted preparation effort will be reduced because the ability to obtain continuances when uncertain events occur will lessen the need to prepare for them. But the use of continuances involves various costs of delay, meaning that the decision to grant continuances should be guided by an economic calculus. That calculus is developed in the theory presented in this article and the actual use of continuances is discussed.

1. Introduction

Uncertainty is a familiar aspect of adjudication as it unfolds. Litigants might learn that unsuspected claims have been introduced in amended pleadings, they might not have had reasonable opportunity to pursue a surprising result of discovery, they might be told with little notice that a witness will be unable to appear at trial, they might hear testimony about which they had no forewarning, they might experience difficulties in providing documents in a timely way, they might find that an opposing party or that the court has advanced an unforeseen legal position; examples of unexpected events that arise along the path of adjudication abound.[1]

Such uncertainty in the course of adjudication leads to two potential social problems. The first is that when unanticipated events occur, the information that parties are able to provide to a court might be inadequate for its purposes. Suppose that a party initially believes that the issue of causation of harm is not likely to be relevant to his case and thus prepares only modestly for it. But at trial a witness states that causation is in fact a significant issue. Then a judicial decision relying on the party's limited consideration of causation might not be properly informed. Or

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[1] See Section 4A.1 for further illustration and discussion.

suppose that a party plans for an expert to provide crucial testimony on damages, yet shortly before trial the expert becomes ill and cannot appear. Then a judicial decision would not reflect important information about the magnitude of losses.

The other social problem concerns wasted adjudication effort. Namely, whereas parties will tend to invest effort before trial to address the possibility of a wide range of unexpected events, that effort will often prove to be unproductive—because unexpected events are by definition events that do not usually occur. Consider the party who believes causation of harm is unlikely to be relevant to his case but still prepares for it to a degree because of its potential importance. His effort will have been squandered if, as would be predicted, causation does not turn out to bear on his case. Or suppose that the party who has hired an expert to give vital testimony on damages engages another damages expert to ready himself to serve as a possible standby for the first. Then the expenses of the second expert will have been fruitlessly borne if, as would be foreseen, the planned expert is able to appear at trial.

Although these two social problems might be viewed as inevitable byproducts of the uncertainties that characterize adjudication, both can be ameliorated through the use of a familiar feature of our legal system—the continuance. Under a continuance, a trial or other scheduled proceeding will be postponed or suspended to permit a party to remedy a problem of insufficient provision of information to the court, after which the planned proceeding will occur or the interrupted proceeding completed.[2]

By definition, then, the granting of a continuance can address the problem of subpar provision of information to courts. Why, however, would the use of continuances moderate the second problem of wasted preparation effort? In essence, the explanation is that a judicial practice of allowing continuances when unexpected events occur will curb the motive of parties to invest effort prior to the manifestation of these events—for a continuance would furnish a form of insurance against lack of preparedness. This point is easily seen in the situation of the litigant who would hire a standby expert as protection against the possibility that his intended expert would not be able to appear at trial. If the policy of the court were definitely to permit a continuance when an intended expert is temporarily unable to testify, the litigant would have no need to hire the standby expert. Likewise, the party who would prepare to a positive extent for the possibility that the issue of causation would be of relevance to his case would have less reason to make this investment of effort if the court would usually grant a continuance if the issue of causation of harm were unexpectedly revealed to be important.

The foregoing social benefits of continuances are, of course, accompanied by various social costs of accommodating them. These costs include the burden of reconvening participants in the proceedings that follow continuances, efforts that participants might then need to make to refresh their understanding of their cases, and difficulties that participants might suffer in planning their affairs while awaiting judicial decisions.[3] The conditions under which

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[2] See, for example, Charles Alan Wright et al., 9 Fed. Prac. & Proc. Civ. §2352 and Section 4A.1 below.

[3] Note that it is only when a continuance results in the interruption of a proceeding that the costs of reconvening participants would be borne. If a continuance results only in the postponement of a proceeding, there would be no costs of reconvening participants; but the costs to participants of refreshing their understandings of their matter could well be positive, especially if the postponement was lengthy. The difficulties participants would face in

continuances will be desirable to permit should naturally reflect a balancing of the various costs of delay against the benefits of continuances.

The primary objective of this article is to clarify the ideas just outlined using the methods of economics. To this end, I analyze two stylized models of uncertainty in adjudication, each of which serves as an archetype for contexts in which a court may find that it has a sharp reason to grant a continuance.[4] The models are presented informally, employing numerical examples, and then formally. My focus will be on determination of the social-welfare maximizing solutions of the models.

In Section 2, I study the first model, involving a single issue (for example, causation of harm) of uncertain relevance prior to trial. Pretrial preparation effort devoted to the issue is assumed to have value to the court if and only if the court finds the issue relevant at trial. When a party chooses a level of pretrial preparation effort, the party is taken to know the probability that the court would consider the issue relevant and also the condition under which the court would grant a continuance. The main result demonstrated is that a court should grant a continuance only when the probability of relevance of the uncertain issue was below a critical threshold, but provided also that the cost of a continuance would not be excessive in a specified sense.[5]

In Section 3, I consider the other model, concerning situations in which parties exert diligence effort to lower the probability that they will be prevented from presenting socially valuable information at trial by a problematic event (like the illness of an expert).[6] Here when parties choose their level of pretrial diligence effort, they are assumed to know whether a continuance would be granted if the problematic event were to occur. The conclusions reached are different in their specifics but qualitatively similar to those drawn in Section 2.

In Section 4, I turn to a description and discussion of continuances in our legal system and of related procedural practices in civil law countries. As I explain, the criteria employed in the granting of continuances in the United States seem sensible in many respects in view of the economic theory of Sections 2 and 3. Nonetheless, in assessing the general value of continuances, courts and commentators largely restrict their attention to the obvious benefit of improving judicial decisions when litigant preparation efforts were inadequate. In other words, courts and commentators generally overlook the second of the two social benefits of continuances analyzed in this article—that the practice of granting continuances palliates the problem of wasted legal effort on uncertain issues and the exercise of unnecessary precautions to assure the provision of information that might be needed at trial. This observation suggests that

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planning their affairs would depend on the length of the continuance, not on whether it was an interruption or a postponement of a proceeding.

[4] I contemplated a model combining the features of the two separate ones but concluded that that would not be illuminating.

[5] See Section 2A.3 and Proposition 2 in Section 2B.3.

[6] In the first model, by contrast, parties were not able to affect the probability of the uncertain event (which was that the court would find the issue relevant).

in an overall sense, continuances may not be granted in sufficiently broad circumstances by our judicial system.

In considering the civil law world, I concentrate on Germany for purposes of illustration.[7] There the judicial consideration of a case transpires to an important degree in a series of discontinuously held hearings rather than significantly during what we call a "trial," our concentrated continuous final proceeding and the highlight of our system of adjudication. The periods separating hearings in Germany are continuances; they provide the parties and courts opportunities to prepare for subsequent hearings. Hence, the regime of discontinuous hearings in Germany may be viewed as a succession of adjudicatory events in which the two benefits of continuances that are studied in the theory of Sections 2 and 3 are engendered in an almost automatic fashion.

Before proceeding, let me comment on the present article and prior writing on adjudication. This article reflects the general orientation of a now expansive literature in the economics of litigation.[8] In that literature, the emphasis is on the incentive to sue and to settle in light of uncertainty about the final outcome of litigation. Here in contrast the concern is with uncertainty about events occurring over the course of adjudication and with its desirable design.[9]

In legal literature on adjudication, I find almost no writing devoted to continuances.[10] That is probably because continuances are considered straightforward and thus uninteresting—a continuance will be desirable to grant mainly when its value would exceed the inconveniences of the associated delay. However, several articles on German civil procedure have a bearing on continuances as analyzed here, for reasons that I mentioned two paragraphs above. In this regard, it will be seen that a notable two-part article by Benjamin Kaplan, Arthur T. von Mehren, and Rudolf Schaefer in the *Harvard Law Review* first recognizes that continuances have social value in lowering the need for litigant preparation effort.[11] This and related points are developed by von Mehren elsewhere and by John Langbein in a provocative article on the German advantage in civil procedure.[12]

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[7] As I mention in Section 4B, civil procedure in other civil law countries is similar to that in Germany in certain basic respects important to my conclusions.

[8] See the authoritative survey of economic writing on litigation in Spier (2007).

[9] A number of other articles also consider uncertainty during adjudication and its useful design. Examples include Landes (1993), which investigates a model of sequential adjudication and focuses on opportunities of parties to settle during its stages as information is revealed to them; Kaplow (2017), which also examines a model of multistage adjudication, where the information that the court and the parties will observe at each stage is uncertain; Shavell (2018), which considers a model of the use of motions, where the uncertainty is over the private information that litigants possess and that may bear on the need for a change in adjudication; and Avraham and Hubbard (2022), a general study of externality issues embedded in civil litigation as it proceeds.

[10] For example, hornbooks on civil procedure that I have examined do not have sections devoted to continuances nor do they list continuances in their indexes.

[11] Kaplan, von Mehren, and Schaefer (1958) (hereafter Kaplan and von Mehren).

[12] Von Mehren and Gordley (1977), von Mehren (1982, 1988), and Langbein (1985).

2. A Model of Uncertainty about the Relevance of an Issue and the Possible Utility of Continuances

2A. Informal analysis of the model

2A.1 *Assumptions and framework of analysis*. I consider here a simple model of adjudication involving a single party[13] and a single issue. The issue is uncertain in that prior to trial, the party does not know whether the issue will turn out to be relevant to his case—he will learn whether that is so only at trial. The party chooses a level of preparation effort bearing on the uncertain issue before trial.

Two regimes of adjudication will be analyzed. The first is trial alone, as shown in the upper part of Figure 1. Here, if the issue is determined to be relevant at trial, the party's pretrial preparation effort will contribute to the social value of the court's decision.[14] But if the issue is not found to be relevant, the pretrial preparation effort will have no social value—the effort will constitute a social waste.

The second regime is trial with possible continuances. As illustrated in the lower part of Figure 1, in this regime, if the issue is found relevant at trial, the court might grant a continuance. If it does so, the party would be allowed time to expend more effort on the case, after which the court would hold a second proceeding and render a decision. The social value of the decision that would be made following a continuance would be based on the sum of the preparation effort made initially and the effort undertaken during the continuance. A continuance would also engender certain social costs: as mentioned earlier, these include the expenses of reconvening participants for the second proceeding, the need then of participants to review the record of the case, and problems for participants caused by their having to wait longer for a judicial decision.[15] If the court does not grant a continuance, the situation will be assumed to be equivalent to that under trial alone.

The objective of the analysis is to determine socially optimal behavior and outcomes under each of the regimes. The definition of social welfare is the expected social value of judicial decisions minus the expected costs of preparation effort (made pretrial and/or during a continuance) and the expected social cost of granted continuances.[16]

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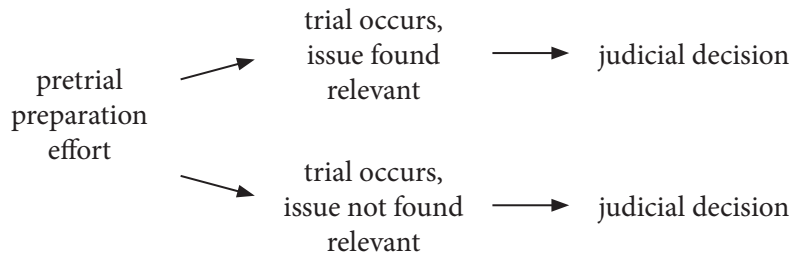
[13] The assumption that there is a single party is made in order to isolate the effect of uncertainty about the relevance of an issue on socially desirable preparation effort. For this purpose, consideration of the question whether the source of uncertainty is an opposing party, the court, or some other factor would be a complicating distraction.

[14] The social value of a judicial decision may be interpreted as reflecting its consequences for the parties in their particular dispute and also the message the decision sends to parties who might be involved in similar disputes in the future. The specific nature of the social value of a judicial decision is not of importance to the analysis.

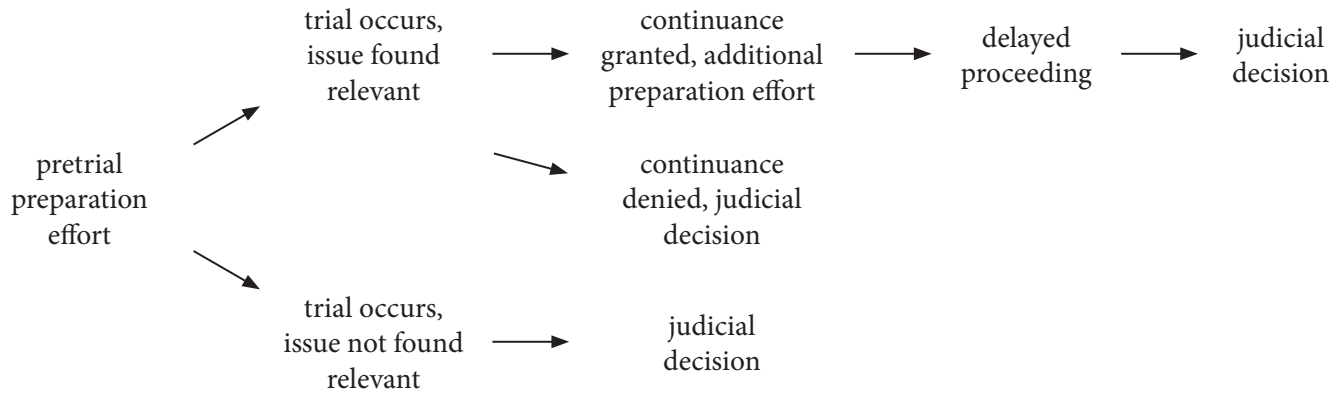
[15] It should be noted, though, that these social costs do not include preparation effort made during the continuance, for that effort is taken into direct account because it is added to pretrial preparation effort.

[16] The word expected is a term of art, meaning probability–discounted. Thus, if the probability of a continuance is 25% and the social cost of a continuance would be 400, the expected social cost of a continuance would be 25%×400 = 100. The amount 100 can be interpreted as the average of the amounts that would be observed were there repetitions of situations in which 25% is the probability of incurring a cost of 400.

Trial Alone



Trial with Possible Continuances



Two Regimes of Adjudication Involving
Uncertainty about the Relevance of Information
Figure 1

I will generally ascertain the optimal value of social welfare assuming that the state can control the party's behavior. Thus, under the trial alone regime, the presumption will be that the state can effectively choose preparation effort before trial so as to maximize social welfare.[17] And under the regime with possible continuances, the assumption will be that the state can choose the initial level of preparation effort, whether a continuance would be given if the uncertain issue were found relevant, and if so, the level of preparation effort during that period—all in order to best promote social welfare.

In fact, litigants will of course choose preparation effort themselves, to foster their own objectives. Yet it is necessary to undertake the analysis here of what behavior would be best if the state had complete control over preparation effort and the granting of continuances to understand how the state should regulate the behavior of parties in litigation and decide whether to allow or deny continuances.[18]

2A.2 *Trial alone.* In the regime of trial alone, social welfare is governed by the level of preparation effort made by the party before trial. In particular, our assumption will be that the greater the level of preparation effort, the greater will be the social value of the court's decision provided that the issue turns out to be relevant. Therefore, investment in preparation effort is an investment with an uncertain return.

To illustrate the contribution of preparation effort to social welfare, consider first Table 1, applying when the issue is initially *certain* to be relevant.[19]

Table 1
Preparation Effort, Value of Decisions, and Social Welfare
When the Issue Is Known To Be Relevant

Preparation effort	Value of judicial decision given relevance of the issue	Welfare when the issue is known to be relevant
0	0	0
100	500	500 – 100 = 400
200	800	800 – 200 = 600
300	**950**	950 – 300 = **650**
400	1000	1000 – 400 = 600

Because Table 1 applies when the issue is understood definitely to be relevant, social welfare equals the full value of the court's decision when the issue is relevant—there is no discounting for the possibility that the issue might not be relevant. Hence, if preparation effort is 100, the

[17] Although the state is assumed to be able to control preparation effort, the state will not know before trial whether the court would find the uncertain issue relevant. Thus, the state is presumed to act under the same degree of uncertainty about the social benefit from preparation effort as the party would.

[18] Moreover, it will be seen in Sections 4A.2 and 4A.3 that courts do control the behavior of parties both implicitly and explicitly through their criteria for granting continuances and their due diligence requirements.

[19] In this and other tables and in the text, the level of preparation effort will be assumed to equal its social cost and the value of the court's decision will refer to its social value.

value of the decision is sure to be 500, so that social welfare will be 400. It is apparent from the table that the social welfare–maximizing level of preparation effort, which I will refer to as optimal preparation effort, will be 300. Spending less than this amount, such as 200, could be improved upon because doing so would yield a greater increase in the value of the court's decision than it would raise effort expense, whereas spending more than 300 would raise value by less than the increase in expense.

In the next table, we assume that the probability that the issue is relevant is only 50%.

Table 2
Preparation Effort, Value of Decisions, and Social Welfare
When the Probability of Relevance of the Issue Is 50%

Preparation effort	Expected value of judicial decision given 50% probability of relevance	Welfare when the probability of relevance is 50%
0	50%×0 = 0	0
100	50%×500 = 250	250 – 100 = 150
200	50%×800 = **400**	400 – 200 = **200**
300	50%×950 = 475	475 – 300 = 175
400	50%×1000 = 500	500 – 400 = 100

Here the expected value of the court's decision for any level of effort is half of the value when its relevance is certain. As a result of the lower expected value of preparation effort due to uncertainty, the socially optimal level of effort is 200 rather than the higher level of 300 when the issue was definitely relevant.

The next table uses calculations like those in Table 2 and shows optimal preparation effort, the expected value of the court's decision, and social welfare for five different probabilities of relevance of the uncertain issue.

Table 3
Probability of Relevance, Optimal Effort, Value of Decisions, and Social Welfare

Probability	Optimal preparation effort	Expected value of judicial decision	Welfare
10%	0	0	0
25%	100	25%×500 = 125	25
50%	200	50%×800 = 400	200
75%	300	75%×950 = 712.5	412.5
100%	300	100%×950 = 950	650

As this table makes clear, the optimal level of preparation effort tends to rise with the probability of relevance of the issue as does the expected value of the court's decision and social welfare. Social welfare rises for two reasons: one is simply that, for any level of preparation effort, the

probability that it will result in an increase in the value of the court's decision will be higher; and the other is that the desirable level of preparation effort itself generally increases,[20] implicitly taking advantage of the higher likelihood that preparation effort will pay off.

Before continuing, let us calculate from the previous table the expected waste in preparation effort—effort that is devoted to the uncertain issue that will turn out not to improve the judicial decision when the issue is found not to be relevant. The expected amount of such sterile effort is as follows.

Table 4
Probability of Relevance, Optimal Effort, and Wasted Effort

Probability	Optimal preparation effort	Expected wasted preparation effort
10%	0	90%×0 = 0
25%	100	75%×100 = 75
50%	200	50%×200 = 100
75%	300	25%×300 = 75
100%	300	0%×300 = 0

Here, in each row, we multiply the optimal level of effort by the probability that the issue does not emerge as relevant.[21]

2A.3 *Trial with possible continuances*. We now consider the regime shown in the lower part of Figure 1—under which the court may or may not grant a continuance if the issue is found relevant. If the court does grant a continuance, the party will have additional time to invest in preparation effort before a second proceeding occurs and a judicial decision is made.

Under this regime, let me discuss what optimal preparation effort must be when we provisionally *assume that a continuance would be granted if the issue is found relevant* (I will of course consider below whether a continuance *should be granted* in this circumstance). The first point to explain is that the socially best level of *pretrial* preparation effort must be *zero*.[22] The logic underlying this conclusion is as follows. We know that if positive preparation effort is made initially, that effort will turn out to have been squandered whenever the uncertain issue is

[20] In the numerical example under consideration, the optimal level of preparation effort does not increase when the probability of relevance changes from 75% to 100%. But that the optimal level of preparation does not increase for this change is due to the simplifying assumption that preparation effort is in discrete amounts. In the formal version of the model in Section 2B, the level of preparation effort is continuously variable and the optimal level of preparation effort always rises to some degree with the probability of relevance.

[21] Note that wasted effort is zero when the probability of relevance is zero, for then no effort is made, so it cannot be wasted; and wasted effort is also zero when relevance is certain, for then although effort is highest, there is no chance that it will be wasted.

[22] This extreme conclusion will not hold under various changes in our assumptions, but its significance will remain; see Section 2A.4(d) below.

found to be irrelevant at trial.[23] However, this possibility of pretrial wasted effort can be avoided because a party can invest a contemplated amount of pretrial effort when and only when he *knows* that the issue is relevant—which is to say, when and only when the court ascertains that the issue is relevant at trial and thus, under our present assumption, when the court will grant a continuance. Suppose, for instance, that the probability of relevance of the issue is 75% and that a party contemplates spending an amount, say 100, on preparation before trial. Then there would be a 25% chance that this pretrial investment of 100 would be wasted. If, however, the party makes no pretrial investment of effort and instead earmarks the investment of 100 for use during a continuance, the investment of 100 would never be wasted (yet would always be made when the issue is found relevant and thus would raise the value of the judicial decision). For this reason, it can be verified that social welfare will be enhanced if preparation effort at any positive level that might be made before trial is instead planned to be made during a continuance.

It follows from the point that optimal initial preparation effort must be zero—under the assumption that the court will grant a continuance—that optimal preparation effort *during* a continuance will equal optimal preparation effort when the issue is known to be relevant. Specifically, because optimal pretrial preparation effort before trial is zero, then if the issue is found relevant at trial and a continuance is given, the best amount to invest in preparation effort at that juncture will be the entirety of the optimal amount when the relevance of the issue is certain. In our example, that amount is 300; see Table 1.

To illustrate, given our assumption that a continuance will be granted when the issue is relevant, if the probability of relevance of the issue in our example is 25%, then social welfare will be 25%×(950 – 300 – cost of a continuance). Note here that 950 will be the value of the judicial decision because 300 will be the preparation effort during the continuance, and this amount as well as the social cost of a continuance must also be subtracted from 950 to obtain the net level of welfare. Let me assume here that the cost of a continuance is 150. Thus, when a continuance is granted, the net level of social welfare will be 950 – 300 – 150 = 500; accordingly, 25%×500 = 125 will be expected social welfare. Carrying out this kind of calculation for different probabilities of relevance, we obtain the next table.

Table 5
Probability of Relevance of the Issue and Social Welfare Under Continuances
Assuming that They Will Be Granted

Probability	Welfare under trial with a continuance
10%	10%×500 = 50
25%	25%×500 = 125
50%	50%×500 = 250
75%	75%×500 = 375
100%	100%×500 = 500

[23] This point was illustrated in Table 4.

We can now answer the question whether or not it is socially desirable for a continuance to be granted in our example. We can do this by combining Tables 3 and 5 to obtain the following.

Table 6
Probability of Relevance and Welfare under Trial Alone versus Trial with a Continuance

Probability	Welfare under trial alone	Welfare under trial with a continuance
10%	0	**50**
25%	25	**125**
50%	200	**250**
75%	**412.5**	375
100%	**650**	500

The bolded levels of social welfare tell us which regime is better and suggest that for probabilities of relevance up to some critical level, the regime with continuances is superior and above that level, the regime of trial alone is superior. In fact, the critical probability in our example can be shown to be 2/3; this is why the granting of continuances is superior when the probabilities are 10%, 25%, and 50% but not when the probabilities are 75% and 100%.[24]

The basic result illustrated in this example is demonstrated generally to be true in the formal analysis. Namely, when the probability of relevance of the uncertain issue lies below a critical *threshold probability*, the granting of continuances is superior to the regime of trial alone; and when the probability is above this threshold, the regime of trial alone is better.[25] This fundamental result holds *provided* that the cost of a continuance is not unduly large, which in our

[24] A sketch of the calculation demonstrating that 2/3 is the critical probability is as follows. Let us focus on the region of probabilities between 50% and 75% because the critical probability (assuming that it exists) must be above 50% and below 75%. Now in the region between 50% and 2/3, it can be verified that the best level of pretrial preparation effort under trial alone will be 200, and in the region between 2/3 and 75%, the best such preparation effort under trial alone can be verified to be 300 (at the probability 2/3, effort levels of 200 and of 300 are tied). Hence, the formula as a function of the probability p for social welfare under trial alone is $800p - 200$ between 50% and 2/3, and the formula is $950p - 300$ in the region between 2/3 and 75%.

In the entire region between 50% and 75%, we know that under the regime with continuances pretrial effort will be zero and 300 during continuances, so that the formula for social welfare will be $500p$ (as was explained in the paragraph preceding Table 5).

From the foregoing formulas, it can be seen that social welfare under the continuance regime is higher than under trial alone for probabilities in the interval [50%, 2/3) and that social welfare will be higher under trial alone for probabilities in the interval (2/3, 75%].

[25] See Proposition 2(d) in Section 2B. As stated there, the probability threshold, p_C, is positive—meaning that there exists a low region of p in which a continuance is better than trial alone.

example means that the cost is not above 650; if the cost exceeds this amount, a continuance should never be granted.[26]

Before further discussing the foregoing probability threshold result, let me mention that when the probability exceeds the threshold and *a continuance is therefore not optimal to grant*, it is still true that *a continuance could appear to be optimal to grant.* In Table 6, we can see that when the probability of the issue is 75%, a continuance is undesirable to grant. Yet if the party had invested no pretrial effort, it would *seem* desirable to grant the party a continuance: doing so would generate a net social gain in the judicial decision of 950 – 300 = 650, whereas the cost of a continuance is only 150, creating an ex post gain in social welfare of 500. But Table 6 shows that expected social welfare would be higher under trial alone. This observation illustrates why one can be led astray by adopting an ex post perspective in considering the virtue of a continuance rather than attending to the ex ante view, which forces one to take into account *expected values*—and in the present instance, the expected savings in the cost of a continuance if continuances are denied and positive effort is made pretrial.

Now let me attempt to explain what underlies the basic result about the probability threshold. In this regard, it will help to say why a continuance will be worthwhile to grant for sufficiently low probabilities of relevance of the uncertain issue. In our example, when the probability of relevance is only 10%, it is not worth spending *anything* on preparation in the regime of trial alone—see Table 3—because the expected value of effort will be worth less than its cost. That makes social welfare under trial alone zero. However, social welfare under the regime with continuances will be *positive* when the probability is very low. The reason is that, as was demonstrated in this section, although it will not be desirable for a party to invest in preparation before trial, it will always be possible to secure a positive social welfare benefit of 950 – 300 – 150 = 500 *when* the issue is found relevant—see Table 5. Hence even if the probability of relevance is only 10%, a party will obtain an expected welfare benefit of 10%×500 = 50 under the regime with continuances. It also follows from considerations of continuity that for probabilities of relevance higher than 10%, such as 25%, such that some positive but still low preparation effort would be undertaken in the trial only regime, the regime with continuances will remain superior to trial alone.

A different argument answers the question why a continuance will not be desirable to grant if the probability of relevance of the uncertain issue is sufficiently high. Consider the case in which the probability of relevance is close to 100%, say 99.9%. Then under the regime of trial alone, optimal pretrial effort would be 300 in our example—see again Table 3—and social welfare would be 99.9%×950 – 300 = 649. In that situation, it would clearly be worse to grant a continuance. For then it would not be desirable for the party to prepare at all before trial (in order to avoid a small probability of wasted effort) and the court would find the issue relevant and bear the social cost of a continuance of 150 with 99.9% probability. Hence, the expected cost of the continuance would be 149.85. During the continuance, the same amount of preparation effort, 300, would be chosen as under the trial alone regime. Thus, the regime of continuances would

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[26] See Proposition 2(b) and 2(c) in Section 2B. As stated there, the specific high cost of a continuance above which it would never be optimal to grant a continuance is the net value of optimal preparation effort when the relevance of an issue is certain, namely, $v(x^*) - x^*$. In our example, this unduly high cost, the net value of optimal preparation effort when the relevance of the issue is certain is 950 – 300 = 650 (which exceeds the assumed cost of the continuance in our example of 150).

engender a needless expected social cost of essentially 149.85. If the probability of relevance is distinctly less than 100% but is still high, such that optimal pretrial effort would be close to 300, the regime of continuances would remain inferior to that of trial; for the expected cost of continuances would be significant—continuances would be very likely to be granted since the probability of relevance of the issue would be high by hypothesis—yet the gain from continuances would be slight, for preparation effort would be near 300 under trial, and the waste of initial preparation effort would be relatively unlikely.

The preceding explanations tell us why, at very low levels of the probability of relevance of the uncertain issue, the granting of continuances is desirable and why, at very high levels of the probability, the regime of trial alone is desirable. The explanations are therefore consistent with the claim that there exists a critical threshold probability below which the continuance regime is best and above which trial alone is best; but this claim is still not self-evidently true and requires proof.[27]

To gain further insight into the comparison of the regime of trial alone with the regime with the possibility of continuances, let us view the contest between them as depending on whether the expected social benefits of the granting of a continuance over trial alone exceed its expected social cost.[28] The regime under which a continuance would be granted generates two expected benefits relative to the regime of trial alone. As has been observed, one social benefit is the *expected gain from increasing preparation effort to the ideal level of 300 when the uncertain issue is known to be relevant*; under the regime of trial alone, preparation effort will generally be less than the ideal due to uncertainty about the relevance of the issue. The other social benefit is, as has also been made clear, *avoidance of wasted preparation effort when the uncertain issue turns out to be irrelevant*; under trial alone, preparation effort will often be positive because of the possibility that the issue will be relevant, and thus can turn out to be wasted. *The expected social cost of the continuance regime is the probability that the issue is relevant multiplied by the adjudication cost due to the continuance*; under trial alone, this cost is avoided. These expected benefits and the expected cost are listed for the various probabilities of relevance in the next table.

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[27] The explanations only suggest the existence of a threshold because the claims that at very low probabilities a continuance is best and at very high probabilities trial is superior do not rule out the possibility that the better regime alternates between trial alone and continuances at intermediate probabilities. The proof of Proposition 2(d) in Section 2B shows that that cannot happen. The reason concerns the concavity of the graph of $Z(p)$ in Figure 3.

[28] The welfare comparison of the two regimes is expressed in these terms in Section 2B.3; see the alternative expression for $Z(p)$ in (13) given there.

Table 7
Probability of Relevance of the Issue and Expected Benefits and Costs of Granting a Continuance

Proba-bility	Pretrial effort, trial alone	Effort with a continu-ance	Expected benefit from greater effort	Expected benefit from avoiding waste	Expected cost of a continuance
0%	0	300	0%×(650 – 0)=0	100%×0=0	0%×150=0
25%	100	300	25%×(650 – 400)=62.5	75%×100=75	25%×150=37.5
50%	200	300	50%×(650 – 600)=25	50%×200=100	50%×150=75
75%	300	300	75%×(650 – 650)= 0	25%×300=75	75%×150=112.5
100%	300	300	100%×(650 – 650)= 0	0%×300=0	100%×150=150

To illustrate the interpretation of the table, consider for example the case where the probability of relevance is 25%. Then, as can be seen, under trial alone effort would be 100, whereas effort under the continuance regime would be 300, which would be expended only during a continuance. The increase of 200 in effort under the continuance regime would result in a higher net benefit from effort: when effort is only 100 under trial alone, the benefit from the judicial decision would be 500 (see Table 1), resulting in a net benefit of 400; but when effort is 300, the benefit from the judicial decision would be 950, resulting in a net benefit of 650. The enhancement in net benefits due to the use of a continuance would thus be 650 – 400 = 250, and multiplying this amount by 25% gives the expected net benefit of 62.5. The expected benefit from avoiding wasted effort under the trial alone regime is 75. Hence the two expected benefits add to 137.5 and thus exceed the expected cost of a continuance of 37.5. Note that the expected cost is as low as it is reflects the low 25% probability of its use. This makes the continuance regime superior to trial alone. Similarly, it can be seen in the last three rows of the table that the granting of continuances is superior when the probability is 50% (for 25 + 100 = 125 exceeds 75), whereas trial alone is superior when the probability is 75% (for 0 + 75 = 75 is less than 112.5) and when the probability is 100% (for 0 + 0 = 0 is less than 150). Here note that the expected cost of a continuance is higher than before because the probability of its use is higher, ranging from 50% to 100%. Altogether, this table reproduces the conclusions that we saw from Table 6 (as it had to).

Finally, let me add a general point about the critical probability threshold that separates the lower probabilities of relevance for which a continuance regime is optimal from the other probabilities for which a trial regime is superior. The claim is that the lower is the cost of a continuance, the higher will be the critical probability threshold. The explanation is that if the cost falls, then the level of social welfare associated with the continuance regime will rise at any positive probability of relevance, whereas social welfare under a trial alone regime will be unaffected. Consequently, the set of probabilities of relevance for which social welfare is higher under continuances will expand. This implies that the critical threshold must be higher. We can illustrate with our example. Suppose that cost of a continuance is 50 rather than 150 as was assumed. Then welfare under the continuance regime will be 950 – 300 – 50 = 600 (rather than

950 – 300 – 150 = 500) whenever the issue is found relevant and a continuance is granted. Accordingly, Table 5 will be replaced by

Table 8
Probability of Relevance and Social Welfare under a Continuance

Probability	Welfare under a continuance
10%	10%×600 = 60
25%	25%×600 = 150
50%	50%×600 = 300
75%	75%×600 = 450
100%	100%×600 = 600

and thus Table 6 will be replaced by

Table 9
Probability of Relevance and Trial Alone Versus Trial with Continuances

Probability	Welfare under trial alone	Welfare under continuances
10%	0	**60**
25%	25	**150**
50%	200	**300**
75%	412.5	**450**
100%	**650**	600

As this table shows, continuances are now desirable when the probability of relevance is 75%, whereas before trials would have been optimal at that probability. Thus the critical probability must have risen above 2/3 and in fact it can be shown to be 85.7%.[29]

2A.4 *Remarks.* Let me now comment on the conclusions drawn in this section.

(a) *Two primary conditions characterize the socially desirable regime for the granting of continuances: the probability of relevance of the uncertain issue must be less than a threshold; and the ex post benefit from a continuance must exceed its costs*. We have seen from an examination of our stylized model that the socially desirable regime for the granting of continuances involves two properties. First, the probability of relevance of the uncertain issue must have been below a critical positive threshold level. And second, the approval of a continuance must raise ex post social welfare, namely, the increase in the value of the judicial decision due to a continuance must exceed its delay cost. We would expect these two conditions

[29] I use the logic of footnote 24 here and focus on the region between probabilities p of 75% and 100%. We saw in Table 3 that under trial alone, optimal preparation effort in that region was 300, meaning that the value of a judicial decision would be 950 when the issue was relevant. Hence, the formula for social welfare in that interval under trial alone is $950p - 300$. On the other hand, we know from the explanation for Table 8 that the formula for social welfare under continuances is $600p$ for all p. From these two formulas, we can verify that welfare under the continuance regime is higher than under trial alone for probabilities in the interval [75%, 85.7%) and that welfare under trial alone is higher for probabilities in the interval (85.7%, 100%].

for the granting of continuances to hold in approximate terms in more detailed models of adjudication and thus in reality.

(b) *Why the probability of relevance of the issue must have been less than a critical positive threshold.* The explanation for this conclusion is perhaps most easily understood from a paraphrase of the discussion of Table 7. Namely, when the probability of relevance of the uncertain issue is sufficiently low, little or nothing will be invested in preparation effort in a trial alone regime—meaning that if the issue turns out to be relevant, *much would be gained by granting a continuance*. At the same time, *the expected cost of the policy of granting continuances will be small* because of the unlikelihood of relevance of the issue. Hence, it makes sense that granting continuances will be socially desirable.

Conversely, when the probability of relevance is sufficiently high, substantial preparation effort will be made in a trial alone regime—implying that if the issue turns out to be relevant, *little would be gained by granting a continuance.* Furthermore, *the expected cost of a continuance will be high* because of the elevated probability of relevance of the issue. Consequently, continuances will be unattractive to permit.

(c) *Why the ex post benefit of a continuance must exceed its cost—but that condition is not sufficient for it to be granted.* Approval of a continuance plainly cannot be desirable if its benefit would exceed its cost; were that the case, social welfare would be higher if the continuance were denied.

However, the ex post optimality of a continuance is not a *sufficient* condition for granting it.[30] Suppose that permitting a continuance would be desirable from an ex post vantagepoint because doing so would yield a benefit of 250 in the improved quality of the judicial decision and result in a cost of only 150. Why would it not always be desirable for such a continuance to be approved? The essence of the answer is that the party's preparation effort might have been irresponsibly low if the party had known that the probability that the issue was relevant was high. In that circumstance, had the party devoted more preparation effort to the issue, the benefit of a continuance might have been diminished, say to 50, and thus less than the cost of the continuance of 150. In other words, by failing to prepare adequately given his knowledge, the party might have been acting so as to foist the 150 cost of a continuance upon society. Indeed, we will see in Section 4A that courts will deny continuances even though they are desirable ex post for the reasons I have just described.

(d) *The result that optimal pretrial effort is zero when continuances would be socially desirable to grant might not hold in variations of the model—but optimal pretrial effort will still often be low enough to lead to a reduction in wasted effort.* It was demonstrated in the analysis that no pretrial effort should be exercised when continuances would be granted, and the rationale rested on a simple intuition: if a party anticipates that the policy of a court will be to grant a continuance *whenever* the uncertain issue is found relevant, preparing entirely during the continuance will function well, whereas preparing at a positive level before trial will lead to the possibility of wasted effort.

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[30] Note that we can infer that ex post optimality of a continuance cannot be a sufficient condition because ex post optimality—that the ex post benefit exeeds the ex post cost—is consistent with *any* probability of the relevance of the uncertain issue, whereas we know that the probability must be *below* a threshold. What is about to be advanced is a direct rather than an inferential explanation for the insufficiency of ex post optimality.

This logic will not apply, however, if, as would often be true in reality, a party is *unsure about the conditions under which a court will grant a continuance*. Suppose, for instance, that it is best for a court to grant a continuance when the probability that an issue is relevant is less than the threshold level of 65% but that the court might err in its assessment of that probability.[31] Then if the true probability of relevance is 50%—meaning that the party should be granted a continuance if the issue is found relevant (since 50% is less than 65%)—yet the court might incorrectly deem the probability of relevance to have been 80%—meaning that the party would not be granted a continuance if the issue was found relevant—the party would face a risk of denial of a continuance. For that reason, it could be desirable for the party to invest some effort before trial in order to guarantee that he has made at least minimal preparations for the uncertain issue should it become relevant. Thus, we should view the polar result of no pretrial effort in the model as standing for the proposition that the granting of continuances will tend to reduce the problem of wasted pretrial effort but will not necessarily eliminate it.

2B. Formal analysis of the model

2B.1 *Assumptions and framework of analysis.* Because the model of adjudication involving a single party and a single uncertain issue has been described informally in Section 2A.1, I will proceed immediately to the analysis of trial alone and of trial with possible continuances. I will define variables and amplify on the assumptions made in Section 2A where necessary.

2B.2 *Trial alone*. Let

x = trial preparation effort[32] expended on the uncertain issue; $x \geq 0$;

p = probability that a court will find the issue relevant at trial; $0 \leq p \leq 1$;

$v(x)$ = value of the judicial decision given x when the issue is found relevant;

$v(0) = 0$, $v'(x) > 0$, and $v''(x) < 0$;

and assume that $v(x)$ is zero when the issue is not found relevant. Suppose as well that $v'(0) > 1$, which will be seen to imply that a party would choose positive preparation effort if he knew that the issue was relevant. The justification for the assumption is that if a court considered an issue to be relevant, presumably the court would want a positive amount of effort to be devoted to it by a party who knew it was relevant. Suppose furthermore that as x grows, $v'(x)$ approaches the limit 0 due to diminishing marginal returns from preparation effort.

Because social welfare in this regime is defined to be the expected value of judicial decisions minus preparation effort, social welfare is given by

(1) $W(x) = pv(x) - x$.

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[31] Such judicial error is only one source of uncertainty about the granting of continuances when an issue is relevant. Notably, suppose that there are multiple issues of uncertain relevance. Then it might be best for a court to grant a continuance only if several are simultaneously found relevant—only if the sum of the values of information associated with those issues that turn out to be relevant exceeds the cost of a continuance. Hence, it might be that two uncertain issues A and B would each have to be found relevant for a continuance to be socially worthwhile to grant. Then it would not be true that if issue A was found relevant at trial that a continunace would definitely be granted, for B would also have to be found relevant for a continuance to be allowed. Accordingly, it might well be socially desirable for a party to invest positive effort pretrial in A (as well as in B) in a regime with continuances.

[32] I will sometimes refer to this effort as an investment or as a cost.

Hence
(2) $W'(x) = pv'(x) - 1$
and
(3) $W''(x) = pv''(x) < 0$.
The x that maximizes $W(x)$ will be denoted $x(p)$. Also, $x(1)$, optimal effort when the issue is known to be relevant, will sometimes be called *ideal effort* and denoted x^*.
Additionally, define the probability
(4) $p_o = 1/v'(0)$
and note that $0 < p_o < 1$ because of the assumption that $v'(0) > 1$.

We have

Proposition 1. Under the regime of trial alone:

(a) If the probability of relevance of the uncertain issue p is less than or equal to the positive threshold p_o, then optimal preparation effort $x(p)$ will be 0; and if $p > p_o$, $x(p)$ will be positive and increasing in p.

(b) If $p \leq p_o$, social welfare $W(x(p))$ will be 0; and if $p > p_o$, $W(x(p))$ will be positive, increasing, and convex in p.

Notes. That $x(p) = 0$ in a region of low p is implied by the fact that the marginal benefit of effort, $pv'(0)$, is less than the marginal cost of effort, 1, for p sufficiently low. See Figure 2 for a graph of $W(x(p))$.

Proof. Part (a): When $p \leq p_o$, we have $W'(0) = pv'(0) - 1 \leq [1/v'(0)]v'(0) - 1 = 0$. Further, $W'(0) = 0$ implies that $W'(x) < 0$ for all positive x because $W''(x) < 0$. Hence, $x(p) = 0$ for $p \leq p_o$.

When $p > p_o$, we have $W'(0) = pv'(0) - 1 > [1/v'(0)]v'(0) - 1 = 0$, so that $W(x) > 0$ for x in a neighborhood of 0. Hence, if there exists an optimal x, it must be positive. We know that there exists an optimal x because of the assumption that $v'(x)$ tends to 0 as x grows.[33] Hence, at an optimal x, we must have $W'(x) = 0$ or
(5) $pv'(x) = 1$.
This x must be unique because $W''(x) < 0$; accordingly, the x satisfying (5) identifies $x(p)$. Implicitly differentiating (5) with respect to p, we obtain $v'(x(p)) + pv''(x(p))x'(p) = 0$, so that
(6) $x'(p) = -v'(x(p))/[pv''(x(p))] > 0$
when $p > p_o$.

Part (b): When $p \leq p_o$, we know from (a) that $x(p) = 0$, so that $W(x(p)) = W(0) = 0$. When $p > p_o$, we know that $x(p) > 0$, which implies that $W(x(p)) > 0$; for since $x(p)$ is the unique optimum, we know that $W(x(p)) > W(0) = 0$. To show that $W(x(p))$ is increasing in p when $p > p_o$, differentiate
(7) $W(x(p)) = pv(x(p)) - x(p)$
with respect to p to obtain

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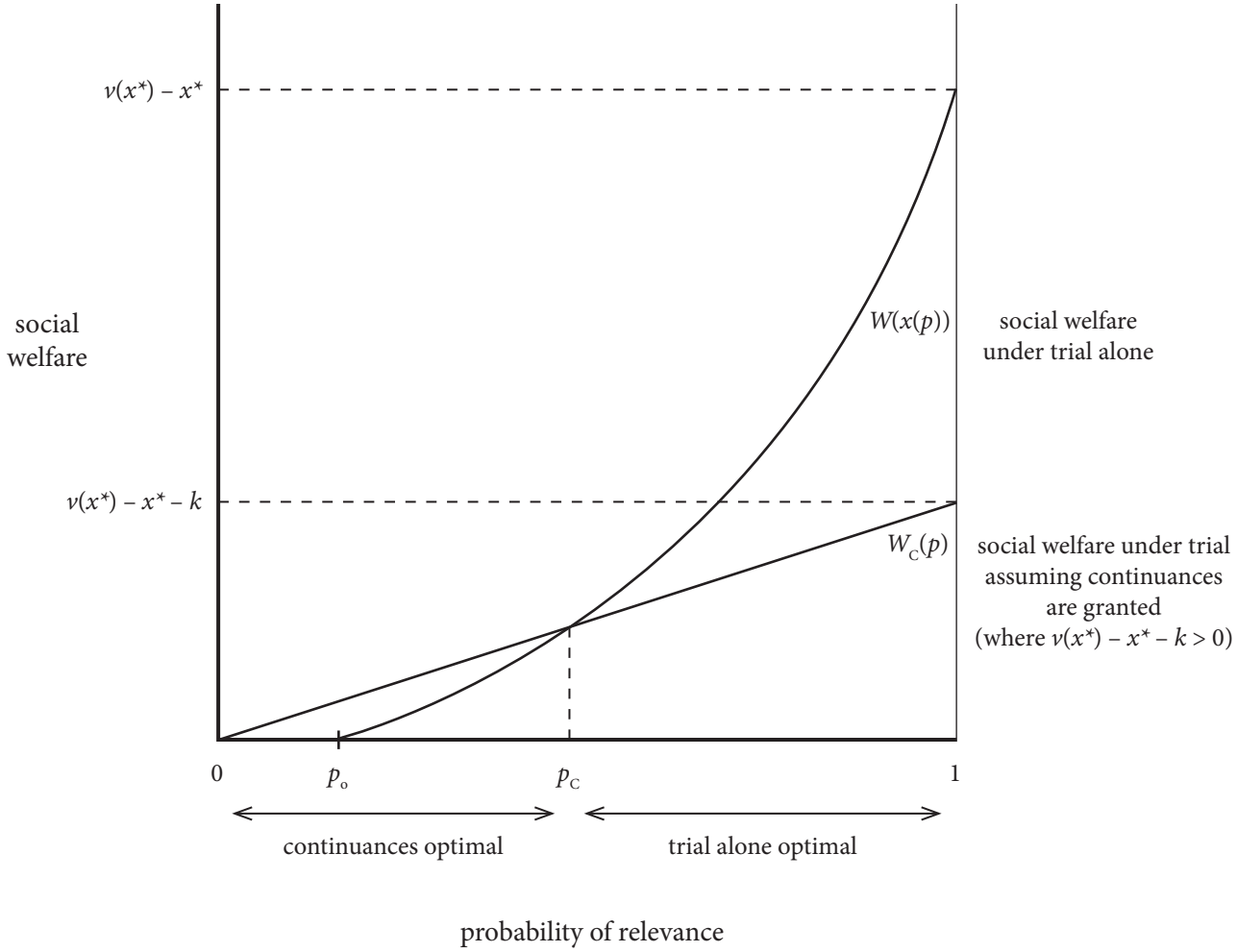
[33] Because of the assumption that $v'(x)$ tends to 0 as x grows, we know that $W'(x)$ tends to –1 as x grows. This implies that there is an x, say $x\sim$, above which $W(x) < 0$. Hence, in solving the problem of maximizing $W(x)$ over all non-negative x, we can restrict attention to x in $[0, x\sim]$. This latter problem has a solution because a continuous function must have a maximum over a closed interval.



Social Welfare under the Two Regimes of Adjudication

Figure 2

(8) $W'(x(p)) = v(x(p)) + pv'(x(p))x'(p) - x'(p)$
$= v(x(p)) + x'(p)[pv'(x(p)) - 1] = v(x(p))$,
where the term in brackets is 0 by (5). Since $v(x(p))$ is positive when $p > p_o$, so is $W'(x(p))$. Finally, from the last line in (8) and (6) we have
(9) $W''(x(p)) = v'(x(p))x'(p) > 0$.□

2B.3 *Trial with possible continuances*. I next consider the regime of trial with possible continuances. Under this regime a finding at trial that the issue is relevant will result either in the granting of a continuance or in its denial.

If a continuance is granted, further preparation effort will be allowed and a subsequent proceeding will occur before the court makes its decision (see the lower part of Figure 1). Let

y = preparation effort during a continuance; $y \geq 0$.

Total effort given x and y will thus be $x + y$ and $v(x + y)$ will be assumed to be the value of the judicial decision. Also, let

k = added cost of adjudication associated with a continuance; $k > 0$.

This amount is interpreted as including any burdens of reconvening participants in the proceeding following the continuance and of their having to refresh their recollections of the case.[34]

Social welfare is now the expected value of the judicial decisions minus preparation effort and the costs of continuances. Hence, if a continuance would be granted for a given x and y if the uncertain issue turned out to be relevant, social welfare would be
(10) $W_C(x, y) = pv(x + y) - x - py - pk$.
If a continuance would be denied for a given x and y if the issue were relevant, social welfare would be be $pv(x) - x$, namely, the outcome under trial alone. Our problem is to determine the optimal regime of trial with possible continuances: choose the levels of x and of possible y and whether or not to grant a continuance if the issue turns out to be relevant so as to maximize social welfare. In considering the problem, I will assume for simplicity that $0 < p < 1$. The next proposition furnishes the answer to this problem.

Proposition 2. Under the regime of trial with possible continuances:

(a) If it is optimal for a continuance to be granted, then optimal pretrial effort must be zero and optimal effort during a continuance must be x^*; hence social welfare will be $p[v(x^*) - x^* - k]$.

(b) If $v(x^*) - x^* < k$, it is never optimal for a continuance to be granted.

(c) If $v(x^*) - x^* = k$, then when $p \leq p_o$, the granting of a continuance and trial alone will result in the same level of social welfare; and when $p > p_o$, only trial alone will be optimal.

(d) If $v(x^*) - x^* > k$, then when $p < p_C$, where p_C is a threshold probability satisfying $p_o < p_C < 1$, the granting of a continuance will be optimal and superior to trial alone; when $p = p_C$, the granting of a continuance and trial alone will result in the same level of social welfare; and when $p > p_C$, trial alone will be optimal and superior to the granting of a continuance.

[34] To be clear, the amount k does not reflect the cost of preparation effort undertaken during the continuance, for that is already accounted for as y.

Notes. The rationale for part (a) is that if a continuance would be granted when the uncertain issue turns out to be relevant, it would be wasteful to invest positive x pretrial—for then x would provide no return with probability $(1 - p)$—whereas x could be invested *only* when it would provide a return with certainty—namely, during a continuance. The amount that it would be efficient to invest during the continuance given that $x = 0$ would be x^*.

Parts (b) and (c) will be seen to follow easily from part (a).

Part (d), including the existence and determination of the threshold probability p_C, can best be understood from Figures 2 and 3.

Proof. Part (a): We have the following identity for any x and y.

(11) $W_C(0, x + y) - W_C(x, y) = [pv(x + y) - p(x + y) - pk] - [pv(x + y) - x - py - pk]$
$= (1 - p)x,$

which is positive for positive x. To interpret (11), note that $W_C(0, x + y)$ is welfare when a continuance would be granted, when 0 is pretrial effort, and when $x + y$ is effort during the continuance. In contrast, $W_C(x, y)$ is welfare when a continuance would be granted, when x is pretrial effort, and when y is effort during the continuance. In effect, $W_C(0, x + y)$ tells us what welfare is when the timing of effort x has been moved from the pretrial period to the continuance. What the identity verifies is that welfare is higher by $(1 - p)x$ when pretrial effort is zero because when positive effort is made pretrial, there is a probability of $(1 - p)$ that that effort will be wasted, whereas x will always be made when it is productive because the continuance will be granted.

We therefore know that since the assumption is that under the optimal regime a continuance is granted (meaning too that both pretrial effort and effort during the continuance are optimally determined), pretrial effort x must be 0. Hence, social welfare can be written as

(12) $W_C(0, y) = pv(y) - py - pk = p(v(y) - y) - pk,$

from which it is clear that the optimal y maximizes $v(y) - y$. This means that the optimal y is x^*, as claimed. If we substitute x^* into (12) we see that social welfare must be as asserted in part (a).

Part (b): If the claim is false, then there must exist an x and a y for which granting a continuance is optimal. By part (a), this implies that $x = 0$ and $y = x^*$ and that social welfare will be $p[v(x^*) - x^* - k] < 0$. That, however, contradicts the optimality of granting a continuance, for if a continuance would not be granted, welfare would be $W(x(p))$, which is non-negative.

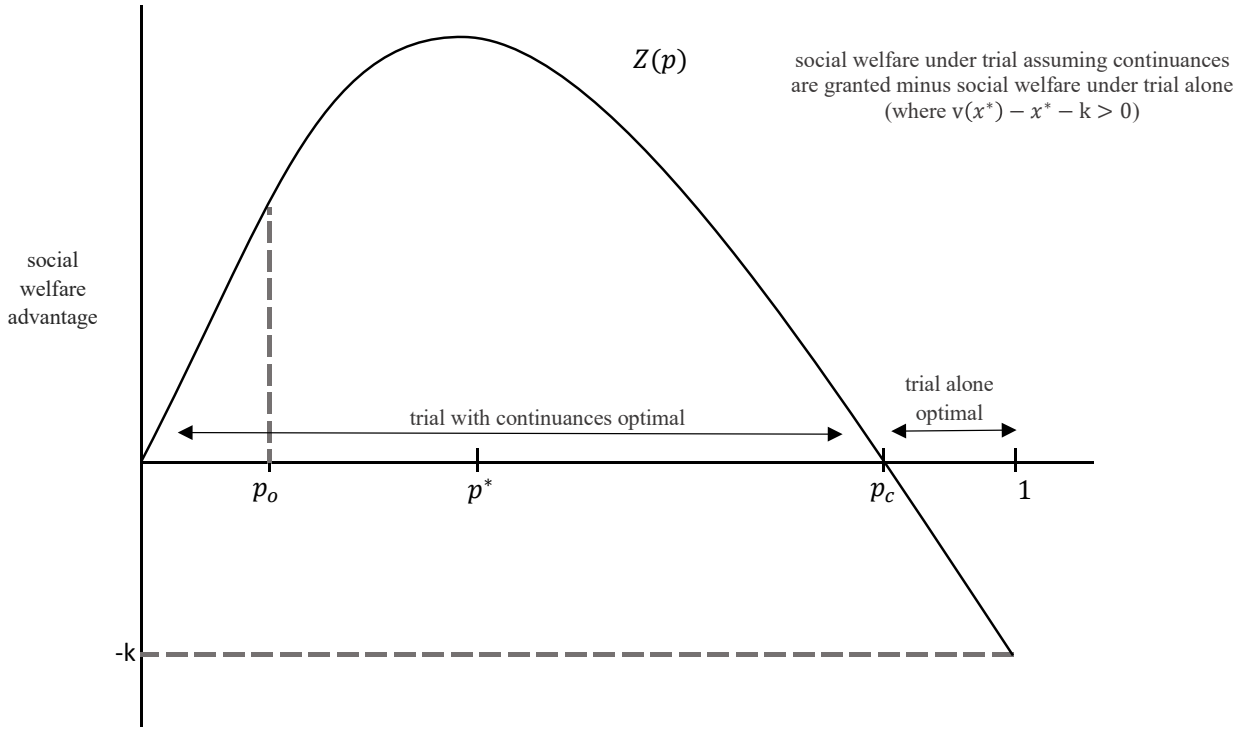
Part (c): If granting a continuance is optimal, we know from part (a) that social welfare must be $p[v(x^*) - x^* - k]$. But this expression equals zero for all positive p because our assumption is that $v(x^*) - x^* = k$.

Now when $p \leq p_o$, we know that $x(p) = 0$ and that social welfare will be $W(0) = 0$. Hence, the regime of continuances and of trial alone result in the same level of social welfare for this region of p. However, when $p > p_o$, we know from Proposition 1 that $x(p)$ and $W(x(p))$ will be positive. This means that the regime of trial alone will be superior to that of continuances.

Part (d): Let us first define

(13) $Z(p) = p[v(x^*) - x^* - k] - [pv(x(p)) - x(p)].$

The term $p[v(x^*) - x^* - k]$ is social welfare if a continuance would be granted when $x = 0$ and $y = x^*$; and by part (a), this term is also the value of social welfare if granting a continuance is optimal. The other term is the value of social welfare under trial alone. Note too that the right hand side of (13) can also be written as $p[(v(x^*) - x^*) - (v(x(p)) - x(p))] + (1 - p)x(p) - pk$. These



Social Welfare Advantage of Trial with Possible Continuances over Trial Alone

Figure 3

three terms correspond to the two benefits and the cost discussed in Section 2A.3 in the paragraph including Table 7.

It follows that when $Z(p)$ is positive, social welfare will be higher if a continuance is granted than under trial alone; when $Z(p)$ is zero, social welfare will be the same if a continuance is granted as under trial alone; and when $Z(p)$ is negative, trial alone will be superior to the granting of a continuance.

We will use the above facts about the sign of $Z(p)$ to help establish the claims of part (d). The reader should refer to Figure 3, showing the graph of $Z(p)$, in regard to the argument that will be made.[35] We begin by making three observations:

(i) $Z(p) = p[v(x^*) - x^* - k]$ in $[0, p_o]$ and thus $Z'(p) = [v(x^*) - x^* - k] > 0$ in that interval: This observation is clear from (13) because $x(p) = 0$ in $[0, p_o]$.

(ii) $Z(p)$ is strictly concave in $(p_o, 1]$: If we differentiate (13) and make use of (8), we obtain

(14) $Z'(p) = [v(x^*) - x^* - k] - v(x(p))$.

Hence

(15) $Z''(p) = -v'(x(p))x'(p) < 0$ in $(p_o, 1]$

because (6) shows that $x'(p) > 0$ applies when $p > p_o$.

(iii) $Z(1) = -k$: This follows from (13) because $x(1) = x^*$.

We now show that the maximum of $Z(p)$ over $[0, 1]$ is achieved at a unique p^* lying in $(p_o, 1)$ and is such that $Z(p^*) > 0$ and $Z'(p^*) = 0$. Furthermore, we will prove that $Z'(p) > 0$ for $p < p^*$ and $Z'(p) < 0$ for $p > p^*$. To demonstrate these claims, note first that a maximum must exist because $Z(p)$ is continuous and is maximized over a closed interval. Also, we know that $Z(0) = 0$ and by observation (i) above that $Z(p)$ is increasing and positive in $(0, p_o]$. Hence, $Z(p^*)$ must be positive and p^* must be at least p_o. In fact, p^* must exceed p_o because, by (i), we know that $Z'(p_o) = v(x^*) - x^* - k > 0$, which implies that $Z'(p) > 0$ in a positive neighborhood of p_o. We know as well that $p^* < 1$ must hold, for we have proved that $Z(p^*)$ is positive, whereas $Z(1) < 0$ by observation (iii). We have therefore shown that p^* is in $(p_o, 1)$ and hence that $Z'(p^*) = 0$ is true. From this, we can prove that p^* is unique: if that is not so, then there must exist at least two probabilities, say $p_1^* < p_2^*$, at each of which $Z(p)$ is maximized; but this implies that $Z'(p_1^*) = Z'(p_2^*) = 0$, which contradicts the fact that $Z(p)$ is strictly concave in $(p_o, 1]$, as shown in observation (ii). It remains to prove that $Z'(p) > 0$ for $p < p^*$ and $Z'(p) < 0$ for $p > p^*$. The strict concavity of $Z(p)$ in $(p_o, 1]$ and the fact that $Z'(p^*) = 0$ implies that $Z'(p) > 0$ for p in (p_o, p^*); and we already know from (i) that $Z'(p) > 0$ in $[0, p_o]$. Hence, $Z'(p) > 0$ for p in $[0, p^*)$ as claimed. Last, strict concavity of $Z(p)$ in $(p_o, 1]$ and the fact that $Z'(p^*) = 0$ implies that $Z'(p) < 0$ for p in $(p^*, 1]$.

Next, let us demonstrate that there is a unique p_C in $(p^*, 1)$ at which $Z(p_C) = 0$. This follows from the intermediate value theorem and the facts that $Z(p^*) > 0$, $Z(1) < 0$, and $Z'(p) < 0$ for p in $(p^*, 1]$.

To complete the proof of (d), note that because $p_C > p^*$ and $p^* > p_o$, we know that $p_C > p_o$. Thus, p_C lies in $(p_o, 1)$. The three properties of p_C asserted in (d) can now be verified. The first is that if p is less than p_C, it is optimal for continuances to be granted and not optimal for them to

[35] The graph of $Z(p)$ corresponds to the difference between the graphs of $W_C(p)$ and $W(x(p))$ in Figure 2.

be denied. To show this, note that a p under consideration must either lie in $(0, p_o]$ or in (p_o, p_C). If p is in the first interval, then we know that $Z(p) = p[v(x^*) - x^* - k] > 0$ by observation (i). If p is in the second interval, then $Z(p)$ must also be positive. The reason is that if p is in (p_o, p^*), then $Z'(p)$ must be positive due to strict concavity of $Z(p)$. Hence $Z(p)$ must be positive in this interval. And if p is in (p^*, p_C), then $Z(p)$ must remain positive, for otherwise there would be a $p < p_C$ at which $Z(p) = 0$, contradicting the fact that p_C is the unique point at which $Z(p) = 0$ holds. Since, then, $Z(p) > 0$ when p is in $(0, p_C)$, the regime of trial with continuances is superior to trial alone in that interval. The second claim is that if $p = p_C$, then the regime of trial with continuances and trial alone result in the same level of social w.elfare. This is true by definition of p_C, for $Z(p_C) = 0$. The last claim is that if p exceeds p_C, trial alone is superior to the regime with continuances. This follows from the facts that $Z(p_C) = 0$ and that $Z'(p) < 0$ in $(p_C, 1]$, for they imply that $Z(p) < 0$ in that interval. □

Finally, let me comment on the desirability of granting a continuance from the perspective of its *ex post value in raising social welfare*, meaning the change in social welfare that granting a continuance would bring about given pretrial effort x and that the uncertain issue was found relevant. In particular, if a continuance is granted, ex post optimal effort y during the continuance would be $x^* - x$ to make up for the shortfall between x and the ideal preparation amount x^* (assuming that $x < x^*$); and thus ex post social welfare would be $v(x + (x^* - x)) - x - (x^* - x) - k = v(x^*) - x^* - k$. If a continuance is not granted, ex post social welfare would be $v(x) - x$. Hence, from the perspective of ex post social welfare, a continuance should be granted if and only if

(16) $v(x^*) - x^* - k > v(x) - x.$

Now let us consider the implication of use of (16) to grant a continuance versus use of social welfare. I will focus on the case where $v(x^*) - x^* - k > 0$, for from Proposition 2(d) we know that only in this situation can use of a continuance raise (ex ante) social welfare and that that will be true if and only if $p < p_C$. There are two differences between the criterion (16) and that given in Proposition 2(d). First, under (16) a continuance would be granted for a range of positive x (for at $x = 0$, (16) is satisfied), whereas under Propositions 2(a) and 2(d), x must be zero when a continuance is granted. Second, under (16) the probability p has no effect on the granting of a continuance, whereas under Proposition 2(d) a continuance would not be granted if $p > p_C$.

3. A Model of Uncertainty about the Provision of Information and the Possible Utility of Continuances

3A. Informal consideration of the model

3A.1 *Assumptions and framework of analysis*. I consider now a different model of adjudication. Here a single party plans to furnish information to the court at trial, but the probability that the party will successfully provide it depends on his level of diligence effort. For example, as mentioned in the Introduction, the party might plan to have an expert witness testify at trial, whereas the likelihood that the witness will actually do so may depend on the care the party exercises to monitor the progress of the expert, to ensure that the expert does not have a conflict of interest, or to check that the expert is well aware of the time and date of his

appearance.[36] We can liken diligence effort to the level of precautions that individuals take to prevent accidents, for diligence reduces the likelihood of the "accident" of failure to provide planned information to a court.

Two regimes of adjudication will be analyzed, as shown in Figure 4. In the regime of trial alone, if the information turns out to be provided to the court, the value of the judicial decision will be augmented. To capture this improvement in value, I will assume that if the information is provided, the judicial decision will have a positive value, whereas if the information is not provided, the value of the decision will be zero.

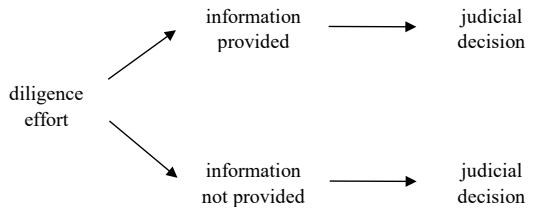
The regime of trial with possible continuances will differ from trial alone when the party fails to present the intended information at trial. In that case, the court will choose whether or not to grant a continuance. If the court grants a continuance, the party will be accorded time to make a second attempt to supply the intended information to the court. As with the initial attempt to furnish information, if this new attempt succeeds, the judicial decision will have positive social value, whereas if it does not succeed, the decision will have no social value. A continuance will be assumed to involve social costs, as was explained in Section 2.

The goal of the analysis is to determine which of the two regimes is socially superior, where the definition of social welfare is the expected social value of judicial decisions minus diligence effort and minus the cost of possible continuances.

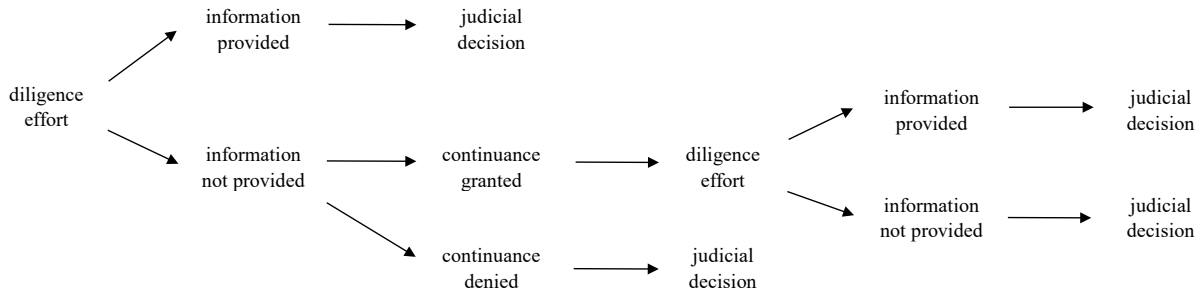
3A.2 *Trial alone.* In the regime of trial alone, social welfare is governed by the level of diligence effort exerted by the party before trial, where the degree of diligence raises the likelihood that the court will be provided with the information of value to it. Suppose that the value of a judicial decision if the court is successfully provided with the information is 100. Then the following table tells us what social welfare will be in an example involving five different levels of diligence effort.

[36] See Section 4A.1 and, for example, 17 Am. Jur. 2d §42 for specific cases of relevance.

Trial Alone



Trial with Possible Continuances



Two Regimes of Adjudication Involving
Uncertainty about the Provision of Information
Figure 4

Table 10
Diligence, Probability of Successful Provision of Information, and Social Welfare under Trial Alone

Diligence effort	Probability of success	Expected value of information	Social welfare
0	5%	5%×100 = 5	5 – 0 = 0
10	45%	45%×100 = 45	45 – 10 = 35
20	65%	65%×100 = 65	65 – 20 = 45
30	80%	80%×100 = 80	80 – 30 = **50**
40	85%	85%×100 = 85	85 – 40 = 45

It can be seen that 30 is the optimal level of diligence effort; in particular, raising effort from 20 to 30 is desirable because that increases the expected value of information by 15, which exceeds the additional effort cost of 10, whereas raising effort from 30 to 40 is undesirable because that would increase the expected value of information by only 5, which is less than the additional effort cost of 10.

3A.3 *Trial with possible continuances.* We now consider the regime of trial with the possibility of continuances, under which the court might grant a continuance if the information it needs was not provided. When a continuance is granted, the party will be given time to make a another attempt to supply information to the court. For simplicity, it will be assumed that this second attempt will be made on the same terms as the initial attempt and thus will be described by Table 10. If the new attempt is successful, the court will make a decision and obtain the value 100; and if the new attempt is unsuccessful, a decision will be made without the information and adjudication will end.[37]

It follows that the optimal level of diligence effort *during* a continuance will be 30 (what it was in the trial alone regime). Hence, the probability that the information will be provided during the continuance will be 80% and the expected increase in social welfare produced by the continuance will be 50. This increase in social welfare implies that a continuance will be optimal to grant if and only if its cost is less than 50. More generally, a continuance will be optimal to grant if its cost is less than the expected social welfare generated by an attempt during the continuance to produce information with optimal due diligence effort. Thus, for instance, if the cost of a continuance is 10, then granting it would be optimal, and it would yield a net value of 50 – 10 or 40.

[37] I comment in Section 3A.5 below on how the conclusions drawn here would be altered if courts were to permit a failed attempt to provide information during a continuance to be followed by further continuances.

A further implication is that when it would be optimal to grant a continuance, *the optimal level of diligence effort in the initial attempt to provide information tends to be lower than the optimal level during the continuance*. The underlying reason is that if the initial attempt to provide information fails, there will still be a second chance to obtain information, whereas if there is failure to obtain information during the continuance, there will be no further opportunity to provide information to the court. To illustrate this point, consider the next table.

Table 11
Diligence, Probability of Information in an Initial Attempt, and Social Welfare when Granting Continuances Would Be Desirable

Diligence effort	Probability of initial success	Probability of continuance	Social welfare	Ultimate probability of success
0	5%	95%	5+ 95%×(50 – 10) = 43	5% + 95%×80% = 81%
10	45%	65%	45–10 + 65%×(50 – 10) = **61**	45% + 65%×80% = **97%**
20	65%	35%	65–20 + 35%×(50 – 10) = 59	65% + 35%×80% = 93%
30	80%	20%	80–30 + 20%×(50 – 10) = 58	80% + 20%×80% = 96%
40	85%	15%	85–40 + 15%×(50 – 10) = 51	85% + 15%×80% = 97%

The logic of the calculations in the rows is straightforward. For example, in the first row, where effort is zero, there is a 5% chance that information will be provided at trial and thus a 95% probability that it will not be provided and that a continuance will be granted. Hence, in the fourth column of the first row, the second term is 95% multiplied by 50 – 10, which is social welfare due to a continuance net of its cost of 10. The last column records the total probability of success from the initial attempt to provide information, which is 5%, and from that during a continuance, which is 80%, but occurring with probability 95%, adding to 5% + 76% or 81%.

It can be seen as claimed that in the initial attempt to provide information to the court, the optimal diligence effort is 10, for social welfare is 61 and highest when that is the level of effort. Thus, optimal initial diligence effort is indeed lower than during the continuance (and than in the trial alone regime), when optimal effort is 30.[38]

3A.5 *Remarks*.

(a) *The conclusions here are analogous to those in Section 2*. We have verified in the analysis in this section that continuances should be employed when and only when the social

[38] In numerical examples like the one considered here, the optimal level of diligence effort in the initial period might be lower than in the trial alone regime (and in the period of the continuance), but it could also be the same. However, in the formal model of the next section, the optimal level of effort in the initial period is unambiguously lower.

cost of a continuance would be less than the expected social value of the information that would be provided to the court as a consequence. In that situation, we have also seen that the socially desirable degree of initial diligence effort should be lower than that during a continuance and what would be best in a regime with trial alone.

These two points are similar to those made in Section 2. There, continuances were also socially desirable to grant under a condition involving their cost.[39] And when that condition was met, the desirable degree of preparation effort was lower (in fact it was zero) than when what would be best in a regime of trial alone.

(b) *The assumption that initial diligence effort and diligence effort made during a continuance were equally effective*. Although I made this simplifying assumption, it could be that diligence effort during a continuance would be more effective[40] or that it would be less effective than effort made initially.[41] Such differences would alter the optimal diligence effort both during a continuance and initially. But the differences would not change the general condition under which a continuance would be granted—when the increase in expected welfare due to a continuance would exceed its cost—nor would it alter the result that optimal initial diligence effort would tend to be lower in a regime with continuances than in the trial alone regime.

(c) *The assumption that if a continuance did not lead to provision of information, further continuances would not be granted.* If this assumption were relaxed, the qualitative nature of the results would not change.[42] Suppose, for example, that a second continuance might be granted if information were not provided during the first continuance (but no further continuances beyond the second would be permitted). Then optimal diligence effort during the second continuance in our example would be 30, the same as in the trial alone regime; optimal diligence effort during the first continuance would tend to be lower than under the trial alone regime; and optimal diligence effort during the initial period would tend to be lower still.[43]

Moreover, if additional continuances were considered, it might be appropriate to allow for their costs to vary with time. Notably, the costs might increase, especially because of increasing difficulties associated with inability of the parties to plan their affairs. For that reason,

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[39] See footnote 26.

[40] Suppose that an expert had failed to appear on time through neglect and wanted to guard against serious damage to his reputation from a similar second problematic outcome.

[41] Suppose that an expert failed to appear on time because of the onset of a chronic illness that would lower his future ability to make an appearance.

[42] In explaining this point, I revert for simplicity to the assumption that the effectiveness of diligence effort is the same during continuances as it is initially and is described by Table 10.

[43] The explanation is in essence that failure to provide information during the second continuance means that the court will never obtain information—which is exactly the situation in the trial alone regime. In contrast, during the first continuance, failure to provide information to the court does not mean that the court will never obtain information because the second continuance might provide it. And so on. See the paragraph at the end of Section 3B.

the cost of a continuance might exceed its expected welfare value, implying that it would not be optimal to grant further continuances.

3B. Formal analysis of the model

3B.1 *Assumptions and framework of analysis.* As in Section 2B, I will proceed immediately to the analysis, defining variables and amplifying on the assumptions made in the informal analysis as necessary.

3B.2 *Trial alone*. Let

v = value of the judicial decision if information is provided to the court; $v > 0$; whereas the value of the decision will be zero if information is not provided;

x = diligence effort to increase the probability of provision of information; $x \geq 0$;

$p(x)$ = probability that information will be provided to the court; $0 < p(x) < 1$; $p'(0) > 1/v$; $p'(x) > 0$; and $p''(x) < 0$ for $x \geq 0$.

The assumption that $p'(0) > 1/v$ is made to assure that positive diligence effort is worthwhile; the other possibility is uninteresting for the purposes of this section.

We will suppose that social welfare in the trial alone regime is the expected value of a judicial decision minus diligence effort. Thus, social welfare will be

(17) $W(x) = p(x)v - x$.

We now show

Proposition 3. Under the regime of trial alone, the optimal level of diligence effort x^* is determined by $p'(x) = 1/v$, and x^* and optimal social welfare $W(x^*)$ are positive.

Proof. We have

(18) $W'(x) = p'(x)v - 1$.

Therefore

(19) $W'(0) = p'(0)v - 1 > (1/v)v - 1 = 0$.

Hence, the solution to the problem of maximizing $W(x)$ must be at a positive x. Accordingly, we have

(20) $p'(x)v - 1 = 0$ or $p'(x) = 1/v$

at a solution. A solution to (20) must be unique because $p''(x) < 0$ and will be denoted x^*. Since $W'(0) > 0$, we know that $W(x^*) > 0$. □

3B.3 *Trial with possible continuances*. I next consider trial with the possibility of a continuance if information was not provided initially. If a continuance is granted, the party will make a second attempt to provide information as was described in Section 3A and Figure 4.

We will assume that social welfare in this regime is the expected value of judicial decisions minus diligence effort both initially and during a possible continuance, minus also the cost of a continuance. Specifically, in this section, let

x_1 = diligence effort to increase the probability of provision of information during the initial period; $x_1 \geq 0$;

x_2 = diligence effort to increase the probability of provision of information during a continuance; $x_2 \geq 0$;

and let $p(x_1)$ be the probability of successful provision of information in the initial period and $p(x_2)$ be the probability of successful provision of information during a continuance. As before, k will be the cost of a continuance.

Accordingly, if information is provided at trial, social welfare will be $v - x_1$ and adjudication will end. If information is not provided at trial and a continuance is not granted, social welfare will be $-x_1$. On the other hand, if information is not provided at trial and a continuance is granted and it results in provision of information, social welfare will be $-x_1 - x_2 + v - k$, whereas if it does not lead to provision of information welfare will be $-x_1 - x_2 - k$.

It follows that expected social welfare if a continuance would not be granted when information is not provided initially would be $W(x_1) = p(x_1)v - x_1$. Hence, when a continuance would not be granted, optimal welfare would be $W(x_1^*) = W(x^*) = p(x^*)v - x^*$. If a continuance would be granted, expected social welfare would be

(21) $W_C(x_1, x_2) = p(x_1)v - x_1 + (1 - p(x_1))(p(x_2)v - x_2 - k)$.

Note here that $(p(x_2)v - x_2 - k)$ is the expected return from diligence effort during a continuance net of its cost k.

We now have

Proposition 4. Under the regime of trial with possible continuances:

(a) If $k < p(x^*)v - x^*$, continuances should be granted and social welfare will exceed that under the regime of trial alone. Moreover, the optimal level of initial diligence effort x_1^* will be less than x_2^*, the optimal level of diligence effort during a continuance, which will equal x^*, the optimal level of effort under the regime of trial alone.

(b) If $k = p(x^*)v - x^*$, the granting of continuances and the regime of trial alone will result in the same level of social welfare.

(c) If $k > p(x^*)v - x^*$, continuances should not be granted and their approval would lower social welfare from that under the regime of trial alone.

Notes. With regard to part (a), it is apparent that the choice of x_2 during a continuance is equivalent to the choice of x_1 during the regime of trial alone, which is x^*. This suggests that a continuance should be optimal to grant if and only if $k < p(x^*)v - x^*$. Additionally, we would expect $x_1^* < x_2^* = x^*$ because failure to provide information initially is followed by a second chance to provide information, whereas failure to do during a continuance means that information is not provided.

Parts (b) and (c) are self-evident from the third term in (21).

Proof. I will prove only part (a) because, as observed, parts (b) and (c) are obvious.

We first want to show that if $k < p(x^*)v - x^*$, welfare under a continuance will exceed optimal social welfare under trial alone, $W(x^*) = p(x^*)v - x^*$. Suppose that $x_1 = x_2 = x^*$ and consider from (21) that

(22) $W_C(x^*, x^*) = p(x^*)v - x^* + (1 - p(x^*))(p(x^*)v - x^* - k) > p(x^*)v - x^* = W(x^*)$.

Therefore, granting a continuance must raise social welfare.

The claim that $x_2^* = x^*$ follows because for any x_1, maximization of $W_C(x_1, x_2) = p(x_1)v - x_1 + (1 - p(x_1))(p(x_2)v - x_2 - k)$ over x_2 is equivalent to maximization of $p(x_2)v - x_2 - k$ over x_2. The solution of this problem is clearly $x_2^* = x^*$.

The other claim is that $x_1^* < x_2^*$. We know that x_1^* is the x_1 that maximizes

(23) $W_C(x_1, x_2^*) = W_C(x_1, x^*) = p(x_1)v - x_1 + (1 - p(x_1))(p(x^*)v - x^* - k)$.
Thus, x_1^* is determined by
(24) $p'(x_1)v - 1 - p'(x_1))(p(x^*)v - x^* - k) = 0$
or by
(25) $p'(x_1) = 1/v + p'(x_1))(p(x^*)v - x^* - k)$,
so that $p'(x_1) > 1/v$. Since $p'(x^*) = 1/v$ and $p''(x) < 0$, we conclude that $x_1^* < x^*$, which is x_2^*. □

Let me now comment on the assumption made here that adjudication ends with a single continuance. I suggested in 3A.5(c) that if a second continuance could be given if information was not provided in the first continuance, the qualitative results would not change. To amplify, suppose that we consider this model and that x_3 is diligence effort during a possible second continuance. Then expected social welfare (assuming that $k < p(x^*)v - x^*$ and that continuances would be given) would be
(26) $W_C(x_1, x_2, x_3) = p(x_1)v - x_1 + (1 - p(x_1))\{p(x_2)v - x_2 - k + (1 - p(x_2))(p(x_3)v - x_3 - k)\}$.
Note here that if information is not provided initially, welfare afterwards would be $\{p(x_2)v - x_2 - k + (1 - p(x_2))(p(x_3)v - x_3 - k)\}$. This term includes $(1 - p(x_2))(p(x_3)v - x_3 - k)$, corresponding to the probability of no provision of information during the first continuance and the expected welfare flowing from a second continuance. It is clear that since x_3 appears in (26) only in $(p(x_3)v - x_3 - k)$, the optimal x_3 is x^*, as I claimed in 3A.5(c). Using this observation, we can see that the optimal x_2 maximizes $p(x_2)v - x_2 - k + (1 - p(x_2))(p(x_3)v - x_3 - k) = p(x_2)v - x_2 - k + (1 - p(x_2))(p(x^*)v - x^* - k)$, implying the first order condition $p'(x_2)v - 1 - p'(x_2))(p(x^*)v - x^* - k) = 0$. But this is the same as (24), meaning that $x_2^* < x^*$. By similar logic, it can be shown that $x_1^* < x_2^*$.

More generally, the foregoing suggests that in a model with the possibility of up to n continuances, we would conclude that $0 < x_1^* < x_2^* < \ldots < x_{n+1}^* = x^*$ (provided that $k < p(x^*)v - x^*$).

4. Continuances in the United States and Related Aspects of Adjudication in Civil Law Countries

4A. Continuances in the United States

4A.1 *Continuances defined and circumstances leading to them.* A continuance is the postponement of a scheduled court proceeding or the suspension of an ongoing proceeding until a later date. A continuance may be requested by a party in a motion or granted by a judge sua sponte. The general justification for a continuance offered by courts and commentators is that a court might otherwise be denied information needed to do justice in a case or else that the court or the parties would be unduly inconvenienced if a postponement or suspension were not allowed. Courts have broad discretion to permit or to deny continuances.[44]

The types of circumstances that can lead to continuances range widely, engendering ubiquitous motions for them. These categories of circumstances include, for example, the

[44] See generally Continuances and Adjournment, A.L.R. Index; 17 Am. Jur. 2d Continuance Summary and succeeding sections; and Charles Alan Wright et al., 9 Fed. Prac. & Proc. Civ. §2352. In this section and in Section 4B, I will discuss continuances in civil cases; but were I to consider also continuances in criminal cases, the observations I make here, being mainly qualitative, would not be significantly different.

amendment of pleadings, such as when an injured pedestrian alters his complaint against a driver, stating that he was traversing a crosswalk at the time he was struck rather than at another crossing point;[45] situations that can cause individuals to miss proceedings, notably, when parties, witnesses, or counsel become ill or die or encounter serious conflicting obligations;[46] dearth of time to prepare for trial or to present key evidence, for instance, when a party claims that it will not be possible to obtain a desired document when required;[47] changes in the nature of relief sought, such as when a defendant learns at a late stage that damages would include a claim based on a theory of enterprise liability;[48] pendency of related legal matters, for instance, when a party asserts that an expected Supreme Court ruling would be likely to bear on its case.[49] And surprise constitutes a very broad category of circumstances overlapping with many of the above, for instance, when a husband unexpectedly learns that his wife has sued for divorce but she had not informed him of her action, when a defendant asserts without mention prior to trial that the plaintiff had abandoned his claim, when counsel suddenly withdraws from a case, when a litigant without notice requests the shifting of legal fees, or when a witness alters his prior testimony.[50]

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[45] In that situation, a party might request a continuance to investigate the character of the crosswalk. This is a hypothetical based on Rooney v. Maczko, 315 Pa. 113, 172A. 151 (1934) (involving an injured pedestrian who first said that he was walking on the south side of the street and then that he was on the north side when an accident occurred). See also, for example, Rickley v. Goodfriend, 212 Cal. App. 4th 1136, 151 Cal. Rptr. 3d 683 (2013) (concerning a victim of illegal dumping of contaminated debris on her land who amended her complaint to include an action against defendant's attorney for failure to comply with a court-ordered remediation plan) and, more generally, 17 Am. Jur. 2d §39.

[46] See, for example, Lindsey v. Wright, 84 Cal. App. 499, 258 P. 438 (1st Dist. 1927) (concerning illness of the son of a litigant). See as well 2 People v. McGruder, 2009 WL 529820 (Mich. Ct. App. 2009) (in which a witness was shot shortly before trial), Hunter v. Fairfax's Devifee, 3 U.S. 305, 305 (1796) (involving death of counsel), and, more generally, 17 Am. Jur. 2d §§10, 25, 32, 35 and 67 A.L.R. 2d 497, 68 A.L.R. 2d 470, 47 A.L.R. 2d 1058.

[47] See Fanning v. Iversen, 535 N.W. 2d 770 (S.D. 1995) (in which defendant claimed she needed time to obtain information about the net worth of plaintiff). See also, for example, U.S. v. Gilmore, 31 Fed. Appx. 43 (2002) (involving defendants in a foreclosure action who asserted they needed additional time to review documents sent to them by plaintiff) and, more generally, 17 Am. Jur. 2d §42.

[48] See Werkmeister v. Robinson Dairy, Inc. 1042 Colo. 669 Pacific Reporter 2d (1983) (involving a plaintiff request to append to her grounds for damages a theory of enterprise liability). See also, for example, Fournier v. Great Atlantic & Pacific Tea Co.,128 Me. 393, 148 A. 147, 68 A.L.R. 481 (1929) (in which defendant had reason to believe damages would be limited to the general category but plaintiff added a claim for permanent injury) and, more generally, 17 Am. Jur. 2d §41 and 56 A.L.R. 2d 650.

[49] See In re: Homestores.com Inc. Securities Litigation, 814 347 Federal Supplement, 2d Series (2004) (involving a request for a continuance by defendant in a securities fraud matter on the argument that a future decision of the U. S. Supreme Court might bear on its case). See also, for example, Eckert v. Graham, 131 Cal. App. 718, 22 P.2d 44 (1st Dist. 1933) (where the value of one party's claim depended on whether another court would rescind a contract) and, more generally, 17 Am. Jur. 2d §43 and 37 A.L.R. 6th 511.

[50] See, for example, Harter v. Harter, 5 Ohio 318 (1832) (husband had not received notice of divorce petition and wife was required to have published notice in a newspaper), Johnson v. Mark, 834 N.W.2d 291 (N.D. 2013) (involving a possible claim of surprise about a cancelled contract), Amy v. Genovese, 85 A. 2d 529 (N.J. 1951) (in which counsel for defendant withdrew the day before trial), Electrical Wholesalers v. V.P. Elec., 33 A.3d 828 (Conn. App. 2012) (concerning late disclosure of a claim by creditor for reimbursement of its attorney fees), Betts v.

4A.2 *Criteria for granting continuances.* Courts generally approve a motion for a continuance only if the burden of the resulting delay would be outweighed by the benefit of avoiding the difficulties of following the planned proceedings. Consider, for example, the following characterizations of a court's responsibility: "The court should consider the peculiar circumstances of every case so as to prevent on the one hand an unnecessary procrastination and to avoid on the other hand an injurious precipitation of a trial"[51] and "On a motion for a continuance, it is the duty of the trial judge, in the absence of some weighty reason to the contrary, such as prejudice to the substantial rights of the parties by forcing them to go to trial without being able to fairly present their case, to insist upon cases being heard . . . ."[52]

How do courts gauge the benefit of granting a continuance? They strive to consider the value of the specific information that would be gained on account of a continuance, recognizing that in some situations a party can take steps to obtain information similar to that requested even if the continuance is denied. Thus, in a motion for a continuance to allow further discovery, courts will ask whether there is a plausible basis for believing that new facts would be uncovered and, if so, whether such found facts would be material to the case;[53] in a motion for a continuance to permit an ill expert witness to appear at a later date, courts will inquire about factors including the possibility that the expert's deposition could provide a reasonable alternative to live testimony, the ability to find a substitute expert before the trial, and the probability that the expert would recover;[54] and in a request for a continuance to await the outcome of a pending related matter, courts will examine the degree of connection between the related matter and the case at hand as well as how long it might take for a decision in the related matter to be reached.[55]

Crawford, 965 P. 2d 680 (Wyo. 1998) (in which an expert changed his testimony at trial from what he had said in a deposition) and, more generally, 17 Am. Jur. 2d §37.

[51] 17 Am. Jur. 2d §3.

[52] 17 Am. Jur. 2d §2.

[53]17 Am. Jur. 2d §8. See, for example, Harrison v. Davis, 197 W. Va. 651, 478 S.E.2d 104 (1996) (in which a request for additional discovery in a medical malpractice case was denied on the ground that the plaintiff could not say what new evidence might be found four years after a newborn died in a hospital or how uncovered evidence could be material).

[54] 17 Am. Jur. 2d §§10, 12 and 18 A.L.R. 6th 509. See, for instance, R.M.S. Titanic v. Wrecked and Abandoned Vessel, 327 F.Supp.2d 664 (E.D.Va. 2004) (where a salvor requested a continuance because its expert appraiser of artifacts was recovering from surgery, whereas the court found that sufficient time remained before trial for the salvor to engage another suitable appraiser).

[55] 17 Am. Jur. 2d §43. See Eckert v. Graham, 131 Cal. App. 718, 22 P.2d 44 (1st Dist. 1933) (in which a continuance was granted because the value of one party's claim depended crucially on whether another court would rescind a contract). And see in contrast, in R.M.S. Titanic v. Wrecked and Abandoned Vessel, 327 F.Supp.2d 664 (E.D.Va. 2004) (here a continuance was requested (in addition to that mentioned in the prior footnote) to await a decision of the United States whether to designate the wreck of the Titanic an international memorial, but this pending matter was found to have no bearing on the issue in the case, the magnitude of the award to the salvor).

In contrast to their attention to the issue of the benefit of a continuance, courts do not usually speak to the costs of delay due to a continuance in specific terms. Courts tend to make only brief and general mention of the disadvantages of delay, commonly reciting the need for judicial economy and the desire of parties for cases to be concluded in a timely manner. Nevertheless, even if unsaid, a court's decision about granting a continuance would be expected to reflect its sense of the particular case before it, its docket, and whether or not a trial would be by jury.

An important qualification to the foregoing description of judicial decisions over the granting of continuances is that although the apparent benefit of a continuance might exceed its delay costs, a court will often deny it if the requesting party did not exercise appropriate diligence to avoid the situation calling for the continuance or if the party actually fostered that situation. Hence it is stated that the party must have acted "in good faith and with due diligence" and that "a party may . . . be entitled to a continuance . . . and yet, because of the party's conduct, be regarded as having waived and lost this right."[56] It is also stated that "Among the factors to be considered when ruling on a motion for a continuance are whether the delay is purposeful or is caused by the accused. Thus, a continuance may be denied by the trial court if the need for the continuance is caused by the movant."[57]

Judicial concerns about the need for diligence are typified by situations concerning missing witnesses. Here proper diligence would include parties taking such precautions as apprising witnesses of the time and place of their testimony, compelling their testimony if they are reluctant to appear, and arranging their travel.[58] Similarly, in situations involving the withdrawal of counsel, due diligence would require that parties without counsel make reasonable efforts to secure new counsel if enough time remains before trial to accomplish that.[59]

Another illustration is situations in which continuances are based on claims of surprise. In this context, appropriate diligence would mean that parties pay careful attention to the pleadings, the results of discovery, and all other sources of information made available to them before trial. If the parties had reason to believe that it was probable that they should have prepared on some issue yet they were not, they might be denied a continuance.[60]

Judicial attention to the problem that parties might be responsible for or even engineer situations ostensibly calling for continuances is not uncommon. Examples include situations where a party seeks a continuance because he had planned a vacation during the period of trial,[61] where a party requests a continuance because of lack of time even though the party has had

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[56] 17 Am. Jur. 2d §5.

[57] 17 Am. Jur. 2d §7.

[58] 17 Am. Jur. 2d §§15, 16.

[59] 17 Am. Jur. 2d §22.

[60] 17 Am. Jur. 2d §§38, 42.

[61] 17 Am. Jur. 2d §7.

ample time for preparation,[62] where a party seeks a continuance to review exhibits with which the party is already familiar,[63] and where a party asks for a continuance to wait for the outcome of pending litigation even though that litigation was brought by the party himself after the case in question began.[64]

4A.3 *Continuances in the light of the economic analysis of this article.* As the discussion in the preceding section illustrates, the policy of the courts in regard to the granting of continuances tends to be cast as a comparison between their benefits and costs, and in this very general sense judicial policy is economic in character. What, however, can be said in more particular terms about judicial policy and economically desirable policy vis a vis continuances?

First, in assessing the informational benefits that granting continuances would furnish the judicial system, the methods that courts employ seem intelligent from an economic perspective. Notably, we saw that courts frequently inquire into the probability that granting a continuance would turn out to yield more information and, if so, its likely significance—in order to estimate its expected value; and courts also often examine the possibility of substitute means of providing information in lieu of the granting of a continuance—so as to better measure the consequences of denying a continuance.[65]

But second, courts do not appear to recognize that avoidance of unproductive preparation effort constitutes a benefit of granting continuances. In as much as this is a major and different category of benefit, one suspects that its omission from judicial reckoning may lead to insufficient allowance of continuances.

Third, as I remarked, courts seem to say little about the social costs of delay associated with continuances. Yet as I suggested, this does not mean that courts fail to properly credit the costs of continuances; possibly courts would consider it unseemly to discuss in explicit terms cost as a factor in the dispensation of justice.

Fourth, the due diligence requirements that would deny parties continuances when they had reason to know that more preparation effort would have been desirable are qualitatively consistent with the economic analysis in this article. Specifically, the result of Section 2 that continuances should not be granted when the probability that an issue of potential relevance exceeded a threshold might be interpreted as generally consistent with the due diligence requirements under discussion. It seems that the main reason that courts frown on granting continuances when parties' knowledge should have led them to exert greater preparation effort is judicial concern over the costs of continuances. At the same time, I conjecture that the probability threshold at which the due diligence requirements begin to apply is too low—that continuances should be granted more often than they are. This would follow from my hypothesis

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[62] 17 Am. Jur. 2d §42

[63] 17 Am. Jur. 2d §42

[64] 17 Am. Jur. 2d §43

[65] For example, when courts consider whether an ill expert witness will recover and when so, and when they ask what the value of the witness's testimony would then be, they are helping to estimate the expected value of a continuance. And when courts also ask about the possibility of engaging an alternative expert witness if a continuance is not granted, they are refining their estimate of the informational loss attending denial of a continuance.

that courts tend to overlook the point that continuances reduce the problem of wasted preparation effort.

The due diligence requirement that bars continuances when parties engineered or otherwise contributed to circumstances facially calling for continuances makes economic sense. That is because the requirement should discourage parties from expending resources to generate the socially costly situations on which the continuances are premised. When, for example, someone plans a vacation for the singular purpose of being able to request a postponement of trial and that person succeeds in obtaining a continuance, the vacation itself will have been socially wasteful or partly so, and the delay cost of the continuance will have been needlessly borne.

4B. Related aspects of adjudication in Germany and other civil law countries.

The system of civil adjudication in Germany,[66] an exemplar of adjudication in the civil law world, is frequently described as consisting of a series of hearings.[67] It is in these hearings that most of the stuff of adjudication occurs.[68] I will refer to the periods between hearings as continuances.[69]

The German courts enjoy substantial authority to choose the content of hearings and their sequence. Thus, a court can hold a hearing concerning new evidence or a specific legal issue at any point in a case;[70] and whether a hearing would be of particular relevance to one side or to the

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[66] See generally the influential treatise-like article Kaplan and von Mehren and the insightful description and analysis of Langbein (1985) (hereafter Langbein) building on it; see also, for example, Chase et al. (2017), von Mehren and Gordley (1977), and Murray and Stürner (2004).

[67] Kaplan and von Mehren state at 1471 that under the German system "proof and other material are commonly received at a series of court sessions" and that "there is no 'trial' in the sense of a single occasion for the display of evidence" and application of law. Similarly, Langbein writes at 826 that "Trial is not a continuous event. Rather, the court gathers and evaluates evidence over a series of hearings, as many as circumstances require."

[68] This is the overall understanding conveyed by Kaplan and von Mehren in Section III "The Main Course of Proceedings" at 1211-1249 and in Langbein in Section I "Overview of German Civil Procedure" at 826-830; see also Murray and Stürner (2004) in Chapters 7 and 8. Nevertheless, the aspiration of the German courts is for there to be a concentrated trial rather than a chain of discontinuously held proceedings. On reforms in German civil procedure expressing this ambition and discussing why it has been frustrated, see especially von Mehren (1988) at 614-622; and see also, for example, Murray and Stürner (2004) at 249-253.

[69] See the English translation of the German Civil Code at https://www.gesetze-im-internet.de/englisch_zpo/englisch_zpo.html. Section 136 reads in part " (1) The presiding judge shall open the hearings and shall direct their course" and "(3) He shall ensure that the matter is discussed exhaustively . . . without interruption until its close; if necessary, he is to immediately determine the session of the court at which the hearing is to be continued." My understanding is that judges typically schedule new hearings without a formal declaration of a continuance and that there is no requirement for such in the Code. Functionally, the period between hearings is what I have defined as a continuance in this article.

[70] For example, Kaplan and von Mehren state at 1232 on proof-order that "When it appears to the court at oral-argument that there are material contested issues of fact, it will order proof-taking. The order may be made quite informally at the close of the discussion and be followed immediately by taking evidence . . . . Commonly, however, the court will close the discussion by pronouncing a proof-order (Beewisbeschluss) under which evidence will be taken at a future date . . . ."; and in a related vein the authors write at 1233 that "There is no compulsion to attempt

other would not impede its occurrence—there is no analogue in German civil procedure to our separation of the plaintiff's case and the defendant's.[71] Courts also determine the length of time of the continuances that they schedule between hearings.

The ability of German courts to intelligently govern the system of hearings and continuances relies on the presumption that German judges tend to possess a fairly detailed understanding of their cases. If judges were not well-informed about their cases, they would not be properly equipped to discern when it would be desirable to hold a hearing on this or that matter and how much time would be appropriate to set aside in a continuance for it. The reason that judges in fact display real familiarity with their cases lies in the significance of their role in adjudication.[72] Notably, German judges conduct the examination of witnesses,[73] retain and oversee experts,[74] maintain and routinely update official dossiers of their cases,[75] face a formalized obligation to provide indications of how they view their cases as they progress,[76] and have a duty to seek the shortest route to their resolution.[77] Satisfying these responsibilities naturally leads German judges to learn about their cases expeditiously and permits them to control effectively the order and manner in which factual and legal issues are considered in hearings.[78]

The great flexibility of the German system of discontinuous hearings implies that the two benefits of continuances discussed in Sections 2 and 3 above can be enjoyed to a significant

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to take proof on all the apparently contested issues at one sitting. On the contrary, if the court perceives that there is a single matter which is likely to be determinative—a defense perhaps—it may confine its proof-order to that matter and await results of the proof-taking . . . before issuing any further proof-order." Similarly, Langbein in Section II "Judicial Control of Sequence" states at 830 that "German procedure functions without the sequence rules to which we are accustomed in the Anglo-American procedural world. . . in German procedure the court ranges over the entire case, constantly looking for the jugular—for the issue of law or fact that might dispose of the case."

[71] As Langbein observes at 830 "The very concepts of "plaintiff's case" and "defendant's case" are unknown . . . . Free of constraints that arise from party presentation of evidence, the court investigates the dispute in the fashion most likely to narrow inquiry. . . ."

[72] See generally Kaplan and von Mehren, Langbein at Sections I, II, and IV, and Murray and Stürner (2004) at Chapters 6C and 8.

[73] See Langbein at 833–835 and Murray and Stürner (2004) at 272-275.

[74] See Langbein at 835–841 and Murray and Stürner (2004) at 280-290.

[75] See Langbein at 827-828.

[76] See Murray and Stürner (2004) at 166-177.

[77] See Murray and Stürner (2004) at 165-166.

[78] The contrast between the functions and responsibilities of German and American judges may not be as substantial as I have implied in this and the preceding two paragraphs. As developed especially in Resnik (1982), judges here have increasingly assumed managerial roles in litigation. Indeed, she remarks at p. 386 that in some respects the description of the German judge in Kaplan and von Mehren "now seems apt for the American judge as well."

degree. First, that there is freedom all along the path of adjudication for the court to order a new hearing and a continuance means that the potential benefits of continuances to allow work to be done can usually be realized. Second, because this state of affairs is generally appreciated to hold by the parties in a case, they will tend to refrain from investing substantial preparation effort on matters that are unlikely to emerge as important; for the parties will know that if such matters actually become consequential, they will then be given the opportunity to consider them.

This second benefit of avoiding uneconomical preparation effort is sometimes recognized in comparative literature on civil procedure. A good example is the following observation about discovery in the United States versus fact-gathering in German adjudication: In the United States "on account of our division into pretrial and trial, we have to discover for the entire case. We investigate everything that could possibly come up at trial, because once we enter the trial phase we can seldom go back and search for further evidence. By contrast, the episodic character of German fact-gathering largely eliminates the danger of surprise; if the case takes an unexpected turn, the disadvantaged litigant can count on developing his response in another hearing at a later time."[79] In this manner, "Germans eliminate the waste."[80]

My general portrayal of the advantages of the German system of discontinuous hearings should apply to the regimes of civil procedure in many other civil law countries, for they tend to share three basic characteristics. Namely, adjudication occurs primarily in separate hearings before a court.[81] Second, the number, subject matter, and scheduling of continuances and hearings is controlled by judges. And third judges are familiar with their cases, especially because of their direct involvement in fact-finding; for it is judges, not counsel, who question witnesses and hire and superintend experts.[82]

5. Conclusion

As has been seen in this article, continuances constitute a beneficial feature of the design of our judicial process because granting them can alleviate two problems generated by uncertainties that may arise over the course of adjudication.

The first problem was that parties might be surprised by unlikely events and find that they are unprepared or unable to present information to a court that it needs. Here the granting of a continuance will often answer the need, but at the cost of delay. Hence, from an economic

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[79] See Langbein at 831. Here he echoes Kaplan and von Mehren, who say at 1201 "as proof-taking in German practice need not be concentrated in one continuous session, there is little danger of surprise—thus one motive for the American lawyer's sedulous concern with getting at the facts before the trial is largely removed."

[80] Langbein at 846.

[81] See, for example, Chase et al. (2017) at 8 "the proceeding unfolds in a piecemeal fashion through an indefinite series of hearings without any 'precisely defined boundaries between preliminary, evidentiary and plenary hearings.' In these hearings, the case is 'prepared,' attempts at settlement are effected, evidence is offered, admitted and eventually presented. . . ." Notwithstanding this description, numerous differences exist in civil procedure among civil law countries, on which see remarks concerning Germany, Italy, Japan, and France at 343-350.

[82] Along with the first characteristic of discontinuous hearings, the second and third characteristics are generally supported or implied by Chase et al. (2017) at Chapter 5, especially at Sections I-III.

perspective, one would want courts to compare the benefits and costs of continuances in deciding whether to grant them—and this is what we saw that courts do in practice.

In particular, as was explained in Section 4A, courts' evaluations of the benefits of continuances tend to involve explicit and often nuanced consideration of the utility of obtaining additional information. In contrast, courts' assessments of the costs of continuances are often cursory, yet that might be only the appearance of things; possibly courts are reluctant to speak about the burdens they would bear from giving continuances.

The foregoing judicial weighing of benefits and costs is made from an ex post perspective, that is, taking largely as given the preparation efforts that parties made at the time that they requested a continuance. However, a striking feature of judicial practice is that a continuance may be denied even though its ex post value would exceed its ex post cost. These denials will occur if a court believes a party requesting a continuance should have been better prepared—which is to say, when the party did not exert due diligence to prevent the court from having to wastefully countenance a continuance. That happens when the party should have understood that the probability of the event leading to its request for a continuance was not low. In effect, then, courts employ ex ante reasoning along with ex post.

The second problem associated with uncertainty in adjudication was wasted preparation effort. That problem is a byproduct of the natural interest of parties to prepare for a wide range of events in litigation, including relatively unlikely ones. Being unlikely, many of the latter circumstances especially will not eventuate, meaning that preparation for them will have proved to be unproductive. However, to the extent that parties anticipate that when unlikely events occur, courts would grant them continuances, parties will have less motive to prepare in advance. Thus the giving of continuances is associated with a second benefit, reduction of sterile preparation effort.

This second benefit of continuances in reducing wasted preparation effort does not seem to be reflected in the calculus of our courts in the granting of continuances. Thus, a suspicion is that, in an overall sense, it might be socially beneficial for courts to grant continuances more often than they presently do.

Finally, we saw in Section 4B that the virtues of continuances appear to be enjoyed in a fuller manner in civil law countries than in the United States. In the German system, a prototype for civil law countries, adjudication occurs mainly in a series of discontinuous hearings separated by periods that are literally or effectively continuances. Courts possess almost complete freedom to determine the sequence and the content of the continuances and hearings. What is perhaps most notable about this system is that because parties appreciate that they will be able to obtain continuances fairly readily if their requests display due diligence, the second benefit of continuances in reducing preparation effort may be realized to a much greater extent than in our system of adjudication.

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