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Racing the clock: Deadlines, conflict, and negotiation in lawmaking

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INTRODUCTION

This chapter analyzes the widespread use of lawmaking deadlines, under which an actor or actors who create rules with the force of law must either act or achieve a result within a specified time. Although deadlines may seem like an attractive way of trying to control behavior, it turns out that their benefits are not always as advertised, and they may have hidden costs.

The chapter begins with case studies of the use and impact of deadlines in several, very different lawmaking settings. In an effort to understand the operation of deadlines better, it then explores four different families of models from game theory that could apply in situations involving deadlines. This exploration sets the stage for some normative conclusions about the costs and benefits of rules.

THE USE AND IMPACT OF DEADLINES

Deadlines are used in a wide range of lawmaking settings, not all of which can be discussed here. Instead, the focus will be on two types of administrative deadlines – deadlines for federal agencies to issue rules and deadlines for state agencies to achieve results – and on two types of non-administrative settings – fiscal legislation and international negotiations in the presence of deadlines. As we will see, in the...
non-administrative context, the consequences of a missed deadline tend to be more dramatic, leading to more visible effects on behavior.

**Deadlines for Federal Regulations**

Begin by considering statutes that require agencies to issue regulations by a specified date. These statutory provisions sometimes seem to operate more as gentle nudges than as mandates, as illustrated by recent legislation on food safety. After President Obama signed food safety reforms at the beginning of 2011, the Food and Drug Administration (FDA) had one year to propose enforceable preventative controls, as well as safety requirements for producing and harvesting farm produce, among other mandates. The FDA did manage to produce drafts of two proposed rules before the Act’s deadline. But rather than formally proposing the rules, it submitted the drafts to the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget (OMB) for review, a prolonged process (Bottemiller 2012; Farber and O’Connell 2014, 1138–39). After much delay by OMB, the FDA formally proposed the revised versions on January 4, 2013, exactly a year later than the statutory deadline (Bottemiller 2013; Food and Drug Administration 2013). The FDA had also missed other deadlines under the Act, prompting a district court judge, a few months later, to order the agency to propose new deadlines it would meet (Food Safety v. Hamburg, No. 12-cv-04529, N.D. Cal. Apr. 22, 2013). This was not the end of the delays. By early 2014, the FDA had proposed most of the required rules, but there were continuing delays on proposing others. The FDA agreed with the plaintiffs on a new schedule for issuing many of the final regulations by 2017 (Johnson 2015). If this schedule is kept, it will mean that most but not all of the rules will be out within five years of the statutory deadline.

Among other possible costs of missing a statutory deadline, doing so makes it much easier to sue the agency for delay than it would be to sue otherwise. For instance, it triggers the application of citizen suit provisions in pollution laws that would not otherwise apply (Gersen and O’Connell 2008, 952). It also expedites lawsuits for delay under the Administrative Procedure Act.\(^1\) Even so, as the FDA example shows, getting an effective remedy takes perseverance or the part of the challengers. But without a deadline, their task would be even harder since

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\(^1\) Violation of a statutory deadline qualifies as being ‘not in accordance with law’ under the Administrative Procedure Act, making judicial review more readily available. See Biber (2008, 476, 478–84).
they would have to convince a court that the agency's delay was unreasonable.\(^2\)

Failure to comply with deadlines in the FDA case is far from a unique situation. For instance, under the 1972 Clean Water Act, Congress was supposed to issue pollution control regulations for industry no later than 1973 (33 USC § 1314(b)). But the Environmental Protection Agency (EPA) fell far behind schedule. For example, the EPA did not promulgate regulations for the chemical industry until 1987 (Env. Rep., Nov. 13, 1987, at 1736). Regulations for certain mining operations were issued in 1988, and upheld two years later (Rybachek v. Alaska Miners Ass'n, 904 F.2d 1276 (9th Cir. 1990)). Thus, these particular standards were at least 15 years overdue.

A careful empirical study across multiple administration agencies by Gersen and O'Connell in 2008 provides a firmer basis for generalizing about the operation of regulatory deadlines. They identified almost 2,500 regulations from 1987 to 2003 involving statutory deadlines and about 15 percent of that number involving judicially imposed deadlines (Gersen and O'Connell 2008, 983, table 4). The numbers themselves are striking: deadlines are far from being rare features of agency life. Overall, the frequency of deadline-driven regulations has been fairly steady, with a couple of spikes for some agencies. Deadlines are much more likely to be found in significant regulatory actions (those with high compliance costs) and in regulations affecting other governmental units such as states. Deadlines are associated with a shorter regulatory process, but to a surprisingly modest extent. Controlling for other differences, there was a 57 percent chance that a rulemaking with a deadline would end before a similar rulemaking with no deadline.\(^3\) At the EPA, for example, the average duration of rulemakings without deadlines was 685 days; regulations subject to deadlines took an average of 610 days or about 10 percent less time (988, table 12).

There is no reason to think that the situation has changed since the Gersen and O'Connell study, either in terms of Congress's propensity to impose deadlines or their generally modest impacts. In a review of the provisions of the Dodd-Frank Act requiring rulemakings, the Government

\(^2\) For instance, in NRDC v. FDA, 760 F.3d 151 (2d Cir. 2014), the agency was able to stall for 12 years on answering a petition to regulate the use of antibiotics in cattle feed, even though it had already made a finding that this practice posed public health risks. Only when it was sued for unreasonable delay did it finally reject the petition.

\(^3\) The percentage is derived from the 1.37 to 1 odds given in Gersen and O'Connell (2008, 949).
Accountability Office (GAO) found that ‘of the 236 provisions we identified, over two-thirds (157) required regulators to take action by a specific date. Among the provisions with deadlines that passed as of December 2012 (a total of 134 provisions), regulators had missed the act’s deadlines for the majority (119, or 89 percent) of the provisions’ (Government Accountability Office 2013, 6). Agencies explained their failure to meet the deadlines based on practicality and concern over quality:

For example, CFTC staff described the statutory timetable as a challenge, noting that they were required to issue a significant number of rules within the first year of the act’s passage. According to some of the regulators with whom we spoke, their staffs have prioritized ‘getting it right’ over meeting statutory deadlines, which has resulted in missing a number of the act’s deadlines (Government Accountability Office 2013, 24).

It seems fair to say that the agencies treated the deadlines as more in the nature of guidelines than rules.

Of course, when Congress is really serious about deadlines, it has ways of making them more binding. ‘Hammer’ provisions can provide penalty defaults that take effect if the agency misses its deadline. For example, under one provision of a law dealing with nutrition labels, the FDA was required to issue proposed rules within a year, and those proposed rules became binding if the FDA failed to take final action by the end of another year. The hammer was successful in several dimensions: it forced the issue to the top of the FDA’s agenda, and strengthened the FDA’s hand in negotiations with the White House over the final rule (Magill 1995). Other kinds of administrative deadlines, such as statutes of limitations for enforcement actions, may also be quite effective. But as the Gersen and O’Connell study shows, the typical rulemaking deadline has a far less dramatic relationship with speed, perhaps because the penalties for violating the deadline are usually mild.

When the agency is doing the best it can and misses a deadline, there is little reason for anyone to want it to move faster. But a deadline may also be missed for other reasons. The agency (or the White House) may not much desire to regulate, or it may be struggling to overcome opposition from some interest group. In those situations, the missed deadline is likely to lead to conflict. As shown by the FDA case with which this section opened, actually getting the agency to issue the regulation can require a prolonged battle.
Federal Deadlines for State Regulation

Setting standards is one thing, achieving them is another. The basic mechanism of the Clean Air Act involves a combination of delegation to state regulators, subject to federal approval of state plans and programs, and deadlines for the state regulations to achieve specified results. Thus, the states have a key ‘lawmaking’ function in creating enforceable plans to reach the standards by the deadlines.

In theory, the EPA has complete control in this system, because it can disapprove a state plan, impose its own program, or even rescind the delegation to the state entirely. But EPA’s actual power is more limited as a practical matter, because these sanctions also impose serious costs on the agency itself. The ‘threat of EPA withdrawing approval for any state enforcement programs and having the federal government assume primary responsibility’ is ‘hollow due to a lack of federal resources and an expanding number of regulated entities’ (Flatt 1997, 31).

For instance, EPA has admitted its unwillingness to impose strict deadlines or sanctions on state agencies regulating air pollution. There are strong pressures against the full exercise of federal authority in this area, because a ‘successful federal air pollution control program requires the willing participation of state administrative agencies’ (Dwyer 1995, 1218). Thus,

[T]here are practical administrative and political limits to centralization. Although it has as much legal authority as it needs, the federal government cannot implement its air pollution program without the substantial resources, expertise, information, and political support of state and local officials. Congress and EPA can quell minor revolts among state agencies, but widespread dissatisfaction – manifested in the time-honored ‘go-slow’ approach – will bring EPA and even Congress to the bargaining table (Dwyer 1995, 1224).

As a result, ‘the states have been able to work compromises with EPA rather than be slavishly subject to federal dictates’ (Dwyer 1995, 1116).

Because of these dynamics, federal air pollution deadlines have served as the bases for rounds of negotiation and increasingly stringent restrictions on states. As originally enacted in 1970, the Clean Air Act called on states to adopt state implementation plans (SIPs) to control pollution, with a mandate to achieve national air quality standards by 1975. The deadline was not met in many areas, and Congress responded by extending the deadline to 1977, with a further extension to 1987 for the most severe non-attainment areas (a euphemism for regions violating the federal mandate). Even so, the new deadlines were not met in many
places: two years after 1987, nearly 100 areas were in violation of the deadline with respect to ozone pollution and about half as many with respect to carbon monoxide (see Farber and Carlson 2014, 420–422).

In 1990, Congress passed a major overhaul of the Clean Air Act. The 1990 amendments added new deadlines, which varied depending on the severity of the non-compliance. The least compliant areas were given the most time, but were also subject to the most rigorous interim requirements. At each of these stages, states have had to produce revisions in their formal state plans for EPA approval. The reader might be forgiven for suspecting that the entire process was a charade, but in fact air quality has improved substantially and retrospective studies show that the benefits have far exceeded the costs.4 Still, someone reading the original statute with its strict deadlines might well be bemused by the complex dance of deadlines, non-compliance, and renegotiation (see Farber and Carlson 2014).

This flexibility about state deadlines is not unique to environmental statutes. Under the Affordable Care Act, the original deadline for states to submit proposals for their own insurance exchanges was November 16, 2012, with a final decision by Health and Human Services (HHS) on these proposals due by January 1, 2013. HHS engaged in a series of deadline extensions, first ruling that the November 16 deadline could be met by submitting a letter of intent rather than an actual proposal, then extending that deadline by a month, and then indicating that it would continue to entertain proposals even after the January deadline for approval decisions, providing conditional approval, and then working with the states to bring the state programs into compliance (Dinan 2014, 402–04).

**Deadlines and the Fiscal State**

Deadlines have played a major role in fiscal disputes between the President and Congress for many years. The story begins with the 1974 Congressional Budget and Impoundment Act, which was intended to increase Congressional control over budgeting, but at least one informed observer believes that it actually increased the President’s control, leading to a cascade of budget deficits under President Reagan (Fisher 2015).5

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4 This is not to say, of course, that some other approach might not have produced the same benefits more quickly or cheaply.

5 Fisher (2015) argues that the ceilings in the budget resolution also effectively became floors from the perspective of appropriations committees.
A decade later, in response to concerns about growing budget deficits, Congress passed the Graham-Rudman-Hollings Act.\textsuperscript{6} The statute created a series of declining budget caps intended to eliminate the deficit by 1991. Federal deficits exceeding the cap by more than certain amounts triggered a notice to Congress. If Congress missed the deadline to act, percentage cuts in agency budgets were set jointly by the Comptroller General and the head of the Office of Management and Budget. The Supreme Court held this provision unconstitutional because the Court considered the Comptroller General to be part of the legislative branch (Bowsher v. Synar, 478 U.S. 714, 1986). That ruling triggered a fallback procedure in the statute, which Congress later replaced with sequestration by the head of OMB.

In those more innocent times, the apparent concerns were that the executive branch might not spend all of its appropriations or that Congress might not balance the budget — not that Congress might fail to fund the operation of the government at all. Between 1985 and 1995, there were a series of government shutdowns due to lack of funding, but none exceeded a single working day. Matters escalated in 1995. Under the leadership of Speaker Newton Gingrich, the Republicans demanded major budgetary concessions from President Clinton in return for passing appropriations bills to fund the government. Congressional Republicans did not give way until after the government had shut down twice. One of the two shutdowns lasted three weeks, the longest in U.S. history. Pending a final budget deal, Congress passed a series of 14 continuing resolutions (CRs) to provide temporary funding authority (see Shane 2003). Each side apparently thought the other would pay the greatest political price for a shutdown; as it turned out, both sides lost in terms of public approval, but Congressional Republicans more so.

In 2011, the crisis involved the debt ceiling rather than a shutdown. The debt ceiling is set by federal legislation authorizing borrowing up to a certain amount, which then becomes the ceiling. When the government hits the ceiling, it can no longer borrow, meaning that if it is running a deficit it must immediately stop payments on some of its obligations.

The threat of such a default was averted with new budget legislation, cutting spending over the next 10 years and raising the debt ceiling by

\begin{footnotesize}
(299). Fisher also argues that the 1974 Act diminished Presidential accountability for the budget by allowing the President to shift responsibility for budget decisions to Congress (310).

\textsuperscript{6} The best succinct account of the budget confrontations since 1985 is probably Louk and Gamage (2015, 214–17). Their study also discusses two state government shutdowns, one in Minnesota and one in California (224–29).
\end{footnotesize}
almost a trillion dollars. At the same time, Congress extended most of a
group of tax cuts that would otherwise have expired at the same time.
The cuts were embodied in the 2012 American Taxpayer Relief Act of
2012, which also set up a bipartisan committee to recommend budget
cuts; the recommendations would then receive fast-track consideration in
both houses. But the committee deadlocked, triggering fallback sequestra-
tion provisions, or rather, a complicated series of sequestration pro-
visions (see Congressional Budget Office 2013a; 2013b).

The government shut down again in 2013 in another confrontation
between a Democratic President and a Republican House. This time, the
dispute was over substantive legislation rather than spending. Congres-
sional Republicans wished to tie federal funding to rollbacks of the
President’s signature health care law. Senate Democrats blocked this
effort, and the government shut down at the beginning of the next fiscal
year on October 1. Again, both sides paid a price with the public, but the
Republicans paid a much larger price. The shutdown lasted over two
weeks, until the government was only a day away from another deadline
— the date at which borrowing authority would cease, forcing the
government into default.

In 2015, yet another confrontation led to authorization for borrowing
through March 2017 and increased spending (over the sequestered
amounts). The increased spending amounted to $80 billion, split between
defense and domestic programs, with additional authority to spend
another $74 billion for both military and nonmilitary purposes from the
off-budget Overseas Contingency Operations (OCO) (Clark 2015).
Despite this agreement on the budget, the government faced yet another
possible shutdown as 2015 rolled to a close. On December 11, Congress
passed a CR funding the government for another week, in order to allow
negotiations over appropriations riders to continue (Snell 2015). Finally,
on December 18, Congress passed a $1.8 trillion package of spending
and tax cuts, with the controversial riders stripped out (Herszenhoren
2015).

Deadlines in the appropriation process have dramatic effect since
failure to appropriate results in a shutdown. Deadlines are also found in
the less dramatic concept of authorization laws, which are frequently
time-limited. One might think that the expiration of a program’s author-
ization would have drastic consequences, bringing implementation of the
program to its knees. The results, as shown by a recent empirical study,
are far less draconian (Curry 2015). About three-quarters of the deadlines
passed without receiving any Congressional attention at all, and 96
percent of the programs received appropriations the following year
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nonetheless (20). Not surprisingly, the likelihood that an expired authorization would receive Congressional attention increased with the amount of funding at issue. Oddly, deadlines are more likely to be ignored when the program is salient to the public, but Congressional consideration and partisan standoffs are most probable on issues where the minority party enjoys an advantage (such as security issues in the case of the GOP) and where interest groups exert pressure on the majority party.7

Deadlines for Lawmaking in the International Sphere

Climate negotiations have presented two interesting examples of the operation of self-imposed deadlines. The U.N. Framework Convention on Climate Change (UNFCCC) established a general commitment to combat climate change and called for annual Conferences of the Parties (COPs) to consider implementing measures. These multinational conferences are held in December each year, and their length is limited both by impending holidays for many nations and by the logistical difficulties of assembling for extended periods high-level representatives and their staffs from 200 countries. The COPs leading up to the 2009 COP in Copenhagen had established an action plan aimed at producing a major global agreement there (Robinson 2010).

As it turned out, the Copenhagen meeting came near to being a complete failure. Somehow, it appears, the planners who had set the high expectations for this conference had failed to notice that 2008 was a presidential election year in the United States, meaning that the new President would have only a year to formulate a climate policy and pursue pre-COP discussions with other nations – not to mention dealing with the worst economic crisis since the Great Depression and assorted other tasks. For this and other reasons, the negotiations did not go well, raising the prospect that the meeting would be forced to adjourn with nothing accomplished. The effect could have been to completely discredit the U.N. process, leaving no clear path forward for climate negotiations. At the last minute, President Obama and other leaders of major powers succeeded in negotiating a ‘political agreement’ under which nations would submit individual pledges for emissions reductions. The COP, which operates only by consensus, ‘took note’ of the agreement (Revkin and Broder 2010).

In addition to these fiscal situations, lawmaking deadlines may also be created by sunset provisions. For a recent example, see Berman (2013). For general discussion, see Gersen (2007). Space limitations preclude discussion of sunset provisions in this chapter.
The Paris COP in 2015 was also planned as the time for a major climate agreement. It was based on a series of voluntary pledges, following the model of the Copenhagen Accord, but the goal was to get a consensus agreement covering issues such as the ultimate goal of the agreement, deforestation, and monitoring of performance. Again, the negotiations ran beyond the deadline. The COP finally adopted a breakthrough climate agreement late in the evening of December 12, 2015, a day after the conference was originally scheduled to end. Apparently, however, the talks were nearly derailed at the last minute when the Americans threatened to walk out due to the substitution of a ‘shall’ for a ‘should’ in one crucial provision, which was handily dealt with by a decision of the Americans and the French to treat it as a typo that could be corrected with broader consultation (Warrick 2015). Because of the hurried wrap-up to the proceeding, these last-minute negotiations required quick discussions between the United States and China, the United States and India, and between China and the Venezuelans (who were among the group most likely to object), and the deal was struck. Those in the know breathed a sigh of relief when the ‘typo correction’ went through without comment, inasmuch as ‘the last few hours have been known to “make or break” climate negotiations, and this one was no different’ (Friedman 2015).

In quite a different setting, a mix of international and domestic deadlines was faced in the negotiations with Greece over its possible debt default or exit from the Eurozone. In late June of 2015, negotiations between Greece and European finance ministers appeared to reach a standstill. On Thursday, June 25, German Chancellor Merkel set a deadline for agreement before markets opened the following Monday, in order to prevent default on Greece’s scheduled 1.6 billion euro payment to the IMF on Tuesday. To obtain continuation of a bailout program once a deal was reached, legislation would have had to pass the Greek legislature on Sunday and then the German legislature on Monday (Traynor et al. 2015). But the deadline was not met, and the IMF payment was not made on time (Yardley et al. 2015). Another round of deadlines followed. Finally, on July 16, the Greek parliament passed austerity measures, facing a July 20 deadline to pay 3.5 billion euros to the European Central Bank (Maltezou and Koutantou 2015).

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8 The Americans apparently believed that this was a deliberate substitution by someone on the French side, since France as the host country was in charge of preparing the final text (Adragna 2015).
That round of deadlines and negotiations with Greece was not the end. Yet more negotiations over reforms continued against an August 20 deadline to make another billion-plus euro payment (Dendrinou and Bouras 2015). Even in November, there were still negotiations under the shadow of another deadline, this time over enactment of economic measures such as broader powers for Greek banks to foreclose on home mortgages. A news story on November 16 remarked that '[a] sense that recent history is repeating itself on the Greek debt crisis was in the air over the weekend, as a deadline to sign off on the next stage of the country’s bailout was delayed again after “marathon” talks’ (The Week 2015a). A deal was finally reached on November 18 (The Week 2015b).

MODELING NEGOTIATIONS IN THE PRESENCE OF DEADLINES

Understanding the effects of deadlines is complicated in part because of the strategic nature of behavior in lawmaking settings. Actors are concerned not only about what proposal would actually be best if implemented, but also with how other actors might react to the proposal and even with how they themselves would expect to respond to those reactions. Formal models based on game theory can help work through the complexities of these strategic decisions. Although the assumptions in the models may not be completely realistic, they can at least provide a clearer picture of the strategic implications of a situation. They offer a useful check on the informal arguments about incentives and strategies that are often to be found in the law review literature. In particular, they may be able to help us better understand the behaviors of the political institutions discussed earlier.

The Game of Chicken

We can begin with perhaps the simplest of the game theory models, the game of chicken, which can be seen as a model of brinksmanship. The game of chicken is modeled on a contest between two drivers, who agree to drive straight at each other. The one who swerves first loses. Each actor is best off if only the other driver swerves (a victory), next best off if both swerve (a draw), less well off if only the actor swerves (a face-losing defeat), and worst off if neither swerves (a disaster). In terms

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9 For a particularly clear explanation of the benefits and limitations of modeling, see Powell (1999, 23–24).
of their combined welfare, the drivers are assumed to be best off if they both swerve – the bitterness of defeat is worse than the sweetness of victory, so a draw is better than the situation where one wins and the other loses – and definitely better than the situation where they both collide head on.

There are three equilibrium solutions to the game. Here, equilibrium means that neither actor has an incentive to change behavior even knowing what the other actor will do. The three equilibrium strategies are: Driver 1 always swerves and Driver 2 never swerves; Driver 2 never swerves and Driver 1 always serves; and (most interestingly) both drivers randomly swerve a fixed percentage of the time. In that last, ‘mixed strategy solution,’ the probability of swerving is a function of the payoffs for the various outcomes (or more specifically, of the difference between each outcome and the next-worst outcome) (Rapport and Chammah 1966).10

The decision whether to strike a deal or demand surrender by the other side in a confrontation over the federal debt ceiling is a possible illustration of the game of chicken. Though somewhat less dramatic, budget disputes involving threats of government shutdowns may also fit the model to some extent. The game of chicken suggests that several types of outcome are possible if both sides are rational: (a) the President consistently wins these confrontations, (b) Congress consistently wins, or (c) in some percentage of confrontations neither gives ground and the debt ceiling is breached or the government shuts down. The pattern of shutdowns over the past 25 years seems to fit this prediction – shutdowns do occur, but hardly always.

The game of chicken has limitations that reduce its utility in describing deadline situations of the kind discussed in this chapter. In this stylized game, the parties make a once-and-for-all choice of strategies at the start that does not include the possibility of learning from the behavior of the other party. The options are binary, rather than allowing more graduated responses. Either the debt ceiling gets raised or it does not, with no option to control the amount of the increase. Moreover, it is a one-shot game, so there is also no incentive to develop a reputation that might affect later iterations. And finally, there is no communication between the

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10 One superficially tempting approach is to remove the steering wheel as the game begins, forcing the other party to give way – but this pre-emptive approach involves the risk that the other driver will adopt the same strategy: ‘[i]magine the chagrin of a pre-emptor as he sees that the driver of the car oncoming has removed his steering wheel at precisely the same moment’ (Rapport and Chammah 1966, 10).
parties, and thus no potential for negotiation. The models discussed presently allow some of these added complexities.

Noncooperative Bargaining Theory

In contrast to the game of chicken, negotiations are front and center in noncooperative bargaining theory.\textsuperscript{11} In a simple model, two parties make alternating offers to each other. Upon receiving an offer, either party may accept the offer, make a counter-offer, or (with fixed probability) exit the negotiations and receive a fixed payoff. It turns out, however, that with perfect information about the other party, the game ends almost immediately, with one party making an offer that the other instantly accepts. The deal will favor the party with the highest likelihood of exiting the negotiations (Myerson 1991). In a more complex version of the game, the parties have imperfect information, and there is some probability that one party will irrationally accept an offer only above a certain level. It turns out that this can guarantee that party an outcome close to that level (403). Clearly, there is a temptation to bluff and pretend to be irrationally committed to a certain outcome even if this is untrue.

Naturally, it is possible to complicate the models almost endlessly in an effort to provide greater realism, such as the effect of focal points on negotiations or of various types of learning strategies about the other side's preferences. For example, in a market where sellers are uncertain of the valuations that buyers put on their properties and expect new buyers to enter the market periodically, bargaining is prolonged as sellers in each round seek to identify buyers with the highest valuations. This scenario might be considered analogous to legislative negotiations when new elections are expected (Fuchs and Skrzypacz 2010). A follow-up paper shows that efficiency may actually be improved in a market where the quality of assets is imperfectly known to buyers by subsidizing trades during a short period of time and imposing a high tax thereafter, in effect creating a deadline (Fuchs and Skrzypacz 2015). Thus, in this model, during a financial crisis when assets become illiquid, it can be optimal to announce that assets will be frozen entirely unless sellers unload them

\textsuperscript{11} In the spirit of these bargaining models, Eric Posner and Adrian Vermeule discuss a hypothetical between the President and Congress over the terms on which to end a war, although both sides agree it should end in three months. The parties also have the option of sparking a confrontation to be settled in court rather than bargaining, and Posner and Vermeule argue that they will tend to underutilize this option because they do not fully internalize the social benefits of clarifying lines of authority (Posner and Vermeule 2008, 1008–10, 1024–26).
quickly. More generally, this suggests that deadlines may improve social welfare when the alternative is a prolonged process in which the parties slowly feel each other out and seek their best bargain.\textsuperscript{12}

There have been some interesting efforts to apply such bargaining models to the legislative process.\textsuperscript{13} For instance, Roderick Kiewet and Matthew McCubbins test a model of bargaining over appropriations (Kiewet and McCubbins 1985). In their model, the President and Congress bargain over appropriation levels knowing that a breakdown in negotiations could require a CR, which is costly for both sides. Because of this cost, Kiewet and McCubbins hypothesize that Presidents and Congresses will accommodate each other’s preferences, so that a shift in party control on one side or the other will lead to a corresponding shift in the positions made by the other side. They find support for this hypothesis in a data set covering 1948–1979. As we have seen, in more recent times, greater political polarization seems to have led to greater willingness to tolerate budget impasses, suggesting that this accommodation process is either no longer effective or at least is no longer strong enough to prevent periodic breakdowns in negotiations.

This family of models seems especially useful in situations where at least some actors have the option of exiting the negotiations and where there can be a prolonged back-and-forth before any actual deal. Something like this situation might hold in international negotiations or in the negotiations between EPA and state regulators.

**War-of-attrition Models**

In the models considered so far, conflicts can be resolved by entering into an agreement or (as in the game of chicken) by cooperative action. In politics, decisions are rarely made for all time, and agreements may not be enforceable. In such situations, where it is always possible to reopen any cooperative outcome, war-of-attrition models are particularly useful. Even where one player has a natural advantage over the other, wars of

\textsuperscript{12} In another interesting model, one party has more control over the deadline than another and can use that control to drive a harder bargain (Ozyurt 2015).

\textsuperscript{13} For instance, Sean Gailmard and Thomas Hammond show that one chamber of the legislature may want to appoint a committee that does not represent the chamber as a way to credibly commit to reject offers that it should otherwise rationally accept. Note, however, that if both chambers follow this approach, the result may be a game of chicken in which both sides lose because the other will not back down in negotiations (Gailmard and Hammond 2011).
attrition may last for a considerable length of time (Bulow and Klemperer 1999). This may be a useful model, for instance, of the litigation between a challenger and an agency over compliance with a rulemaking deadline, which can extend over multiple rounds of litigation.\textsuperscript{14}

In a typical model, the war involves winning a series of battles, the outcomes of which are not wholly deterministic. A player finds it rational to put forth more effort as victory comes closer, because the odds of winning rise, but also to make a last-ditch effort at defense in the opposite situation because defeat is so costly. There are also some useful findings about prospects for a draw or peaceful coexistence, which are most likely when war is expensive relative to the benefits of victory, or cheap for one party relative to the prospect of loss (Bulow and Klemperer 1999).

In some situations, administrative deadlines may fit the war-of-attrition model. In these situations, the agency prefers to delay the rule (perhaps to infinity), but after the deadline passes, this delay comes at the cost of a potential lawsuit from an interest group that favors regulation. The group can win a lawsuit if it is patient enough, but this requires repeated trips to court and comes with the expense of litigation. At each stage, the parties can continue litigation or surrender (the agency by issuing the rule, the challengers by walking away). The war-of-attrition model indicates why both parties might find it rational to start such a conflict and also why the conflict might be expected to last a long time.

\textbf{Models of War and Peace}

The war-of-attrition model does shed light on why wars (or political conflicts) begin and end, but does not explain why many wars do in fact end with negotiated agreements rather than continuing until one side or the other prevails. Moreover, if negotiated settlements are possible, why do wars start in the first place, since the parties could have made the same deal at the outset and saved the cost of the war?\textsuperscript{15} One possibility is that the parties have asymmetric information, so neither knows how much the other is willing to concede or how hard it would fight to obtain

\textsuperscript{14} Thanks are due here to Anne Joseph O'Connell, who suggested the potential relevance of this model to lawmaking deadlines in conversation.

\textsuperscript{15} Given the importance of the issue, the literature is understandably enormous. For a concise summary, see Jackson and Morelli (2011).
its preferred outcome. In this situation, war can be avoided only if the stronger party can credibly communicate its strength.16

Commitment problems are another reason, since a deal made to prevent war might not hold up, leaving one party worse off when the other one later reopens negotiations (‘Give them an inch and they’ll take a mile’). To be enduring, a negotiated settlement will only hold in the absence of some external enforcement mechanism when it is not worthwhile for either party to reopen it, meaning that for either one the cost of initiating even a short conflict is not worth the possible gain. For instance, suppose that the marginal benefit of holding additional territory declines as the party’s existing territory increases. Then there may be a point where the marginal benefit of acquiring more territory for the dominant party is less than the cost of war for the victor, and this seems especially likely because the cost of losing territory is higher for the side that is currently losing the war, which will translate into a greater willingness to fight (Yoo 2015).

The models discussed here illuminate how deadlines can shape behaviors when the penalty for missing the deadline is draconian, as with the U.S. debt limit or the Greek debt crisis. In particular, they help us to understand why negotiations sometimes succeed as an alternative to continued conflict over deadlines, but also why brinksmanship or prolonged conflict sometimes occur even when a negotiated solution would seem to be better for everyone.

The discussion turns next to a consideration of the costs and benefits of deadlines and to the question of how to improve their operation.

NOMARATIVE IMPLICATIONS

The Costs and Benefits of Deadlines

The potential benefits of deadlines seem obvious: they may speed up decisions and may sometimes ensure that a decision is actually made rather than delayed indefinitely. It is more difficult to know the magnitude of these benefits. We have the best information regarding deadlines

16 Leventoglu and Tarar have proposed a model in which asymmetric information leads to war only in the presence of other factors, such as obstacles that delay offers and counteroffers, making continued negotiation less appealing than the immediate benefits of war (Leventoglu and Tarar 2008). There are also models with multiple equilibria, making predictions difficult. See, e.g., Langlois and Langlois (2006).
in federal rulemakings thanks to the Gersen and O'Connell study. As discussed earlier, their findings suggest that deadlines may exert a moderate effect on rulemaking speed. Since the study was limited to rules that were actually proposed, it may somewhat underestimate the result since it is possible that some rules subject to deadlines might otherwise have been postponed forever. On the other hand, it could overstate the effect because the diversion of resources to expedite rules with deadlines may have slowed down the other rules that were used as the control group. That would have exaggerated the benefits of deadlines versus a world in which no rules were governed by deadlines.

One final intriguing point from the Gersen and O'Connell study is that there were differences among agencies regarding the effect of deadlines, which suggests the possibility that statutory deadlines may serve different purposes in different statutory settings. For instance, deadlines were associated with reductions of the duration of rulemakings in HHS by over 40 percent (Gersen and O'Connell 2008, 946). With a better understanding of the interagency differences, it might be possible to give a more granular account of when deadlines are beneficial.

As Gersen and O'Connell point out, deadlines can have detrimental effects along several different dimensions (Gersen and O'Connell 2008, 951–70). Deadlines may reduce the quality of the agency decision because of time pressures and lead to limitations on input from the public or within the executive branch. Courts have sometimes reduced the intensity of judicial review when an agency is operating under a deadline (962–63, n. 141). They can also distort resource allocation within the agency if the agency has a better ability to set priorities than Congress. And, as pointed out above, they may also slow down other regulatory procedures that may have equal public benefit but are not subject to deadlines.

One reason for the relatively small effect of deadlines on speed of decision in the rulemaking context may be that the penalty for missing a

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17 Conceivably, if Congress can observe features of regulations that were not part of the study and would lead to greater-than-normal delays, even a modest reduction in the average speed of rulemaking might represent a much greater improvement over the amount of time that the specific rulemaking would have taken in the absence of a deadline — something like telling a friend who is usually late that a party starts earlier than it actually does, in order to induce them to show up nearly on time.

18 This argument assumes, however, that the agency is unable to use the existence of deadlines as leverage to obtain greater appropriations. If deadlines increase the agency budget, then the tradeoff would not exist or would at least be smaller.

19 For some illuminating case studies of these costs, see Abbott (1987).
deadline is modest. Thus, it seems plausible that the situation might be different in the appropriations context, where the threat of a government shutdown gives deadlines much greater force. Note the difference may not be quite as stark as it appears.

For example, the end of an appropriation period does not necessarily result in an immediate shutdown, because appropriation deadlines can be extended through CRs. Moreover, it is at least possible that the shutdown threat actually delays appropriations, because it encourages the use of giant appropriations bills to increase Congressional leverage against the President. In a world where agency budgets continued until changed legislatively, the threat of a shutdown could not be used as leverage to seek other policy changes (something that may or may not be desirable). Congress might conceivably then simply pass appropriations in regular order during the course of the year. Still, as David Kamin suggests in Chapter 2, it is also possible that Congress would revisit appropriations less than annually, so changes in appropriations would be delayed compared to the present system. Thus, the effect of appropriations deadlines on the speed with which Congress revises appropriations is unclear.

Even if the existence of deadlines does expedite the appropriations process or shortcut gridlock, the result could well be a quality decrease in appropriations decisions due to the need to make final adjustments in the year-end rush. A more serious cost is that a deadlock leads to a government shutdown. Louk and Gamage argue that shutdowns have high social costs that are not internalized by legislators (Louk and Gamage 2015, 215–36). Among the costs they cite are lower economic growth, leading to several billion dollars of lost output, wages paid to furloughed employees who did not work during the shutdown (another $1 billion in the case of the 1996 shutdown), and harm to the government's credit rating. Moreover, they point out, shutdowns can lead to long-term backups in government services after the shutdown is over. For instance, even a year after a shutdown in Minnesota, driver's license applications were delayed by two months due to the continuing backlog (231).

In terms of regulatory and fiscal decisions, the case for deadlines is at best an uneasy one. Deadlines do not necessarily speed up decisions as much as one might hope, especially if the consequences for deadline violation are small. When they do actually speed up decisions, there are tradeoffs in terms of decision quality. For instance, a careful empirical

\[\text{20 It seems likely that these conclusions would generalize to other lawmaking settings, but we lack enough information to be sure.}\]
study by Daniel Carpenter and others showed that drugs approved close to the statutory deadline were significantly less safe in practice (Carpenter et al. (2012)). Worse, the failure to meet a deadline can create high social costs in those cases where the penalties for deadline violation are more draconian (unlike the typical regulatory setting where the consequences of delay are often minor).

One might wonder, then, why deadlines seem to be used so frequently. Perhaps it is because, despite their limitations and costs, they provide the best available tool for prioritizing decisions. Or they may serve other purposes. They might be useful as a way to signal to affected parties that regulations should be expected sooner rather than later, so they can begin to plan accordingly. Deadlines may also have symbolic value as expressions to the public of the priority and urgency of action (and as sometimes-misleading signals of resolve). Deadlines may also serve other purposes, such as creating a safe harbor for the agency, freeing it from criticism or pressure until the deadline has passed, or as nudges to an agency to improve its efficiency.

It is also possible that, even when they would otherwise speed up lawmaking, deadlines have a tendency to proliferate, undermining their efficacy. For instance, if an agency is already subject to many deadlines, any new obligations that are not accompanied by deadlines are likely to get low priority indeed. Thus, there is an incentive to add a deadline to the new obligation simply to give it equal treatment. But if everything the agency does is subject to deadlines, their power to control the agency’s priorities becomes even weaker.

Certain deadlines, particularly those with draconian consequences, do seem to be designed to force on-time action, especially when a decision-making body might otherwise be too gridlocked or disorganized to address them directly. This may carry heavy transactions costs — for instance, budget crises improve Congress’s ability to overcome gridlock but divert the President’s attention from other pressing matters such as foreign policy. Still, despite their costs and unreliable impact on timeliness, this may sometimes be the best action-forcing mechanism available in some circumstances. If so, it is important to minimize the potential for a breakdown in negotiations that could result in draconian consequences.

21 David Kamin’s chapter in this book, ‘Legislating Crisis,’ considers these issues in the context of U.S. budget decisions, concluding that some of these mechanisms are on balance useful whereas at least one (the debt limit) is too risky.
Avoiding the Costs of Brinksmanship

It is apparent that in some settings deadlines can lead to brinksmanship with potentially serious side effects such as government shutdowns or a national financial crisis. Disarmament is one way to limit the fallout in the lawmaking setting. For instance, in the appropriations setting, the legislature could adopt a rule providing continuing appropriations pending new legislation, an approach favored by Louk and Gamage and adopted in some states (Louk and Gamage 2015, 236–46). The trouble is that at least one side is likely to feel advantaged by the existing balance of power, so an agreement to disarm is fraught with difficulties. In the absence of such an agreement, assuming that it is desirable to limit the likelihood for shutdowns, what steps might be available?

The models discussed above suggest several possible steps to increase the likelihood of a negotiated settlement. Perhaps the most important is to improve information flow in order to allow opposing sides to gauge more accurately the ability and willingness of the other to carry through on threats. Expanding the size of the groups involved in the discussions could provide more information about preferences, which could discourage bluffing. So could the use of neutral mediators or encouragement for more aggressive investigation of negotiations by the press. It may also be important to find ways to increase the credibility of commitments, since one reason that negotiations fail is fear that any agreement would not actually hold up over time. In the budget situation, it may be difficult for the legislature to commit to future appropriations, but procedural rules could be used to limit the veto points for legislation implementing a budget deal.

CONCLUSION

This chapter began with the observation that deadlines are common in a wide range of lawmaking contexts, including federal agency rulemakings, state rulemakings under federal supervision, fiscal legislation, and international negotiations. Despite the hope that these deadlines will drive conflicting parties toward agreement or overcome bureaucratic inertia, their success is mixed, often producing only modest improvements in speed (at least in the case of federal rulemaking, where the best data is available). On the downside, in some situations deadlines can reduce the quality of decisions or encourage brinksmanship in the face of the deadline, currently a serious problem in the context of the federal budget. Game theory models suggest that the contexts discussed here are not
unrepresentative and that deadlines can create a range of strategic behaviors, including some that seems counterproductive in terms of social welfare.

Thus, if there is a case for deadlines, it is an uneasy one. Where deadlines are used, however, game theory suggests some possibilities for improvement, such as increasing information sharing between actors and providing enforcement mechanisms for negotiated outcomes. This chapter has in some ways only scratched the surface of the issue. There is undoubtedly much more to say about the role of social and cognitive society, many more cases of interest that could be considered, much more modeling and empirical research to do, and deeper normative issues to probe. It is, however, clear that deadlines create complex behavior and that the normative picture is quite mixed.

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