

# The Legal Coordination Game<sup>\*1</sup>

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## I. The Coordination Model of Political Authority

Jeremy Waldron tells us that “the felt need among members of a certain group for a common framework or decision or course of action on some matter, even in the face of disagreement about what the framework, decision or action should be, are *the circumstances of politics*.”<sup>2</sup> Political authority and the law, Waldron insists, presuppose the circumstances of politics. We reasonably disagree not only about conceptions of the good life and value, but about justice and the common good. However, because we need to act together, we cannot rest content with each going his own way. We thus have to deal with the fact that we reasonably disagree while achieving some sort of unity of action. Thus our need for political authority and the rule of law.

According Waldron’s interpretation of the circumstances of politics, then, we (1) feel a need for a common framework or action yet (2) have intractable, yet reasonable, differences as to what that should be. Waldron understands the problem in terms of an impure coordination game as in Figure 1 below.

	$C_1$	$C_2$
$R_1$	1	-1
$R_2$	-1	1

Figure 1: An Impure Coordination Problem

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This is Luce and Raiffa's "Battle of the Sexes" problem.<sup>3</sup> Row and Column wish to go out together: he wants to go to the fights with her ( $\langle R_1, C_1 \rangle$ ); she wants to go the ballet with him ( $\langle R_2, C_2 \rangle$ ). Either coordination point ( $\langle R_1, C_1 \rangle$ ,  $\langle R_2, C_2 \rangle$ ) is preferred by both of them to options in which they fail to coordinate. Thus  $\langle R_1, C_1 \rangle$  and  $\langle R_2, C_2 \rangle$  are coordinative equilibria.

Waldron clearly thinks all this is important for an analysis of the rule of law, though it is not quite clear just how it is important. He tells us that whether such a coordination game will be solved

depends on the circumstances of each case, including how much more each prefers his or her own favorite outcome to the less favored [equilibrium point], how likely each thinks it is that they will get their favourite outcome by holding out, etc....I do not want to claim that law *solves* PC [coordination games] and that is why we should respect it. (LD: 104)

The law, Waldron argues, can make one coordination point more salient by attaching sanctions, and so make it less likely that people will hold out for their favorite outcome. "But before it can do that, the society must have decided which of the coordinative strategies to select as the one to be bolstered in this way. That itself is no mean achievement—and I want to say that it is by embodying that achievement that law commands our respect" (LD: 104).

The idea seems to be that although a specific law contributes to coordination by "selecting" a specific coordination point, it does not necessarily "solve" a coordination problem: the "achievement" of the law is to select which coordination point should be

sought. It is hard to see just what this means—unless we actually coordinate on a point, the selection of it as the one to be pursued does not seem much of an achievement—but what is clear is that Waldron believes that law and legal authority can be modeled on an impure coordination game:

We want to act together in regard to some matter M, but one of us thinks it is important to follow policy X while others think it is important to follow policy Y, and none of us has reason to think any of the others a better judge of the merits of M than himself....

In these circumstances, the following will *not* be a way of settling on a common policy: each does whatever he thinks is important to do about M. We must find a way of choosing a single policy in which [we]...can participate despite our disagreements on the merits (LD: 107)

As Waldron understands politics, we will debate and discuss the merits and demerits of each of the possible coordination points (policies); since it is an impure coordination game, I prefer a different coordination point ( $\langle R_1, C_1 \rangle$ ) than do you ( $\langle R_2, C_2 \rangle$ ), and so we have something to argue about. However, we each prefer any coordination point to lack of coordination ( $\langle R_1, C_2 \rangle, \langle R_2, C_1 \rangle$ ). In essence, then, Waldron argues that we need to coordinate on some single reasonable policy, even if it is not the one that each of us sees as most reasonable.

## **II. Is Coordination Always Better than Going it Alone?**

In contrast to John Finnis, who insists that the sense in which law solves a coordination problem is distinct from “the game theoretical concept of a coordination problem,”<sup>4</sup>

Waldron explicitly draws on game theoretical modeling of coordination games, so let's look closer at these games. Now it is tempting to suppose that the idea of an impure coordination game necessarily implies that, while we have disputes about the preferred coordination point, we must find a way of acting together, since any way of coordinating is better than any uncoordinated outcome. But things are more complicated than this. Following David Lewis, let us define a coordination equilibrium as "a combination in which no one would have been better off had *any one* agent alone acted otherwise, either himself or someone else."<sup>5</sup> Given this, it is possible to have a coordination game in which some uncoordinated points (which are not in equilibrium) are better for everyone than some coordinated points. Consider for example Figure 2:

	$C_1$	$C_2$	$C_3$
$R_1$	1 2	0 0	0 0
$R_2$	.3 .3	1 2	0 0
$R_3$	0 0	0 0	.2 .2

Figure 2: A Coordination Game With a Non-Coordination Point Pareto-superior to a Coordination Equilibrium

$\langle R_3, C_3 \rangle$  satisfies Lewis' definition of coordination equilibrium; no one can be made better off by a move by either. Given Column's play of  $C_3$ , there is no move that Row can make that is better off for anyone; given Row's play of  $R_3$ , there is no way Column can move that makes things better off for either. Consider  $\langle R_2, C_1 \rangle$ , which is not a coordination equilibrium; either player can make a unilateral move that makes both better off. Yet  $\langle R_2, C_1 \rangle$  is Pareto-superior to  $\langle R_3, C_3 \rangle$ ; both players are better off in an uncoordinated non-equilibrium than in the coordinated equilibrium of  $\langle R_3, C_3 \rangle$ . So it

does not follow that in every coordination game “going it alone” is always worse than every way of coordinating.

To be sure, in Figure 2 it is rational to coordinate given the play of the other player.  $\langle R_2, C_1 \rangle$  is not a stable option; unilateral defection by either player would move them both to a equilibrium that Pareto-dominates it. Nevertheless, we see in Figure 2 that it is not the case that in every impure coordination game it is always better for everyone to coordinate than if they were somehow stuck in an uncoordinated outcome. Suppose we found ourselves in  $\langle R_3, C_3 \rangle$ ; this could not be justified on the grounds that, while some coordination points are better, it is at least better for everyone than if somehow there was no law that produced coordination. Figure 2 does not support the view that legal authority and the law are worthy of respect just because they help select ways of coordinating, *for some ways of coordinating are worse for everyone than some ways of failing to coordinate*. If we are going to make the coordination analysis of law attractive we must add, at the very minimum, the further requirement *that to qualify as a legal coordination game no coordination equilibrium is Pareto-dominated by any non-coordination point*.<sup>6</sup> That is, if legal authority is to be *justified* in terms of a coordination game—if we are to explain why it “commands our respect”—we need to specify an additional requirement of the game: it must never be the case that rational agents would unanimously agree to move from a coordinated outcome to an uncoordinated point. (As they would in Figure 2, where a move from  $\langle R_3, C_3 \rangle$  to  $\langle R_2, C_1 \rangle$  would be endorsed by both Row and Column.) To say that law allows us to coordinate but that we would unanimously agree to return to an uncoordinated situation hardly seems a compelling case for law. More strongly, but still very plausibly, we should add that in our legal coordination game every coordination

point actually Pareto-dominates every non-coordination point. It must always be the case that it is better for everyone (or, at least, not worse for anyone) to act together than to go it alone in *any* way. Each person does at least as well in every coordination equilibria as he would so in any way of going it alone. Let us call this the *Pareto-dominance of coordination*. Unless this holds, we need to compare different ways of going it alone to different coordination points; some people will rationally prefer some cases of an absence of a legal system to some legal systems. For them, it would not be true that each doing “whatever he thinks is important to do about M” is suboptimal *vis a vis* every way of coordinating. At least from the perspective of some, coordination would look like a fetish for acting together, which makes them worse off than they might have been.

### **III. Coordination on Civil Society**

The most plausible version of a coordinative analysis of law is to see a specific legal system, or political society, as a coordination point, and so the absence of coordination a state of nature without law or political society.<sup>7</sup> Hobbes’ theory is sometimes interpreted in this way. We can depict Hobbes’ state of nature as a no-agreement point, and all civil societies as equilibrium points. The power of Hobbes’ characterization of the state of nature is that it is so horrible that every conceivable political society is a coordination equilibrium that Pareto-dominates every non-coordinated point. So, by depicting horrible no-agreement points, Hobbes can show that everyone benefits by any coordinated outcome (type of government). Given that all civil societies are coordination equilibria, no one has any incentive to defect, understood as leaving a coordinated outcome (a civil society) to return to the state of nature.

It is often underestimated just how much an effective coordination account of civil society depends on a Hobbesian-like state of nature story. As soon as we make the state of nature a kinder and gentler place, with perhaps Lockean “inconveniences” but not constant war, we immediately undermine the claim that all no-agreement points are Pareto-dominated by every social contract. Locke was no game theorist, but he clearly recognized this. The Hobbesian can only get her result if anything is better than no agreement; but if no agreement is inconvenient but not a living hell, then we will be more selective about possible coordination points. Some ways of acting together, or some common frameworks, will be seen by some as worse than no agreement. These points are not, in principle, possible solutions to the legal coordination game. People are apt to start insisting on clauses to the social contract, excluding “ways of acting together” (types of civil societies) that they rank as worse than the state of nature. Some may rank regimes without bills of rights as worse than the state of nature. And the less harsh we make the state of nature, the more civil societies will not be perceived as improvements by some contractors, and so they would be disqualified as possible solutions to the legal coordination game.

In Figure 3, Option 1 might be the U.S. Constitution with a Bill of Rights (most preferred by Column); Option 2, Parliamentary sovereignty with an independent judiciary (most preferred by Row), and Option 3 a Hobbesian sovereign. Again, we see a accepting a Hobbesian sovereign ( $\langle R_3, C_3 \rangle$ ) is worse than living in a state of nature.

	$C_1$	$C_2$	$C_3$
$R_1$	1	0	0
$R_2$	0	2	0
$R_3$	0	0	-1

Figure 3: Three Social Contracts

The problem here is that  $\langle R_3, C_3 \rangle$  is not a coordination point. It is not a coordination equilibrium—indeed it is not an equilibrium solution at all. The intuitive idea of coordination as “doing the same thing” departs from the formal idea of a coordination equilibrium.<sup>8</sup> In the ordinary language sense it looks as if we coordinate, but  $\langle R_3, C_3 \rangle$  clearly is not in equilibrium, so in the formal sense it is not a coordination equilibrium. Thus the analysis of coordination games does not justify the conclusion that all ways of “doing the same thing” are better than no coordination because, formally, some types of “action-in-concert” (LD: 108) are instances of non-coordination. Thus, just because we have a common policy  $X$  on matter  $M$ , it does not follow that  $X$  is a coordination equilibrium. The less harshly we describe the “state of nature,” the more common policies actually fail to be coordination equilibria. And even if some ways of doing the same thing are genuine coordination equilibria, that is not enough: only if we have the Pareto dominance of coordination (§II), can we present a plausible case for the authority of law.

The upshot of all this is that other things equal, the more attractive the no-agreement points, the more possible common policies—legal systems—will fail to Pareto dominate them. This has deep consequences for *Law and Disagreement*. Waldron

advances a number of arguments against entrenched constitutional rights, but consider what he tells us is “the deepest reasons of liberal principle for being unhappy about a Bill of Rights” (LD:221):

When a provision is entrenched in a constitutional document, the claim-right (to liberty or provision) that it lays down is compounded with an immunity against legislative change. Those who possess the right now get the additional advantage of its being made difficult or impossible to alter their legal position. That can sound attractive; but, as W. N. Hohfeld emphasized, we should always look at both sides of any legal advantage [citation omitted]. The correlative to the claim-right is of course the duty incumbent upon officials and others to respect and uphold the right. And the term correlative to the constitutional immunity is what Hohfeld would call *a disability*; in effect, a disabling of the legislature from its normal functions of revision, reform, and innovation in the law. To think that a constitutional immunity is called for is to think oneself justified in disabling legislators in this respect (and, thus, indirectly, in disabling the citizens they represent) (LD: 221).

We can now see that, surprisingly, the disability to which Waldron objects is soundly grounded in the legal coordination game. Assume that we do not embrace a Hobbesian state of nature, but we make the no-agreement points (regarding civil society) less harsh—say people order the outcomes in a way closer to a Lockean story. Given this Lockean sort of ordering, legal systems that are understood by some as making them worse off than they are in the state of nature—say because people *believe* such systems violate fundamental rights to life, liberty and property<sup>9</sup>—will not be genuine coordination

equilibria at all. Moreover, even if some arise as coordination equilibria because of the choices of others (e.g.,  $\langle R_3, C_3 \rangle$  in Figure 2), they may not Pareto-dominate all versions of the state of nature. It follows, then, that insofar as the authority of law derives from its role in *improving everyone's lot* by helping to achieve coordination in the face of disagreement (LD: 108), it has no authority if it selects a way of acting together,  $X$ , that is not Pareto superior to some state of nature,  $Y$ .  $X$  would not be a solution to the legal coordination game. Its way of acting together does not improve the lot of some: we cannot expect them to grant authority to state that fails to improve on the state of nature. The very thing to which Waldron objects—the legislative disability—is precisely what follows from the legal coordination game's account of political authority. Entrenched rights identify “actions-in-concert” that are not Pareto-dominant to all states of nature, and so cannot be solutions to the legal coordination game.

It appears, then, that unless Waldron wishes to take the Hobbesian route of characterizing all no-agreement points as horrendous, and so claim that all ways of acting together are coordination equilibria that Pareto dominate all ways of “going it alone,” he cannot both assert that the key to legislative authority is the way in which it assists in solving the legal coordination problem and that there is something disturbing in principle about legislative disabilities. If it is the case that legislation has coordinative authority only insofar as it is required to solve the legal coordination game, then in all those cases in which its directives would fail to do so because the directives are not Pareto superior to some no-agreement point, it does not have authority.

#### IV. Legislation as Coordination

Waldron's main concern, however, is not a coordination analysis of political life in general, but of politics, and especially of legislation. Waldron is, of course, right that there are some things on which we need to coordinate, and for some matters the coordination account is insightful. We all (or, very nearly all) agree that we need some laws of property, and that any regime of property rights is better than a free-for-all. Waldron, though, isn't just out to show that some of our current laws are coordination points (again, vis a vis the state of nature), but that we can understand debates about new laws, and our acceptance of their authority, as impure coordination games. "*A piece of legislation* deserves respect because of the achievement it represents in the circumstances of politics: action-in-concert in the face of disagreement"<sup>10</sup> (LD: 108).

The story, to recap, is this. We are considering a range of possible laws  $\{X, Y, Z\}$  with regard to some matter  $M$  (LD: 107). We each rank the alternatives differently (hence our disagreement). If the law enacted,  $Y$ , is the solution to a legal coordination game it must be the case that  $Y$  Pareto-dominates every no-agreement point. Now it would certainly seem that the obvious way to characterize the no-agreement points is that they all constitute no legislation at all on matter  $M$ , so each unilaterally acts in her preferred way. Thus, for Waldron to show that new legislation solves the legal coordination problem, it must be the case that "no law at all on  $M$ " ranks below every proposed (possible?) law in everyone's preference ordering. And that appears to be what Waldron does suppose: "Suppose too," he adds, "that we all know that  $M$  requires a common policy' (LD: 107).

This supposition, though, is manifestly contrary to fact. Overwhelmingly, in debates about new legislation a significant number of people believe that no common policy on *M* is required, or at least that no common policy is certainly better than many of the proposed ways of acting together. Given Waldron's very permissive conception of the reasonable,<sup>11</sup> on almost any issue there are reasonable citizens who believe that no common policy should be pursued. Debates about abortion, drug laws, environmental policy, trade policy, pornography, affirmative action and stem cell research are all examples: many would insist that some of the proposals offered by their fellow citizens are distinctly worse than no legislation at all. With pornography, for instance, classical liberals would insist that no common policy at all is the preferred option: people can read it, buy it, leer at it or whatever, if doing so is consistent with their other rights (such as property rights). Some people will prohibit it in their buildings, others won't: each going her way is the preferred option.

Over a very wide range of political issues, then, it would seem that for *each and every* proposal *P* in the set of options, a number of citizens will rank it as inferior to some no-agreement points: (1) those who prefer all no-agreement points to all agreement points, and so rank *P* and all others laws behind every way of going it alone, such as classical liberals in our pornography case; (2) those who prefer some, but not all, ways of going it alone to all ways of acting together and (3) those who prefer some non-*P* option to some no agreements, but prefer some no agreements to *P*. It thus seems almost impossible for any new law to be a solution to the legal coordination game.

Ah, one might say, but then no new law—liberty—is the common policy. Allowing porn (or abortion, or not regulating pollution or stem cell research) is itself a

policy, so there is no getting away from a common policy. This *prima facie* tempting reply totally trivializes the idea of a coordination game and Waldron's use of game theory. On this view every cell in Figure 1 is a coordinated outcome; it is just that sometimes we coordinate by doing things differently. There no longer is a no-agreement point, for every cell constitutes a "coordinated" outcome. That clearly won't do, for not every cell satisfies the requirements of being a coordination equilibrium.

Let us consider the problem more carefully. Suppose that at time  $t$  we are playing a coordination game, and have arrived at an equilibrium. Suppose that the game involves simply the first two rows and first two columns of Figure 4 (the shaded cells); and we have an equilibrium at  $\langle R_1, C_1 \rangle$ , a certain set of laws regarding property rights and personal rights. Now suppose at time  $t+1$  a proposal is made to add to the set of laws a statute against selling pornography (the unshaded cells).

	$C_1$	$C_2$	$C_3$
$R_1$	1	0	0
$R_2$	0	2	0
$R_3$	0	0	1.5

Figure 4: Old Laws and New Laws

Although  $\langle R_3, C_3 \rangle$  is a Pareto-dominant equilibrium point (vis a vis all uncoordinated outcomes), it does not Pareto-dominate the current coordination equilibrium. It does not solve any sort of coordination problem, because there already is a coordination equilibrium. Even though Row prefers  $\langle R_3, C_3 \rangle$  to the status quo, she would not defect from  $\langle R_1, C_1 \rangle$ , and of course Column has no incentive at all to move to  $\langle R_3, C_3 \rangle$ .

A factor upsetting the current equilibrium would do the trick. If we are no longer at an equilibrium point, then we do not have to be moved away from one. Thus, it has been suggested to me that we might imagine that the current laws regarding property rights are no longer in equilibrium because, say, environmentalists refuse to obey them any longer, believing that they support environmental policies that environmentalists view as wrong. Hence the environmentalists might violate the property rights of logging firms or petroleum companies. Thus we require a new law to regain coordination. Such a situation is depicted in Figure 5 (again, the original game is the shaded cells, the game at  $t+1$  includes all the cells).

	$C_1$	$C_2$	$C_3$
$R_1$	1	0	0
$R_2$	0	2	0
$R_3$	1.2	0	1.5

Figure 5: Destabilizing New Preferences

Now given Row's new preferences, what was previously an equilibrium  $\langle R_1, C_1 \rangle$  no longer is, and the new law  $\langle R_3, C_3 \rangle$  is indeed in equilibrium. But this account takes as its starting point that Row, the environmentalist, undergoes a preference change such that he prefers each going their own way, i.e.,  $\langle R_3, C_1 \rangle$ , to acting together,  $\langle R_1, C_1 \rangle$ . Notice, though, that *this provides a coordination account of new laws only by undermining Waldron's main claim*: that though we all have different preferred common policies, we all agree that a common policy is better than each going it alone. Row does not think this in Figure 5 at  $t+1$ : Row now would prefer going it alone unless Row gets his preferred outcome—and that is why Row violates the property rights of owners under the current regime.

This account of new laws is thus paradoxical. If there is no preference change, the current laws are in equilibrium, and there will be no movement to a new law. On the other hand, there can movement to new laws if some change their preferences and begin to disobey the current laws such that we no longer have coordination. But this requires that some prefer going it alone to having some (i.e., status quo) common policies, and that is precisely counter to Waldron's idea of the "circumstances of politics."

Of course exogenous factors may be such that new problems arise. More sophisticated evolutionary models can explain why small changes in circumstances and behavior can lead to new equilibria. I do not wish to insist on a static model (though, it should be noted, Waldron gives no clue whatsoever as to how he might wish to include an analysis of dynamic equilibria into his theory of law). Even in the type of simple games we are considering, however, we can build in a rationale for changes of equilibria, e.g., when a new law would Pareto-dominate the current law, and so everyone agrees that the addition of the new law is better, as in Figure 6.

	$C_1$	$C_2$	$C_3$
$R_1$	2	0	0
$R_2$	0	1	0
$R_3$	0	0	2.5

Figure 6: Pareto-dominance of a New Law

Again, the current game is in the shaded area, but because of exogenous factors the third row/column become available. Although  $\langle R_1, C_1 \rangle$  is still in equilibrium, it is not in *strong equilibrium*<sup>12</sup> as  $\langle R_3, C_3 \rangle$  Pareto-dominates it. We can easily imagine, then, that a political authority might move us from the former to the latter. *This suggests a different model of new legislation: rather than seeing it as selecting coordination points and so helping to solve the legal coordination game, we might see politics and legislation as moving us around the matrix, from one coordination equilibrium to another.* At one point we have  $\langle R_1, C_1 \rangle$ ; then we take a vote and move to  $\langle R_2, C_2 \rangle$ , which is not Pareto-

superior, but simply preferred by a majority. New laws, then, do not help solve coordination problems, they move us from one coordination equilibrium to another.

This, I think, is the most attractive interpretation of Waldron’s account. But its plausibility depends on the equivocation between “ways of doing the same thing” and “coordination equilibria” that I pointed out in section III. Consider Figure 7:

	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>
R <sub>1</sub>	1 2	0 0	0 0	0 0
R <sub>2</sub>	0 0	2 3	0 0	0 0
R <sub>3</sub>	0 0	0 0	2.5 2.5	0 0
R <sub>4</sub>	0 0	0 0	0 0	4 -1

Figure 7: Legislation v. Coordination?

Suppose we start at  $\langle R_1, C_1 \rangle$ ; as in the previous figure, legislation can move us to a new coordination point,  $\langle R_2, C_2 \rangle$ , that Pareto-dominates it. But legislation is majoritarian, so it can also move us to a coordination point in which the majority (Row) endorses egalitarian measures, taking some gains away from Column, hence it can move us  $\langle R_3, C_3 \rangle$ . But for the same reasons it can move us  $\langle R_4, C_4 \rangle$ , which is not a coordination equilibrium at all. Once we allow that legislation can move us around the matrix, including to a point that is not Pareto-superior to the *status quo*, there is no reason to suppose that the legislation will really identify coordination equilibrium. Only by erroneously supposing that, by necessity, every way of doing the same thing is a coordination equilibria, could that seem plausible.

#### IV. A New Law or a Return to The State Of Nature?

The claim that legislative politics can be modeled as a legal coordination game might be saved if we can identify sufficiently nasty no-agreement points. If, for example, it plausibly could be maintained that all no-agreement points represent a return to the state of nature, then new legislation on  $M$  might be usefully modeled on the legal coordination game. For then  $M$  might plausibly be said to Pareto-dominate all no-agreement points. But, political rhetoric aside, it is a rare issue indeed in which the cost of inaction is political disintegration. Not even Hobbes' theory endorses this claim. It is at least plausible to interpret Hobbes as maintaining that any defection regarding any law threatens a return us to the state of nature. Suppose this is Hobbes' view. If so, then civil society itself is at stake with every decision whether to obey every law. However, even on this "Hobbesian" view, *ex ante* it is not the case in a Hobbesian state that all new legislation on  $M$  Pareto-dominates no legislation about  $M$  at all. As long as subjects have preference orderings, many are apt to prefer no action at all to the selected option. To be sure, once the sovereign makes his choice we might have something that looks like a coordination game: unilateral defection would no longer make sense. And of course, the Hobbesian case thus understood turns on "extremely strong assumptions"—which is a nice way of saying they are false.

A variant of this interpretation of new legislation as a legal coordination game has been suggested.<sup>13</sup> Consider what it might mean to say there is no law at all on matter  $M$ —for example, what might it mean to say there is no law at all regarding pornography. I have been supposing it means that the current legal system remains as it now is, but no additional law regarding pornography is introduced. But another possible interpretation employs a more modest version of the return to the state of nature view. Imagine that we

return to the state of nature in all matters regulating pornography. Thus the baseline is not all current laws that protect owners of adult bookshops, property rights, privacy, etc., but a return to the state of nature regarding all these matters, so that each person is now at liberty to do anything she wants with pornography, from reading it, to burning it and, presumably, burning adult bookstores and pornographers. Call this the *hole of the web of law* interpretation: we imagine no agreement points as absences of any legal regulations relating to this matter. If *that* is the baseline, then any new law regarding pornography will apt to be Pareto-superior to a hole in the web of law. Again, the trick is to depict the no-agreement points in a sufficiently dastardly fashion so that anything would be better.

But this seems an awfully odd way to conceive of our coordination problem. Go back to Figure 1, the simple battle of the sexes problem. According to the hole in the web of law interpretation, although we now have an coordinative equilibrium (say  $\langle R_1, C_1 \rangle$ ), moving to  $\langle R_2, C_2 \rangle$  also can be explained in terms of solving a coordination problem as it is better than either of the uncoordinated outcomes. Suppose that we are now at the fights ( $\langle R_1, C_1 \rangle$ ) and my wife proposes that going to the ballet solves our coordination problem, because it is, after all, better off than no coordinated outcome at all! But if we are now in a coordinative equilibrium, we have already solved the coordination problem; saying that other equilibria are better than no coordination at all hardly gives us a coordination reason to move from where we are. Indeed, it misunderstands the concept of an equilibrium.<sup>14</sup> Once we are at the fights, there is no coordination problem to be solved, even if my wife would have preferred the ballet. To be sure, we might think of legislation as simply moving us from one coordination equilibrium to another, but we have already considered and rejected that interpretation.

One suggestion that has been put to me is that this model of law might be insightful if all laws contained sunset clauses, so that at some point we were indeed thrown back into the state of nature. That, at least, would solve the puzzle of why we are constantly leaving equilibria. Numerous objections confront such an interpretation, most devastating of which is that our legal system seldom contains such clauses, so the coordination account could not explain our system. “The model would work if our system was different than it is” is not an especially compelling defense of a model of our legal system. More technically, this analysis would understand law as an iterated impure coordination game; those sorts of games have their own range of solutions that are not discussed by Waldron or other legal philosophers employing game theory.<sup>15</sup>

### **V. Coordination Games, Collective Action and the Rule of Law**

Although Waldron explicitly models the rule of law and legislation on coordination games, often it seems that he understands them differently, as collective action problems (LD: 201). Indeed, that he believes we have an *obligation based on fairness* to do our part in collective action suggests the possibility of free riders and prisoner’s dilemmas (LD: 239ff). So law might be understood as achieving a public good, which we all wish but would prefer to obtain without paying the costs of obedience. This, of course, points to a very different way of understanding the rule of law.<sup>16</sup> Whatever problems there may be with understanding law as a type of collective action problem, it has one great advantage over coordination accounts: it makes sense of the centrality of sanctions to law. As Leslie Green effectively demonstrated with respect to an earlier generation of coordination theories of law, it is exceedingly difficult for coordination theories to

plausibly account for the role of sanctions in law.<sup>17</sup> Finnis acknowledged this: if law was an impure coordination game, “deviance would not be so much wrong as irrational—unintelligible.”<sup>18</sup> If we are in a coordination equilibrium, no one has an incentive to unilaterally defect, even if some would prefer other equilibria. To be sure, it is possible to work in sanctions in a round-about way—perhaps they are signals letting people know what are the coordination points are. But it is hard to see how this accounts for the role of law enforcement in our political society. It is certainly a stretch. Given the amount spent on policing and punishment, it would be an extraordinarily expensive way of letting people know what the law is.

## **VI. Conclusion: Law and Coordination Games**

I have not argued here that it is unreasonable or erroneous to understand the law as coordinative. Perhaps Finnis is correct that there is a distinct, non-technical, notion of coordination that can be appealed to—some way that makes sense of not wanting to be played for a “sucker” by non-cooperators (one cannot be played for a sucker in a coordination game).<sup>19</sup> And without doubt one of the functions the law plays is to allow us to gain benefits from coordinating our activities. But it does not follow that this long-standing insight is enhanced by trying to employ game theory, and especially if one claims, as does Waldron, that a specific sort of game is the primary model for understanding all of law. My point here is not the banal one that any model of legal authority is apt to leave something out: as Waldron reminds us, models of authority have to be purchased “wholesale, not retail” (LD: 121). Rather, I have argued that the whole attempt to employ game theory in this way is misguided. It fails to appreciate the

requirements for a solution to the game, what would have to be true for law to actually be an equilibrium solution, *and how our current understanding of the law would actually be undermined by depicting it as an equilibrium solution.* Perhaps a much more sophisticated version, building in an analysis of dynamic equilibria, could do the job, but surely simple static games are not the place to look.

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## Notes

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<sup>1</sup> Earlier versions of this paper were delivered at the 2001 meeting of the American Political Science Association and to the Law Faculty at the Universidad Torcuato Di Tella. I would like to especially thank Jeremy Waldron, Larry Alexander and Guido Pincione for their comments and suggestions.

<sup>2</sup> Jeremy Waldron, *Law and Disagreement* (Oxford: Oxford University Press, 1999), p. 102. Hereafter referred to as “LD.”

<sup>3</sup> R. Duncan Luce and Howard Raiffa, *Games and Decisions* (New York: John Wiley and sons, 1957), p. 90.

<sup>4</sup> John M. Finnis, “Law as Co-ordination,” *Ratio Juris*, vol. 2 (March 1989): 97-104.

<sup>55</sup> David Lewis, *Convention* (Cambridge, MA: Harvard University Press, 1969), p. 15. Emphasis in original. See also Jean Hampton, *Hobbes and the Social Contract Tradition* (Cambridge: Cambridge University Press, 1986), p. 138.

<sup>6</sup> This is not the same as saying that each equilibrium point is a strong equilibrium. An equilibrium is in strong equilibrium when no outcome Pareto-dominates it; I am only requiring that no uncoordinated outcome Pareto-dominates any coordinated outcome. See Peter C. Ordershook, *Game Theory and Political Theory* (Cambridge: Cambridge University Press, 1986), p. 305. Cf. Leslie Green’s condition (2c): “(almost) everyone prefers that everyone conform to some [norm] *R* rather than not conform to any.” “Law, Coordination and the Common Good,” *Oxford Journal of Legal Studies*, vol. 3 (Winter 1983): 299-324 at p. 302.

<sup>7</sup> See Noel B. Reynolds, “Law as Convention,” *Ratio Juris*, vol. 2 (March 1989): 105 –

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120 at p. 107 and Green, “Law, Coordination and the Common Good,” p. 301. In a footnote to LD, Waldron suggests that much of the force of Green’s criticism of modeling law as a coordination game is only directed against the particular version Green was attacking (Finnis). I believe that this under-appreciates the force of many of Green’s insightful points. Waldron does not pause to explicitly respond to Green’s detailed criticisms.

<sup>8</sup> See Lewis, *Convention*, pp. 10ff.

<sup>9</sup> It should be stressed that it only matters what they believe, and so how they order the outcomes. Nothing depends here on the claim that there actually are such rights. See Green, “Law, Coordination and the Common Good,” pp. 309ff.

<sup>10</sup> Emphasis added.

<sup>11</sup> On this see David Estlund, “Jeremy Waldron on Law and Disagreement,” *Philosophical Studies*, vol. 99 (2000): 111–128.

<sup>12</sup> See above, note 6.

<sup>13</sup> At the roundtable on his *Law and Disagreement* at the 2001 American Political Science Association annual meeting, San Francisco, CA.

<sup>14</sup> Again, an analysis of dynamic equilibria could explain why small changes in behavior might gradually move us to a new equilibrium. This holds the possibility for a more sophisticated coordination analysis of law, though it is not clear it would overcome the problems of the baseline that I explored earlier in this paper. Although I cannot go into it here, such a dynamic analysis seems more consistent with a stress on the common law (as opposed to explicit legislation), as a dynamic equilibrium incrementally responding to

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exogenous changes.

<sup>15</sup> See e.g., Nabil Al Najjar, “A Theory of Forward Induction in Finitely Repeated Games,” *Theory and Decision*, vol. 38 (1995): 173-193.

<sup>16</sup> See Edna Ullmann-Margalit, “Is Law a Coordinative Authority?” *Israel Law Review*, vol. 16(1982): 350-55. But cf. Green, “Law, Coordination and the Common Good,” p. 317.

<sup>17</sup> Green, “Law, Coordination and the Common Good,” p. 317ff.

<sup>18</sup> Finnis, “Law as Coordination,” p. 99.

<sup>19</sup> *Ibid.*, p. 102.