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THE COORDINATION VALUE OF REGULATION

Ellie F. Baker* and Cass R. Sunstein**

ABSTRACT

The current method used by the United States Government to calculate benefits and costs does not accurately measure the monetary value of some regulations. The problem is that the method fails to recognize the possibility that individual valuations, reflecting judgments in a relatively isolated, uncoordinated situation, might be significantly different from individual valuations in a situation of coordination. For example, people might be willing to pay \$X for a good, supposing that other people have that good, but might be willing to pay \$Y to abolish that good, supposing that no one will have that good. Or people might be willing to pay \$X to protect members of an endangered species in their individual capacity, but far more than \$X for the same purpose, assuming that many others are paying as well; one reason may be that an individual expenditure seems futile. We sketch, identify, and explain this unmeasured value, which we define as coordination value, meant as an umbrella concept to cover several categories of cases in which individual valuation measured in the uncoordinated state might be inadequate. Changing the methodology of benefit-cost analysis to consider coordination value would present serious empirical challenges, but would eliminate the estimation error.

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A new regulation may not be promulgated in the United States unless its benefits justify its costs, unless some source of law requires another regulatory approach (Executive Order No. 12866, 1993). In this Article, we argue that in cases where current benefit-cost analysis (BCA) assesses the value of a regulation using the value of actions taken in an uncoordinated state, BCA has a potentially serious gap: it does not capture any or all the value that comes from the coordinated action mandated by a regulation.

Throughout this Article, by “the uncoordinated state” we mean the state in which an individual exists prior to a regulation, and by “the coordinated state” we mean the state produced by the regulation. The problem is that people’s valuations, made individually and in relative isolation, may differ from their valuations, made as part of a group, all of whom will be committed or bound. We define the difference as *coordination value*, a term that is meant as a kind of umbrella, covering diverse situations in which individual valuations made in an uncoordinated state do not represent the welfare benefits of regulations that produce a coordinated state. We demonstrate the existence of coordination value, discuss factors that influence its direction and magnitude, argue that coordination value can be included in BCA, and consider how including coordination value changes which regulations are justified. We intend the discussion as a kind of promissory note, in the form of preliminary sketch of a large set of problems, which would benefit, in the fullness of time, from sustained analysis and from empirical testing (see Sunstein, 2022).

Beyond the Lone Ranger

Decades ago, some of the conceptual foundations for consideration of coordination value were set out in the environmental context in two widely neglected essays by Amartya Sen (Sen, 1995; 2000). Sen urged that individuals’ willingness to pay (WTP) to protect nature, or some

other environmental good, might be influenced by whether WTP is being elicited in people's individual capacity or as part of a group, all of whom would be bound. In the context of valuation of environmental goods, Sen objected to what he called the "Lone Ranger" model, which neglects to ask whether people's valuations might be different, or greater, if they knew that other people would be contributing too (Sen, 1995; 2000). Rejecting the Lone Ranger model, Sen asked, "How might we make better use of the social choice approach to interpret this valuational issue?" (Sen, 2000) He did not answer that question. The inclusion of coordination value in BCA is our response. We show both the scope of the valuation issue and how coordination value can address the valuation issue for multiple applications, extending well beyond the environmental context.

Our work is meant to add to a literature that aims to improve policy assessments by ensuring they attend to factors that are sometimes neglected in BCA, including social interactions, behavioral biases, and program interactions. An important condition for this research, and for BCA, is the rigorous collection and public distribution of relevant datasets. In an important paper, Kniesner and Grodner call for improved estimates of labor response to tax reform by expanding the labor supply model to include social interactions (2006, 2008). Wage elasticity is the percentage change hours worked produced by a percentage change in salary and is a significant indicator of the impact of tax reform. Accurately modeling social interactions in a labor supply model improves estimates of wage elasticity, because a change in wage has a secondary effect (Kniesner and Grodner, 2008). The central point is that individuals change the number of hours they work in response to a change in average hours worked in their community, which in this case is produced by a change in wage (Kniesner and Grodner, 2008). According to Kniesner and Grodner, wage elasticity that is estimated without specifying, or incorrectly

specifying, the effects of social interaction is respectively 40 percent and 60 percent lower than that estimated correctly specifying those effects (Kniesner and Grodner, 2008).

Similarly, policy assessments that disregard how policies interact with one another may miss important impacts and opportunities for improvement. For example, the extent to which the Occupational Safety and Health Act of 1970 (OSHA) and worker's compensation insurance (WC) reinforce one another is influenced by the degree of experience rating of WC insurance premiums (Kniesner and Leeth, 1989). The degree of experience rating is the extent to which insurance premiums are set based on the accident history of a particular workplace, as opposed to the accident history of an industrial class (Kniesner and Leeth, 1989). When WC is completely experience rated, the programs complement one another, but when WC is only partially experience rated, they do not (Kniesner and Leeth, 1989). The work described shows how updating policy assessments to include complex and previously unspecified dynamics can make assessments more accurate and may significantly change their results.

Issued in 2003, OMB Circular A-4, which guides BCA, recommends consideration of how behavioral biases may produce a need for regulation and affect regulatory outcomes (referring, for example, to "mental rules-of-thumb that produce errors"), but it does not discuss how individuals' valuations may be contingent on coordinated versus uncoordinated states (the dynamic that produces coordination value) (Circular No. A-4, 2003).¹ This is a serious gap. Throughout this Article, we describe and rely on a body of literature that explores, both theoretically and empirically, how individuals' valuations may depend on the actions of others.

¹ The Circular A-4 was updated in 2023, but the new circular was ordered to be rescinded on January 31, 2025 (Executive Order No. 14192, 2025), and the 2003 version was ordered to be restored. The 2023 Circular A-4 included significant revisions to the 2003 circular. But aside from a brief reference to positional goods, the 2023 Circular A-4 did not discuss how individuals' valuations may be contingent on coordinated versus uncoordinated states.

These studies help orient our identification and estimation of various kinds of coordination value. Aggregating and ordering this literature under the umbrella of coordination value is one of our central aims here, in an effort to establish the broader importance of considering coordination value in BCA.

The State of the World: With and Without Coordination

Currently US BCA aims to predict and quantify “how the state of the world in the regulation’s presence would differ from the state of the world in its absence” (Quoted in Circular No. A-4, 2023; Circular No. A-4, 2003). To produce a typical BCA (formally called a Regulatory Impact Analysis), regulators, often including economists and scientists, work together to identify desired outcomes. Those outcomes might include, for example, mortality reductions, morbidity reductions, economic savings, reduced emissions of greenhouse gases, protection of endangered species, and reduced harms to natural resources, personal property, and real property (Circular No. A-4, 2003). To the extent feasible, regulators are required to quantify these outcomes by estimating their magnitude and monetize them by estimating how much individuals are willing to pay to obtain (WTP), or accept to give up (WTA), a particular regulatory outcome (Circular No. A-4, 2003).

When valuing fatality reduction (the value of a statistical life), regulators typically rely on WTP. Both WTP and WTA are estimated using revealed or (more rarely) stated preferences, where revealed preferences are determined by observing individuals’ tradeoffs in real life, and stated preferences are determined by asking individuals their WTP or WTA for an outcome as a hypothetical question (Circular No. A-4, 2003). OMB Circular A-4, which guides BCA’s measurement of WTP and WTA, does not discuss how valuations may be contingent on whether a state is coordinated or uncoordinated; stated preference surveys and revealed preference

calculations likewise disregard the possible disparity. At least some monetary values in BCA exclude or do not fully account for coordination value, because these values are obtained by measuring individuals' WTP or WTA in an uncoordinated state.

To see the potential importance of coordination value, consider protection of endangered species. People might be willing to pay \$X for that purpose, if they are paying in relative isolation. But they might be willing to pay far more than \$X for that purpose, contingent on other people also contributing (Sen, 1995). We can readily imagine a similar disparity in many areas involving regulatory policy, including protection of pristine areas, public parks, the ozone layer, and animal welfare (ibid.).

Neglecting coordination value may lead to significant undervaluation of the net benefits of regulations in multiple domains. For example, consider the consequences of ignoring coordination value when assessing a hypothetical privacy regulation. Suppose that regulators estimate that a regulation would remove the data of one million individuals from the databases of certain organizations. Regulators will ignore coordination value if they use individuals' WTP to remove their own data from organizations' databases, all else held equal, as a proxy for individuals' WTP to remove their data, as well as their community's data, from the databases of the relevant organizations, assuming their WTP would be matched by all members of their community. Unless your community's data is also removed, the removal of your data might turn out to be meaningless or close to it, because it might well be possible to obtain all or most of your data from the community's data. It follows that the coordination value of data removal is likely to be positive and high. Unless coordination value is taken into account, BCA will substantially underestimate the value of privacy regulation.

Or consider social media. People might be willing to pay \$X to have access to a social media site, supposing that everyone else has access to that site. But it is also possible that people would favor, and be willing to pay for, regulation that would ban that site, supposing that the ban would be universal (Bursztyn et al., 2023). People are willing to pay for goods that they wish did not exist (id.; Sunstein, 2024). In this context, a regulation solves a coordination problem, sometimes in the form of a stag hunt game (Skyrms, 2004). When it does so, eliciting people's WTP in relative isolation will not adequately capture the welfare benefits of regulation; it might even get the sign wrong.

Coordination value can be positive, as illustrated in the examples above, but in other cases it can be negative. Consider coordination value caused by congestion externalities. In relative isolation, an individual might be willing to pay a high amount to obtain access to a stretch of wilderness. But the same person might be willing to pay far less if asked their WTP to obtain access to the stretch of wilderness, assuming their WTP would be matched by, and access granted to, all members of their community. Because of negative coordination value, BCA that uses individuals' WTP in the uncoordinated state will produce an overestimate of the welfare benefits of a road providing access to the stretch of wilderness. Depending on the regulation, coordination value can be high or low, positive or negative. There is a significant degree of uncertainty present in any BCA without explicit specification of coordination value.

Identifying coordination value

Recall that coordination value is the difference in value an individual obtains from taking an action in a coordinated state as opposed to in an uncoordinated state. Ideally, the value of an action would be identified in the context of a game of complete information, defined as one in which the payoffs for all players are known (Sen, 1995). Payoffs are based on the actions of an

individual *and* all other players in the game. Standard BCA assumes a game of complete information where the players' payoffs are to some extent independent of others' actions (Sen, 1995). For many purposes, that is a reasonable assumption (Viscusi, 2018). In important cases, however, an individual's valuation of an action is dependent on what other people do, generating coordination value. Consider access to a network: Whether such access is valuable depends on how many people have access to the network. Or consider protection of a cultural amenity (a museum, an old building, an artifact): How much people will be willing to pay to provide that protection might well depend on whether and how much other people are paying to provide that protection (cf. Sen, 1995).

Consider the very different case of reduction of mortality risks: How much people might be willing to pay to reduce mortality risks might depend on whether other people are also paying, and being helped, as well (cf. Kniesner and Viscusi, 2002). In this sense, a union member's valuations for increased safety in their workplace may be more likely to reflect the coordination value of a safety regulation than an individual's choice to move to a job with lower salary and higher safety. This may be true insofar as the union member's valuation is made as part of a group, all of whom are committed or bound, whereas the individual's valuation is made in relative isolation.

The table below contrasts the game we have described, where players' payoffs are dependent on others' actions, with the game assumed by standard BCA. While standard BCA assumes that players' payoffs are to some extent independent of others' actions, it does not necessarily follow that coordination value is always absent from standard BCA valuations. Insofar as the action a person values in the uncoordinated state allows them to enter into a situation where their action is more coordinated with others, their WTP will reflect some

coordination value. Valuations used in standard BCA may produce no such change in action coordination (in which case $\alpha = 0$ and coordination value is excluded), a change in action coordination equal to that produced by the regulation (in which case $\alpha = 1$ and coordination value is correctly specified), or some change in action coordination that is less than that produced by the regulation (in which case $0 < \alpha < 1$ and coordination value is partially included).² Unless adjustments are made to existing BCA, valuations recorded in states that are not completely coordinated may be incorrect because of missing coordination value. Payoffs in the game we describe can be modeled as follows:

$$U_{\text{coord}}(a) = U_{\text{uncoord}}(a) + c(n(a)) \quad (1)$$

a is binary and represents whether an individual takes a particular action.

$U_{\text{coord}}(a)$ is the utility an individual derives from taking an action a in the coordinated state.

$U_{\text{uncoord}}(a)$ is the utility an individual derives from taking an action a in the uncoordinated state.

C is coordination value and is a function of n , the number of people who will also take the action contingent on the individual acting ($a = 1$).

Table 1. Potentially inaccurate game assumed in status quo BCA.

Individual/everyone

Action

Unspecified action

² Here we assume regulation will always produce the maximally coordinated state. This is not necessarily the case, and dropping the upper bound on α could pose interesting questions beyond the scope of this Article.

Action	Uncoordinated action payoff + α coordination value	Uncoordinated action payoff + α coordination value
No action	n/a	0

Table 2. Game that includes coordination value.

Individual/everyone

	Action	Unspecified action
Action	Uncoordinated action payoff + coordination value	Uncoordinated action payoff + α coordination value
No action	n/a	0

Where α is between $[0, 1]$. Only the payoffs to the individual are included in the matrices above. The payoffs to everyone are equal to the payoffs to the individual multiplied by the total number of people in the game.

Coordination value is frequently caused by solution of a collective action problem (typically in the form of a prisoner's dilemma or a stag hunt game). We now disaggregate various kinds of coordination value, without contending that our treatment is exhaustive. Most of the examples involve positive coordination value but as we have noted, that value can also be negative. For simplicity, the examples involve situations in which all parties take the same action in the coordinated state produced by a regulation. But regulations can of course produce a coordinated state without requiring identical actions from all parties. For example, a regulation could require that firms use different hiring algorithms from one another, and in doing so, coordinate behavior. In these cases, coordination value may also exist.

Futility and coordination value

Suppose that people are asked how much they are willing to pay to protect a pristine area. They might say little or nothing, not necessarily because they do not care about pristine areas, but because they might think, rationally enough, that their own contribution will be essentially futile. By contrast, they might be willing to pay a significant amount if and only if other people do so as well (Sen, 2000). The central point is that protection of pristine areas might not be worth much in the way of money or time unless people can solve some kind of collective action problem. It might be a stag hunt game (Skyrms, 2004); it might be a prisoner's dilemma. Regardless, individuals' low valuations in the uncoordinated state may be the result of an inability to solve a collective action problem, rather than a low valuation or the equilibrium that would emerge from a solved collective action problem. When it is easy for individuals to solve a collective action problem voluntarily, they will of course choose to do so (Ostrom, 2000; Dietz et al., 2003). If they cannot solve that problem, there will be a standard market failure. If, in such cases, regulators use people's monetary valuation in the uncoordinated state, they will substantially understate the monetary value of relevant regulation, which, by hypothesis, will solve the collective action problem.

Altruism and coordination value

When the value of an action in an uncoordinated state is used as a proxy for the value of an action in a coordinated state, regulators ignore the possibility that individuals value helping others. Such value can be seen as the coordination value of altruism, which refers to the fact that people derive value from considerations that do not involve their own well-being (Sen, 1995; Posner and Sunstein, 2004). Excluding or underestimating the coordination value of altruism is a

potentially serious gap in the valuation of a statistical life (VSL). Jones might be willing to pay \$X to reduce a statistical mortality risk that Jones faces, but other people might be willing to pay some fraction of \$X, and in extreme cases \$X or more, to eliminate a statistical risk that Jones faces. The issue has received considerable attention in the context of valuation of risks to children, where it is standard to focus on parents' WTP to reduce statistical risks (Kniesner and Viscusi, 2024). In some cases, it is possible to elicit people's WTP to protect others through market evidence (ibid.) or through surveys. Or consider animals; people may be willing to pay something to protect them, even if animals have no WTP.

Under the present method for estimating VSL, benefits that people obtain from the increased safety of others are typically ignored or underestimated, even though they might not be low in aggregate (Posner and Sunstein, 2004). It is true that existing estimates of VSL informed by revealed preferences may reflect some of the coordination value of a safety regulation if a worker benefits from moving to a safer workplace not only because their personal mortality risk is reduced but because they value working in an environment where their coworkers have a reduced mortality risk. But this valuation still does not reflect benefits to an individual from the *increased* safety of others; their former coworkers still face the same mortality risk as before. It is also true that existing VSL estimates may already include some degree of altruism if, for example, a worker knows that if he is injured or killed, others will be harmed, and if he includes an appreciation of those harms in WTP and WTA. This kind of altruism is not, strictly speaking, coordination value. But it is possible that people will focus on the adverse effects of risks only if, or more if, they are in a situation of coordination.

To clarify the importance of altruism and its relationship to coordination value, consider a hypothetical situation where you are jumping across a river. You have a 1 percent chance of

falling into the river and dying and a 99 percent chance of safely crossing. How much would you pay to avoid jumping across the river? Now consider how much you would pay to avoid jumping across the river with 99 other people, where in this case, one person is expected to die.

Considering a risk to a group, including oneself, is not the same as considering only a risk to oneself. When valuations are based on individual valuations of statistical risks faced in relative isolation, we lose a key value of collective risk reduction; the benefits that individuals derive from the increased welfare of others. People often care about one another, and they may be willing to pay something to reduce risks to other people.

To be sure, family members are different from strangers, and monetizing the relevant values is challenging. Note, however, that in 2023, U.S. citizens were found to have donated approximately \$373 billion to 501(c)(3) organizations (Martin et al., 2024). It seems clear that the exclusion of coordination value will result in at least some underestimation of individuals' value of a collective action in situations where the action helps not only oneself but also others.

Conditional cooperation and coordination value

Conditional cooperation has been documented in lab and field settings and occurs when people cooperate only if others cooperate as well (Gächter, 2007). In the lab, conditional cooperation is often tested using a linear public goods game where individuals choose how much of their money to contribute to a community pool that will be multiplied by some factor $\alpha > 1$ and then redistributed equally to all participants (Gächter, 2007). In representative studies, Fischbacher et al. (2001) and Fischbacher and Gächter (2006) find that when participants in a public goods game choose their contribution “as a function of other participants’ average contribution,” more than half are “conditional cooperators,” defined in these studies as individuals whose “contributions are a positive function of the others’ average contribution”

(Gächter, 2007). Applied to the regulatory context, individuals who are conditional cooperators will have lower WTP in the uncoordinated than coordinated states, producing coordination value. Defined by action rather than motive, conditional cooperation may be driven by the expected futility of individual action or the intrinsic value of reciprocity and trust (Gächter, 2007).

Relative position and coordination value

A status or positional good is one whose valuation depends on how much other people have (Frank, 1999; but see Killingsworth et al., 2023). For some or many people, money might be a positional good, at least in part. By contrast, safety might not be a positional good, in the sense that people may want to be safe regardless of whether other people are safe. Let us suppose, without insisting, that people care about their *relative* economic position, and not solely about their *absolute* economic position (Frank, 2024; Frank, 1999; Frank and Sunstein, 2001). If so, people will value, for some specified cost, an across-the-board increase in safety more than an increase in safety that they alone purchase at that specified cost, if the former results in no change in an individual's relative economic position, and if the latter reduces an individual's relative economic position (Frank, 2024; Frank and Sunstein, 2001). Efforts to increase safety might produce an increase in a good that is not a positional good, or that is not mostly a positional good, while producing a decrease in a good that is a positional good, or that is mostly a positional good.³ The problem is that such efforts cannot occur without collective action; people who compete over relative economic position are placed in a prisoner's dilemma (Frank, 1999). Notably, the now-rescinded 2023 OMB Circular A-4 drew attention to this point (OMB,

³ The sufficient condition for our point to hold is that individuals' WTP for safety is, on average, less affected by positionality than income. This is supported by both a comprehensive survey of evidence indicating income is, to some extent, a positional good (see Frank and Sunstein 2001) and the fact that even if safety is a positional good, individuals' WTP is unlikely to be affected by its positional character unless interpersonal differences in safety can be observed, and such differences are sometimes obscured in the relevant contexts (Frank and Sunstein 2001).

2023): “Externalities can also be associated with positional goods, which can exist if any increase in the relative position of one person lowers the relative position of others (and vice versa).”

This claim is an example of positive coordination value, because it means that individuals will value an action in the uncoordinated state (without regulation) less than the same action in the coordinated state (under regulation). After presenting research attempting to quantify the importance of relative economic position, one study tentatively estimates an adjusted VSL as much as 75% larger than the status quo (Frank and Sunstein, 2001). This adjustment is a reflection of coordination value, and however provisional and tentative (Kniesner and Viscusi, 2003), the estimation process is evidence of the potential viability of including coordination value in regulatory assessment.

Under other circumstances, positional goods may result in negative coordination value. Lateness may be a positional good; how much one cares about being late may depend on how late others are. An individual might be willing to pay significantly more to avoid being late in an uncoordinated state, when they cannot be sure of others’ lateness, than in a coordinated state, where all others at the meeting will also be late (or pay identical amounts to avoid being late). This example is unlikely to be relevant to regulation, but we can imagine others that are (cf. Bursztyn et al., 2023; Sunstein et al., 2024).

Certainty and coordination value

People prefer outcomes they consider certain to probabilistic outcomes that will provide them a benefit with the same expected value (Kahneman and Tversky, 1979). People are likely to consider outcomes from coordinated action certain (if everyone wears seatbelts, X lives will be saved) and outcomes from uncoordinated action probabilistic (if I always wear a seatbelt, I

reduce my mortality risk by Y percent). People's preference for outcomes that are considered certain means that they may value an action in the coordinated state more than the same action in the uncoordinated state. This valuation difference is a form of coordination value. It is possible that in some contexts, obtaining people's WTP in an uncoordinated state will produce an underestimate for that reason, though it is fair to question whether regulators should take into account the higher valuation of certain outcomes than probabilistic outcomes with the same expected value.

Product traps and coordination value

Sometimes people fall into "product traps"; they buy goods that they wish did not exist. Coordination value might come from taxing or abolishing the relevant goods. To frame the analysis, consider social media (Bursztyn et al., 2023). In large-scale, incentivized experiments, the authors ask

- TikTok and Instagram users' willingness to accept payment to give up their social media accounts individually, for a month (users demand \$59 and \$47 respectively);
- TikTok and Instagram users' willingness to pay or accept money to exist in a community where nobody uses TikTok and Instagram, which turns out to be a WTP (users are willing to pay \$28 and \$10 respectively)

This is a startling finding. People are willing to demand a significant payment not to use a product that they wish did not exist. The specific point is that as individuals, people would require real money to give up use of the social media platforms, suggesting that they obtain significant benefits from such use; but if they are part of a group, they would *pay* real money for the same thing, suggesting that use of social media produces significant costs.

If we can trust the data, a regulation that bans the relevant sites would generate significant welfare benefits. By contrast, use of individual WTP would suggest that such bans

would produce significant welfare losses. Use of individual WTP is therefore misleading; it gets the sign wrong! In the case of social media, estimating the coordination value of a social media ban may be easier than estimating the overall value of such a ban. This is because an estimate of the overall value of a social media ban may be inadequate without consideration of the alternatives that take social media’s place (Posner, 2024).

Table 3. *Identifying users’ coordination value and social media valuation from Bursztyn et al.*

Tik Tok:

individual/nation

	No Tik Tok	Tik Tok
No Tik Tok	$\$(-59 + 87 \text{ (coordination value)} = 28)$	-\$59
Tik Tok	Impossible	\$0

Instagram:

individual/nation

	No Instagram	Instagram
No Instagram	$\$(-47 + 57 \text{ (coordination value)} = 10)$	-\$47
Instagram	Impossible	\$0

Only the payoffs to the individual are included in the matrices above. The payoffs to everyone are equal to the payoffs to the individual multiplied by the total number of people in the game.

Bursztyn et al. identify the driver of these numbers; it is a product of the negative spillover effects on non-users. For an individual contemplating social media use in an uncoordinated state, the negative spillover effects experienced when not using social media surpass the negative welfare effects of social media use and help drive high valuation of social media (Bursztyn et al.³⁶, 2023). A coordinated state, for example abolishing the relevant sites so that community nonparticipation is guaranteed, eliminates these spillover effects (Bursztyn et al., 2023). A central and potentially general finding is the existence of “product market traps: coordination failures where some consumers are trapped in an inefficient equilibrium and would prefer the product not to exist” (ibid). The current BCA process will not identify product market traps unless it accounts for coordination value; including coordination value in BCA would make such traps visible. We think that product traps are common and individual WTP will fail to see them (Sunstein, 2024).

Conclusion

If BCA is undertaken without inclusion of coordination value, it might produce serious mistakes; the resulting figures will fail to capture the net benefits of regulations with high coordination value. Regulations with positive coordination value are common across multiple domains. For at least some regulations, coordination value is entirely or partially ignored by current estimates of welfare benefits. Without a change in current benefit-cost methodology, the monetary value of some regulations will be estimated incorrectly.

It is true that considering coordination value in BCA would present serious challenges. Empirical testing, including testing in real time and retrospectively, is essential to avoid overreaching (Sunstein, 2022). Still, considering that value would correct the relevant mistakes, which are, we think, likely to be large in magnitude.

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