Chapter 6

Conclusions

These conclusive pages advance a set of reflections on the current status of Rational Choice Theory and Positive Political Theory within contemporary debates in Political Science. The heyday of Rational Choice in the discipline occurred during the Eighties. Since the beginning of the new millennium, however, enthusiasm for this theoretical approach has substantially declined. One explanation lies in the methodological debates of the Nineties, when Rational Choice theorists were called upon to respond to the apparent lack of empirical validation for many of their analyses. For several political scientists, the outcome of this debate crystallized the definitive failure of the expansionary ambitions of Positive Political Theory within Political Science (Green and Shapiro 1994; Friedman 1995). As a consequence, the theoretical and formal sophistication achieved during the Eighties and Nineties has increasingly been absorbed into economic theory, often under the broader label of "political economy."

These pages also outline how reconstructing the entry of Game Theory into Political Science complements the broader historiography of the theory of games.

Formal Political Theory and Mathematical Economics. Riker's "Dilemma"

Behavioralism did not provide political science with either a unified method or a single theoretical framework, in the way that the postwar mathematical approach did for neoclassical economics. Nevertheless, Behavioralism represented the mainstream of the discipline throughout the Fifties and Sixties. After that period, however, no comparable unifying paradigm emerged in political science.

The decline of behavioralism resulted from multiple causes, most notably the dramatic transformations affecting American social sciences and society in the late Sixties. The Vietnam War and the student movement demanded new approaches to social inquiry, and no discipline was immune.[1]

[1] A notable parallel can be found in economics. In 1968, to protest the decision to hold the American Economic Association meeting in Chicago, where police had violently repressed largely peaceful demonstrators, several prominent economists, including Lawrence Klein (later Nobel laureate in 1980), organized an alternative meeting in Philadelphia, an unprecedented and never-repeated event.

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Many younger scholars began to question political science's role in interpreting, and potentially legitimizing, these events. Within the heterogeneous anti–Vietnam War movement, the "Caucus for a New Political Science" was established in 1967 (Dryzek 2006).

Despite resistance from behavioralists, David Easton's 1969 American Political Science Association presidential address attempted a conciliatory response to these emerging critiques. Easton explicitly referred to a "new revolution in political science" and articulated seven core tenets of what he called a "Credo of Relevance" (Easton 1969, p. 1052). These included claims such as the priority of substance over technique and the contention that behavioral science concealed an ideology of empirical conservatism.

More generally, the rallying cry of the post-behavioral revolution involved a politicization of the profession. In particular, it rejected the pretense of value-free social science, one of the defining features of Behavioralism. This rejection was motivated, in part, by the observation, explicitly made by Easton, that political science as a discipline had failed to anticipate the social and racial crises that engulfed the United States in the latter half of the Sixties.[2]

Finally, Easton also issued a call for what he described as "creative speculation." By this expression, he meant, following "the great political theorists of the past", the formulation of "new and often radically different conceptions of future possible kinds of political relationships" (Easton 1969, p. 1058). Beyond what might appear as a mere appeal to utopian thinking, Easton advocated "boldly speculative theorizing" that would build upon, rather than reject, the findings of contemporary behavioral science, and that would reflect on the implications of these findings for political life within alternative and explicitly articulated value frameworks (ibidem).

As discussed earlier, Riker's attitude toward Behavioralism exhibited little, if any, hostility. On the contrary, his theoretical agenda ran parallel to and, at least in his own assessment, complemented the reformist aspirations advanced by Behavioralists. At the same time, however, he identified what he regarded as the major shortcomings of Behavioralism, most notably its weak theoretical foundations and its lack of a clear conception of individual action. As Riker put it, "the behavioralists [...] were totally atheoretical. They had no picture of human beings." (Riker and Shepsle 1979, p. 21)

Moreover, Riker understood the development of political science as a cumulative enterprise, in which superior theories gradually supplanted or complemented earlier ones. For this reason, he did not align himself with the post-behavioral revolution, primarily because the call for politicizing the discipline appeared to him conceptually misguided. He even seemed to reject the very label "Post-Behavioral." In his view, the call for an orientation of political science beyond mere empirical data collection could be adequately captured by the simple notion of "science" itself. By contrast, he argued that "the post-behavioral revolution, as other people use the word, seems

[2] As evidence, Easton pointed to the negligible number of articles published in the American Political Science Review between 1958 and 1968 addressing issues such as racial conflict, urban crises, poverty, violence, and civil disobedience.

to refer to the success [that] Straussians and others of that sort have had in persuading people that science is biased" (Riker and Shepsle 1979, p. 127). While Riker did not oppose the practical or reformist motivations behind the project of a science of politics, he insisted that even such an enterprise required rigorous scientific and methodological foundations that, in his view, Behavioralists had acknowledged, but which Post-Behavioralists were threatening to undermine.

Riker never abandoned his methodological commitment to what he called a "genuine science of politics." At the core of this commitment lay a precise expectation: the possibility of generating genuine explanations and predictions in the social sciences, analogous to those seemingly produced by economics. Yet his conception of political theory evolved in a markedly different direction. This shift was closely related to the feasibility of producing reliable predictions in political science and to the role of what he termed "political craftsmanship," as distinct from straightforward models of rational action. It also illuminates how Riker assessed the achievements of Positive Political Theory and the relationship between economics and political science.

A key text for reconstructing Riker's evolving stance toward both economics and formal political theory is a 1977 review essay, aptly titled *The Future of a Science of Politics* (Riker 1977). In this piece, Riker once again criticized particularistic explanations of political events, emphasizing instead the importance of general analysis. This position rested on what he explicitly described as a "positivistic view of science," whose core requirement was the existence of scientific laws, understood as "well-verified generalizations." Importantly, Riker defined scientific laws not only as empirical regularities discovered through observation, but also as theorems derived from axiomatic systems. He appeared to attribute equal scientific status and explanatory force to both.[3]

For Riker, the paradigmatic model of such a science was Price Theory, which, he argued, "satisfies, in structure and outcome, [his] notion of what a science is just as well as, perhaps, physics." (Riker 1977, p. 22) Price Theory holds that prices are determined through the equalization of supply and demand in a competitive market. The law of demand, for instance, can be derived by empirically validating how quantities demanded respond to changes in prices. This empirical evaluation can then be extended through axiomatic reasoning, yielding a theory of consumer choice. Although Riker regarded the supply side of Price Theory as less empirically intuitive than the demand side, economists ultimately generalized both into a theory of competitive equilibrium. As he summarized:

> "[This theory] contains all the elements in our previous description of a science. It starts with an empirical law, which is presumably universal when properly restricted. This law is

[3] "Law and axioms thus reinforce each other. The necessity of the inference makes the law seem reasonable, and the empirical validity of the law makes the axioms seem true. Thus, with a theory there is a much stronger reason than mere observation to accept a scientific law" (Riker 1977, p. 15).

> then imbedded [sic] in a theory of choice. In turn, this initial theory is elegantly elaborated to produce a nonobvious and far from trivial inference about market clearing, which is in turn strongly supported by empirical evidence." (Riker 1977, 21–22)

As noted earlier, Riker identified three core political problems that, in his view, were amenable to theoretical treatment analogous to Price Theory: spatial models of electoral competition, the influence of voting rules on electoral outcomes, and theories of political coalitions, particularly the size principle. He also outlined several conditions favorable to the development of a rational choice approach in political science. First, these theories possess what he termed the "essential structure of science," insofar as they rest on empirical laws that can be axiomatized to generate theorems about strategic interaction. Second, they incorporate the concept of equilibrium, shifting attention away from subjective motives and toward the outcomes generated by purposive interaction. Third, they typically concern small-scale and frequently repeated events, a point already discussed in the philosophical literature of the late Fifties. Finally, rational choice theory addresses the problem of intentionality without excluding judgments about motives or regularities in human behavior. On this last point, Riker went so far as to claim that "the assumption of rationality serves just about the same function in social science that the principle of mechanics once served in physical science." (Riker 1977, p. 32)

However, Riker eventually became deeply skeptical about the possibility of deriving useful predictions in political science, even through game-theoretic or formal modeling. As a result, his focus shifted from equilibrium to disequilibrium (Riker 1980). He interpreted equilibrium as a stable configuration of preferences, and disequilibrium as the failure to reach such stability. In the textbook he co-authored with Peter Ordeshook in 1973, Riker proposed a threefold typology of "social equilibria." First, a "strong, unique equilibrium," arising from interactions so precisely specified and goals so narrowly defined that society will certainly converge upon it. If disturbed, the system will return to equilibrium as quickly as possible. Competitive price formation served as the canonical example, while in political science, this type of equilibrium was associated with certain results in Social Choice Theory. Second, they identified a "weak, unique equilibrium," produced by more complex interactions oriented toward more complex goals—monetary macroeconomics being their primary example. Finally, they described "non-unique (unstable) equilibria," in which outcomes belong to a set of possible results, with interaction leading to some unspecified point within that set rather than to any particular outcome (Riker and Ordeshook 1973, 150–151). Riker classified the size principle as an instance of a weak, unique equilibrium (Riker and Ordeshook 1973, p. 177). Notably, this taxonomy says little about the mathematical existence of equilibrium and instead reaffirms the emphasis on prediction.

In his 1980 article, Riker drew an even more explicit connection between equilibrium and prediction. He defined economics as a discipline that "admits predictions of an equilibrium" and attributed its prestige among the

social sciences to the "actual occurrences of numerous predicted equilibria." (Riker 1980, p. 434) Because he equated equilibrium with the ability to predict concrete outcomes, Riker viewed political science as particularly vulnerable to impossibility theorems such as those developed by Richard McKelvey and Norman Schofield in the Seventies. These results demonstrated that, in multidimensional policy spaces, collective choice almost invariably generates cycles, thereby undermining the global transitivity required for consistent social choice.[4] Riker interpreted these findings as evidence that something analogous to economic equilibrium might be unattainable in political contexts. Consequently, political science necessarily involved the study of persistent disequilibrium. He famously concluded that:

> [Not economics but] "politics is the *dismal* science because we have learned from it that there are no fundamental equilibria to predict. In the absence of such equilibria we cannot know much about the future at all, whether it is likely to be palatable or unpalatable, and in that sense our future is subject to the tricks and accidents of the way in which questions are posed and alternatives are offered and eliminated." (Riker 1980, p. 443)

Note that Riker's earlier analysis of political coalitions already contained a closely related intuition. Indeed, he devoted several pages to a largely verbal discussion of the implications of persistent disequilibrium for his model. At that stage, however, Riker still appeared convinced that a sufficiently refined theory might ultimately resolve this difficulty. Later, he came to believe that overcoming this obstacle required a more fundamental step, one that could not be achieved through purely mathematical refinement. To address this decisive problem, Riker argued for a renewed focus on institutions, particularly on their role in shaping political outcomes through the capacity of rational actors to deploy manipulative rhetorical strategies in order to secure preferred results. This emerging research program did not abandon rational choice theory or game-theoretic tools as such. Rather, it rejected the notion that political outcomes could be rendered predictable. As Riker himself put it: "The sum of our new sophistication is [...] that political outcomes truly are unpredictable in the long run. We may have few pretty well-verified generalizations to guide us (for example, the size

[4] Suppose there are n alternatives. Even if no alternative beats all $n-1$ alternatives, it still could be possible to find a set of k alternatives (themselves in a cycle) that beats all the $n-k$ alternatives. This is a "top cycle." McKelvey showed that the 'top cycle' could include all possible alternatives in an n-dimensional space. Norman Schofield demonstrated a similar result. Assume a point x in a multidimensional policy space. For each agent, there is an indifference curve passing for x. Given these indifference curves, one can find the set of points $P_c(x)$, the set of points that some winning coalition prefers to x. Namely, for the set of all winning coalitions, $P_w(x)$ is such that there are some points y that cannot be included in $P_w(x)$ by some path $yR_iz \dots R_ix$. This means that x is always beaten by some point, no matter how the voting procedure is organized (McKelvey 1975; Riker 1980).

principle or Duverger's Law), but for the most part, we live in a world that is uncertain because it lacks equilibria" (Riker 1980, p. 445).

Riker's argument is particularly significant for political theory, insofar as he used the persistence of disequilibrium to articulate a conception of liberal democracy opposed to a populist one: that is, a Madisonian view contrasted with a Rousseauian one. The crucial distinction between these two conceptions lies precisely in the fact that the former does not incorporate anything analogous to a "general will," understood as an equilibrium representing a stable configuration of preferences and values. According to Riker, democracy is better defined by its rules than by its outcomes, since outcomes are always susceptible to manipulation through strategic voting and rhetoric. It was in this context that Riker coined the term "heresthetics" to describe these manipulative practices.[5]

This intellectual trajectory appears to imply a substantial retreat from an "economic-style" conception of formal political theory. Once the significance of equilibrium is called into question, the prospect of developing a discipline grounded in formal analysis, such as utility theory or Game Theory, rather than merely mimicking economic ideas becomes deeply problematic. For this reason, Riker's paper elicited a direct response from other formal political theorists. Peter Ordeshook, in particular, replied in the same issue of the *American Political Science Review*, defending a position much closer to that of mathematical economics, especially with respect to the centrality of equilibrium (Ordeshook 1980).[6] Ordeshook addressed only briefly the issues of equilibrium reliability, why Nash Equilibria are played, or whether coalitions are stable. Instead, he focused on the meaning of equilibrium in economics and, by extension, in formal political theory. He summarized Riker's position as follows: "Believing that political processes do not share the straightforward stability found in abstract representations of economic markets, he infers that political scientists are disadvantaged in their 'science' in contrast to economists, whose paradigm Riker has borrowed" (Ordeshook 1980, p. 447). Ordeshook, however, remained unconvinced by what he saw as the "new" Riker.

First, Ordeshook argued that Riker attributed excessive importance to

[5] From the late Seventies until his death in 1993, Riker devoted the final phase of his scholarly career to the further development of these ideas. Among his later works, *Liberalism against Populism* (Riker 1982) is arguably the most influential. In this book, Riker revisited and extended the arguments of his 1980 article, while also offering a historical narrative designed to show "how political events can be interpreted as part of the continuing efforts by participants (either leaders or losers) to manipulate outcomes to their advantage" (Riker 1982, p. 213). More specifically, he examined how slavery emerged as a national political issue in the decades preceding the American Civil War. In subsequent works, beginning with his presidential address to the *American Political Science Association*, Riker pursued similar analyses of other episodes in American political history, starting with the adoption of the U.S. Constitution (Riker 1984; Riker 1986; Riker 1996). Riker's historical reconstructions have, however, been contested on empirical grounds (for discussions and assessments of these criticisms, see McLean 2002; McLean 2009).

[6] In this reply, Ordeshook's position differed from that advanced in the earlier textbook, suggesting that the relevant sections may have reflected primarily Riker's authorship.

equilibrium understood as stability, and therefore assumed, incorrectly, that price theory itself rested on stable markets. In reality, he contended, "the presumed stability of markets is an abstract fiction that most economists recognize as a theoretical impossibility" (Ordeshook 1980, p. 447, italics in the original). Stability exists within the formal model, but not necessarily in the real world.

The same reasoning applies to predictive power. Abstract market models may predict how changes in the parameters of a model affect prices and consumption, but they cannot forecast the specific values these variables will take. Consequently, "market stability is also a fiction of the mathematical abstractions used to represent it" (Ordeshook 1980, p. 448). For example, consider a market with one seller and two buyers, in which the value of the buyers' coalition is zero. The core, that is, the set of undominated imputations, includes only allocations that assign all value to the seller and none to the buyers. In this scenario, the seller is effectively a monopolist who extracts the entire surplus from exchange. However, it is equally plausible to assume that buyers might form a cartel and negotiate collectively, giving rise to a new equilibrium. The situation then becomes a bargaining problem in which the monopolist seeks to secure the most favorable distribution along the Pareto frontier. In this case, the core consists of all points on the Pareto frontier, demonstrating that the existence of equilibria alone is insufficient to generate predictions (Ordeshook 1980, p. 448).

Ordeshook's central claim, therefore, is that equilibria are features of formal models and may exhibit properties such as existence, uniqueness, or stability, but they do not necessarily confer predictive power. This argument does not resolve the problem of social choice impossibility but rather, it points toward new analytical directions. As he concluded, "theorizing about them requires developing new concepts and [...] the optimism of the past over the ease with which the economists' paradigm could be transplanted into politics must give way to the realization that political scientists themselves must contribute to the development of that paradigm" (Ordeshook 1980, p. 450).

Examining the contrast between Riker's argument and Ordeshook's allows for a more precise appraisal of how Riker employed Game Theory and economic theory, as well as of how the early development of Positive Political Theory diverged from postwar neoclassical economics and from other attempts to extend economic reasoning beyond its original disciplinary domain.

As previously discussed, following the influential work of E. Roy Weintraub, historians of economics have interpreted the transformation of economics into a mathematical discipline as closely connected to the parallel development of mathematics as a formalist program (Weintraub 2002). Giocoli summarized the profound transformations in economics between the Thirties and the Fifties as a shift between two distinct visions of the discipline (Giocoli 2003b). The first conceives economics as a "system of forces," according to which the discipline studies processes generated by market and non-market forces, including, but not limited to, those that drive a system toward equilibrium. After more than a century operating within

this framework, economists increasingly replaced it with an alternative conception of economics as a "system of relations." This latter view defines economics as "a discipline whose main subject is the investigation of the existence and properties of economic equilibria in terms of the validation and mutual consistency of given formal conditions, but that has little if anything to say about the meaningfulness of these equilibria for the analysis of real economic systems." (Giocoli 2009a, p. 24)

Within this distinction, the concept of equilibrium occupies a pivotal position. If economics is conceived as a "system of forces," equilibrium represents a state of an economic process, the outcome of interacting forces that generate it in an empirically meaningful way, while related issues such as perfect foresight, stability, and perfect information also require explicit consideration. By contrast, under the formalist "system of relations" approach, equilibrium is simply the necessary solution to a formally specified economic problem. In this framework, equilibrium either exists or does not; it never "emerges" or "arises" through a process.

Riker's formal analysis aligns more closely with the "system of forces" vision. For him, equilibrium does not function as an abstract analytical framework within which formal analysis unfolds, nor as the solution concept of a game-theoretic model. Rather, it denotes a relationship among forces, akin to equilibrium in partial-equilibrium economic analysis. This is evident, for example, in Riker's own definition from his 1962 work: "The notion of equilibrium is that of a relationship of forces arranged so that the deviation from some point of balance results in a (possibly automatic) correction back to balance" (Riker 1962b, p. 147). The previously discussed threefold classification of equilibria further illustrates this point.

This perspective also helps explain Riker's preoccupation with disequilibrium. Within a "system of forces" framework, equilibrium and disequilibrium are analytically symmetrical, and disequilibrium may even appear more empirically salient, given that social reality rarely exhibits anything resembling physical equilibrium. By contrast, in axiomatic models, and in the concept of equilibrium commonly employed in game theory, namely Nash Equilibrium, equilibrium is simply the solution to a formally defined problem. Consequently, the primary concern becomes the existence, non-existence, or multiplicity of equilibria.

The crucial point is that, in economics, Game Theory developed within the "system of relations" framework. This historical fact highlights how the introduction of Game Theory into political science differed fundamentally from its adoption within economics. It also clarifies the difficulty of the task Riker attempted to undertake, particularly in his theory of political coalitions. This difficulty stemmed not only from Riker's limited access to advanced game-theoretic techniques, which might have rendered his analysis more mathematically robust, but also from the fact that he approached game theory from a conceptual standpoint fundamentally at odds with its mathematical and economic development.

This conclusion can be further reinforced by recalling how Riker addressed the issue of rationality in his work on political coalitions (Riker 1962b, 17 et ss.). As noted earlier, Riker criticized the notion of rationality

adopted by economists since at least the late Thirties, namely the tautological idea that rationality could be divorced from substantive content through mathematical formalization.[7] Instead, Riker advanced a conception of rationality grounded in the elementary preference for winning over losing. His rejection of preference-ordering arguments can be interpreted as an effort to render political rationality intelligible to an audience uncomfortable with mathematical sophistication, but capable of grasping intuitive formulations of key concepts. Nevertheless, Riker's argument remains weak and poorly integrated into his broader discussion of modeling in the social sciences. He defended the rational choice assumption through what he called a "summation argument": even if not all actors are rational, the most important ones are. This move overlooked a crucial aspect of economic rationality, namely its function as a constraint on the beliefs and desires agents may hold, thereby rendering their actions theoretically intelligible (Reiss 2013, p. 31). In this sense, even when economic models appear descriptively plausible, the goal of modeling rational behavior still requires strong assumptions about preferences, beliefs, and their formal structure.

Riker's position can thus be interpreted as resting on an older conception of economic analysis as a "system of forces", a conception that, while appealing, was increasingly displaced within the very domain Riker had chosen as his theoretical reference, namely Game Theory, by an axiomatic "system of relations" approach. Notably, this was an area of economics that, until quite recently, remained particularly distant from empirical validation. This tension, in essence, constituted Riker's unsolvable dilemma.[8]

Positive Political Theory and "Economic Imperialism"

Above, it has been shown how Riker's use of economic theory differed from the trajectory postwar Economics was following. Nevertheless, it has also been argued that the case of "Positive Political Theory" was different, insofar as, from the Seventies onward, it clearly embraced an approach much closer to mathematical economics. A further step is to assess whether the development of formal political theory should be interpreted as an "act of conquest" by economics or rather as an independent intellectual event.

The extension of economic theory and analytical tools beyond the traditional domains of economics (namely markets, labor, and money) has conventionally been labeled "economic imperialism" (or "economics

[7] This is what game theorist and philosopher Ken Binmore later termed the "consistency view" of rational action (Binmore 2015).

[8] In a later methodological essay published in 1990, Riker revisited several of these issues. Most notably, he then linked rational choice and equilibrium to explanation rather than prediction. He argued that "the difference between prediction and explanation is that explanation requires much more convincing support" (Riker 1990, p. 167). While sociological laws may generate predictions, they cannot explain phenomena unless they are "placed inside a theory of equilibrium" (Riker 1990, p. 176). Nevertheless, Riker did not engage directly with broader philosophical debates concerning the nature of explanation in the social sciences or with the question of whether mathematical models are genuinely suited to this task.

imperialism"). The term "economic imperialism" is commonly attributed to the economist Kenneth Boulding, who allegedly used it to describe "an attempt on the part of economics to take over all the other social sciences" (quoted in Tullock 2004, p. 3). Gordon Tullock popularized the expression through a short essay published in the early Seventies. In that piece, he praised the economic approach while simultaneously advocating the blurring of disciplinary boundaries within the social sciences (Tullock 2004).

Sonja Amadae and Bruce Bueno de Mesquita challenged the "economic imperialism" thesis in the specific case of Positive Political Theory along three distinct lines (Amadae and Mesquita 1999). First, the thesis presupposes that Rational Choice Theory was fully articulated within economics and subsequently "colonized" other disciplines, including political science. This historical reconstruction, as previously shown, is inaccurate, particularly with respect to Game Theory.[9] Second, the assumption of "economic imperialism" shifts credit for innovation away from political scientists and toward economists. Once again, this does not constitute an accurate factual account. As discussed earlier, political scientists made significant contributions to formal theoretical developments, for example, in the literature on voting or in cooperative game-theoretic solution concepts such as the "Competitive Solution." Finally, Amadae and Bueno de Mesquita argued that "[...] the economics imperialism scenario ignores that both economists and political scientists have had to reconsider their subject areas as market phenomena are increasingly seen to be interlaced with non-market 'externalities,' and 'political economy' is taken to be a single unit of study which entails recognizing the unification of politics within economics" (Amadae and Mesquita 1999, 289–290).

It is important to note that Ordeshook articulated a view closely aligned with this latter argument. He contended that the development of "positive political theory," or "political economy," represented nothing more than the "natural evolution of a paradigm that had previously integrated both disciplines but that economists refined in the first part of this century after shedding many of the encumbrances reality places on theorizing" (Ordeshook 1990, p. 10). Accordingly, the re-emergence of political economy amounted to the "reintegration into a refined paradigm of those features of reality that economists discarded in order to facilitate theorizing" (ibidem).

The arguments outlined above address the issue of "economic imperialism" primarily from a historical perspective. From this standpoint, they effectively demonstrate that the intellectual projects associated with Riker and with Positive Political Theory cannot simply be dismissed as manifestations of economics' imperialistic ambitions. Historically speaking, therefore, the situation is considerably more complex than is often assumed.

However, "Economic imperialism" has also been examined from a philo-

[9] As Amadae and Bueno de Mesquita rightly noted, "[...] 'rational choice,' denoting conscious decision making in a strategic environment with rational competitors, as originally articulated by von Neumann and Morgenstern (1944), became the status quo within political science before economists fully grasped its merits for their field" (Amadae and Mesquita 1999, p. 290).

sophical perspective. Approaching this issue from the standpoint of Philosophy of Science is equally interesting. While it is true that Riker and early political game theorists could not have been strongly influenced by economics, given that Game Theory still occupied a marginal position within the discipline during the Fifties and Sixties, it is equally true that Positive Political Theory and economics became increasingly intertwined, a closeness that persists to this day. From this perspective, "economic imperialism" appears to be at least twofold. First, it refers to economists applying their analytical tools to non-traditional domains such as politics, law, sociology, or crime. Second, it denotes the adoption of an economic-style formal approach in the construction of entirely new theories. The distinction becomes clear when one contrasts, for example, the spatial analysis of voting in political science with Gary Becker's well-known economic analysis of discrimination.

Becker was deeply influenced by Milton Friedman's positive methodology, which dominated the so-called Chicago School until the Seventies.[10] Becker employed Price Theory to assume that individuals possess a "taste for discrimination," such that proximity to members of other ethnic groups generates disutility. This preference for discrimination could thus be represented by a "discrimination coefficient" added to conventional capital and labor costs (Fleury 2012, 11 et ss. Lazear 2000). In doing so, Becker linked individual discrimination to market discrimination and proposed a market-based solution to the problem. If discrimination constitutes a cost for firms and individuals, market competition will tend to eliminate it by favoring the survival of the most efficient firms, those with lower costs. Crucially, Becker did not develop an entirely new theory of discrimination. Rather, he applied what he regarded as a powerful and general analytical tool, Price Theory, to generate new insights. The same logic applies to much of the Public Choice literature, as well as to Mancur Olson's classic analysis of collective action (Olson 1965; Ordeshook 1990).

Consider the Spatial Theory of Voting instead. While its development would indeed have been impossible without adopting the mathematical approach characteristic of economic theory, it required far more than a passive borrowing of analytical tools. Although Downs's most famous result appears relatively intuitive, despite its intellectual debt to the less obvious findings of Hotelling, Duncan Black's analysis, though not exceptionally sophisticated mathematically, demanded a precise formalization of distinctly political concepts, such as the assumption of single-peaked preferences. Matters became considerably more complex when these results were extended to n-dimensional spaces, as in the highly mathematical works of McKelvey, Schofield, Ordeshook, Davis, Hinich, and others briefly addressed earlier. These scholars did not merely apply existing tools to

[10] On Friedman's methodology, see Friedman 1954 and Caldwell 1994. Becker addressed discrimination in his Ph.D. dissertation, later published in 1957 as *The Economics of Discrimination*. He was among the most prominent price theorists of the Chicago School, alongside Friedman and George Stigler, and was awarded the Nobel Prize in Economics in 1992 (Spencer and Macpherson 2014, 189–209). For a historical and critical assessment of the Chicago School, see Horn, Mirowski, and Stapleford 2011.

clarify a phenomenon. Rather, they constructed entirely new theories that would have been impossible without adopting the same highly mathematical reasoning prevalent in economics, while simultaneously inventing formal counterparts to inherently political concepts related to voting.

To fully appreciate this distinction, it is useful to consider how preferences are represented in microeconomics. First, a commodity space, typically a Euclidean coordinate system, $\mathbb{R}^n_{++}$, is assumed.[11] Each point in this space represents a bundle of goods, and a utility function encapsulates individual choice. Indifference curves and preference sets represent agents' rankings over these bundles. Each economic agent faces a maximization problem, which mathematically consists in identifying the quantities and prices that maximize her utility function. Graphically, this corresponds to the indifference curve tangent to the budget constraint. This so-called "consumer problem" is an optimization problem whose extension to large numbers of goods and agents yields the framework of General Equilibrium. Economic theory subsequently investigates the conditions under which such equilibria exist and how they change when properties of utility functions, budget constraints, or traded goods are altered.

Standard consumer choice theory typically assumes that both budget sets and indifference curves are convex. These assumptions capture two intuitive ideas: that a mixture of goods is preferable to consuming only one good, and that, at constant prices, larger bundles are always preferred to smaller ones (for example, four apples and four pears are preferred to two apples and two pears). A particular case involves satiable preferences, for which the latter condition holds only up to a certain point. This feature is also central to formal political analysis, since in spatial voting models each rational voter's utility is defined as the distance between her ideal point and the proposed alternative.

Microeconomics thus analyzes decentralized decisions concerning the production and consumption of goods and services. Similarly, Spatial Voting Theory concerns the collective selection of a point within a feasible space under a given decision rule, typically majority voting. This parallel, however, does not imply that the latter is merely an offshoot of the former. The following assessment by Ordeshook is therefore worth quoting at length:

> "The use of single-peaked preferences, or the more general conceptualization of convex preference sets with internal satiation points, contributes importantly to the reintegration of the fields of political science and economics. [...] With respect to [...] the presumed imperialism of economics [...] many economists regarded the notion of spatial preferences with internal satiation points as merely a peculiar special case. [...] However, with the derivation of such preferences from neoclassical assumptions, we now see that *such preferences are*

[11] $\mathbb{R}^n_{++}$ denotes the strictly positive orthant of Euclidean space. This reflects the intuitive assumption that traded commodities exist and therefore have positive quantities, although this assumption is not universally applicable.

> *not merely a special case but that they follow from what distinguishes political institutions from decentralized markets.* Hence, because what substantively distinguishes economics from politics is reflected in the formal representation of preferences, this distinction becomes part of the paradigm and can be manipulated and recombined by anyone operating within the paradigm." (Ordeshook 1990, p. 20, italics added).

The concept of disciplinary imperialism has, of course, been examined more systematically by philosophers of science. While Ordeshook's account may already appear sufficiently explanatory, it is nonetheless useful to relate the foregoing distinction to the taxonomy proposed by the Finnish philosopher of science Uskali Mäki (Mäki 2009). Mäki distinguishes between "expansionism" and "imperialism." The former refers to the expansion of a theory's explanatory scope, that is, the range of phenomena it can explain. "Imperialism," by contrast, is a subset of expansionism. "Economic imperialism" is thus defined as "a form of economics expansionism where the new types of explanandum phenomena are located in territories that are occupied by disciplines other than economics" (Mäki 2009, p. 360). According to Mäki, the key difference rests on "*historical and social contingency*" (Mäki 2009, p. 361, italics in the original). In some cases, established disciplines already address the phenomena later subsumed by the expanding discipline. In others, they do not. The very notion of imperialism presupposes boundaries, and economic imperialism consists precisely in crossing disciplinary boundaries. From this perspective, the distinction is pragmatic, defined in terms of (the existence or absence of) established disciplinary practices and of the relations between the practices of the "conquering" and "conquered" fields.

The primary motivation behind scientific "imperialism" lies in the aspiration to provide unified explanations of phenomena. While Mäki accepts unification as a "virtuous achievement of scientific theorizing," he nevertheless proposes several constraints on its legitimacy. For present purposes, the most relevant is the "ontological constraint," which he further divides into "derivational unification" and "ontological unification." In brief, derivational unification concerns the ability to explain diverse phenomena using a parsimonious set of theories, whereas ontological unification "is a matter of redescribing large classes of apparently independent explanandum phenomena as forms or manifestations of a common system of entities, causes, and mechanisms." (Mäki 2009, p. 364)

These notions are not easily operationalized, as few theories fit neatly into one category or the other, and the boundary between them remains somewhat blurred. Nevertheless, one may interpret derivational unification as the attempt to construct an "explain-everything" theory, as in simplified versions of rational choice theory or even price theory. Under the assumption that individuals always behave as maximizers, theorists can generate wide-ranging explanations of diverse social phenomena. Such explanations do not necessarily refute alternative theories, but they may appear especially appealing due to their reliance on clear and circumscribed

assumptions. Becker's analysis of discrimination provides a paradigmatic example. By contrast, extending Game Theory and related microeconomic approaches to domains such as voting or rational-choice models of political institutions entails a stronger ontological commitment: it assumes that unity across social phenomena is possible and that the task of theory is precisely to render this unity formally explicit (see Mäki 2009, 364 et ss.). Mäki associates this position with a realist philosophy of science. From this standpoint, "economic imperialism" is objectionable only in cases where derivational unification occurs without corresponding ontological unification. Accordingly, Mäki does not reject economic imperialism on principle, provided that economics does not present itself "hegemonically as being in possession of superior theories and methods, thereby excluding rival theories and approaches from consideration" (Mäki 2009, p. 374).[12]

The distinction between Price Theory and microeconomics further helps to clarify this issue. These two approaches are often treated as interchangeable, since both rely on rational choice assumptions and supply-and-demand analysis. Nevertheless, important differences exist, as clearly articulated in the most recent edition of the now-classic *Chicago Price Theory* textbook (Jaffe et al. 2019). There, it is argued that:

> "In emphasizing markets and competition, price theory is different from microeconomics. Both typically begin with the consumer or household, but price theory stresses how consumers react to prices, many times without reference to utility or even 'rationality,' whereas microeconomics takes care to lay down an axiomatic foundation of the utility function and individual demand functions. Price theory then quickly gets to market equilibrium, treating related subjects such as compensating differences, tax incidence, and price controls. Microeconomics makes more intensive use of game theory, which traditionally places greater emphasis on rationality and optimizing agents. Both price theory and game theory model behavior in terms of equilibrium, but the latter typically focuses on interactions among small numbers of agents and seeks to generate separate predictions for each of them, treating the rest of the market as given. [...] With its emphasis on competitive market equilibrium, basic price theory is concerned not with bid prices but with final transaction prices, aggregate quantities produced and sold, and their relationship to costs of various kinds, as well as with the position of goods within the consumer demand system." (Jaffe et al. 2019, 2–3)

If this reconstruction is correct, then Positive Political Theory, while distinct from Price Theory, yet closer to and partly subsumed within microeconomics, would not constitute, in Mäki's terminology, an unjustified instance of economic imperialism. This interpretation is further supported

[12] Mäki refers to this situation as "Economics Imperialism*."

by the fact that scholars such as Ordeshook or McKelvey, by applying Game Theory and other formal tools to voting, political coalitions, and institutions, did not invade an established disciplinary territory. Rather, they produced an entirely new class of analyses and results that would have been unattainable otherwise. At the same time, however, as argued in the previous section, Riker's strong faith in the predictive power of an "economics-like" approach, particularly his identification of equilibrium with meaningful prediction, can plausibly be interpreted as a form of unjustified economic imperialism, at least within Mäki's analytical framework.

A Ideological Conservative Bias?

A final point deserves further exploration: the possible existence of a "conservative and free-market bias" in Positive Political Theory. In several works (see for example Mirowski 2002; Amadae 2003; Erickson et al. 2015), the postwar development of mathematical Economics, Game Theory, and Rational Choice Theory is interpreted as deeply intertwined with Cold War political imperatives and, in particular, with the defense of a free-market economy against the perceived threats of socialism and Marxism. This line of argument parallels, and at times overlaps with, the so-called "economic imperialism" thesis.

Above, it has been argued that it is historically misleading to interpret the entry of Game Theory into Political Science as a form of economic imperialism. From the standpoint of philosophy of science, however, the issue is more complex. From that perspective, one might still argue that Riker's intellectual enterprise exemplified an unjustified mode of economic imperialism, while the same conclusion does not necessarily follow in the case of "positive political theory."

Yet this observation does not exhaust the question of what sustained Riker's long-term commitment to formal analysis. Despite the differences emphasized above, Riker's commitment to formal theory and to the Theory of Games followed, in certain respects, a trajectory similar to that of mathematical economists in the Fifties. Indeed, practical ambitions underpinned the development of General Economic Equilibrium models, Econometrics, and Linear Programming: advanced formal analysis could serve applied objectives (objectives that were not necessarily identical with, or reducible to, a radical free-market program).[13] Similarly, Riker's main goal was to advance the scientific understanding of politics, namely to articulate true propositions about political phenomena. He regarded game theory and economic theory as rigorous and valuable analytical instruments and therefore employed them. In the Fifties, his agenda was not primarily political, but methodological.

[13] Consider, for example, the Cowles Commission at Chicago in the Fifties. Its members were largely European and often held left-wing political preferences. This ideological orientation frequently placed Cowles researchers in tension with the Department of Economics that hosted the Commission, where enthusiasm for mathematical economics was, if anything, weaker than among Cowles affiliates. Hibbard n.d.

In the Seventies, however, Riker's political ideology evolved toward the political and philosophical outlook associated with figures such as Milton Friedman, George Stigler, and Gary Becker. He thus adopted a firm free-market orientation.[14] Moreover, as discussed above, from the late Seventies onward Riker explicitly argued that the inevitability of majority cycles and the vacuity of concepts such as the people's will supported the superiority of liberal democracy (understood through social choice) over populist democracy (Riker 1982). These conclusions, grounded as they were in the mathematical analysis of Social Choice, were already implicit in foundational works such as those of Arrow in the early Fifties. It remains open to debate, however, whether the primary force sustaining this intellectual development was the defense of liberal democracy against more radical alternatives (or, analogously, the protection of market systems against collectivist planning).

A potentially pivotal factor in Riker's turn toward libertarian positions may have been the presence at Rochester, although for a relatively brief period, of the prominent legal scholar Henry G. Manne. Trained at the University of Chicago Law School, Manne was a central figure in the institutionalization of Law and Economics as a recognized field of research. He was also a committed libertarian, shaped by his Chicago experience and by his engagement with the Austrian economist Ludwig von Mises and the UCLA economist Armen Alchian (Gindis 2020; Manne and Stocker 2012).[15] Although he was not an economist, Manne took economic theory with great seriousness, convinced that legal phenomena could not be understood without analyzing the market forces shaping actors' incentives. Moreover, his interest was not confined to theory: he was actively engaged in the economic training of lawyers, judges, and law professors.

Manne arrived at Rochester in 1968, hired by W. Allen Wallis, himself a former University of Chicago faculty member, closely associated with Friedman and Stigler, and a member of the Mont Pèlerin Society. was tasked with establishing a law school and, in the interim, temporarily joined the Political Science department. His involvement in departmental activities, however, appears to have been minimal (Bueno de Mesquita 2021). The plan to create a law school eventually dissolved, and Manne moved to Miami. Yet it may not be coincidental that in the Seventies Riker began collaborating more intensively with the Liberty Fund and increasingly

[14] In his interview with Shepsle, he stated that "I have gone 180 degrees in what I think the appropriate reformist position is" (Riker and Shepsle 1979, p. 145).

[15] Aaron Director played a crucial role in establishing "Law and Economics" at Chicago, especially through the introductory Price Theory course he taught at Chicago Law School in the late Forties. From that point, the transition from having an economist teaching in a law school to building an entire research field proceeded relatively quickly. During the late Forties and Fifties, Director became increasingly involved in joint teaching and research with legal scholars, applying price theory to traditional legal and public policy issues such as antitrust (Medema 2009). Armen Alchian was particularly well known for his economic theory of property rights (Alchian 1965; Alchian and Allen 2018). Ludwig von Mises was a committed classical liberal whose conception of economics, named "praxeology", challenged both socialism and neoclassical economics (Caplan 1999).

participated in conferences and initiatives often organized by the "Law and Economics Center," founded by Manne at the University of Miami.[16]

In his interview with Shepsle, Riker returned explicitly to the issue of an "inherent conservative bias" in Positive Political Theory (Riker and Shepsle 1979, 143 et ss.). He then offered an ideal-typical account of why individuals are drawn to social science and why, among the various areas of political science, formal political theory might be more inclined to exhibit conservative dispositions. "Most people, I think, enter Political Science, as indeed all of the social sciences, as undergraduates because they have moral concerns. And they want to make the world a little better in some way or another. And as they get attracted to science itself, why then [sic] they tend to lose interest in the reform enterprise that attracted them in the first place." (Riker and Shepsle 1979, p. 144) These remarks fit closely with Riker's epistemological position as reconstructed above, namely, his progressive view of science and the theoretical posture he sought when he first adopted Game Theory. As he continued, "I think that the notion that political theorists are conservative is simply an accident that they are not interested in reform because they become interested in theory." (Riker and Shepsle 1979, p. 145) He thus forcefully rejected the claim of an inherent conservative bias, bracketing his own political commitments.

One of the main reasons this allegation is so frequently directed at formal approaches in political science may be the association of Public Choice, especially Buchanan's version of it, with a broadly classical liberal normative orientation. Above, it has been shown how Riker's efforts to institutionalize Positive Political Theory in the Sixties and thereafter often overlapped with Public Choice. Yet there were also meaningful differences between the two approaches. One of the most significant is precisely that Public Choice was more explicitly politically committed than Positive Political Theory. As it is evident in Buchanan's and Tullock's early work, prior to their joint 1962 book (and as reconstructed masterfully in historical studies such as Levy and Peart 2020), they, together with figures such as Warren Nutter and Rutledge Vining, were motivated by mounting concerns in the Fifties about the appropriate role of social science and government. Consequently, in the eyes of many observers, Public Choice came to represent a libertarian posture.[17]

It is true that rational-choice approaches to political institutions may, at least in part, support analogous aspirations. Yet, as the broader history of economics itself demonstrates, this is insufficient to sustain the claim that a discipline grounded in the mathematical representation of individual

[16] A detailed list of these activities is provided in Gindis 2020. The "Liberty Fund" is an American think tank founded in 1960 by businessman Pierre F. Goodrich. It focuses on disseminating conservative and libertarian ideas, particularly through educational initiatives.

[17] It is nevertheless simplistic and imprecise to suggest that Public Choice is straightforwardly ideologically biased. More generally, it can be understood as a "set of theories" concerning governmental failure (Buchanan 2003), but this does not imply that every Public Choice scholar aims to minimize the size of the state as much as possible.

preferences and choices is inherently politically conservative.

Concluding remarks

Three years before his death in 1993, Riker participated in a conference organized by E. Roy Weintraub at Duke University, the first meeting explicitly devoted to the history of Game Theory. There, Riker presented a paper on the entry of the theory of games into Political Science, an intervention that was also partly autobiographical, given his own role in that process (Weintraub 1992; Riker 1992). Despite his later turn toward the study of institutions and "heresthetics," the research program he had built from the Sixties onward had flourished, becoming one of the most distinctive and intellectually vibrant subfields of political science in the Eighties and Nineties.

When Riker began his theoretical enterprise, American Political Science was entering a period of ferment and disciplinary transformation. In his view, economics offered a viable model for creating a "genuine science of politics." Ultimately, however, political science did not achieve methodological unity in the way Mathematical Economics did. On the contrary, by the late Eighties, Stanford professor Gabriel Almond famously spoke of "separate tables" in Political Science, and Cornell professor Theodor J. Lowi offered a similar diagnosis in 1992 (Almond 1988; Lowi 1992). Introducing a double cleavage to conceptualize the state of the discipline, one methodological (soft/hard) and one ideological (left/right), Almond painted the following, rather bleak, portrait of the field:

> "Now there is uneasy separateness. The public choice people seek an anchorage in reality, a 'new institutionalism,' to house their powerful deductive apparatus; the political econometricians want to relate to historical and institutional processes; the humanists cringe at the avoidance of political values by 'scientism,' and suffer from feelings of inadequacy in a world dominated by statistics and technology; and the radical and 'critical' political theorists, like the ancient prophets, lay about them with anathemas against the behaviorists and positivists, and the very notion of a political science professionalism that would separate knowledge from action. But their anti-professionalism must leave them in doubt as to whether they are scholars or politicians." (Almond 1988, 827–828)

Many things have changed again in political science over the three decades since those words were written. Yet Almond's assessment, together with subsequent developments, suggests that Riker's expectation that his approach might become the "main hope for a genuine science of politics" has not been realized. More importantly, this outcome was not determined primarily by theoretical refutation, but rather by what might be called "empirical" developments, at least insofar as the number of articles employing game theory in the leading political science journal appears to have peaked

in the Nineties, after which enthusiasm for formal political theory noticeably waned (Lohmann 2008).

In a widely debated book published in 1994, two political scientists, Donald P. Green and Ian Shapiro, questioned how rational choice theories conformed to the empirical phenomena they purported to explain (Green and Shapiro 1994). Famously, they argued that one of the most troubling features of rational choice scholarship was its being "method-driven" rather than "theory-driven." In other words, the main advances in the approach resulted more from the progressive refinement of technical, namely, mathematical, tools than from the emergence of substantive real-world puzzles. Their critique rested on the premise that what is mathematically interesting is not necessarily what is most consequential for explaining actual political phenomena.

Nevertheless, even before Green and Shapiro's intervention, the challenge of incorporating imperfect knowledge and error into game-theoretic models, so as to render them more amenable to empirical validation—had become, in some circles, a central concern among formal theorists. For McKelvey, the core problem was how to relate Nash Equilibria to experimental findings obtained in laboratory settings. The outcome was what has been described as a "statistical facelift to traditional non-cooperative game theory," known as "Quantal Response Equilibrium" (Palfrey 2005, p. 16; McKelvey and Palfrey 1995). McKelvey and his coauthors were not directly responding to Green and Shapiro. Rather, their efforts emerged from longstanding, and still unresolved, problems in Game Theory, such as whether Nash Equilibrium strategies are in fact played in simple experimental environments. Quantal Response Equilibrium represented a highly technical attempt to address these difficulties. It has since been employed across Political Science, Economics, and Econometrics, and it sits precisely at the intersection of these disciplines.

After Green and Shapiro's book, other formal theorists called for greater empirical relevance, though without necessarily embracing the full force of their critique of rational choice in political science. In many respects, these responses followed the trail Riker had already opened with his rational-choice institutionalist program in the Eighties. Yet important differences remained. For instance, Ordeshook emphasized an "engineering" approach to institutions, namely, the use of Game Theory and formal analysis not to predict outcomes, but to support institutional design (Ordeshook 1996). This move aimed to reframe the longstanding positive-versus-normative debate: normativism would be strengthened by game-theoretic tools while being constrained in scope. The question was no longer what the best polity or institution would be in the abstract, but how existing institutions might be improved. This orientation was not far from what Baron and Ferejohn achieved when they related "more universalistic" outcomes to "open rule committees." Their model implies that an open rule committee increases each member's bargaining power and may therefore reduce internal conflict. In a different vein, but with a comparable objective, Norman Schofield called for a "theory of rationality based on both preference and belief," which he labeled the "Condorcetian Research Program," explicitly intended

to overcome the limitations of a purely preference-based approach (Schofield 1996).

To conclude, it would be difficult to claim that, three decades after Riker's death and six decades after his work on political coalitions, Game Theory, and, more broadly, formal approaches, occupy a central place in contemporary political science. Nonetheless, Positive Political Theory remains a well-defined and established subfield, even if its boundaries with economic theory appear destined to blur further.[18]

Yet the purpose this research was not to adjudicate the current standing of formal political science within the discipline, but rather to reconstruct and discuss, both from an internalist and an externalist standpoint, how political scientists began to use Game Theory. This focused on three main dimensions: first, Riker's role in this process as a formal theorist; second, his role as an "intellectual entrepreneur," or "charismatic leader," of an intellectual community; and third, a neglected chapter in the history of Game Theory, namely the cross-fertilization between economics and politics.

Beginning with the latter point. Cross-fertilization is inherently two-sided. When economic analysis is applied beyond its traditional domains, the process is often framed as an "act of conquest." In such contexts, non-economist social scientists frequently adopt a twofold posture: they either resist the perceived invasion or become background figures, sometimes dismissing economic theory with irony. It has been argued instead that the distinctive feature of Riker's approach lies in the seriousness with which he treated Game Theory. He advanced an entire research program that, in his view, coincided with the scientific maturation of political science as a whole. Particularly in the Seventies, political Game Theory developed in parallel with, and at times with greater energy than, game-theoretic research in economics, especially regarding specific topics and approaches such as cooperative games. Eventually, Positive Political Theory joined the broader game-theoretic revolution in much the same way economics did: cooperative models were marginalized, and non-cooperative theory became dominant. Yet the path toward this outcome began earlier than in economics, and Riker's theory of political coalitions constituted a cornerstone of that trajectory.

It has also been argued that Riker lacked sufficient mastery of Game Theory to realize his extraordinarily ambitious theoretical goals. This concerns Riker as a formal theorist. His use of game theory was often defective and imprecise, and several explanations for this were advanced. One important explanation concerns biographical contingencies. Riker obtained an undergraduate major in Economics during the late Thirties and early Forties, when such training differed radically from today's curricula,

[18] As noted earlier, Ordeshook argued that the re-emergence of political economy represented the reintegration into economics of those features of reality that economists had previously discarded in order to facilitate theorizing (Ordeshook 1990, p. 10). Moreover, Riker wrote that "the main practical benefit of rational choice theory to political science is that it has opened the door to political economy as a part of political science" (Riker 1990, p. 180). A principal advanced reference is Persson and Tabellini 2002.

requiring little if any mathematical or statistical preparation. The same is true of his graduate training in political science. As a result, his early analyses were frequently under-formalized and rarely attracted the attention of mathematically oriented game theorists.

This explanation, however, is still insufficient. A fuller account must complement it by appealing to epistemological assumptions, particularly the contrast between alternative conceptions of formalism in economics. As argued, Riker did not fully recognize the innovative character of mathematical economics and Game Theory relative to interwar economics. Moreover, he embraced a "hyper-positivist" philosophy of science, within which there appeared to be little room for the notion that a model could function as a "caricature" (Gibbard and Varian 1978) or an "idealization" (Reiss 2013) of reality, and within which rationality was treated as a substantive theory rather than as a purely formal one, as it increasingly became in postwar economics, especially in its most mathematically stringent versions.

Riker thus sought robust predictive power in Game Theory as the foundation for a genuinely empirical and fully scientific political science. Moreover, he looked for such predictive leverage in the segment of Game Theory, von Neumann and Morgenstern's cooperative games, that was least able, mathematically speaking, to generate predictions, insofar as it relied on solution concepts that often contain infinitely many elements or, in some cases, no solutions at all. Unfortunately, as a vast literature demonstrates, it remains difficult to specify what the predictive power of Game Theory actually is. Philosophers of science and economists have examined at length questions such as what a model is and what the explanatory power of a model consists in, yet no unified position has emerged. Nonetheless, a broadly shared view among economists and formal social theorists is that game-theoretic models, and formal approaches such as Rational Choice Theory more generally, do not produce genuine predictions, at least not in any straightforward sense of the term "prediction."

Moreover, like other formal approaches, game theory exhibits a distinctive feature. Martin Shubik, who worked extensively in the field, proposed a threefold division between "high church" Game Theory, "low-church" Game Theory, and "conversational Game Theory" (Shubik 2002). The first category includes highly mathematical work introducing genuinely new concepts or results (for example, contributions associated with figures such as Nash, Shapley, and Aumann). Much of economics' use of Game Theory belongs to the second category. Finally, as the label suggests, "conversational Game Theory" encompasses more informal and widespread reasoning, namely, adopting a game-theoretic mindset in practical problems without relying on formal modeling. The intriguing feature of this taxonomy is that, insofar as the notion of predictive power applies at all, it arguably fits "conversational" Game Theory better than the other two. Identifying situations that can be addressed with a game-theoretic mindset is often straightforward. Yet in such cases, proposing alternative explanations is just as easy, since the boundaries of what is being explained remain vague or poorly specified. By contrast, constructing a rigorous model in the first two senses allows for a more precise characterization of the problem, but it typically does so at

the cost of any realistic prospect of prediction.

It can be argued that the most convincing, though not the only, way to live with this puzzle (that is, to live with it rather than solve it) is provided by Ariel Rubinstein. For Rubinstein, Game Theory is primarily the study of the considerations that inform decision-making in interactive settings, with no necessary normative implications and limited empirical content (Rubinstein 2007). As he writes, "[g]ame theory is viewed as a cousin of logic. Logic does not allow us to screen out true statements from false ones and does not help us distinguish right from wrong. Game theory does not tell us which action is preferable or predict what other people will do. If game theory is nevertheless useful or practical, it is only indirectly so. In any case, the burden of proof is on those who use game theory to make policy recommendations, not on those who doubt the practical value of game theory in the first place." (Rubinstein 2007, p. 634) In this broad sense, the Theory of Games is, above all, a language, much like mathematics.

Integrating this language into the analytical repertoire of political scientists constitutes the true landmark contribution of William H. Riker, even though he did not succeed in his more ambitious project of using Game Theory to transform political science into a genuinely empirical science. Yet this conclusion should not be taken to delegitimize the theoretical efforts of Riker (and others like him) to adopt Game Theory within their respective disciplines. Indeed, the questions that initially puzzled him and later sustained his commitment to formal analysis lie at the heart of any attempt to search for a science of politics.