

# Setting the stage for disciplinary transformations.

## The Case of the University of Rochester in the 1960s

Gianluca Damiani\*

June 13, 2022

### Abstract

The aim of this paper is twofold. First, to present a historical narrative of how political scientist William H. Riker, and renowned mathematical economist Lionel W. McKenzie, established political science and economics departments at the University of Rochester in the 1960s. Thanks to their efforts, Rochester evolved from a minor regional University to a U.S. leading research institution regarding economics and political science. Riker transformed American political science, establishing a theory-driven, formal approach labeled "Positive Political Theory" centered around game theory and rational choice. In this process, the closeness with McKenzie's economics certainly influenced Riker's ability to expand his theoretical agenda. Second, I try to show that the nature of this influence is more complicated than often stated.

**Keywords:** Game Theory, Political Science, Positive Political Theory, William H. Riker, Lionel W. McKenzie

**JEL Classification:** B16, B21, B29, B31

### Introduction

The University of Rochester represents an interesting case study to investigate the role of the local dimension in developing a transformative approach to social sciences. Rochester is mainly associated with the name of political scientist William Harrison Riker (1920-1993). Riker arrived in 1962 as chairman of the Department of Political Science, a role he maintained until 1976, and remained there until he died in 1993. Under his chairmanship, due to his effortless activity as a scholar and intellectual entrepreneur, at Rochester, one of the most advanced and prestigious Ph.D. programs in political science in the entire U.S. (and subsequently in the entire world) was created. This program was characterized by a strong commitment to advanced mathematical modeling, rational choice, and game theory, an approach that Riker labeled as "Positive Political Theory." (Riker and Ordeshook 1973; Austen-Smith 1999)

---

\*Ph.D. Candidate, UniFI-UniTO. e-mail: gianluca\_damiani@hotmail.it I want to thank the Staff at the Rochester University Library and at Rubinstein Library at Duke. Finally, I want to thank also professor Kenneth Shepsle, Professor Bruce Bueno de Mesquita, Professor Richard Niemi, and Professor Peter Ordeshook for having shared with me some recollections about their experiences at Rochester.

Riker shared many ideas with such scholars as James Buchanan and Gordon Tullock and the "Public Choice" group, other than other forerunners of formal analysis in political science, such as Kenneth Arrow, the Scottish economist Duncan Black, and Anthony Downs. Among the authors above, Public Choice was strongly institutionally based (at the University of Virginia and, later, George Mason University).<sup>1</sup> However, as Sonja Amadae suggested, one of the specific features of "Positive Political Theory" was that this approach is also strongly associated with the scholarship of a single individual, Riker himself. (Amadae 2003)

Riker entirely reshaped the study of Political Science at Rochester in a way that fulfilled his theoretical ambitions. In doing this, he was favored for certain both by the presence of a well-funded and ambitious academic environment and an advanced and theory-driven economics department headed by Lionel W. McKenzie (1919-2010), a leading economist equally hired to develop a pioneering department for economic research. Then, the presence of such a first-rate department of economics had a substantial impact on Riker's ability to pursue his theoretical and disciplinary agenda. The closeness between the two departments was real, (in any sense, since the two departments belonged and still do, to the same building.) (Amadae 2003, p. 170; Bueno de Mesquita 2021) To Amadae, the presence of McKenzie's theory-driven Department is proof of the strong influence economic theory had on Riker's political science. Not in his commitment to formal methods but in refining and advancing his research program.

Taking this influence for sure, however, leads to setting Riker's theoretical and disciplinary efforts dangerously closer to the idea of "economic imperialism. Thus, this paper aims to assess how Riker and McKenzie carried the activities of the two departments forward and if it was really the case that economics influenced political science in a way resembling a conquest. Furthermore, by dealing with McKenzie and Riker's role in transforming the departments they chaired, one can better appraise the significance of the role of the "local" dimension" in reconstructing the history of science.

## 1 The University of Rochester and its transformation

Riker arrived at Rochester in 1962, whereas McKenzie's preceded him by five years. The coming of two relatively young (both were in their forties) and promising scholars to Rochester was not casual. Indeed, a century after its foundation, the University of Rochester was in the middle of significant changes.

This institution was established in 1850 in Rochester (N.Y.). During the Second Industrial Revolution, Rochester became an important industrial place where key companies were founded, most notably Kodak and Xerox. Furthermore, the city also had a tradition of intellectual activities. Here, for instance, lived the great activist and abolitionist Frederick Douglass, and therefore, it was one of the forums of the antislavery debates before the Civil War. After that, Rochester was also the hometown of the social reformer and women's suffrage activist Susan B. Anthony, which provided further intellectual stimulation. Despite this, in the mid-1950s, the Univer-

---

<sup>1</sup>Besides, Riker had strong relationships with Buchanan and Public Choice and had a role in establishing both the Review and the Society. See: Medema 2000; Riker 1988

sity of Rochester was still a small private liberal art college in a geographical position certainly not favorable at all. Indeed, located in the north-western part of New York State, on the shores of Ontario Lake, and close to Niagara Falls and the Canadian border, it was far from the intellectually stimulating environment of the Ivy League colleges or the University of Chicago and California. Its academic accomplishments were mainly related to the presence of the country-wide renowned Eastman School of Music, which started in 1921 due to the endowment of George Eastman, the founder of Kodak. Another philanthropist who grandly contributed to the local University's academic rise was Joseph Wilson, the owner of Xerox.

In the 1950s, the University of Rochester obtained a huge endowment thanks to him, which listed it among the top-US richest Research Universities. (Amadae and Mesquita 1999) With that money, the University administrators started their program to enhance the academic status of their institution, opening with the recruitment of senior and younger professors and the establishment of new advanced studies programs. For instance, Riker recalled that other than personal reasons, what captured him were the efforts made by the Rochester administration to pass "from a small liberal arts college to a university and systematically developing departments" and build an advanced program of graduate education." (Riker and K. Shepsle 1979, p. 62)

The Department of Economics was established in the mid-1950s from a partition of the Business School. This move was due to providing first-rate graduate education in the discipline, which was becoming increasingly mathematical in that decade. The splitting of the Department predated McKenzie's arrival. However, it matched the latter's ideas concerning education in economics. Indeed, at Duke, the University where he was working in those years, he proposed exactly such a separation between business and economics classes. (Düppe and Weintraub 2014, p. 44)

McKenzie's correspondence throws some light both on his hiring process and, most interesting, his impressions of the place he was about to move to. In an exchange with his colleague at Duke, economist Frank de Vyver, he described the University of Rochester very favorably, although he also advanced some worryings about its lack of prestigious academic pedigree compared to other major universities. (Lionel W. McKenzie to Frank de Vyver, October 16, 1956, McKenzie n.d. Box 6) Eventually, like Riker, some years later, he was captured by the opportunity to play a central role in developing a department practically from zero (other than an exceedingly high salary) and accepted the offer. (Lionel W. McKenzie to Frank de Vyver, November 23, 1956, McKenzie n.d. Box 6)<sup>2</sup>

In a way similar, Riker was hired in 1962 to chair the Department of Political Science. Riker, as we will show, displayed a radical transformative attitude in his discipline, and McKenzie played a role in his appointment. Indeed, as he later wrote: "I recall my discussion with Bill Riker when he came to the University to consider whether to accept a position there [...] Of course I welcomed him heartily to Rochester and described my Department's goals to him. The presence of an economics department whose success was already well known played an important role in making these appointments possible." (McKenzie 2012, p. 232)

Finally, in the same year as Riker's appointment, the renowned economist and statistician W. Allen Wallis was hired. Wallis was previously the dean of

---

<sup>2</sup>Some details of McKenzie's hiring were recollected by himself in: McKenzie 2012

the University of Chicago Graduate Business School and came to Rochester to assume the chairmanship of the University, eventually becoming also the Chancellor between 1970 and 1976. Wallis was part of an extended network of people. At the University of Chicago, he was very close to people like the future Nobelists Milton Friedman and George Stigler. Besides, he was also a member of the Mont Pèlerin Society, the association of liberal and free-market scholars established by Friedrich August von Hayek after WWII.

To further enhance Graduate Education at Rochester, Wallis hired, in 1968, the law scholar Henry G. Manne to set up a law school. Manne was a legal scholar deeply involved in developing "law and economics," albeit with a strict libertarian attitude. (Gindis 2020) However, the plans for a Law school faded away in the fall of 1973, and Manne moved to Miami. Manne's leaving deprived Rochester of another potential community of scholars engaged in transforming their discipline. But at the same time, his unfortunate attempt makes it apparent how attractive the intellectual environment at Rochester was twenty years after the beginning of the transition from a small regional university to a U.S.-leading research institution. This was the product of the efforts, among the others, of McKenzie, Riker, and Wallis.

The following sections will explore Riker and McKenzie's activities in chairing and shaping their respective departments in more detail.

## 2 Riker and the transformation of Political Science: setting the "Positive Political Theory"

The 1950s represented a period of ferment for American Political Science. Indeed, many young scholars began to contend with the historicist and judicial attitude of the discipline. This movement became known as the "behavioral revolution." Its central tenets emphasized the prediction and the explanation of political issues based on observation and data collection and the development of interdisciplinary and "self-conscious criticism" about its method and results. But also on pure research, leaving aside any normative aspiration to establish the "truth or falsity of values" like democracy, freedom, or equality, which are not passable of scientific validation. Besides, behavioralists maintained a certain kind of methodological pluralism.<sup>3</sup>

Despite this intellectual ferment, at Rochester, the Department of Political Science, in the late 1950s, was "really going downhill in terms of its undergraduate activities" since, as Riker recalled, in 1957, "no people decided to major in political science. So that there were no seniors in political science in 1959, which was the nadir of the department." (Riker and K. Shepsle 1979, p. 62)

Riker, who graduated from Harvard in 1947, shared many views with behavioralists and, during his graduate studies, developed a firm attitude against the traditional approach to political science.<sup>4</sup> However, he did not join the behavioral movement, pursuing his theoretical agenda instead. This agenda comprised a solid commitment to formal analysis, resting on economic assumptions, especially game theory. Therefore Riker, in the late

<sup>3</sup>On the "behavioral revolution and its impact on American Political Science see Dahl 1961; Somit and Tanenhaus 1967; Adcock 2009

<sup>4</sup>I cannot explore the details of Riker's life and early works on these pages. For more information, see Bueno de Mesquita and K. Shepsle 2001; Riker 1992; Riker 1997; A non published source full of interesting remarks, as well as anecdotes is: Riker and K. Shepsle 1979)

1950s, published several papers on these issues, and in 1962 a comprehensive work, *The Theory of Political Coalitions*, where he explored political coalitions using von Neumann and Morgenstern's theory of  $n$ -person zero-sum games. Like the case of McKenzie (see below), chairing a department and establishing from nil a graduate program allowed Riker to fulfill his methodological as well as theoretical agenda.

To better appraise some of Riker's ideas, one can look through the reports written for "the "Committee on Social Science," an informal group established in 1961 to enhance social science education at Rochester University. To this Committee belonged members of all the social sciences departments in the College of Arts and Science, i.e., Anthropology, Political Science, Psychology, Sociology, History, and Economics. As it is apparent from the drafts of the first meetings, between October and November, the main issues to be addressed comprised interdisciplinarity and how to better fit the development of social sciences at Rochester to the national trends country-wide. Moreover, the activities of each Department, as well as the aims and scope of their research, are described.

The "committee for social sciences" was formed months before Riker officially assumed his position at Rochester. Despite this, his imminent coming certainly influenced the discussions about Political Science. In fact, from the drafts of the committee meetings, it is apparent that Riker was hired mainly for his ideas about the proper development of the discipline. Furthermore, although he was not yet officially part of the faculty, many references are made to his planned activities in the Department, even though they remain very general.

Then, even if the Department was represented in the Committee by Richard Fenno, a scholar committed to traditional analysis but not hostile toward more formal analysis, the discussion embodied some of Riker's ideas. It emphasized the new perspectives Riker would have adopted, namely the "growth toward a doctoral program," starting with the "acquisition of men with broad theoretic interest and with skill in the application of scientific analysis to the subject matter of politics." (Appendix to the minutes of "Committee on the Social Sciences," October 2, 1961, McKenzie n.d., Box 32). Again, in the third meeting of the Committee, when Fogel and McKenzie discussed empirical research and applied mathematics, Fenno reminded Riker's active interest in mathematical methods in the study of political behavior. ("Committee on the Social Science," November 6, 1961, McKenzie n.d., Box 32).

Each Department was also required to write a report for the Committee. Unfortunately, the report on political science is unsigned, so it is impossible to ascertain if it was Riker's product or Fenno's. However, again, it can be recognized Riker's theoretical agenda in taking a glance at it. For what concern the teaching activity, the Department adopted the traditional, and somewhat standard curriculum, i.e., American politics, comparative political systems, International Politics, and Political theory. However, it is also anticipated that "beginning next year [...] we will be giving a different, more theoretically and broadly oriented introductory course". (Report on Political Science for Committee on Social Science, in McKenzie n.d., Box 32). Such a re-orientation of teaching activities was a prerequisite for developing a graduate program. The list of research projects in which the Department was to be involved encompasses the analysis of decision-making in small groups, federalism, and congressional committees. But also more theoretically ori-

ented topics like "methods and hypotheses which may be used to develop a general theory of politics" or "the relationship between leisure behavior and political behavior." However, the intrinsic interdisciplinarity of these projects was also recognized, for instance, between decision-making theory, mathematics, and economics. ("Report on Political Science," cit.) Concerning hiring policies, the aim was to seek "men of broad theoretic interests and with skill in applying the important analytical techniques of social science to the subject matter of politics." (ibidem). This task entailed necessary an interdisciplinary approach with a broader research horizon. Indeed "[...] it is difficult to be precise about the nature of all our needs. Certainly, all existing strength in the social sciences plus Mathematics and Philosophy will be a source of strength to Political Science." (ibidem) Nevertheless, the emphasis is not exclusively on formal analysis and mathematical methods. Social psychology, too, was considered part of this renovation process.

The report concluded with a general statement on the discipline's future: "the future of Political Science as a social science depends upon its ability to link systematics theory about human behavior and accurate descriptions of distinctly political activity. Moves that promote this 'marriage' - within or without the Department - will enable Political Science at Rochester to operate at the frontiers of the discipline. Our goal is to do this and to do so with distinction." (ibidem)

Riker arrived in Rochester in 1962. Albert Noyes, the Dean of the College of Liberal Arts, hired him in 1961, with conditions very similar to McKenzie's, and he started his activities in the fall of 1962 as chairman of the Department. As soon as Riker arrived, he began his work toward its radical renovation.

At Rochester, he found the right environment to advance his own agenda, supported even by scholars like Fenno, who remained committed to traditional methods. No one opposed his program to enhance the fortunes of the Department by advancing his view of political science, a program which, quite obviously, needed the teaching of decision and game theory courses, as well as methodology ones. As stated by Kenneth Shepsle, which enrolled in 1967 in the newly appointed Graduate Program, "when [Riker] came to Rochester, he came as the chair of the Department. Quite innocently, he sent around a memo to his colleagues proposing a Ph.D. program where he emphasized game theory and decision theory, and econometrics. He expected to have a broad discussion with these colleagues about it. His colleagues immediately said yes. And so he began to build the faculty that could teach that kind of political science." (K. A. Shepsle 2021).

What Riker was trying to accomplish can be summed up in a letter he wrote when applying for the "Center for Advanced Studies in Behavioral Sciences" at Stanford.<sup>5</sup> Here, he described the work he aimed to pursue at Stanford as "formal, positive political theory." ("Supplementary Statements, Riker to Ralph Tyler, December 4, 1959, Riker n.d., Box 10, Folder 1). In his words, "formal" meant that the theory was to be expressed in algebraic rather than verbal symbols. Instead, "positive" refers to the descriptive, rather than normative, nature of his analysis. He outlined the same vision in his work on political coalitions, whose first chapter is devoted to his view of political science (formal, positive political theory) based on axioms, internal

---

<sup>5</sup>This Research Center was established in 1954, funded by the Ford Foundation. See Tyler 1956; Amadae 2003; Erickson et al. 2015. Its first director was the renowned educator and reformer of the American school system Ralph W. Tyler (1902-1994)

logic, and empirical validation. (Riker 1962, p. 9)

Apart from the reports above, one can find a more comprehensive overview of the department activities, before and after Riker's appointment, in the University of Rochester's Undergraduate Bulletins. These bulletins, directed to people who want to enroll, present a general description of the University's history and activities and a detailed list of Departments, Faculty members, and courses. Concerning 1961-2, the Political Science curriculum mirrored a traditional approach, divided into International Relations, American Politics and Institutions, and Political Theory. The latter also comprised the introductory course in "Scope and Methodology in Political Science." (1962-3 *University of Rochester Bulletin* n.d., pp. 147-9). Riker arrived the next year, and among the first people he hired, there was Arthur Goldberg, and especially Gerald H. Kramer, as an instructor. They added to the original six faculty members (besides Riker himself). These members were Richard Fenno, Theodor Bluhm, Glen Wiltsey, William Diez, Dale Neuman, and Peter Regenstreif. (Riker and K. Shepsle 1979, p. 63) Kramer, in particular, had a deep knowledge of math, and his role would be essential in the following years to advance the training and the research in mathematical political science within the Department. With Riker's arrival, the undergraduate courses in scope and methodology doubled, and a course in "Positive Political Theory" was introduced in the 'Political Theory' section. (1967-8 *University of Rochester Bulletin* n.d.) As Amadae and Bueno de Mesquita summed up Riker's transformative agenda, "whereas other programs emphasized the literature, Riker focused on developing tools for rigorous research into the theoretical properties and empirical law of politics." (Amadae and Mesquita 1999, pp. 278-80). Naturally, therefore, the notion of rational choice in political decision-making occupied a central place.

However, the prerequisite for establishing a successful graduate program remains faculty and student recruitment. As Riker later recalled it:

"I devoted the first year to finding teachers to expand [...] and also outlining and planning a Ph.D. program. [...] I was extremely fortunate to hire two people who were entirely sympathetic with the kinds of things I wanted to accomplish in that Department. One was Jerry Kramer and the other was Art Goldberg. [...] Kramer was the first person that I could find who was both a political scientist and was interested in teaching about statistics. [...] And it was pure luck to be able to find him. And I think that his experience here was very good for him because he came here thinking of his role in the world as being a statistician. And, in the five years or so he spent at Rochester, I think he changed his vision of himself to being a political scientist and being interested in political theory. And I always felt that that was one good thing that this Department did for the world was to make Jerry into a political theorist." (Riker and K. Shepsle 1979, p. 65)

Kramer, for instance, was an MIT Ph.D. According to Shepsle, he was "probably the leading mathematical political scientist at the time" (K. A. Shepsle 2021) and had a pivotal role in supervising the dissertations of analytically inclined graduate students, like Peter Ordeshook, Shepsle himself, and especially Richard McKelvey. (Ordeshook 2021) After his Rochester experience Kramer joined the faculty of Yale and spent much time at Cowles Foundation there.

In 1967-8, Richard Niemi joined the faculty. Niemi had a Ph.D. at Michigan State but was also previously an undergraduate at Lawrence College,

where Riker had taught between 1948 and 1961, and in 1961, he attended perhaps one of the first courses made by Riker about "Positive Political Theory," in the same period when Riker was also a Fellow at CASBS, in Stanford. (Niemi 2021) Despite lacking formal training in mathematical modeling, in the way of Kramer or some of the graduate students who began to arrive once the Graduate Program started, Niemi had a profound training in statistics and fit well in the theoretical agenda Riker was advancing.

In the 1967-8 U.R. Bulletin, the undergraduate courses covering themes like Game Theory, Decision Theory, and analytical methodology became five. (1967-8 *University of Rochester Bulletin* n.d.) Nevertheless, the most important novelty of the second half of the 1960s was the definitive establishment of the graduate program. The task Riker was initially called for.

The first student enrolled in 1962, but the program officially started in 1963. Peter Ordeshook, who entered the class of 1964, recalls that, although he chose Rochester over Columbia quite by chance, Riker's treatment of formal political theory deeply struck him. The program covered practically all the main topics up to that time, spanning from Arrow's Impossibility Theorem to Spatial Models of Voting, but also Buchanan and Tullock's *The Calculus of Consent* and the newly published Olson's *The Logic of Collective Action* (1965). Other than Riker's work on political coalitions and courses on game theory, using Luce and Raiffa's textbook (Luce and Raiffa 1957). At the same time, as Ordeshook wrote to the author, "*Riker was interested in such things only to the extent that they said something about real politics. Riker's philosophy, then, was quite simple: The emerging field of formal political theory should not spin off into arcane mathematics or a plethora of axioms but instead address classical political questions.*" (Ordeshook 2021. Italics in the text).

Kenneth Shepsle, who arrived in Rochester in 1967, remembers that Riker was deeply involved in graduate education. He taught two seminars every graduate student took, one introductory about Game Theory and one called "Positive Political Theory." (K. A. Shepsle 2021). Gerald Kramer likely taught a more advanced course in Game Theory after his arrival since his mathematical capabilities were far beyond anyone among Rochester Faculty at the time.

According to Ordeshook and Niemi, students were required to take also "traditional" courses, like that of Fenno and Bluhm. However, the Rochester Graduate program came to be identified in the late 1960s with its strong emphasis on mathematical political science and formal modeling. The consequence was that the student's undergraduate background that applied for it differed mainly from other political science programs. As Shepsle stated: "When I came to Rochester, it was still a collection of oddballs in a way who ended up in graduate school at Rochester, people who had done work in physics, or in engineering, or in mathematics, who normally gravitated as undergraduates into political science and then on to Rochester." (Riker and K. Shepsle 1979, p. 70). Shepsle had a Major in Mathematics, while Ordeshook was an Engineer by training. In the class of 1968 entered Richard D. McKelvey, with a background similar (Palfrey 2005), and the trend also continued in the 1970s.

Mathematical reasoning occupies a central role in "Positive Political Theory." Indeed, as Riker intended it, his approach did not simply entail tools borrowed from economics. In this sense, it did not limit to advancing a parallel between economic and political action, like many other works in the

history of political ideas did.<sup>6</sup> Instead, at its core, lies the importance of formal modeling of political phenomena, where concepts like preferences, choice, and equilibrium assume meaning exactly in relation to the model's internal consistency. Consequently, mathematical training came to occupy a pivotal role in the education of political scientists at Rochester. Note that Riker was not a mathematician. He was mainly self-trained, but his capabilities were far below that needed to pursue his ambitious theoretical agenda. As Bruce Bueno de Mesquita remarked to the author: "he had not many mathematical skills, but a great mathematical intuition. He had a good understanding of how mathematics can be used by people with much more training than he had. For "Political Science," he put emphasis on the word "Science." He certainly was not a mathematician." (Bueno de Mesquita 2021) Since Riker understood mathematical reasoning but was unable to teach it, the mathematical education of graduate students needs to be fulfilled in different ways in the early years of the Doctoral program.

On the one hand, as seen, people like Kramer taught them; on the other, the students were encouraged to take econometrics and statistical courses in the Department of Economics or even Math (Ordeshook 2021; K. A. Shepsle 2021). Furthermore, the graduate program attracted people with good math backgrounds so often that much training was not required, at least at the beginning. In Bueno de Mesquita's words: "In the early years' many students came in with good mathematics background, Dick McKelvey came with a lot of math, but he was clear that wasn't going to be perpetually true, so Bill established a course often taught in the summer, a math course for political science. The essentials of calculus, matrix algebra, linear algebra. The graduate students who were interested in modeling, of course almost everybody had to come with math, or to take a math course." (Bueno de Mesquita 2021)

As apparent from these pages, Riker's impact on Political Science Research at Rochester was astounding, complementing, thus, what McKenzie had started for economics.

### 3 McKenzie and Economics at Rochester

The second postwar marked a turning point for the development of economics, too. Namely, the discipline became a mathematical science. (Weintraub 2002; Giocoli 2003) Lionel W. McKenzie greatly contributed to this transformation. Yet, in the 1950s, his accomplishments were extraordinary, especially given his peripheral displacement in the community of mathematical economics.

A Georgia native and a Duke graduate (when Duke was still only a relatively prestigious regional university in a segregated state), McKenzie held a Ph.D. from Princeton (although, for personal reasons, he was able to finally receive it only in 1956, after the publication of his first important theoretical papers) and, before, was a Rhodes Scholar at Oxford and an instructor at MIT.<sup>7</sup>

He started to work on mathematical economics mainly by self-training. However, in 1950 he spent an entire year at Cowles Commission at Chicago

---

<sup>6</sup>For a brief discussion of this intellectual history see the classic work of Brian Barry: Barry 1970

<sup>7</sup>On McKenzie's life and academic career see: McKenzie 1999; Mitra and Nishimura 2009

University, where he met the main characters of the incipient formal revolution in economics, like Gerard Debreu, Tjalling Koopmans, and others.<sup>8</sup> Furthermore, at Chicago, he received formal education in mathematics, especially Algebra, Topology and Measure Theory, thus expanding his knowledge well beyond the calculus-based training that still represented, if any, the only requirement for economics students and graduates. (McKenzie 1999, p. 4)

Later, he returned to Duke, where he was appointed professor of economics. His theoretical activity in that period was mainly devoted to the issue of General Economic Equilibrium. In particular, McKenzie provided the first mathematically rigorous proof (and economically valid) of the general equilibrium existence, predating some months the most famous Arrow-Debreu's theorem. (McKenzie 1954; Kenneth J. Arrow and Debreu 1954; D ppe and Weintraub 2014)<sup>9</sup>

From this, it is apparent that McKenzie occupied a somewhat central role in the rising community of mathematical economists. He had strong personal relationships with renowned economists like Paul Samuelson, whom he met during his stay at MIT, and his scientific stature was well esteemed among his peers. This points to the most remarkable difference with Riker, who was relatively isolated in pursuing his disciplinary agenda. However, albeit maybe less radical, even McKenzie had a theoretical agenda to chase.

Therefore, McKenzie was partially dissatisfied with his scholarly activity. This dissatisfaction was the main force that pushed him toward accepting the offer that Rochester Administrators made in 1956. The sources of such dissatisfaction were mainly due to being, at Duke, quite far from the prestigious and engaging departments where the rapid advancements in mathematical economics were carried on. Then, his theoretical agenda was barely accepted at Duke.<sup>10</sup> Indeed Duke faculty was not particularly inclined toward new developments in mathematical economics. Like the vast part of economics departments at the time, they remained committed to more traditional analysis based on verbal logic and descriptive generalizations rather than econometrics and mathematical analysis.

The call from Rochester came in 1956 amid growing dissatisfaction with the Duke environment.

As stated above, McKenzie was hired to develop a first-level graduate program in Economics. A first move was the split of the Department of economics from that of business, a decision which predated his arrival but became effective only after his appointment. However, the most important was certain the implementation of the proper hiring policy.

At his arrival, the Department had three full professors, one associate professor, one assistant professor, and one lecturer, none of them really on the edge of scientific advancements in economic theory.<sup>11</sup> The fields of research

---

<sup>8</sup>On Cowles Commission and his pivotal role in the development of mathematical economics see Dimand 2019; D ppe and Weintraub 2014

<sup>9</sup>Other than General Economic Equilibrium, McKenzie's contributions to Economic Theory encompassed the foundations of Demand Theory (McKenzie 1957) and the issue of Optimal Economic Growth (the Turnpike theorems). A comprehensive outline of McKenzie's theoretical contributions is contained in Mitra and Nishimura 2009 see also: McKenzie 2009

<sup>10</sup>To these must also be added some more personal issues, like having married a Jewish woman in a state, North Carolina, which, although relatively moderated by comparison with the 'Deep South' (where McKenzie was born), was anyway not alien from a certain degree of antisemitism (other than, obviously, racial segregation for African-Americans). D ppe and Weintraub 2014

<sup>11</sup>These were respectively: William E. Dunkman, Donald W. Gilbert, Warren Huns-

followed the traditional curriculum in undergraduate economics education in the U.S., namely Money and Banking, Public Finance, International Economics, Area Economics, Labor Economics, Government, and finally, Economic History. (Albert W. Noyes to Lionel W. McKenzie, November 20, 1956, McKenzie n.d. Box 6) After accepting the job offer, McKenzie started looking for young scholars to hire to enhance the objectives of the Graduate school. His standards and aims were discussed in a letter to Noyes, the Dean of the College of Arts and Sciences, yet before he accepted the job. Then, McKenzie wrote that he "[...] would like to have two appointments available in the beginning, preferably one at the associate level and, if the right man is available, one at the full professor level. The full professor would be very valuable if a top-flight man will come. Otherwise, it might be better to make two appointments at the associate level, of promising people who have already demonstrated their ability through publication, or perhaps one at the associate and one at the assistant level, depending on who is available." (Lionel W. McKenzie to Albert W. Noyes, October 29, 1956)

Between the end of 1956 and the beginning of 1957, he sent different letters to people with whom he was well acquainted, like Paul Samuelson, Robert Dorfman, Kenneth Arrow, William Baumol, Milton Friedman, Jacob Viner, Franco Modigliani, Albert Hirschmann, asking for the possibility of hiring graduate students in their Department, and for personal information about the present members of Rochester Department of Economics. (McKenzie n.d. Box 6) For instance, he attempted to recruit Gary Becker from Princeton, but without success, as the latter chose, as noted, to remain at the University of Chicago. (Lionel W. McKenzie to William Baumol, November 28, 1956; Lionel W. McKenzie to Milton Friedman, November 28, 1956, McKenzie n.d. Box 6)

The first appointment of the new faculty was Ronald Jones, who had obtained a Ph.D. at MIT with Robert Solow, and would become one of the most renowned world-expert in Trade Theory (McKenzie 2012). Other scholars immediately followed: Richard Rosett, Edward Zabel, Nanda Choudry, Michio Hatanaka, S.C. Tsiang, Rudolph Penner, Alexander Eckstein, Sherwin Rosen, and finally, Robert Fogel. The latter, who later moved to Chicago, was awarded the Nobel Prize in Economics in 1994 for his contributions to quantitative economic history.<sup>12</sup> After a year also, the graduate program started, with a strong link to the recruitment of students from foreign countries (especially Japan, Europe, and other regions of Asia). Among the first students enrolled in the program, the most notable was Akira Takayama, later a renowned mathematical economist.

Again, the reports of the "committee for social sciences" (see above) give a sketch of how the activities in the Department of Economics were organized under the chairmanship of McKenzie.

Scientific research in economics was divided into empirical analysis and theoretical. To the first group belonged, for instance, the research work about American Economic History, carried forward by Robert Fogel. Given the quantitative nature of such research, stress was also put on expanding

---

berger, Robert R. France, Jack Taylor, and Alice Wynd.

<sup>12</sup>Fogel's career as well has been reconstructed in his Nobel autobiography: <https://www.nobelprize.org/prizes/economic-sciences/1993/fogel/facts/> Other than Fogel, the other Rochester Nobel Prize, until now, is Paul Romer, who worked there at the beginning of the 1980s. McKenzie, despite his priority in the mathematical proof of the existence theorem, was never awarded the Nobel, contrary to Arrow (1971) and Debreu (1983). This point is discussed in: D  ppe and Weintraub 2014

the funds and the facilities needed, especially computers. ("Empirical Research currently under way in the Department of Economics," McKenzie n.d., Box 32)<sup>13</sup> In this sense, furthermore, a particular mention was made to the "continued development of relations between the economics and history departments." (ibidem) A similar plea for interdisciplinarity was also advanced for political science regarding taxation and fiscal policy

Research in theoretical economics, McKenzie's field of interest, instead spanned from the mathematical analysis of competitive markets, with particular attention to the hot topics of General Economic Equilibrium's properties (existence, uniqueness, and stability of equilibrium), international trade, and macroeconomics. Eventually, among the aims to be pursued, we also find the development of mathematical analysis and statistical analysis in the social sciences, focusing on choice behavior, psychology, and social psychology. ("Research in Theoretical Economics," McKenzie n.d., Box 32)

The report is descriptive and very general. However, it is also precious in presenting a view of the commitment toward social science and interdisciplinary analysis at Rochester in the early 1960s. It represents the image of a very challenging and exciting scientific environment. An aspect confirmed by the personal recollections, interviews, and oral histories, of some of the people who spent part of their intellectual careers at Rochester. As Düppe and Weintraub stated: "By the early 1960s, McKenzie had built up the Rochester research community with its own identity [...] and proud to be labeled theoretical as opposed to mathematical. [...] Rochester welcomed mathematics and science 'majors' into its graduate program as over the 1960s it became known as an exciting place for them to study economics and political science." (Düppe and Weintraub 2014, p. 193)

## Conclusion

Having described how Riker and McKenzie radically reshaped the departments that they chaired, let's draw some conclusions on their parallel activities. Since, it has become customary to define the attempts to extend economic reasoning beyond its natural domain as "economic imperialism," quite naturally, then, it could be easy to see Riker's intellectual enterprise, favored by McKenzie's presence, as influenced decisively by Economics's "going mathematical" path. Instead, however, we argue that the story is more complex.

To begin with, as seen, Riker's commitment to game theory dates before his appointment at Rochester. Rochester's environment made Riker's agenda by far easier to be carried forward but in no way determined it. Riker's commitment to formal theory and game theory followed similar paths to that of mathematical economists in the 1950s. It is well-known that even the practical aspirations fueled research in General Economic Equilibrium models, Econometrics, or Linear Programming: such advanced analysis could have been helpful to practical scopes (not necessarily coincidental with that of a radical free-market society).<sup>14</sup> Similarly, Riker's main aim was to advance the scientific understanding of Politics, to utter true sentences about politi-

<sup>13</sup>This aspect has been particularly important for Fogel's research

<sup>14</sup>Take, for instance, the case of Cowles Commission at Chicago in the 1950s: such a radical attitude put the researchers who worked there often in contrast with the faculty of the Department of Economics, which hosted it, and whose attitude toward mathematical economics was less enthusiast than Cowles'

cal issues. He found that game theory and economic theory were sound and employed them. (Riker and K. Shepsle 1979) It is true that in the 1970s, Riker evolved toward the libertarian worldview sustained by people such as George Stigler, Milton Friedman, Gary Becker, and even Henry Manne (as seen, for a while member of the faculty of Rochester). Since Riker, alongside other political scientists of the 1950s, was animated by a "reformist position" with regard both to the theory and the practice of political science, he simply stated that "I have gone 180 degrees in what I think the appropriate reformist position." (Riker and K. Shepsle 1979, p. 145)<sup>15</sup>

What above contends, even if it does not exhaust many explanations of how cold-war rationality shaped and fueled the development of the Post-war social sciences, especially how mathematization and quantitative analyses conquered economics and other social sciences. (Mirowski 2002; Amadae 2003; Erickson et al. 2015)

Furthermore, the "economic imperialism" thesis for Riker and Positive Political Theory does not hold historically. As Amadae and Bueno de Mesquita have shown convincingly, game theory became a definite part of political science well before economists fully grasped its merit. (Amadae and Mesquita 1999, p. 290). This furthermore points out the well-known story of the late entry of game theory into the economists' toolbox, almost twenty-five years after the publication of von Neumann & Morgenstern's pivotal work. They also stated that assuming the existence of "economic imperialism" displaces the credit for innovation from political scientists to economists, and this, as Riker's story demonstrates, it is untrue. Finally, the call for extending the economic analysis far beyond the study of market phenomena was launched even by economists themselves.

So then, Riker and Positive Political Theory maintained a definite methodological stance separate from economics. This points to McKenzie's view of economics, Riker's view, and the different meanings of "formalism," which sustained mathematical economics. So then, letting apart from the "Rational Choice Approach," which is the starting point, as seen, of Riker's theoretical agenda, there are few resemblances with the General Economic Equilibrium approach that McKenzie's economic theory displayed.

McKenzie, as seen, favored the rigorous foundation of Economic Theory in a mathematical fashion, to which he contributed grandly. However, he, differently from the main strand of axiomatic theory in economics, devoted great attention ever to the economic relevance of his analysis. A well-known example is the proof of the existence of General Economic Equilibrium, where he modeled production as a set of independent and linear activities, whereas Arrow and Debreu's model considered the production set as a set of firms, and so no place was left for the entry of new firms and the dissolution of others. In terms of mathematical sophistication, the two models are quite similar, but McKenzie's one is fairly more "realistic" in representing economic activities. (McKenzie 2009) This shows that he was not simply a mathematical economist or, even less, a mathematician who was doing economics

---

<sup>15</sup>In that period, Riker made explicit the view that, given the inevitability of majority cycles and the emptiness of such concepts as people's will, this supported the absolute superiority of liberal democracy (social choice) over a populist one. (Riker 1982). Since their mathematical nature, these conclusions were comprised yet in the formal works of the 1950s, starting from Arrow. (Kenneth J Arrow 1962) However, the ways Arrow came to this result during his Ph.D. had little in common with the aim of disheartening radical democracy to defend a conservative (or "Madisonian" in Riker's words) view of democracy. K. Arrow 2014

research, but in his own words, he was an "economic theorist." Mathematics and rigorous analysis were decisive in establishing a logically consistent economic theory. However, at the same time, this was not reducible exclusively to a sequence of mathematical theorems and results. (Düppe and Weintraub 2014, p. 190) The same spirit animates all the rest of his economic contributions, especially the study of the convergence of optimal growth path, a branch of theoretical economics that became a Rochester Economics landmark.

Riker, as seen, viewed economics as a model for developing a genuine science of politics. (Riker 1962; Riker 1977) However, his view of economics referred mainly to game theory, not general economic equilibrium, in a period well before the game-theoretic revolution in economics. Besides, Riker's resting on game theory was not fully axiomatic and closer to the "positive" view, which looked for empirical validation using statistical arrangements, historical analysis, and even laboratory experiments.

Eventually, Positive Political Theory became a fully axiomatized economics-like discipline. Riker's role in this process was important, but he never grasped the advanced mathematical analysis encompassed in the more recent developments (especially in the 1970 and 1980s). Game theory was central to Positive Political Theory, becoming the marker of the formal analysis of politics well before the game-theoretical revolution in economics, even fostering the development of some mathematical solutions for cooperative games. (Ordeshook 1978; Ordeshook 2007)

However, McKenzie never was a game theorist, remaining instead a "classical general equilibrium theorist." (McKenzie 2002) But, in the 1970s, James W. Friedman joined the economics department. Friedman was a Yale Ph.D. whose outstanding contributions to the theory of games were pivotal in fuelling its adoption by economists in the 1980s. Besides, Friedman helped people in the political science department to get proper game-theoretical training, going further than the introductory education provided by such works as Luce & Raiffa's. This was, for instance, the case of Ordeshook. (Ordeshook 2021)

Then, it is apparent that the story of the relationship between economics and political science at Rochester is far more complicated than adopting a simple mutual influence view. Both Riker and McKenzie displayed a transformative attitude with regard to their disciplines, and their activities in chairing the respective departments mirrored their mindsets. However, McKenzie ever remained an economist, and Riker, a political scientist.

McKenzie left the department's chairmanship in 1966, still remaining at Rochester for all his career. Riker left his role in 1976, and he also remained part of the Rochester faculty until his death. Thanks to their efforts, Rochester's economics and political science departments became of world-wide relevance. (Amadae and Mesquita 1999)

The aim of this paper has been twofold. First, to present a historical narrative of how two scholars with well-defined ideas concerning their disciplines could create and shape a research community. For what concerns the "local" dimension, in Riker's case, its importance is apparent. Indeed, Riker's place in the political science community was heterodox, and in the 1960s (and even after), Rochester's graduate program was the only choice if you were interested in studying formal political theory.

Second, we also showed that, although Positive Political Theory was favored by the closeness to such a theory-driven economics department, the

link was more complicated. For sure, it was not a case of economic imperialism.

A final point has been neglected in this paper. We interpreted the issue of "local" in quite a traditional way: people in the same physical place doing similar things (despite the differences outlined above). Among the development of new ideas in the 1950-the 60s, Public Choice shared the same vision as Riker. However, Public Choice scholarship cannot be separated from the philosophical issues about constitutionalism, criticism of the majority rule, and the conception of politics as an exchange among equals. It can also partially explain why, despite some overlapping, Public Choice and Positive Political Theory never 'merged' together, maintaining some differences that increased by the passing of time. In the 1960s, there were many exchanges between Positive Political Theory and Public Choice and other scholars following a similar approach. Especially with the Carnegie Mellon's group, Otto Davis and Melvin Hinich. They hired many Rochester Ph.D., starting from Richard McKelvey and Peter Ordeshook. Therefore, the notion of "local" in the case of the development of formal political science can be extended to encompass different stories. Eventually, fostering a translation back from the "physical" community to the "intellectual" one.

## References

- 1962-3 *University of Rochester Bulletin* (n.d.) ().
- 1967-8 *University of Rochester Bulletin* (n.d.) ().
- Adcock, Robert (2009). "Interpreting behavioralism". In: *Modern political science: Anglo-American exchanges since 1880*. Ed. by Robert Adcock, Mark Bevir, and Shannon C Stimson. Princeton University Press Princeton, NJ, pp. 180–208.
- Amadae, Sonja M. (2003). *Rationalizing capitalist democracy: The cold war origins of rational choice liberalism*. University of Chicago Press, Chicago, IL.
- Amadae, Sonja M. and Bruce Bueno de Mesquita (1999). "The Rochester School: The origins of positive political theory". In: *Annual Review of Political Science* 2.1, pp. 269–295.
- Arrow, Kenneth (2014). "The Origins of the Impossibility Theorem". In: *The Arrow Impossibility Theorem*. Ed. by Eric Maskin and Amartya Sen. Columbia University Press, New York, NY.
- Arrow, Kenneth J (1962). *Social choice and individual values [1951]*. John Wiley & Sons, New York, NY.
- Arrow, Kenneth J. and Gerard Debreu (1954). "Existence of an equilibrium for a competitive economy". In: *Econometrica: Journal of the Econometric Society* 22.3, pp. 265–90.
- Austen-Smith, David (1999). *Positive political theory I*. University of Michigan Press, Ann Arbor, MI.
- Barry, Brian (1970). *Sociologists, Economists and Democracy*. Chicago University Press, Chicago, IL.
- Bueno de Mesquita, Bruce (2021). "May 22th 2021". Interview with the author.
- Bueno de Mesquita, Bruce and Kenneth Shepsle (2001). "William Harrison Riker 1920-1993. A Biographical Memoir". In: *National Academy of Sciences. Biographical Memoirs* 79.

- Dahl, Robert A (1961). “The behavioral approach in political science: epitaph for a monument to a successful protest”. In: *American Political Science Review* 55.4, pp. 763–772.
- Dimand, Robert W (2019). “The Cowles Commission and Foundation for Research in Economics”. In: *The New Palgrave Online* (2019).
- Düppe, Till and E Roy Weintraub (2014). *Finding equilibrium*. Princeton University Press, Princeton, NJ.
- Erickson, Paul et al. (2015). *How Reason Almost Lost its mind: The strange career of Cold War Rationality*. University of Chicago Press, Chicago, IL.
- Gindis, David (2020). *Law and Economics Under the Palms: Henry Manne at the University of Miami, 1974-1980*. URL: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3567105](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3567105).
- Giocoli, Nicola (2003). *Modeling rational agents: From interwar economics to early modern game theory*. Edward Elgar Publishing, Cheltenham.
- Luce, Duncan R. and Howard Raiffa (1957). *Games and decisions: Introduction and critical survey*. John Wiley and Sons, New York, NY.
- McKenzie, Lionel W. (1954). “On the existence of general equilibrium for a competitive market”. In: *Econometrica: Journal of the Econometric Society* 27.1, pp. 54–71.
- (1957). “Demand theory without a utility index”. In: *The Review of Economics Studies* 24.3, pp. 185–9.
- (1999). “A Scholar’s progress”. In: *Keio economic studies* 36.1, pp. 1–12.
- (2002). *Classical General Equilibrium Theory*. The MIT press, Cambridge, MS.
- (2009). “Equilibrium, Trade and Capital Accumulation”. In: *Equilibrium, Trade, and Growth: Selected Papers by Lionel W. McKenzie*. Ed. by Tapan Mitra and Kazuo Nishimura. MIT press, Cambridge, MS.
- (2012). “The early years of the Rochester department of economics”. In: *International Journal of Economics Theory* 8, pp. 227–235.
- (n.d.). “Lionel W. McKenzie Papers”. David M. Rubenstein Rare Book & Manuscript Library, Duke University.
- Medema, Steven G. (2000). ““Related Disciplines”: The Professionalization of Public Choice Analysis”. In: *History of Political Economy* 32.supplement, pp. 289–324.
- Mirowski, Philip (2002). *Machine dreams: Economics becomes a cyborg science*. Cambridge university press, Cambridge and New York.
- Mitra, Tapan and Kazuo Nishimura (2009). “Lionel W. McKenzie”. In: *Equilibrium, Trade, and Growth: Selected Papers by Lionel W. McKenzie*. Ed. by Tapan Mitra and Kazuo Nishimura. The MIT press, Cambridge, MS.
- Niemi, Richard (2021). “May 27th 2021”. Interview with the author.
- Ordeshook, Peter C., ed. (1978). *Game Theory and Political Science*. New York University Press, New York.
- (2007). “The Competitive Solution Revisited”. In: *Positive Changes in Political Science: The Legacy of Richard D. McKelvey’s Most Influential Writings*. Ed. by John H. Aldrich, James E. Alt, and Arthur Lupia. The University of Michigan Press, Ann Arbor, MI, pp. 165–86.
- (2021). “I’ll begin where I began”. Manuscript sent to the author.
- Palfrey, Thomas (2005). “Richard Drummond McKelvey (1944-2002)”. In: *National Academy of Sciences. Biographical Memoirs* 87.
- Riker, William H. (1962). *The theory of political coalitions*. Yale University Press, New Haven, CT.

- Riker, William H. (1977). "The Future of a Science of Politics". In: *American Behavioral Scientist* 21.1, pp. 11–38.
- (1982). *Liberalism against Populism: A confrontation between the theory of democracy and the theory of social choice*. Freeman and Company, San Francisco, CA.
- (1988). "The place of political science in public choice". In: *Public Choice* 57.3, pp. 247–57.
- (1992). "The entry of game theory into political science". In: *Toward a history of game theory*. Ed. by E. Roy Weintraub. Vol. 24. Duke University Press Durham, NC.
- (1997). "The Ferment of the 1950s and the Development of Rational Choice Theory". In: *Contemporary empirical political theory*. Ed. by Kristen R. Monroe. University of California Press, pp. 191–201.
- (n.d.). "William Harrison Riker Papers". D.262, Rare Books, Special Collections, and Preservation, River Campus Libraries, University of Rochester.
- Riker, William H. and Peter C. Ordeshook (1973). *An introduction to positive political theory*. Prentice-Hall Englewood Cliffs, NJ.
- Riker, William H. and Kenneth Shepsle (1979). "Interview to William Harrison Riker by Kenneth Shepsle". Box 85, WHRP.
- Shepsle, Kenneth A. (2021). "May 17th 2021". Interview with the author.
- Somit, Albert and Joseph Tanenhaus (1967). *The development of political science: From Burgess to behavioralism*. Allyn and Bacon, Boston.
- Tyler, Ralph W. (1956). "Study Center for Behavioral Scientists". In: *Science* 123.3193, pp. 405–8.
- Weintraub, E. Roy (2002). *How economics became a mathematical science*. Duke University Press, Durham, NC.