



Keynes' Attack on the Versailles Treaty: An Early Investigation of the Consequences of Bounded Rationality, Framing, and Cognitive Illusions

WILLIAM P. BOTTOM*

John M. Olin School of Business, Washington University in St. Louis, One Brookings Drive, Room 1133, St. Louis, MO 63130, USA (E-mail: bottomb@olin.wustl.edu)

Abstract. The Paris Peace Conference was arguably the most complex negotiation ever undertaken. The principal product of the conference, the Treaty of Versailles, failed to accomplish any of its framers' major goals. Relations between the Allies themselves and the Allies and their defeated enemies seriously deteriorated as a consequence of the negotiations and attempts to implement the treaty. Economic conditions in Germany, the rest of Europe, and eventually the United States declined as well. At the time of the Treaty's publication, John Maynard Keynes and a considerable number of other participants predicted these events, pointing to the negotiators' errors and oversights as a primary cause. The logic of Keynes' argument is re-examined in light of recent research on the psychology of human information processing, judgment and choice. It reveals that his approach is actually very consistent with and anticipates both Simon's conception of bounded rationality and recent work on cognitive heuristics and illusions. Negotiator bias has been studied almost exclusively using simple laboratory settings. The catastrophic lose-lose nature of the Versailles Treaty illustrates the way in which complexity necessitates reliance on simplifying heuristics while propagating and amplifying the impact of the bias that is generated. Evidence from the treaty negotiations and the failed implementation of the treaty suggest some very significant boundary conditions for the application of rational choice models in the business, politics, and international relations contexts. It also demonstrates the need for negotiations researchers to focus more attention on the implementation of agreements and the long-term effects of those agreements on relationships.

Keywords: bounded rationality, cognitive illusions, framing, Versailles Treaty

Contemporary research on the psychology of bargaining and negotiation has developed Simon's (1947) argument that complexity forces boundedly rational agents to use mental short cuts. Heuristic methods for processing information, and making judgments and decisions economize on scarce cognitive resources and costly cognitive effort. It has been repeatedly demon-

* William P. Bottom is Professor of Organizational Behavior at the John M. Olin School of Business at Washington University in St. Louis. His research on the cognitive, social, and institutional forces which shape negotiations and exchange has been supported by the National Science Foundation and the Russell Sage Foundation. It has appeared in such journals as the *American Journal of Political Science*, *The Journal of Conflict Resolution*, *Organization Science*, and *Organizational Behavior and Human Decision Processes*.

strated that these heuristic approaches generate predictable biases in judgment that then lead to an escalation of conflict, a failure to settle, or considerable inefficiencies in terms of settlement (see Bazerman et al. 2000). It is commonly presumed that negotiations shaped by these flawed processes may also damage relationships between the parties, thereby foreclosing future opportunities for collaboration or trade. Ironically these conclusions have been drawn from studies of extremely simple negotiations between two monolithic individuals with no past and no future relationship at stake. These studies bear scant resemblance to the complex negotiations they were created to help explain – multiple-issue negotiations between three or more, faction-ridden parties that must consider linkages and the long-term implications of negotiation on relationships (Eliashberg, Lilien and Kim 1995; Zartman 1994). The paradox is an artifact of laboratory methodology that has dominated research in the area.

Untested assumptions and a logical leap are needed to conclude that these heuristics are truly used to cope with the real complexity that characterizes actual business, political, or diplomatic negotiations. To conclude that cognitive bias ever generates impasse, escalation, inefficiency, or damaged relationships in the same way that it appears to have done in many laboratory settings requires an additional leap in logic. The assumptions are certainly plausible but largely untested.

Through experimental variations and forays into the field, research has begun to address the problem of applying generalizations to more realistic conditions. Some researchers suggest that when motivation for cognitive effort is sufficient then reasoning will improve and dispel bias (De Dreu, Koole and Steinel 2000). By implication, when the negotiation is an important one, cognitive bias will have only a negligible impact. However, a systematic review of 74 experiments found that while greater incentives frequently improved performance, there was no evidence that they consistently eliminated cognitive bias (Camerer and Hogarth 1999). A limited number of field studies have also been conducted. Camerer et al. (1997) showed that cab-drivers' decisions regarding working hours exhibited the same biases that were found in the laboratory. Workplace incentives did not eliminate them. However, they also found bias to be much less pronounced among experienced drivers. Thus, perhaps experience and expertise check bias. Northcraft and Neale (1988) observed a similar pattern in the real estate pricing judgments of MBA students and professional agents. So the pattern of results to date suggests that bias may be diminished with experience and incentives. Of course none of these studies, including the field studies, have involved extremely complex problems or exceptionally high stakes.

This study takes a different approach that should provide a useful complement to laboratory and field research. It addresses the impact of negotiator cognition through a highly-focused analysis of the Paris Peace Conference of 1919 (PPC). The PPC was arguably the largest, most complex, and most far-reaching negotiation ever undertaken. Representatives from 27 nations, including the leaders of the world's major powers, worked continuously in Paris for six months to craft an intricate system of treaties to end the First World War.

This analysis of the Conference serves a number of important ends. It clarifies the origins of the concepts of bounded rationality and cognitive illusion. It also substantiates the leap from laboratory phenomena to real, complex negotiation, illustrating how negotiators cope with complexity in multilateral settings. In particular, it demonstrates how highly-correlated errors made over a series of complex, sequential decisions can propagate and amplify cognitive illusions. In Paris, these amplified illusions appear to have greatly distorted the final settlement.

Four sections follow. The first section provides some background on the PPC, focusing on those features that make it a particularly interesting case. The second section summarizes conclusions about the Versailles Treaty published first by John Maynard Keynes and subsequently supported and elaborated upon by a number of other participant-observers. The third section discusses the evidence provided by these authors. It draws from the official record regarding the development of cognitive illusions and their impact on the judgments and choices of the negotiators. Finally the concluding section summarizes the case and reveals the implications of this analysis for further research.

The Complexity of the Paris Conference

The PPC constitutes a unique attempt to craft a truly global settlement (Lentin 2002). The negotiators focused on the territorial, military, and economic issues pertinent to dealing with Germany, while simultaneously attempted to resolve border disputes in China, Southeast Asia, the Pacific Islands, the Middle East, and Africa. They were confronted with the Bolshevik revolution in Russia, Zionism, and Arab, Balkan, and Irish nationalism. They created a new form of international organization, the League of Nations, as well as the International Labor Organization and the World Court of Justice (Temperley 1924). Their ambitious agenda tested the very limits of the negotiators' ability to process information and make rational, far-sighted decisions.

This case is particularly intriguing because the deleterious consequences of negotiator bias that are so often seen in the microcosm of the exper-

imental laboratory appear to have manifested in a vastly magnified form on the diplomatic stage in Paris. The Versailles system was “a debacle” (Kissinger 1984: 357). Bias, at a minimum, indirectly resulted in the United States Senate’s repudiation of a Treaty signed by the President. Furthermore, the most important provisions either could not be implemented or they unraveled disastrously during the 1930s. Additionally, attempts to execute the reparations terms created economic havoc in Europe, the United States, and eventually around the globe (Ferguson 1996; Sargent 1982; Trachtenberg 1984; Schuker 1988; Webb 1989). The negotiation process, the substantive terms of the agreement, and attempts to implement the treaty undermined democratic governments in Italy and Germany. Moreover, the League of Nations, the centerpiece of the Versailles system and its intended enforcement mechanism, failed its principal task and was dissolved in 1945 at the conclusion of the far more devastating Second World War (Fleury 1998).

This slide into a twenty-year period of destructive politico-economic disequilibrium indicates that the validity of the leap from laboratory findings to complex negotiations may actually have received its crucial field test nearly a century ago. Cognitive illusion and its impact on the negotiation process at the PPC may have been critical factors in the contemporary destabilization of international relations, the creation of the cataclysm of the Second World War, the eventual Arab-Israeli conflict, and even the Balkan wars of the 1990s. Furthermore, it is certainly difficult to understand the nature of the Cold War without considering the series of Allied decisions concerning Russia at the peace conference and the role played by cognitive bias. Of course the combination of appropriate preconditions and predicted consequences only suggest the possibility, they do not establish it.

A full understanding of what went awry in the PPC will require a much broader investigation than is feasible here. Cognitive factors may have contributed to the causal sequence of events, but a complete explanation must encompass economic, organizational, and political forces as well. The purpose of this paper is a modest, first step toward disentangling the complex web of interlocking negotiations and renegotiations. We begin by re-examining participant-observers’ detailed accounts of the negotiations, which include first-hand descriptions of the decision-making process that would shape the post-war world.

The top panel of Table 1 lists the plenipotentiary delegates of the five great powers. For purposes of economy, the delegates of the 22 smaller powers are not listed though they exercised considerable influence on particular decisions.¹ Each nation’s full delegation was considerably larger than the key participants listed here. The American mission alone included 1300 members

Table 1. Delegates from the "Great Powers" at the Paris Peace Conference (Source: Temperley 1924)

<i>(A) Plenipotentiary delegates of the Great Powers.</i>						
	Delegate					
	1st	2nd	3rd	4th	5th	6th
France	G. Clemenceau	S. Pichon	L-L. Klotz	A. Tardieu	J. Cambon	F. Foch
Great Britain ¹	D. Lloyd George	A.J. Balfour	A. Bonar Law	G.N. Barnes	A. Milner	W. Churchill
Italy	V. Orlando	S. Sonnino	G.F.S. Raggi	A. Salandra	S. Barzilai	
Japan	K. Saionji	M. Nobuaki	C. Sutemi	K. Matsui	H. Ijuin	
USA	W. Wilson	R. Lansing	H. White	E.M. House	T. Bliss	

<i>(B) An incomplete listing of influential expert advisors at the PPC and to the German delegation at Versailles.</i>			
Advisor	Delegation	Occupation	Prime issue
Baruch, Bernard	USA	Financier	Reparations
Cunliffe, Walter	Great Britain	Banker	Reparations
Davis, Norman	USA	Financier	Reparations
Dulles, John Foster	USA	Lawyer	Reparations
Headlam-Morley, James	Great Britain	Diplomat	Borders
Hoover, Herbert	USA	Engineer	Food relief
Keynes, John Maynard	Great Britain	Economist	Reparations
Lamont, Thomas	USA	Banker	Reparations
Lippmann, Walter	USA	Journalist	League of Nations
Loucheur, Louis	France	Financier	Reparations
Melchior, Carl	Germany	Banker	Reparations
Nicolson, Harold	Great Britain	Diplomat	Borders
Sumner, John	Great Britain	Judge	Reparations
Warburg, Max	Germany	Banker	Reparations
Weber, Max	Germany	Sociologist	War guilt

¹Lloyd George successfully negotiated to add additional representatives from the Dominions of the British Empire including Australia, Canada, India, Newfoundland, New Zealand, and South Africa. In practice they functioned as additional British delegates but are here not treated as "great power" delegates in order to simplify the presentation. Jan Smuts of South Africa, William Hughes of Australia, and Edwin Montagu of India played very important parts in the reparations debate.

at its peak (Gelfand 1963). The lower panel of Table 1 provides an initial, although incomplete, list of influential expert advisors.

The participants were well aware of the historic significance their task would hold in the future. A large number of them kept diaries and wrote extensive letters recording their observations as the events unfolded (Gelfand 1963). Many others subsequently published lengthy accounts of the negotiations and the decision-making process. John Maynard Keynes, a financial expert with the British delegation, provided the first and most influential

account of the negotiation. Keynes resigned from his position with the British Treasury in protest over the terms of the Treaty. He then published a detailed analysis of the negotiations and the dangers posed by the Treaty (Keynes 1920). Critical accounts would soon follow from other members of the British and American delegations, who added new details but pursued a line of argument similar to that of Keynes. Some participants, like Keynes, presented their critique long before events could confirm their pessimism (e.g., Baruch 1920; Lamont 1921; Lippmann 1922). Other negotiators (e.g., Dulles 1940; Lloyd George 1938) offered them in retrospect either as or after the provisions of the Treaty unraveled. Churchill (1948) wrote even later with the perspective afforded by a full appreciation of the destruction of the Second World War.

The next section re-examines the terms of the Treaty and the critics' observations. It can be shown that Keynes and the other critics worked from a conception of boundedly rational negotiation that anticipated many recent insights in cognition, judgment, and bargaining.

From a Principled Armistice to a "Carthaginian" Treaty

The primary complaint of the critics was also one raised by the German government – that the Treaty's terms reflected neither the spirit nor the language of the Armistice under which the Germans agreed to lay down arms in October 1918. Through the signing of the Armistice, Woodrow Wilson had executed a unique form of principled diplomacy, an innovation in practice that prefigured much of what Fisher and Ury (1981) would later come to call "principled negotiation" (see also Fisher, Schneider, Borgwardt and Ganson 1997). In theory, the principled approach should have led to a just and wise agreement that preserved or strengthened relationships. A detailed examination of Wilson's approach and its relationship to the Fisher-Ury model is beyond the scope of this paper (for a paper on this subject see Bottom 2002). But the essence of Wilsonian diplomacy was that international conflicts should be settled by standards of justice rather than by force or for the purpose of maintaining a "balance of power" (Knock 1998). The armistice specifically identified such Wilsonian principles as "open diplomacy," "a peace without annexations or punitive damages," self-determination as "an imperative principle of action," and the formation of "a general association of nations" as the basis upon which the final settlement would be negotiated (Bottom 2002).

The German reply to the first draft of the Versailles Treaty charged the Allies with abandonment of these principled aims and a breach of contract,

The German Peace Delegation has completed its first examination of the Conditions of Peace which were handed to it. It has had to recognize that

the agreed basis of the peace of justice has been abandoned on important points; it was not prepared to see that the promise given expressly to the German people and to all mankind would be rendered illusory in this fashion. The draft treaty contains demands which are not tolerable to any people. Much of it, moreover, in the opinion of our experts, is not possible of fulfillment (Brockdorff-Rantzau to Clemenceau, May 9, 1919, reprinted in Burnett 1940: 1–2).

While the parties made minor modifications to the initial draft, the basic structure did not change (see Mantoux 1992). The Allied response of June 12 was in the form of an ultimatum:

the Allied and Associated Powers must make it clear that this letter and memorandum constitute their final word . . . As such it must be accepted or rejected as it now stands . . . If they (the German government) refuse, the armistice will terminate and the Allied and Associated Powers will take such steps as they think needful to enforce the terms (reprinted in Link, 1966–1992, vol. 60: 451).

Rather than submitting, the existing German government fell. A hastily assembled successor government subsequently sent delegates who capitulated on June 28 at Versailles.

Keynes argued that once the armistice was signed and the Germans abandoned arms, Wilson's principles had served their purpose for the European allies. In his view, these allies subsequently drifted toward the pursuit of a myopic and opportunistic strategy of expropriating as much value as they possibly could from the settlement. This "Carthaginian approach" clashed with Wilson's persistent but misguided attempts to structure a principled settlement. Through larger numbers and vastly superior skill, the Europeans outwitted, outsmarted, and duped Wilson into bargaining mistakes that turned the Treaty into a Carthaginian peace clothed in the insincere language of an idealistic and principled one.

The controversial "Carthaginian" provisions encompassed all aspects of the settlement. Germany was stripped of its colonies, leaving its industry without access to the colonies' vast natural resources. The territorial provisions (see Figure 1) cost Germany 25,000 square miles of territory. The resulting borders rendered millions of ethnic Germans citizens of new states in Austria, Czechoslovakia, Lithuania, and Poland. The so-called Polish corridor (see the strip surrounding Posen in Figure 1) awkwardly detached German East Prussia from the rest of the country. Germany was denied membership in the League of Nations. German Austria was constrained by a French veto from seeking unification with Germany whatever its national aspirations might have been (The Treaties of Peace 1924). As harsh as these

provisions were, the greatest and longest lasting dispute concerned reparation payments from Germany to the Allies.

During the armistice negotiations, the Allies stipulated and the Germans endorsed a particular conception of what Germany owed to the Allies. “In the conditions of peace laid down in his address to Congress on 8 January 1918, the President declared that invaded territories must be restored as well as evacuated and made free. The allied governments feel that no doubt ought to be allowed to exist as to what this provision implies. By it they understand that compensation will be made by Germany for all damage done to the civilian population of the Allies and to their property by the aggression of Germany by land, by sea, and from the air.” (Lansing to Sulzer, November 5, 1918, reprinted in Burnett 1940: 411.) The final treaty actually required an immediate payment of 20 billion goldmarks with the remaining debt and payments to be determined by an inter-allied commission by May 1921. The commission was granted considerable power to gather data on German commercial activity and to ensure that levels of taxation were set appropriately. An appendix spelled out the categories of damage that Germany would be required to pay including the disputed decision to include the cost of military pensions (The Treaties of Peace 1924). This and other problematic aspects of the reparations issue will be analyzed in some detail in the section on “The Cascade of Errors.”

Why would the European allies, for all their tactical brilliance, pursue such a rapacious policy if it were so strategically unwise and ultimately destabilizing and self-defeating? Because his primary focus was on documenting the unworkable nature of the final treaty terms, Keynes did not provide a complete answer to this question. It would fall to the other participant-observers – Baruch, Lamont, Lippmann, Headlam-Morley, Nicolson, and Dulles – to more fully flesh out the explanation. Each looked to “psychological factors” for their answers.

The Propagation of Cognitive Bias

The sheer number and range of issues, the number of interested parties, high stakes, time pressure, and the novelty of the problem all combined to place nearly unprecedented information-processing demands on the negotiators. According to Nicolson (1933: 66) these took a serious toll:

Full allowance must be made for the very limited powers of endurance possessed even by the most muscular of human brains. Under the strain of incessant overwork, the imaginary and creative qualities are apt to flag: more and more does the exhausted mind tend to concentrate upon the narrower circle of immediate detail.

In a rational manner the PPC organizers sought to extend the limits on their own capability through data gathering, expertise, and organization. These decision aids were only partially successful in managing complexity. The leaders of the major powers were forced to rely heavily on their own judgment and intuition.

The critics' contention was that unchecked bias in the leaders' judgment led to a series of mistakes that compounded upon and reinforced each other. The disastrous nature of the resulting settlement was the compound effect of this cascade of errors. We first examine the sequence of mistakes identified by Keynes, Lippmann, and Nicolson. We then discuss the psychological factors they diagnosed as the primary cause.

The Cascade of Mistakes

Decisions were made both sequentially and simultaneously. Sequential errors had a compound effect. Initial decisions of seemingly lesser importance came to impact the later decisions. They framed the debate and shaped subsequent choices. These choices in turn constrained and shaped the final terms. To the critical observers, the full process became a cascade of highly correlated errors, each taking the final treaty further and further astray (Nicolson 1933, describes this dynamic at some length). Critical observers attributed the correlation in the errors, including the earliest, to a set of psychological factors described in a subsequent section.

Wilson's Attendance

Until 1919, no American President had stepped foot on European soil while in office. Most observers in the United States and abroad assumed that Wilson would send a delegate to negotiate on his behalf. The great distance between Washington and the conference location and the relatively slow means of transatlantic communication and travel would leave him vulnerable to the development of domestic political opposition while away. His absence from the conference table, on the other hand, would afford him certain strategic advantages in staking credible commitments (Schelling 1962), thereby enhancing his already formidable bargaining power (Keynes 1920; Lloyd George 1938; Nicolson 1933). He could have retained a crucial measure of veto power over critical provisions. If a proposal failed to conform appropriately to the principles he had articulated (and which formed the foundation of the Armistice) he could reject them from the comfort of the White House. None of these strategic considerations were lost on Wilson's advisors, who urged him to remain in Washington. One Wilson confidante, the journalist Frank Cobb appealed to the President's closest advisor:

In Washington, President Wilson has the ear of the whole world. It is a commanding position, the position of a court of last resort, of world democracy. He cannot afford to be maneuvered into the position of an advocate engaged in personal dispute and altercation with other advocates around a council table . . . This is a mighty weapon, but if the President were to participate personally in the proceedings it would be a broken stick (Cobb to House, November 4, 1918, reprinted in Seymour 1928: 211).

Wilson had by this time acquired an undeniable aura of greatness. His charismatic power was the product of American industrial might, the compelling language of his speeches, and the crucial role he had played in ending the war. Venturing to Paris jeopardized that aura and curtailed his veto power. As the British Prime Minister David Lloyd George put it in retrospect (1938),

a cable from the President of the United States intimating that he disapproved of some particular proposition and that, if it were inserted in the Treaty, he could not sign it, would have made it much easier for the French and British representatives to persuade their respective publics to accept modifications . . . But when he came to the Peace Congress his decisions counted no more than those of the Prime Ministers with whom he conferred.

The Setting of the Talks

The location of international peace conferences is today a matter of very careful deliberation. Camp David, Oslo, Dayton, and Wye River were chosen to isolate the negotiators from the pressure of public opinion and to achieve a degree of balance between the parties. Jerusalem and Sarajevo would hardly be considered suitable for the purpose of effecting Palestinian or Balkan settlements respectively. Yet in 1919, the Great Powers chose to hold the peace conference in an embattled city that had only recently been under siege by German forces. Keynes, Lippmann, and Nicolson would all point to this decision as a crucial early error.

Parisian public opinion, especially as transmitted through the media, acutely impacted the negotiators. They could not escape it. Following an incident in which the German delegation was stoned by locals, Lloyd George admitted that "The conference should not have been held in France. It should have been held in a neutral country. The French Press had acted very badly" (McEwan 1986: 279). He would later (1938) liken the entire experience to negotiating with "stones clattering on the roof and crashing through windows, and sometimes wild men screaming through the keyholes." Nicolson chose a different metaphor,

We felt like surgeons operating in the ballroom with the aunts of the patient gathered all around. The French reacted . . . in a most unhelpful manner. Almost from the first they turned against the Americans with embittered resentment . . . The cumulative effect of all this shouting outside the very doors of the Conference produced a nervous and as such unwholesome effect . . . The choice of Paris, therefore, became one of the most potent of our misfortunes (Nicolson 1933: 77–78).

The full force of all this pressure fell heaviest on Wilson, the leader attempting to argue for a principled settlement. The French press and public eventually turned much of their resentment and anger against him (Keynes 1920; Nicolson 1933; Noble 1935). The extreme psychological, physical, and emotional toll on Wilson, combined with a prior history of vascular disease, culminated in what now appears to have been a small stroke midway through the conference. It ultimately contributed to the debilitating stroke he would suffer during his campaign to obtain Senate ratification of the Treaty (Park 1993; Weinstein 1970).

These initial mistakes undercut Wilson's bargaining power and that of the American delegation on matters of substance. Diminished leverage impacted the settlement reached with respect to colonies, reparations, German boundaries, and the presentation of the treaty to Germany. The approach taken in negotiating an agreement made it impossible to implement and enforce the treaty.

The Blockade

Through British naval superiority, the Allies had maintained a highly effective blockade during the war. This prevented food and essential supplies from reaching German ports. Although the armistice included language concerning food shipments to Germany, the Allied leadership elected to maintain the blockade as a guarantee of German cooperation. Many of the experts took exception to this policy on the grounds that it was immoral and hurt the most vulnerable members of German society.

One of the conditions of the Armistice was that we should let Germany have sufficient food. Four months elapsed before any food of any kind got into Germany, and the blockade . . . was made even more strict than it was during the war . . . Cannot you imagine the feelings of the Germans when month after month went by after the Armistice and no step was taken towards bringing about peace or allowing food into the country, and they saw children and other people slowly dying from want of proper food? This has left a feeling of intense bitterness. It is I think an action, or rather an inaction, as indefensible as anything I have ever

heard of (Headlam-Morley to A.C. Headlam, June 25, 1919 reprinted in Headlam-Morley 1972: 161).

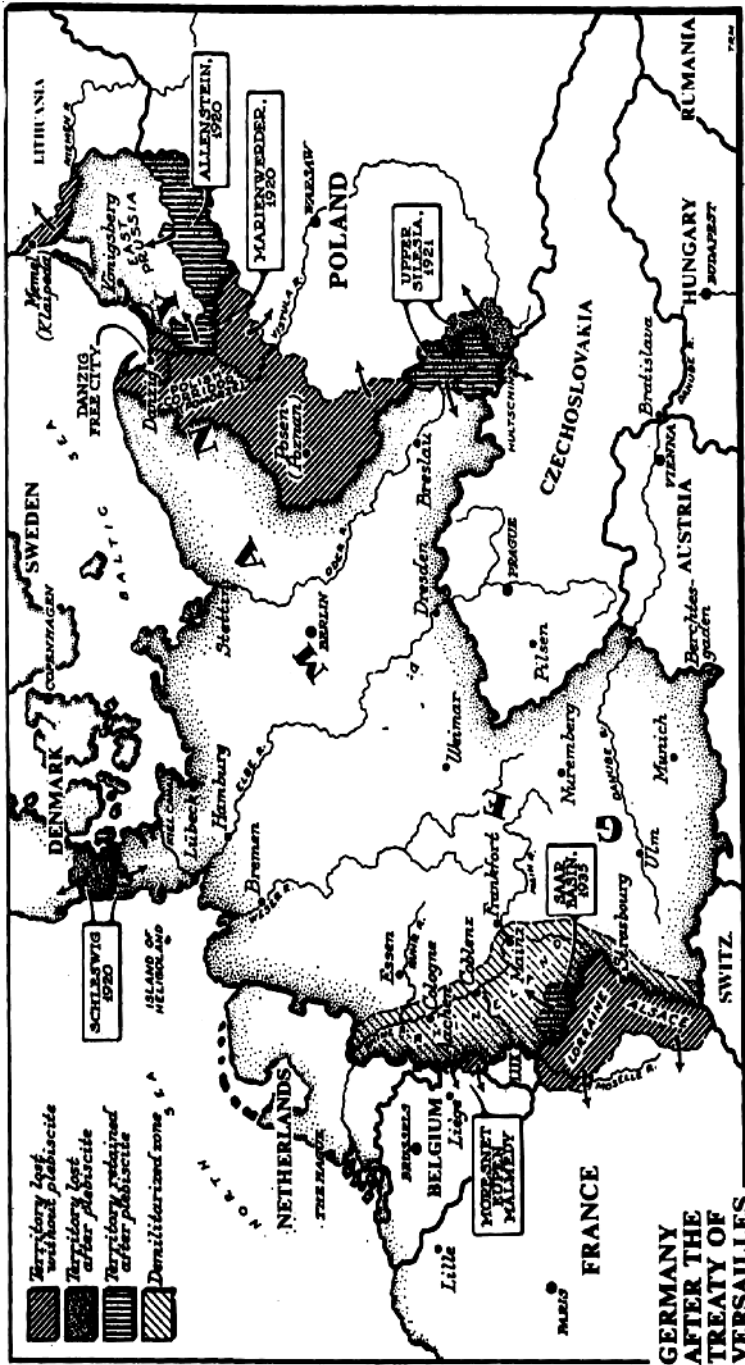
The conference leadership began limited food shipments when the officers of the occupation troops began to complain widely about the appalling conditions in Germany. The argument that seeing widespread starvation among women and children was damaging the morale of the troops appeared to have been persuasive (Headlam-Morley 1972; Noble 1935).

Territory and Reparations

Territorial issues at the PPC spanned the entire globe and virtually every troublesome international conflict of the past century. A careful analysis of those negotiations is well beyond the scope of this paper but the essential features can be sketched. For several days, Wilson fought an early, intense, and extremely bitter conflict with Clemenceau and the British Dominions (Australia, New Zealand, and South Africa) over the disposition of German colonies. Almost completely isolated, he felt compelled to accept Lloyd George's compromise language whereby redistribution of colonies took place under the guise of trusteeships or "mandates" granted by the League of Nations with privileged mandates granted to the Dominions (see Link 1986, vol. 54: 283–380).² The French also fought for German partition. They called for a new set of small, independent states on the right bank of the Rhine to provide an effective buffer from a vastly reduced Germany. Wilson and Lloyd George were implacably opposed on this issue, but Clemenceau logrolled his concession on this scheme into a series of other provisions. Wilson and Lloyd George agreed to a mutual security alliance (anticipating NATO in form and function) to safeguard France from future attack (Clemenceau 1930). France also received 15 years of property rights in the coal-rich Saar region to be followed by a plebiscite to determine final control (see Lloyd George 1938; Nicolson 1933). The compromise also included a military force to occupy the right bank of the Rhine for 15 years at German expense (The Treaties of Peace 1924).

As disruptive as the territorial terms proved to be, the dispute over reparations payments from Germany to the Allies challenged the conference more than any other issue. Complicating the problem was the limited experience and economic knowledge regarding the ability to transfer such vast sums of wealth from one nation to another. It was actually by struggling with the practical problem created by the reparations issue that economists made substantive progress in developing theory (Schuker 1988).

Because of the technical nature of the problem, the Council of Four delegated considerable authority to the Committee on Reparations and Damages



14. Germany after the Treaty of Versailles. (From Arthur S. Link, *American Epoch: A History of the United States Since the 1890's* [New York: Alfred A. Knopf, Inc., 1963], p. 221)

Figure 1. German territorial losses imposed by the Treaty of Versailles.

(CRD). The heated conflict within the committee spilled into various subcommittees, working groups, and finally back to the Council of Four. The American solution recommended the insertion of a modest, fixed sum constituting Germany's total obligation. This approach would reflect the Allies' legitimate claims under the armistice, Germany's vastly reduced wealth, and the pressing need to begin rebuilding. The other delegations, however, demanded reparation in full.

Dulles, the American legal advisor, eventually devised the two-part compromise that broke the deadlock. Article 231 declared:

The Allied and Associated Governments affirm and Germany accepts the responsibility of Germany and her allies for causing all the loss and damage to which the Allied and Associated Governments and their nationals have been subjected as a consequence of the war imposed upon them by the aggression of Germany and her allies.

Germany owed the Allies for the full costs of the war. Article 232 required an initial 20 billion goldmark payment and established the inter-allied commission to devise the final bill (The Treaties of Peace 1924). This creative open-ended solution cleverly reconciled the conflicting views (the British and French got the high theoretical Article 231 while the Americans got what they could presume would be the lower, but postponed Article 232). But the compromise also had severe drawbacks.

There is a great difference between fixing a definite sum, which though large is within Germany's capacity to pay and yet to retain a little for herself, and fixing a sum far beyond her capacity, which is then to be reduced at the discretion of a foreign commission acting with the object of obtaining each year the maximum which the circumstances of that year permit. The first still leaves her with some slight incentive for enterprise, energy, and hope. The latter skins her alive year by year in perpetuity, . . . however skillfully and discreetly the operation is performed (Keynes 1920: 167–168).

Keynes concluded that the numbers contemplated by the Allies during the negotiations could never be obtained. Attempts to repay these amounts would only displace domestic industry and bring forth calls for protectionist measures. Addressing the categories of damage the commission would use to calculate the total bill, he noted that most, "indeed about twice as [many] as all the other claims added together," would be due to the cost of military pensions. The inclusion of pensions as an expense for reparation struck him as a flagrant violation of the agreement that Germany owed the Allies for "damage done to civilian populations." Many others concurred, "We couldn't

find a single lawyer in the American delegation that would give an opinion in favor of including pensions. All the logic was against it" (Lamont 1921: 272; see also Baruch 1920; Nicolson 1933). Wilson admitted as much when he ultimately over-ruled his experts, "'Logic, logic, I don't give a damn for logic. I am going to include pensions'" (Lamont 1921: 272).

Under Article 232, Germany's true debt burden remained a source of overwhelming uncertainty. This blocked capital flow needed to begin reconstruction since prospective lenders had no idea of Germany's debt and therefore deferred assuming inordinate risk (Schuker 1998). The provision also represented a genuine gamble on social psychology – a bet that passions would abate sufficiently to permit a deliberative process to fix a proper bill under American leadership. The gamble quickly went wrong. American rejection of the treaty unfortunately meant that it would actually have no formal standing on the Reparations Commission that fixed the "London Ultimatum" of May 1921³ (Lamont 1921). The schedule was ultimately the product of Anglo-French bargaining. Its terms were harsher than Dulles and his colleagues would have predicted in 1919 and contained a monumental subterfuge involving three different classes of bonds. The distinction was purely designed to maintain the public illusion of full restitution (the "C" class of bonds was the illusion, not intended to actually be paid. Keynes 1922). The *mark* began a precipitous decline in value and totally collapsed in 1923 (Trachtenberg 1984; Webb 1988).

Drifting Toward an Ultimatum

We have already noted that Clemenceau's original scheme called for a full congress of all the belligerents. While never formally adopted, through the better part of the conference no one specifically challenged the concept. Nor did anyone notify the Germans or the Austrians that it was not to take place. As time passed however the need to finalize terms and demobilize armies took on greater and greater importance. Wilson's domestic political situation would only deteriorate in his absence. French fears that Germany would split the allies and find common cause with Wilson had grown. Fatigue set in.

Rather than a congress, the Allies instead summoned German plenipotentiaries to stay under heavy guard at Versailles while they remained in Paris (Mantoux 1992). Germany was given the opportunity to read the full version of the treaty upon its completion and to submit written questions of clarification within a finite time period. The Germans worked hard to turn this into a bargaining game of sorts, though it was a heavily constrained process. They were able to achieve modest revisions to some of the terms of the treaty. But the provisions of greatest concern – League membership, war crimes, the loss of colonies, reparations, the Saar Basin, and military occupation zones –

were not materially altered. After a period of exchanging written notes, the Allies formally issued their ultimatum and the Germans reluctantly signed (Temperley 1924).

The handing over and signing of the Treaty were extremely formal ceremonies with virtually no opportunity for communication between the delegations. The limited communication that took place at the initial presentation ceremony caused tremendous confusion and seriously deepened mistrust (see Boemeke, Feldman and Glaser 1998). The signature ceremony was held in Versailles' Hall of Mirrors, symbolic because Bismarck had declared victory over France and the founding of the German Empire in the same room in 1871.

The minimal German voice, the heavy-handed symbolism, and the final ultimatum combined with the harsh terms of the Treaty to severely disillusion German citizens on all points of the political spectrum. Max Weber, an advisor to the German delegation, urged Germany to reject the ultimatum. "If I am a personal proponent of the idea of saying 'We reject the treaty; occupy Germany and see how you can get your money' then it is because certain conditions are such that, in the event of rejection, we will inescapably suffer the most extreme consequences and that, in the event of acceptance, we will suffer those consequences anyway" (cited in Mommsen 1998: 540).

The intense passion and anger felt in Germany at this turn would not surprise today's students of ultimatum bargaining. As Pillutla and Murnighan (1996) demonstrated, even experimental subjects negotiating over minimal stakes are easily provoked to anger and spite when presented with a one-sided ultimatum. The financial advisors (bankers such as Warburg) and center-left politicians were those who urged caution, conciliation, and further negotiation as the best means to a better future. Hitler would quickly move to exploit widespread German rage and disillusionment about their failures. He led a relentless propaganda campaign against "the Versailles diktat" and the "November criminals" who conspired to overthrow the empire, betrayed the military effort, and turned Germans into slaves of the Allied powers (Baynes 1969; Kershaw 1998).

Judgment and Negotiating Strategy at the PPC

In diagnosing the causal factors responsible for this cascade of errors, Keynes was the first to suggest that psychological factors were at play. Lippmann and Nicolson extended the argument further. For both, it was the confluence of public psychology, the politics of representation in a democracy, and the psychology of the leaders who actually negotiated in Paris that created such a troubled process.

Anchoring

The lowball offer is a time-honored tactic of hardball negotiators. The extreme surprise it engenders sows doubts in the other party's mind about its own judgment of the bargaining zone, skewing the concession-making "dance" into asymmetric terms. As Kahneman and Tversky (1972) documented, the technique is particularly powerful because people tend to anchor their estimates of an uncertain event on a salient, sometimes highly arbitrary, starting point and then adjust it in the direction of other evidence, but insufficiently so. Its impact on bargaining has been established through systematic experimentation (Pogarsky and Babcock 2001; Bottom and Paese 1998; Northcraft and Neale 1988).

According to Keynes (1920, 1922), the French, and to a lesser extent the British, took clear advantage of this psychology to influence the bargaining process.

[T]he lead was taken by the French, in the sense that it was generally they who made in the first instance the most definite and the most extreme proposals. This was partly a matter of tactics. When the final result is expected to be a compromise, it is often prudent to start from an extreme position; and the French anticipated at the outset – like most other persons – a double process of compromise, first of all to suit the ideas of their allies and associates, and secondly in the course of the peace conference proper with the Germans themselves. These tactics were justified by the event (Keynes 1920: 28).

He experienced the impact of anchoring first hand in the debate over reparations and German capacity to pay. Dulles was forced from the outset to wage a spirited campaign over several weeks to dissuade the other Allies from their initial demand that Germany pay for the entire cost of the war.

We may have . . . very definite views as to the reparation which could in justice be required of Germany. But the occasion for the presentation of such original views was in the early days of November 1918 and not today . . . the reparation to be exacted from the enemy is that which is due in accordance with a fair construction of the written agreement of the Associated Governments with Germany (excerpt from Dulles speech to the Committee on Reparations and Damages (CRD) reprinted in Baruch 1920: 289–297).

French claims that Germany was capable of paying as much as 800 billion goldmarks surprised the Americans, vastly exceeding any numbers they had contemplated. American negotiators adjusted upwards their own planned first estimate/offer in response (Burnett 1940).

A perceptive reviewer noted that the extreme Allied demands represented first moves only at the conference itself; earlier moves in the conflict had shaped perceptions as well. The extreme positions staked at the conference were at least in part a tactical response to counteract the anchoring induced by Wilson's speeches and the qualifications of the armistice. Since the Germans were not privy to the ongoing deliberations in Paris, their salient anchors for evaluating the terms remained Wilson's speeches and the armistice agreement. These anchors inflated hopes for modest terms mostly among ordinary citizens but to some extent even among the elites. The average German citizen believed that s/he had surrendered to Wilson's principles, not to a defeat in the field (McNamara and Blight 2001; Mommsen 1998).

Keynes' anchoring analysis had one further implication. As the organizers improvised the final steps in the process, there was to be no real second set of compromises with the Germans. Keynes assumed that the French had anticipated as much. This meant that extremes in the draft treaty essentially survived what was largely a matter of imposition by ultimatum in the second round.

Stereotypes

Though he did not use the term, Keynes was the first to connect mistakes made at the PPC to errors in judgment caused by reliance upon simplistic national stereotypes. As is now well understood, individuals frequently make predictions about the probability of other groups' or individuals' behavior based on the degree to which they fit a stereotype (Kahneman and Tversky 1973; Macrae and Bodenhausen 2000). Keynes concluded that the judgment of the many delegates at the conference was distorted by simplistic predictions of the behavior of "Huns" and "Bolsheviks." Ironically, Keynes (1922) attributed Clemenceau's insistence on punitive "Carthaginian" terms to a rigid German stereotype that Clemenceau used in his decision-making process:

he was a foremost believer in the view of German psychology that the German understands and can understand nothing but intimidation, that he is without generosity or remorse in negotiation, that there is no advantage he will not take of you, and no extent to which he will not demean himself for profit, that he is without honour, pride, or mercy. Therefore you must never negotiate with a German or conciliate him; you must dictate to him. On no other terms will he respect you, or will you prevent him from cheating you.

Two years later, Walter Lippmann created the field of social cognition (Allport 1955; Macrae and Bodenhausen 2000) with his book *Public Opinion*,

the product of his work on the wartime propaganda effort and the peace negotiations. With it, Lippmann formally introduced the concept of “a stereotype” – “the pictures in our heads” – as a means of explaining how individual judgment is formulated. The term dates back to 1798 when it was used to refer to a printing process “in which a solid plate or type-metal, cast from a papier-mâché or plaster mould taken from the surface of a forme of type, is used for printing from instead of the forme itself” (OED 2nd edition). Lippmann used the word to illustrate how preconceptions about social groups had biased the judgment of the PPC negotiators. Keynes' *The Economic Consequences of the Peace* had made an enormous impact on Lippmann's thinking. He consequently had helped Keynes find an American publisher and ran excerpts of the book in the *New Republic*, which he edited (Steel 1999). His analysis of negotiator judgment follows Keynes' version very closely.

Of the great men who assembled in Paris to settle the affairs of mankind, how many were there who were able to see much of the Europe about them, rather than their commitments about Europe? Could anyone have penetrated the mind of M. Clemenceau, would he have found there images of Europe of 1919 . . . Did he see the Germans of 1919 or the German type as he had learned to see it since 1871? He saw the type and took to heart those reports and it seems those only, which fitted the type that he had in mind. If a junker blustered that was an authentic German. If a labor leader confessed the guilt of the empire, he was not an authentic German (Lippmann 1922: 55).

Inspired by Lippmann's theory, Katz and Braly (1933) soon conducted the first systematic empirical investigation of national or ethnic stereotypes. Based on a checklist of adjectives, they discovered that Princeton undergraduates agreed the most as to the characteristics of Germans, Negroes, and Jews. They believed the typical German to be “[s]cientific-minded, industrious, stolid, intelligent, methodical, and extremely nationalistic.” Whereas Keynes' (1920) earlier treatment of the German stereotype was purely to document the shortcomings of the treaty and make the case for wholesale revision, Lippmann generalized. He drew ominous conclusions about decision making in democratic societies and the influence of mass media on stereotype content and availability.

The official conference documentation yields many instances where crucial judgments and choices seem to hinge on the operation of simplistic stereotypes. The pervasive Bolshevik stereotype, based on a viral model, appears to have been pivotal in precluding direct discussions with Soviet representatives (see references to a “cordon sanitaire” in the deliberations over issuing an invitation to Lenin, in Link 1966–1992, vol. 54). Another

example pertains to the most fundamental judgment for any negotiator – an analysis of the strength of his “threat point” (Nash 1953) or “BATNA” (Fisher and Ury 1981). The interpreter’s notes record the first discussion of threat points during a meeting of the Council of Four on April 8, 1919 (Mantoux 1982), four months into the negotiation. Lloyd George brought the Council’s attention to the overdue need to consider this crucial source of uncertainty. Clemenceau was of the opinion that the only option was to restart the war, invade Germany, and force a peace. Clemenceau’s very high confidence was based on a direct invocation of the German stereotype. Lloyd George, however, foresaw risks. Colonel Edward M. House attended the meeting on behalf of Wilson and participated in the following dialogue.

Lloyd George: “I suggest we ask our generals and admirals to prepare these plans, based on different possibilities: (1) if we have no one before us with whom to sign; (2) if the Germans refuse to sign.”

Colonel House: What will you do?

Lloyd George: We might have to occupy Berlin. But I don’t know whether that will serve any purpose.

Clemenceau: “I think it will; the Germans are a servile race.”

No serious planning for this BATNA occurred until June, after the Germans received the treaty and doubts began to grow as to whether they would actually sign it. At that point, the Council of Four was stunned to learn from the military that occupation of Berlin was not feasible.

As we advance we will need increasing numbers of occupation troops all the more important because we will have all of Germany on our hands. [We must] . . . avoid this ruinous occupation, which can take us to Berlin too anemic to deliver the decisive blow (Marshal Foch to Council of Four, June 16, 1919, in Mantoux 1992: 466).

Foch advocated a complicated alternative BATNA with an Allied advance only to the Weser River (see Figure 1) coupled with a diplomatic initiative to sequentially detach the occupied regions. He believed this approach would increase the pressure for what would remain of Germany to capitulate. The Four were completely surprised and dismayed. Clemenceau responded, “If the march on Berlin is impossible, we will have to talk about it amongst ourselves and see what can be done. I must say I was not prepared for what we have just heard.” Wilson added, “I don’t know what to think about what Marshal Foch just told us. I can’t imagine what happened since last we heard him.” None of the more politically astute Council members shared Foch’s

confidence in the diplomatic initiative (Mantoux 1992: 468–475). So what was the BATNA and what were the true odds of its success? Events overtook the Council; it never did fully resolve this question. The negotiation strategy the Allies pursued over a five-month period as the Treaty was crafted was founded on a totally erroneous overestimation of their true bargaining leverage. The magnitude and impact of the miscalculation is incontrovertible. Their perception of the risks of pursuing a hard line in the negotiations with Germany was a vast underestimation of the true risks.

Clemenceau's eventual successor Raymond Poincaré later undertook an experiment on the viability of occupation, the stereotype of "servile" Germans, and the feasibility of forced partition. When Germany fell behind in the payments demanded under the London Schedule, Poincaré sent in troops to occupy the Ruhr in early 1923. He seriously miscalculated; industrial production and reparations payments virtually ceased and the *mark* completely collapsed. By September, a single British pound was trading for 250 million *marks* (Trachtenberg 1982). The explosive surge in prices impoverished German citizens, though wildly unevenly, fueling bitter class and ethnic frictions and galvanizing the nascent Nazi movement in Bavaria (King, Rosen, Tanner and Wagner 2002). The searing memories of that experience created so much concern for renewed inflation that it severely constrained German financial response during the economic downturn that brought the Nazi's to power at the end of the decade. What might have remained a modest slump became instead a prolonged and very deep depression (Ferguson 1996; Schuker 1988).

Overconfidence

Lippmann argued that stereotypes, while hazardous, were also a necessary means of learning, reasoning, and making judgments. They play a particularly important function in negotiation settings where information is scarce and the primary sources of information (namely the other parties) may not be credible or reliable. They provide a basis to hypothesize about differences and, therefore, about possible efficiency-enhancing tradeoffs. Stereotypes can play a constructive role in overcoming the tendency to perceive bargaining as a zero-sum game (Bottom and Paese 1997). Brett (2001) also showed that some national stereotypes, such as the collectivist orientation of Japanese negotiators or the egalitarian nature of Americans, appear to reflect real differences in the distribution of beliefs or values in those countries. The risks of reliance on stereotypes are acute when the decision makers also suffer from overconfidence in the validity of their application to any given case. As Lippmann put it, "what matters is the character of the stereotypes *and the gullibility with which we employ them*" (60).

A belief that one's forecasts of uncertain future events are more accurate than they truly are has been documented in many different settings with many different types of forecasters. Yates et al. (1989) found this tendency in judgments made by American, Chinese, and Japanese students. Christensen-Szalanski and Bushyhead (1981) found it in the diagnostic judgments of family-practice physicians. Roll (1986) argued that, in the extreme form of "hubris," overconfidence in one's forecasts was responsible for the robust market in mergers and acquisitions that persists despite dismal track records of acquiring firms. Hambrick and Hayward (1998) provided empirical evidence that those executives most likely to be prone to hubris were in fact the most aggressive bidders in the merger market.

Unfortunately it appeared to most observers that overconfidence was pervasive among the conference leadership. This observation was made by the participant-critics of the Treaty (Keynes 1920; Lippmann 1921) and by its most ardent defenders (Lloyd George 1938; Tardieu 1921). Even in negotiations that are far less complex than the PPC, a host of uncertainties require consideration. Here, contingencies were manifold and the fate of the conference hinged on the accuracy of the participants' predictions. How long would it take to draft a treaty? What were the odds that Lenin's government would survive in Russia? Could it be toppled with Allied support? What was Germany's capacity to pay reparations? What was the likelihood that Germany would sign the treaty? What were the odds of success of an inter-Allied invasion in the event that Germany refused to sign?

In many respects the most fateful of those uncertain events was whether America would be a party to the treaty. Entering into such a treaty required the approval of a 2/3 majority of the U.S. Senate. From November 9, 1919, to March 19, 1920, the treaty in either its original or amended form was put to a vote three times. The original treaty was rejected 38–53, the amended version was rejected initially by 39–55 and finally by 49–35. War between the United States and Germany and Austria would not formally end until July 1921 with separate treaties signed in October 1921 (Clemenceau 1930).

Wilson's miscalculation regarding his ability to get the Treaty ratified by the U.S. Senate proved to have significant consequences. The League suffered a blow in prestige and capabilities with the absence of the U.S. It is interesting to ponder how successful the Treaty might have been with American involvement and sponsorship. Even a fully functioning United Nations has had difficulty establishing its role as a peacekeeping and peacemaking body. But the loss also cost Wilson his health and ultimately the Presidency. Additionally, internationalism was severely stigmatized and the U.S. withdrew into the Harding and Coolidge era of isolationist "normalcy."

Two other tangible casualties resulted from the Senate rejection. The United States lost its seat on the reparations committee and the mutual assistance pact between France, Britain, and the United States failed. The latter meant that Clemenceau's primary strategic objective and greatest negotiating accomplishment was lost (Clemenceau 1930). The former meant that no American member was in a position to moderate the Anglo-French demands that led to the London Ultimatum of May 1921. The lack of consideration given to this possibility during the PPC is striking. Crucial decisions were taken in confidence that America would be a party to that agreement.

One delegate entertained no doubts until the very end – Woodrow Wilson himself. However, the positive international press coverage of Wilson induced overconfidence in his position and led to significant miscalculations on his part. This effect has been demonstrated outside of the international negotiation context as well.

Hambrick and Hayward (1998) have shown that the tendency for business executives to pay excessive premiums to acquire other firms appears to be related to recent organizational performance and to adulatory coverage of the CEO in the business press. "Media praise serves to reinforce the CEO's confidence . . . fostering the impression that the CEO is in control, efficacious, perhaps even a miracle worker" (Hambrick and Hayward 1998: 108). They begin to internalize the stories told about them. Certainly no CEO in history has received coverage that could compare in hyperbole to that which Wilson received around the world when the Armistice ended the carnage of the war.

Wilson's arrival in Brest and then in Paris was received with understandable jubilation. According to French press reports, it "was a moment of unspeakable emotion," "Never has a king, never has an emperor received such a welcome," "Everywhere music, resounding national anthems, hard to distinguish because of the joyous cries which go up from the crowds," "In all our life we have not heard such acclamations" (Noble 1935: 73).

Press coverage from the middle and from the left was just as euphoric. "Wilson, you have saved our children. Through you evil is punished. Wilson! Wilson! Glory to you, who, like Jesus, have said Peace on Earth and Good Will to Men!" (L'Oeuvre, December 15, 1918 cited by Noble 1935: 73). Wilson's accomplishments – maintaining American neutrality, entering the war decisively, giving speeches received around the world with a near religious fervor, brokering the end of the war, arriving in Europe with tremendous acclaim – were truly spectacular. They may well have made the prospect of defeating Senate opposition seem foregone. The earliest of the cascade of errors – Wilson's willingness to hold the conference in Paris and his insistence on personally conducting the negotiations – certainly reflected a profound sense of self-efficacy and of destiny. He showed no signs of public or private

doubt about Senate ratification before and during the conference, or even during the fateful campaign for ratification.

Absolute confidence rendered contingency planning on the part of the other Allies impossible. Clemenceau (1930) acknowledged both the absence of planning and the obstacle posed by Wilson's hubris.

There were only two men with whom the question (of U.S. ratification) could be usefully discussed. President Wilson and Colonel House, his alter ego, were proud men. To all my questions as to the issue that might be expected President Wilson invariably replied with an imperturbable confidence that he counted for certain on a favorable one. Colonel House was not so unreservedly optimistic, but he had faith in his President (243).

A number of historical analysts, including Sigmund Freud (Bullitt and Freud 1966), have studied Wilson's background for factors in his character and personality that could explain the mistakes he made during the peace conference. The most insightful of these character studies, George and George (1958), traced the roots of these mistakes to Wilson's relationship with his father. They concluded that Dr. Joseph Ruggles Wilson, a Presbyterian minister, "an eloquent preacher, a man of learning, wit, and great presence" (p. 6) instilled in his son a strong system of religious beliefs that made him especially prone to moralistic crusades and to overconfidence. The combination of events and doctrine convinced Wilson that he was acting in Paris not merely as a politician but as an instrument of God. The successful completion of his program became then a matter of destiny, of good and evil.

No research has yet documented a direct connection between religious belief and overconfidence or other forms of cognitive bias. But the qualitative evidence cited by George and George is substantial and consistent with conclusions drawn by many of the conferees (Keynes 1919; Nicolson 1935) and by other analysts. Weinstein's (1972) investigation of the medical record, noted that the rigid nature of Wilson's religious convictions is associated with a pattern of thought and action which would contribute to hypertension and stroke. The very common medical condition of small strokes tends itself to bring on an even more extreme rigidity of belief and action (Weinstein 1972; Park 1995).

Outcome Framing

Why were the French and the British able to take initiative at the bargaining table and engage in such extreme posturing and brinksmanship? To Keynes, Wilson's leverage had been disproportionate. His charismatic leadership had proven decisive in ending the war.

In addition to this moral influence the realities of power were in his hands. The American armies were at the height of their numbers, discipline, and equipment. Europe was in complete dependence on the food supplies of the United States; and financially she was even more absolutely at their mercy. Europe not only already owed the United States more than she could pay; but only a large measure of further assistance could save her from starvation and bankruptcy. Never had a philosopher held such weapons wherewith to bind the princes of this world (1920: 38).

Keynes suggested that the answer was related directly to a widely-studied psychological influence on decision-making. In their influential Prospect Theory of choice, Kahneman and Tversky (1979) established that people evaluate outcomes relative to a reference point, that there is diminishing marginal sensitivity to changes in value of both gains and losses, and that the valuation of losses is greater than that of equivalent gains. These characteristics of utility lead to a tendency for individuals to be risk averse for losses, risk seeking for gains, and to experience "loss aversion."

Experiments in bargaining indicate that in most circumstances negotiators that bargain to minimize or eliminate loss are much more likely to take extreme positions, to engage in contentious tactics, and to reach an impasse than those who are bargaining to maximize gains (Bottom 1990; Bottom and Studt 1993; De Dreu, Carnevale, Emans and van de Vliert 1994). They are much more likely to use highly risky tactics such as ultimatums and brinkmanship. They furthermore tend to win battles against counterparts that frame the issues more positively. Alternatively, both sides lose.

Levy (1997) addressed the challenges of using behavioral decision theory to understand international relations. In his view, research priority must be given to developing specific hypotheses regarding the framing of foreign policy decisions. The hypotheses must be cast in such a way that they carefully distinguish predictions derived from prospect theory from those derived from rational choice theory. The asymmetries in the framing of outcomes among the Big Four in Paris were on a truly unprecedented scale, marking it as a particularly promising case for such testing.

The British, French, and Italians had all suffered staggering losses in manpower, material, physical capital, and national wealth (see Figure 2). Submarine warfare had imposed huge losses on the British fleet, the lifeline of its empire. Most of the western war was fought on French soil. The destruction there included the loss of 1857 square miles of forests, 8000 square miles of farmland, 300,000 homes, 6000 factories, 1500 schools, 1200 churches, and 1,300,000 livestock (Clodfelter 1992).

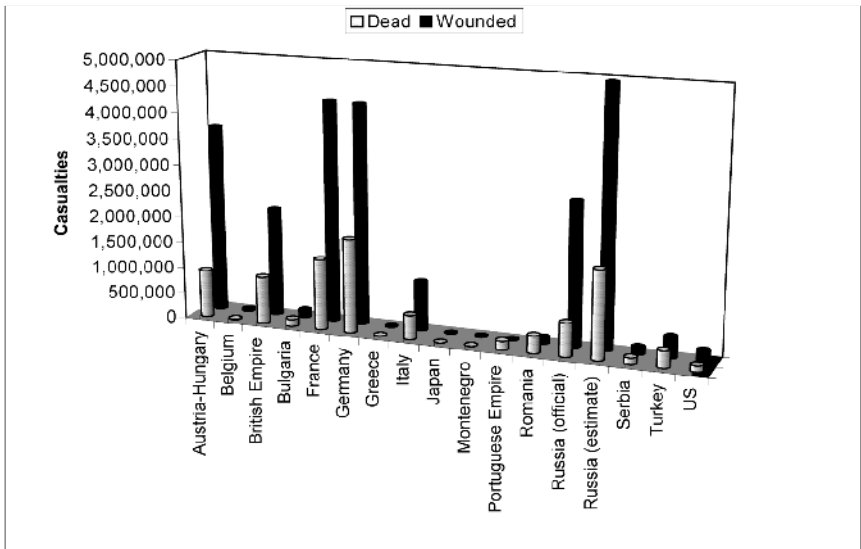


Figure 2. Casualties from the First World War (Source: Clodfelter 1992).

To Keynes, it appeared that the French, and to a somewhat lesser extent the other European negotiators, had narrowly framed the issues around the elimination of these losses rather than long-term opportunities, possibilities, or repercussions:

The future life of Europe was not their concern; its means of livelihood was not their anxiety. Their preoccupations, good and bad alike, related to frontiers and nationalities, to the balance of power, to imperial aggrandizements, to the future enfeeblement of a strong and dangerous enemy, to revenge, and to the shifting of their unbearable financial burdens on to the shoulders of the defeated (1920: 56).

By maintaining American neutrality until the very end, Wilson left the nation in a privileged position. The decisive impact of American intervention gave the U.S. a preeminent position at the bargaining table. America's military forces suffered comparatively light casualties. Also, although industry in the other developed economies suffered serious setbacks, the American industrial base grew substantially from its opportunity to supply the combatants. The war in Europe quickly lifted the U.S. economy out of a temporary slump and into a vigorous and sustained expansion (Friedman and Schwartz 1963; Kuznets 1946). The United States was the ultimate creditor for virtually all Inter-Allied debt (Keynes 1922; Schuke 1988). America alone could look forward to the post-war rebuilding process as a tremendous economic opportunity.

A bargainer will generally have diminished leverage if he is more risk averse than his counterparts (Osborne and Rubinstein 1990). Experimental evidence confirms that framing asymmetries shifts risk preferences and can erode the power of a positively framed bargainer (Bottom and Studt 1993). This pattern is highly consistent with the process that unfolded at the PPC. The British, Italians, and especially the French approached the negotiations with a sense of desperation that the Americans could not appreciate. The Europeans were willing to tolerate considerable delay and to seriously contemplate the complete collapse of the talks if it gave them a possibility of victory in this narrowly framed sense. To the Americans, concession or compromise seemed vastly preferable to the risks the Europeans insisted on taking.

It may be possible to directly trace some of the cascade of errors to these asymmetries in framing. The U.S. and Great Britain willingly conceded to France on issues of ceremony, giving far less emphasis to symbolic considerations. The location of the conference and the arrangements for the signature ceremony largely reflected French preferences. Wilson and Lloyd George expressed some concerns over these choices but quickly conceded to French demands. Since France had clearly lost far more in the war, it seemed particularly contentious to resist its request to host the conference or to arrange ceremonial matters (Nicolson 1933).

The signing of the Treaty was held on June 30. Nicolson described the events in his diary, "They march in single file . . . And then, isolated and pitiable come the two German delegates, Dr. Muller and Dr. Bell. The silence is terrifying. Their feet . . . echo hollow and duplicate. They keep their eyes fixed away from those two thousand staring eyes, fixed upon the ceiling. They are deathly pale . . . It is all most painful" (1933: 368). In his diary entry that day, House (see Seymour 1928: 487) likened the ceremony to "olden times, when the conqueror dragged the conquered at his chariot wheels. To my mind it is out of character with the new era which we profess an ardent desire to promote." Headlam-Morley went further:

The one thing which was forced on one by the whole scene was that it was the revenge of France for 1871; . . . it was the room in which Germany, having won a victory, inflicted a great humiliation upon France. France now once more having got the upper hand was having her revenge for injury done to her, and in every detail complied with the utmost insult to Germany . . . Just the necessary note of reconciliation, of hope, of a change of view, was entirely wanting (Headlam-Morley to Koppel, 6/30/1919, reprinted in Headlam-Morley 1972: 178).

What appeared to be the less important symbolic matters to England and to the United States meant a great deal more to France. Conceding symbolic and

ceremonial matters to France would in itself then seem to constitute a nice bit of value-creating logrolling. Unfortunately, symbolism also had considerable importance in Germany. Losses, even symbolic ones, loomed large and the political debate during the Weimar regime often reflected these symbolic blows as much as the substance of the treaty (Kershaw 1998; Schuker 1988).

One might actually characterize the greatest gamble taken at the conference to be one made by the positively framed Woodrow Wilson. Wilson's decision to link the treaty to the covenant and his resistance to any Senate amendments that might have enabled passage of the treaty certainly constituted brinksmanship. *Ex post* it appears to be an extremely risky and fateful decision. But characterizing the degree of *ex ante* risk an individual takes in a given choice depends on his perception of the expected upside and downside values coupled with his highly personal beliefs about the likelihood of different positive and negative outcomes (Weber and Milliman 1997). As virtually every observer documented, Wilson perceived the probability of his undertaking's success as absolute certainty (Keynes 1920; Nicolson 1933; Seymour, 1928). His self-confidence in his oratorical and persuasive talent was very great. It appears as though he believed that his potential for success was not really a gamble and he was not really taking a risk. The same cannot be said of the tactics of the British, French, and Italians. They certainly understood many, though by no means all, of the uncertainties they faced. They chose to take them anyway.

Discussion

Unraveling the complexities of the PPC and the Versailles Treaty system requires much more analysis than this paper attempts to accomplish. A full explanation will eventually need to encompass cognitive, economic, political, and organizational theory. The objective here is modest. We revisited the arguments and explanations of the earliest critics of the Versailles system in light of recent advances in understanding the limitations on human information processing, judgment, and choice. That investigation, while far from conclusive, yielded some important insights.

The claim is often made that laboratory findings regarding judgment bias or bargaining inefficiency have little significance for real economic and political behavior. With greater incentives, with more experience, with the disciplining effect of political or economic competition, and through the powers of specialization and organization, judgment will improve and bias will dissipate. Choices will come to closely approximate expected utility maximization (Friedman 1953; Lucas 1986; Zeckhauser 1986). Laboratory methods are unlikely to ever refute these arguments in a fully compelling

manner. Evidence of generalizability from systematic field investigations is emerging, but still open to interpretation.

Moreover none of these settings offers a true measure of the critical conditions that could challenge the limits of human rationality. Cabdrivers' choices about working hours (Camerer et al. 1997), parimutuel bets on horses (Thaler and Ziemba 1988), and real-estate pricing (Northcraft and Neale 1987) are well-structured problems with ample opportunity for repetition and learning. The Paris Peace Conference of 1919 was sufficiently complex to tax the most capable, expert, and efficient of processors. It had few good precedents and little clear feedback. If the participant-observers are correct, the challenges appear to have defied experience, expertise, incentives, and organization.

These critics of the treaty shared the belief that the complexity of the problem and the passionate motivation of the negotiators influenced them in a profoundly counterproductive way. Most agreed that they themselves had been party to a repeated and mutually reinforcing cascade of errors. If they were correct, then the conference provides evidence that dramatically raising the stakes may actually magnify and amplify the impact of bias many times over. Nicolson (1933: 7) may have put it best, "Given the atmosphere of the time, given the passions aroused in all democracies by four years of war, it would have been impossible even for supermen to devise a peace of moderation and righteousness."

The boundedly rational negotiators at the conference appear to have crafted instead an unworkable and highly unstable settlement. It undermined peace and security, contributing to a far bloodier and more tragic war than the one it ostensibly ended. The observers' notes on these events and their causes are clear and consistent even though they lacked the terminology of bounds on rationality, judgment heuristics, and bias.

Dulles, later a major architect of U.S. cold war policy, was one of the participant-observers at the PPC. As legal advisor to the American delegation he made the cogent, powerful, and ultimately successful arguments against imposing the full costs of the war on Germany (Burnett 1940). His failure to persuade his French, British, and Italian colleagues to limit reparations to a fixed, clearly-attainable sum ultimately led him to draft the fateful compromise language on reparations that would end up in the final treaty. On the eve of the Second World War, Dulles looked back at the PPC and concluded,

It is easy . . . to draw the conclusion that those who then played important parts on the world's stage were blind and stupid. Such a conclusion is warranted, but it is unimportant. What is important is to find the reasons for this blindness and stupidity which are now apparent. This, I think, cannot be adequately explained in terms merely of individual

deficiencies. Rather it seems consequent upon the operation of general principles. There are usually blindness and inadequate perception when emotion becomes the directive of human action (1940: xiv).

A broad stream of research has followed from Simon's conception of bounded rationality to a focus on cognitive heuristics and then to the study of these heuristics in negotiation and other competitive social settings (Camerer 1997). One interpretation of this stream is that considerable progress has been made in identifying and establishing some of the "general principles" Dulles felt must be responsible for the blind spots of the PPC negotiators. In the case of stereotypes and the heuristics of availability and representativeness, it was the disastrous course of the PPC itself that initiated the research that began with the critical observations of Keynes and Lippmann.

Any conclusions as to rationality must remain conjecture at this point. A complete analysis of the diaries, letters, and memoirs of the participant-observers is an important starting point. But systematic study of the primary-source materials on the proceedings of the conference and of the long-term process of treaty revision is another essential step (Jonsson 1991). Hypotheses regarding rational-choice explanations and behavioral decision theory explanations must be carefully constructed to specify divergent predictions (Levy 1995; O'Neill 2001). The evidence must be gathered in such a way as to facilitate testing. This article has moved the analysis forward by providing a clear articulation of one of these hypotheses, the cognitive-illusions hypothesis. This is far from an original view, rather it stems from analyses of the negotiation initially provided by a number of the participants, beginning with Keynes.

The full implications of Keynes' hypothesis suggest a very general relationship between complexity, bias, motivation, and organization. Complexity poses a challenge for rational action. The simpler the problem the easier it is to exercise good judgment and at least approximate an optimal strategy. This is particularly true when the problem is both structured and repeated, affording ample opportunities for learning to do better coupled with clear feedback about one's progress. De Dreu et al. (2000) have a point. To a certain degree, incentives and accountability may stretch cognitive and human resources to match the challenge of complexity. Those negotiators with a high "need for cognition" may generally have more cognitive resources or be more efficient information processors than others. But beyond a certain point, raising the stakes further will begin to have the deleterious effect on performance first expressed by the Yerkes-Dodson law (Yerkes and Dodson 1908). Attention narrows, creativity flags, and performance declines (Eastbrook 1959). When confronted by a very novel and especially complex problem with the highest possible stakes, motivational factors are unlikely to

check bias; they may very well amplify it. Laboratory studies cannot approximate the extreme motivational conditions under which the most important and far-reaching negotiations, negotiations such as those examined here, are conducted. The decline in performance may be difficult to demonstrate or study in such a setting. Harold Nicolson's observations about the grinding stress of the conference and above all Wilson's physical deterioration under the strain suggest that the PPC negotiators had reached that state. Individuals may be influenced by severe limitations, but presumably organizations can use the benefits of specialization, expertise, and administration to extend limits and mitigate bias (Williamson 1985). It is evident from the PPC records that the conference leadership understood some of its limitations and took steps to obtain the very best sources of expertise available. Organization appears to have been only partially successful in this case at extending rationality and mitigating bias, however. Nicolson (1933), Headlam-Morley (1972), and Tardieu (1921) pointedly discussed many of the ways in which the experts and specialization created additional complications that further impaired productive decision making. If these participants are correct, the PPC committee structure both propagated and amplified the errors in judgment made by each of the experts. The most important lessons of the PPC will stem from a systematic analysis of their claims, which should elucidate the limits of organization as a means of managing complexity and mitigating bias.

The debacle of the Versailles Treaty also provides important lessons for negotiations researchers. Laboratory based studies, which have been the norm over the past several decades, have concentrated on understanding how parties can secure the most attractive terms of agreement. From a pedagogical standpoint this often translates into teaching students to set a high aspiration level and then choose bargaining tactics that allow them to get the other side to agree to final terms that approximate their aspiration. Judged by that standard, the Versailles Treaty was a tremendous achievement for France and England. By March 30 of 1919 Lloyd George was able to claim to one of his closest confidantes, "the truth is that we have got our way. We have got most of the things we set out to get. If you had told the British people twelve months ago that they would have secured what they have, they would have laughed you to scorn" (McEwan 1986: 263).

Of course those accomplishments proved to be illusory. The very attractive terms of agreement as to monetary reparations, a criminal trial for the Kaiser, mutual guarantees of security, and German disarmament existed on paper only. As Keynes had both predicted and attempted to warn against, these provisions could not be successfully implemented or enforced. It would appear that their origins lay in cognitive illusions and their primary effect

was to sustain those illusions in France and in Great Britain. They did so for a time, however, they also caused irreparable damage to international relations. On a far smaller scale similar dynamics shape social, business, and political relationships of all kinds. The real measure of negotiation achievement is necessarily long term in nature. Research, whether laboratory or field, must examine and help us to understand both the process of implementation and the long-term implications of negotiated agreements.

Acknowledgements

The author wishes to thank Ron Allen, Kay Shehan, and Derek Lohse for research assistance with this project. Nick Baloff, Peter Carnevale, Andrea Hollingshead, Jim Little, Gary Miller, Paul Paese, Elke Weber, and two anonymous reviewers provided very helpful comments on an earlier version of this manuscript.

Notes

1. The dominions included India, South Africa, New Zealand, Australia, and Canada. Other nations that sent official delegations were Belgium, Bolivia, Brazil, China, Cuba, Ecuador, Greece, Guatemala, Haiti, the Hedjaz, Honduras, Liberia, Nicaragua, Panama, Peru, Poland, Portugal, Romania, Serbia, Siam, Czechoslovakia, and Uruguay.
2. The Dominions were accorded a special class of "mandate" that was essentially equivalent to annexation in most respects except the label. In this compromise lies also the origins of the ill-fated British mandate over Palestine.
3. The text issues the following threat: "Unless we hear by Monday . . . the Allies are agreed: (1) to occupy the towns of Duisburg, Ruhrort, and Dusseldorf . . . (2) . . . requiring their nationals to pay a certain proportion due to Germany on German goods to their several Governments . . . (3) . . . Duties collected by the German customs houses on the external frontiers of the occupied territories to be paid to the Reparation Commission" (reprinted in Keynes 1922: 215).

References

- Allport, G.W. (1954) *The Nature of Prejudice*. Cambridge, MA: Addison-Wesley.
- Babcock, L., Loewenstein, G., Issacharoff, S. and Camerer, C. (1995) "Biased judgments of fairness in bargaining," *American Economic Review* 85: 1337–1343.
- Baruch, B.M. (1920) *The Making of the Reparation and Economic Sections of the Treaty*. London, England: Harper and Brothers.
- Baynes, N.H. (1969) *The Speeches of Adolf Hitler, April 1922–August 1939*, volume 1. New York, NY: Howard Fertig.

- Bazerman, M.H., Curhan, J.R., Moore, D.A. and Valley, K.L. (2000) "Negotiation," *Annual Review of Psychology* 51: 279–314.
- Boemeke, M.F., Feldman, G.D. and Glaser, E. (1998) *The Treaty of Versailles: A Reassessment after 75 Years*. New York, NY: Cambridge University Press.
- Bottom, W.P. (2002) "Wilson and Lloyd George: Can the principled approach tame the machiavellian bargainer?" Working Paper.
- Bottom, W.P. and Paese, P.W. (1999) "The asymmetric cost of judgment errors in distributive bargaining," *Group Decision and Negotiation* 8: 349–364.
- Bottom, W.P. and Paese, P.W. (1997) "False consensus, stereotypic cues, and the perception of integrative potential in negotiation," *Journal of Applied Social Psychology* 27: 1919–1940.
- Bottom, W.P. and Studt, A. (1993) "Framing effects and the distributive aspect of integrative bargaining," *Organizational Behavior and Human Decision Processes* 56: 459–474.
- Bottom, W.P. (1990) "Adaptive reference points in integrative bargaining," in K. Borcherding, O.I. Larichev and D.M. Messick, editors, *Contemporary Issues in Decision Making*. Amsterdam, Netherlands: Elsevier Science Press.
- Brett, J.M. (2002) *Negotiating Globally*. San Francisco, CA: Jossey Bass.
- Burnett, P.M. (1940) *Reparation at the Paris Peace Conference*. New York, NY: Columbia University Press.
- Camerer, C.F. and Hogarth, R.M. (1999) "The effects of financial incentives in experiments: A review and capital-labour-production framework," *Journal of Risk and Uncertainty* 19: 7–42.
- Camerer, C. (1997) "Individual decision making," in J. Kagel and A. Roth, editors, *The Handbook of Experimental Economics*. Princeton, NJ: Princeton University Press.
- Camerer, C.F., Babcock, L., Loewenstein, G. and Thaler, R. (1997) "Labor supply of New York City cab drivers: One day at a time," *Quarterly Journal of Economics* 112: 407–441.
- Christensen-Szalanski, J.J.J. and Bushyhead, J.B. (1981) "Physicians' use of probabilistic information in a real clinical setting," *Journal of Experimental Psychology: Human Perception and Performance* 7: 928–935.
- Churchill, W.L.S. (1948) *The Gathering Storm*. London, England: Mariner.
- Clemenceau, G. (1930) *Grandeur and Misery of Victory*. New York, NY: Harcourt Brace.
- Clodfelter, M. (1992) *Warfare and Armed Conflicts: A Statistical Reference to Casualty and Other Figures, 1618–1991*. London, England: McFarland & Company.
- De Dreu, C.K.W., Koole, S.L. and Steinel, W. (2000) "Unfixing the fixed pie: A motivated information-processing approach to integrative negotiation," *Journal of Personality and Social Psychology* 76: 975–987.
- De Dreu, C.K.W., Carnevale, P.J., Emans, B.J.M. and van de Vliert, E. (1995) "Effects of gain-loss frames in negotiation: Loss aversion, mismatching, and frame adoption," *Organizational Behavior and Human Decision Processes* 60: 90–107.
- Dulles, J.F. (1940) "Foreword," in P.M. Burnett, editor, *Reparation at the Paris Peace Conference*, Vol. 1. New York, NY: Columbia University Press.
- Easterbrook, J.A. (1959) "The effect of emotion on cue utilization and the organization of behavior," *Psychological Review* 66: 183–201.
- Eliashberg, J., Lillien, G.L. and Kim, N. (1995) "Searching for generalizations in business marketing negotiations," *Marketing Science* 14: G47–G60.
- Ferguson, N. (1996) "Constraints and room for manoeuvre in the German inflation of the early 1920's," *Economic History Review* XLIX: 635–666.
- Fisher, R., Schneider, A.K., Borgwardt, E. and Ganson, B. (1997) *Coping with International Conflict*. Upper Saddle River, NJ: Prentice Hall.
- Fisher, R. and Ury, W. (1981) *Getting to Yes*. New York, NY: Penguin Books.

- Fleury, A. (1998) "The League of Nations: Toward a new appreciation of its history," in W. Boemeke, G.D. Feldman and E. Glaser, editors, *The Treaty of Versailles: A Reassessment After 75 Years*. Washington, DC: German Historical Institute.
- Freud, S. Bullitt, W.C. (1966) *Thomas Woodrow Wilson, Twenty-Eighth President of the United States: A Psychological Study*. Boston: Houghton Mifflin.
- Friedman, M. (1953) *Essays in Positive Economics*. Chicago, IL: University Of Chicago Press.
- Friedman, M. and Schwartz, A.J. (1963) *A Monetary History of the United States, 1867–1960*. Princeton, NJ: Princeton University Press.
- George, A.L. and George, J.L. (1956) *Woodrow Wilson and Colonel House: A Personality Study*. New York: J. Day.
- Gelfand, L.E. (1963) *The Inquiry*. New Haven, CT: Yale University Press.
- Hayward, M.L.A. and Hambrick, D.C. (1997) "Explaining the premiums paid for large acquisitions: Evidence of CEO hubris," *Administrative Science Quarterly* 42: 103–127.
- Headlam-Morley, Sir J. (1972) *Memoirs of the Peace Conference*. London, England: Methuen & Co.
- House, E.M. (1921) *What Really Happened at Paris*. New York, NY: Scribner.
- Jonsson, C. (1991) "Cognitive theory," in V.A. Kremenyuk, editor, *International Negotiation*. San Francisco, CA: Jossey Bass, pp. 229–243.
- Kahneman, D. and Tversky, A. (1979) "Prospect theory: An analysis of decisions under risk," *Econometrica* 47: 263–291.
- Kahneman, D. and Tversky, A. (1972) "Subjective probability: A judgment of representativeness," *Cognitive Psychology* 3: 430–454.
- Katz, D. and Braly, K.W. (1933) "Racial prejudice and racial stereotypes," *Journal of Abnormal and Social Psychology* 30: 175–193.
- Kennan, G.F. (1996) *At a Century's Ending: Reflections, 1982–1995*. New York, NY: W. W. Norton and Company.
- Kershaw, I. (1998) *Hitler 1889–1936: Hubris*. New York, NY: Norton.
- Keynes, J.M. (1922) *A Revision of the Treaty*. New York, NY: Harcourt Brace.
- Keynes, J.M. (1920) *The Economic Consequences of the Peace*. London, England: Macmillan.
- King, G., Rosen, O., Tanner, M. and Wagner, A.F. (2002) "The ordinary election of Adolf Hitler: A modern voting behavior approach," Working Paper, Center for Basic Research in the Social Sciences, Harvard University.
- Kissinger, H. (1994) *Diplomacy*. New York, NY: Simon & Schuster.
- Knock, T.J. (1998) "Wilsonian concepts and international realities at the end of the war," in M.F. Boemeke, G.D. Feldman and E. Glaser, editors, *The Treaty of Versailles: A Reassessment After 75 Years*. Cambridge, England: Cambridge University Press.
- Kuznets, S. (1946) *National Product since 1869*. New York, NY: National Bureau of Economic Research.
- Lamont, T.J. (1921) "Reparations," in E.M. House and C. Seymour, editors, *What Really Happened at Paris*. New York, NY: Macmillan.
- Lentin, A. (2001) *Lloyd George and the Lost Peace: From Versailles to Hitler, 1919–1940*. Hampshire, UK: Palgrave.
- Levy, J.S. (1997) "Prospect theory, rational choice, and international relations," *International Studies Quarterly* 41: 87–112.
- Link, A.S., editor (1966–1994) *The Papers of Woodrow Wilson*. Princeton, NJ: Princeton University Press.
- Lippmann, W. (1922) *Public Opinion*. New York, NY: Macmillan.
- Lloyd George, D. (1938) *Memoirs of the Peace Conference*, volume 1. New Haven, CT: Yale University Press.

- Lucas, R.E., Jr. (1986) "Adaptive behavior and economic theory," *Journal of Business* 59: S401–S426.
- Macrae, C.N. and Bodenhausen, G.V. (2000) "Social cognition: Thinking categorically about others," *Annual Review of Psychology* 51: 93–120.
- Mantoux, P. (1992) *Deliberations of the Council of Four*. Princeton, NJ: Princeton University Press.
- McEwan, J.M., editor (1986) *The Riddell Diaries*. London, England: Athlone Press.
- McNamara, R.S. and Blight, J.G. (2001) *Wilson's Ghost*. New York, NY: PublicAffairs.
- Mommsen, W.J. (1998) "Max Weber and the peace treaty of Versailles," in M.F. Boemeke, G.D. Feldman and E. Glaser, editors, *The Treaty of Versailles: A Reassessment after 75 Years*. Cambridge, England: Cambridge University Press.
- Nash, J.F. (1953) "Two person cooperative games," *Econometrica* 21: 128–140.
- Nicolson, H. (1933) *Peacemaking 1919*. London, England: Constable and Co.
- Noble, G.B. (1935) *Policies and Opinions at Paris 1919*. New York: Macmillan.
- Northcraft, G.B. and Neale, M.A. (1987) "Experts, amateurs, and real estate: An anchoring and adjustment perspective on property pricing decisions," *Organizational Behavior and Human Decision Processes* 39: 84–97.
- O'Neill, B. (2001) "Risk aversion in international relations theory," *International Studies Quarterly* 45: 617–640.
- Osborne, M.J. and Rubinstein, A. (1990) *Bargaining and Markets*. San Diego, CA: Academic Press.
- Park, B.E. (1993) *Ailing, Aging, Addicted: Studies of Compromised Leadership*. Lexington, KY: University Press of Kentucky.
- Pillutla, M. and Murnighan, J.K. (1996) "Unfairness, anger, and spite: Emotional rejections of ultimatum offers," *Organizational Behavior and Human Decision Processes* 68: 208–224.
- Pogarsky, G. and Babcock, L. (2001) "Damage caps, motivated anchoring, and bargaining impasse," *Journal of Legal Studies* 30: 143–159.
- Roll, R. (1986) "The hubris hypothesis of corporate takeovers," *Journal of Business* 59: 197–216.
- Sargent, T. (1982) "The ends of four big inflations," in R.E. Hall, editor, *Inflation: Consequences and Cures*. Chicago, IL: University of Chicago Press.
- Schelling, T. (1960) *The Strategy of Conflict*. Cambridge, MA: Cambridge University Press.
- Schuker, S.A. (1988) *American "Reparations" to Germany, 1919–1933: Implications for the Third World Debt Crisis*. Princeton, NJ: Princeton University Press.
- Seymour, C. (1928) *The Intimate Papers of Colonel House: The Ending of the War*. Boston, MA: Houghton Mifflin.
- Simon, H.A. (1947) *Administrative Behavior*. New York, NY: Macmillan.
- Steel, R. (1999) *Walter Lippmann and the American Century*. New Brunswick, NJ: Transaction.
- Tardieu, A. (1921) *The Truth About the Treaty*. Indianapolis, IN: Bobbs Merrill.
- Temperley, H.W.V. (1924) *A History of the Peace Conference of Paris*. London, England: Frowde, Hodder, & Stoughton.
- Thaler, R.H. and Ziemba, W.T. (1988) "Anomalies – Parimutuel Betting Markets: Racetracks and Lotteries," *Journal of Economic Perspectives* 2: 161–174.
- Trachtenberg, M. (1980) *Reparation in World Politics*. New York, NY: Columbia University Press.
- The Treaties of Peace, 1919–23: Versailles, St. Germain, Trianon* (1924). New York, NY: Carnegie Endowment for International Peace.

- Tversky, A. and Kahneman, D. (1974) "Judgment under uncertainty: Heuristics and biases," *Science* 185: 1124–1131.
- Weber, E.U. and Milliman, R.A. (1997) "Perceived risk attitudes: Relating risk perceptions to risky choice," *Management Science* 43: 123–144.
- Webb, S.B. (1989) *Hyperinflation and Stabilization in Weimar Germany*. New York, NY: Oxford University Press.
- Weinstein, E.A. (1970) "Woodrow Wilson's neurological illness," *Journal of American History* 57: 324–351.
- Williamson, O.E. (1985) *The Economic Institutions of Capitalism*. New York, NY: Free Press.
- Yates, J.F., Zhu, Y., Ronis, D.L., Wang, D.-F., Shinotsuka, H. and Toda, M. (1989) "Probability judgment accuracy: China, Japan, and the United States," *Organizational Behavior and Human Decision Processes* 43: 145–171.
- Yerkes, R.M. and Dodson, J.D. (1908) "The relation of strength of stimulus to rapidity of habit-formation," *Journal of Comparative and Neurological Psychology* 18: 459–482.
- Zartman, I.W. (1994) "Two's company and More's a crowd: The complexities of multilateral negotiation," in I.W. Zartman, editor, *International Multilateral Negotiation*. San Francisco, CA: Jossey Bass, pp. 1–10.
- Zeckhauser, R. (1986). "Behavioral versus rational economics: What you see is what you conquer," *Journal of Business* 59: S435–S450.