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THE GAME THEORY OF THE EUROPEAN UNION VERSUS THE *PAX ROMANA*

*Uri Weiss*¹ and *Joseph Agassi*²

Game theorists recommend the strategy of the *Pax Romana*: if you want peace, prepare for war. It is conditional aggressiveness. The better alternative is the conditional generosity that the European Union (EU) practices with great success.

These strategies may belong to the game known as the repeated prisoner's dilemma: peace (or mutual cooperation) rests on a threat to punish; to that end, players should maintain their threat. In the repeated prisoner's dilemma, the best response to the strategy of "always cooperate" is to always defect. Yet, these strategies may belong to the game known as the stag hunt. In it, the best response to the strategy of "always cooperate" is cooperating with the other player through each round of the game. The game played by the European Union, we contend, is nearer to the stag hunt game than to the prisoner's dilemma game. Every European Union country recently (rightly, of course) recognizes peace as best—and thus as better than an attack on a defenseless neighbor that would lead to an immediate victory.

I. INTRODUCTION: THE PRISONER'S DILEMMA VERSUS THE STAG HUNT

Below is a diagram of the prisoner's dilemma game. Consider two people detained for possession of illegal weapons near a bank in which an armed robbery just took place. The police have strong enough evidence to stick both with a lenient penalty, but not enough evidence to stick both with a severe penalty; so, the police encourage each of them to testify against the other. To achieve that, the police isolate them and propose to each of them individual plea-bargains. The options that the game offers are the following: if they both defect, they will both receive a medium penalty; if they cooperate with each

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other and keep silent, they will both receive a lenient penalty. There are four possible results:

	Coop	Def
Coop	2, 2	4, 1
Def	1, 4	3, 3

Figure 1. Prisoner's Dilemma

Thus, the wish to maximize individual benefit imposes on each player in the prisoner's dilemma the temptation to betray the other, regardless of the other's strategy.³ The strategy described here is not the only one available; it is dominant in the sense that in all permissible situations, a player will gain more than from any alternative strategy. Therefore, in this game, a player cannot gain anything from learning information about the strategy of the opponent.⁴ Hence, in the prisoner's dilemma game, rationality precludes the socially optimal result: it leads to the most socially dissatisfying result.⁵ This is intriguing. The unpleasant aspect of the situation of the prisoner's dilemma—the distrust inherent in it—is irreparable, since it prescribes a result that cannot be improved by soliciting trust.⁶

Some similar games allow for improvements of outcomes through gaining the trust of other players. The most common illustration of this is the variant of the prisoner's dilemma game known as the “stag-hunt game.”⁷ Interestingly, many variants of this game exist; a little

3. This idea of strategy is as old as game theory. According to the definition of von Neumann and Morgenstern (1944), a strategy is a player's plan that prescribes choices for every possible situation given every possible set of relevant information. Thus, a strategy is a comprehensive policy, a plan for action in every possible situation that the rules of the game permit. Obviously, then, the project of von Neumann and Morgenstern is utopian. As Kenneth Arrow has noted, such a strategy is impossible even for chess, that poses problem-situations much simpler than most real-life ones. The limitation of Von Neumann and Morgenstern study to games with fully determined result limits severely the intellectual challenge of their theory. Surprisingly, the theory is nevertheless somewhat challenging. The standard examples for this are the strategies in the repeated prisoner's dilemma of always defect and the tit-for-tat. JOHN VON NEUMANN & OSKAR MORGENSTERN, *THEORY OF GAMES AND ECONOMIC BEHAVIOR* 49 (1944).

4. This is equivalent to what in the early stages of game theory was called “the sure thing strategy” and that Savage called “the sure-thing principle.” LEONARD J. SAVAGE, *THE FOUNDATION OF STATISTICS* 21 (2d ed. 1972).

5. See, e.g., Robert J. Aumann, *Game Engineering*, in *MATHEMATICAL PROGRAMMING AND GAME THEORY FOR DECISION MAKING* (S. K. Neogy et al. eds., 2008). See Steven Kuhn, *Prisoner's Dilemma*, *STAN. ENCYCLOPEDIA PHIL.* (2019), available at <https://plato.stanford.edu/archives/win2019/entries/prisoner-dilemma/>.

6. This may explain the futility in some situations of the goodwill of peace activists who do not try to act politically in order to change the rules of the game.

7. This game was proposed by Rousseau in a less precise language than is common in game theory:

change in the game may lead to very different results.⁸ In it, cooperation produces the optimal payoff for all players; the unilateral betrayal of one gives the defector the second-best payoff, and to the other player, the worst payoff. Mutual betrayal gives both individuals the third-best payoff. For this stag hunt game, again, there are four possible outcomes. The stag-hunt game is best illustrated by two hunters who choose simultaneously whether to hunt a stag or rabbits.⁹ If both hunters go for a stag, they succeed and each gains a part of the stag, which is the best result. On the other hand, a player who goes for a stag alone meets with an absolute failure, which is the worst result. A player who goes for the rabbits alone wins all the rabbits, which is the second-best result. Going for the rabbits together gives every player some rabbits, which is the third-best result. It is then best for both hunters if each go for the stag. When the first hunter goes for rabbits, it is better that the second hunter does not go for the rabbits, but instead goes for the stag (and loses), thus enabling the first hunter to hunt unimpeded. Consider the four levels of success, from 1 to 4:

In this manner, men may have insensibly acquired some gross ideas of mutual undertakings, and of the advantages of fulfilling them: that is, just so far as their present and apparent interest was concerned: for they were perfect strangers to foresight, and were so far from troubling themselves about the distant future, that they hardly thought of the morrow. If a deer was to be taken, every one saw that, in order to succeed, he must abide faithfully by his post: but if a hare happened to come within the reach of any one of them, it is not to be doubted that he pursued it without scruple, and, having seized his prey, cared very little, if by so doing he caused his companions to miss theirs.

See JEAN-JACQUES ROUSSEAU, *Discourse on Inequality*, in *THE SOCIAL CONTRACT AND DISCOURSES* 209–10 (G. D. H. Cole, trans., 1923).

By using the table Game theory clarifies what the priority of each player is, and what is exactly the set of options of each player has. However, we can see that Rousseau has advantage by discussing the context: it is a game, in which the players do not think about their reputations, they play as if they are strangers who do not think about tomorrow. This led Rousseau to propose the following recommendation:

It is easy to understand that such intercourse would not require a language much more refined than that of rooks or monkeys, who associate together for much the same purpose. Inarticulate cries, plenty of gestures and some imitative sounds, must have been for a long time the universal language; and by the addition, in every country, of some conventional articulate sounds (of which, as I have already intimated, the first institution is not too easy to explain) particular languages were produced; but these were rude and imperfect, and nearly such as are now to be found among some savage nations.

See *id.* at 210.

We propose to combine between the socially scientific approach of Rousseau and the preciseness of the table developed by game theoreticians.

8. Economists have noted this interesting result first. See Richard G. Lipsey & Kelvin Lancaster, *The General Theory of Second Best*, 24 *REV. OF ECON. STUD.* 11, 32 (1956).

9. See Brian Skyrms, *The Stag Hunt*, 75 *PROCS. & ADDRESSES AM. PHIL. ASS'N* 31, 31 (2001); Robert Jervis, *COOPERATION UNDER THE SECURITY DILEMMA*, 30 *WORLD. POL.* 167, 167 (1978).

	Coop	Def
Coop	1, 1	4, 2
Def	2, 4	3, 3

Figure 2. Stag-hunt

Obviously, the absence of trust prevents achievement of the optimal solution. However, if the players trust each other enough, they will each achieve the optimal result. The important difference between the prisoner's dilemma and the stag-hunt does not lie in the stories, but rather in the matrices.¹⁰ This is because it is possible to translate the depiction of the stag-hunt game to the terms of the prisoner's dilemma, without changing the stag-hunt conceptually. For example, if the two suspects from the prisoner's dilemma keep silent, they will both walk. If they both sing, they will both receive the usual penalty. But if only one sings, then only that one will receive a lenient penalty, and the other will receive a heavy penalty.¹¹

The most important difference between the prisoner's dilemma and the stag-hunt is this: in the prisoner's dilemma, defection is the dominant strategy—each rational player will defect in any case—whereas in the stag-hunt game, the defection (or its avoidance) depends on the assessment of the players' interdependent strategies. Whereas the prisoner's dilemma game offers no hope for cooperation, the stag hunt game offers the option of raising the incentive for cooperation through trust: if a player believes that the other will cooperate, the player will cooperate. Moreover, if player X believes that the player Y believes that X will cooperate, then the X will believe that Y plans to cooperate, and hence the X will also cooperate. Hence, it is more important to avoid situations that impose the prisoner's dilemma than

10. This may even be realistic, since in both options are available to the police, and they write the rules, i.e., they choose what game that the prisoners will have to play, so it is reasonable that the police will impose on them the prisoner's dilemma game rather than the stag hunt game.

11. See Skyrms, *supra* note 9, at 32. They claimed:

The Stag Hunt does not have the same melodramatic quality as the Prisoner's Dilemma. It raises its own set of issues, which are at least as worthy of serious consideration. Let us focus, for the moment, on a two-person Stag Hunt for comparison to the familiar two-person Prisoner's Dilemma . . . Suppose that hunting hare has an expected payoff of 3, no matter what the other does. Hunting stag with another has an expected payoff of 4. Hunting Stag alone is doomed to failure and has a payoff of zero. It is clear that a pessimist, who always expects the worst, would hunt hare. But it is also true with these payoffs that a cautious player, who was so uncertain that he thought the other player was as likely to do one thing as another, would also hunt hare. That is not to say that rational players could not coordinate on the stag hunt equilibrium that gives them both better payoff, but it is to say that they need a measure of trust to do so.

Id.

those that impose the stag-hunt game.¹² This is a useful lesson for the social sciences: some, but not all, cases of conflict allow for improvements all around, even while leaving the conflict as it is.

The difference between the variants of a game may be significant, since small changes in the rules of the game can make all the difference. Because of this, the decision about which variant describes a given political situation determines attitudes towards it, i.e., the decision of the political player which game they play will determine how they will play the game: if they decide that they play a one-time prisoner's dilemma, they will defect for sure. Thus, bellicose game theoreticians set the game one way, we contend, and the irenic ones set it the other way.¹³ This is Mario Bunge's¹⁴ criticism of game theory: it encourages arbitrariness in scientific guise; one game theoretician may describe the international interaction as one type of game, and another game theoretician will describe the same international interaction as another type of game. Descriptions of real-life situations as games will be less arbitrary if they include options—whenever such options are possible—for players to choose what game to play, with whom, and with what payoffs. This decision as to what game to play, this “super-game,” describes some situations better than the games prescribed in standard game-theoretical texts. It is but our emphatic recognition that at times some players can choose what game to play—this is what standard game theory ignores and our Article wishes to correct. The paradigm case should then raise the question: should we start playing a “war game”?¹⁵

12. JOSEPH AGASSI & ABRAHAM MEIDAN, *PHILOSOPHY FROM A SKEPTICAL PERSPECTIVE* 94–96 (2008).

13. See MARIO BUNGE, *SOCIAL SCIENCE UNDER DEBATE: A PHILOSOPHICAL PERSPECTIVE* 176 (1998). We took his thesis one small step further.

14. *Id.*

15. Russel claimed:

Since the nuclear stalemate became apparent, the Governments of East and West have adopted the policy which Mr. Dulles calls “brinkmanship”. This is a policy adapted from a sport which, I am told, is practiced by some youthful degenerates. This sport is called “Chicken!”. It is played by choosing a long straight road with a white line down the middle and starting two very fast cars towards each other from opposite ends. Each car is expected to keep the wheels of one side on the white line. As they approach each other, mutual destruction becomes more and more imminent. If one of them swerves from the white line before the other, the other, as he passes, shouts “Chicken!”, and the one who has swerved becomes an object of contempt. As played by irresponsible boys, this game is considered decadent and immoral, though only the lives of the players are risked. But when the game is played by eminent statesmen, who risk not only their own lives but those of many hundreds of millions of human beings, it is thought on both sides that the statesmen on one side are displaying a high degree of wisdom and courage, and only the statesmen on the other side are reprehensible. This, of course, is absurd. Both are to blame for playing such an incredibly dangerous game. The game

1.1. *The Repeated Version*

A game is in a Nash equilibrium if no player has incentive to change strategies unilaterally. Each player's strategy is then the best response for the strategy of the other.¹⁶ Nash¹⁷ limited his theory to games without communication between players and only with unilateral changes in the players' strategies. Thus, when players in the (indefinitely repeated) prisoner's dilemma adopt the strategy to always defect, neither has incentive to change strategy unilaterally. A friendly bilateral change, such as tit-for-tat, would benefit every player,¹⁸ so that by breaking the rule of unilateral change, they may come to an agreement to alter their strategies simultaneously. One player's hope that his change of strategy will make the other follow suit should suffice as incentive to change strategies.

Consider the prisoner's dilemma repeated indefinitely with a fixed norm¹⁹ for cooperation and a fixed norm for defection. What conditions secure a Nash equilibrium in this game? Many Nash equilibria to this game are available.²⁰ The two standard pairs of strategies that achieve the equilibria are mutual always-defect and mutual tit-for-tat.²¹ In this game, the mutual always-cooperate strategy is not in a Nash equilibrium²² because the choice of this strategy comprises in-

may be played without misfortune a few times, but sooner or later it will come to be felt that loss of face is more dreadful than nuclear annihilation. The moment will come when neither side can face the derisive cry of "Chicken!" from the other side. When that moment is come, the statesmen of both sides will plunge the world into destruction.

BERTRAND RUSSELL, *COMMON SENSE AND NUCLEAR WARFARE* 19 (2001). The most important proposal of Russell was that we should prevent this risky chicken game. (What Russell claimed regarding one particular war game, should be claimed regarding other war games as well). The conclusion from his proposal for game theoreticians should be to seek for ways to prevent risky games, and this is the main correction that we propose to game theory, this is the right way to make game theory.

16. John Nash, *Non-Cooperative Games*, 54 *ANNALS OF MATHEMATICS* 286, 286 (1951).

17. *Id.*

18. See Kuhn, *supra* note 5.

19. Aumann and Dreze proposed: "Nash equilibrium is of central importance in studying norms of strategic behavior[.]" See Robert J. Aumann & Jacques H. Dreze, *Rational Expectations in Games*, 98 *AM. ECON. REV.* 72, 80 (2008).

20. See Jeffrey C. Ely & Juuso Välimäki, *A Robust Folk Theorem for the Prisoner's Dilemma*, 102 *J. ECON. THEORY* 84, 87 (2002).

21. The latter strategy invites the player to begin with cooperation, and to repeat in any other round of the game what the other did in the previous round.

22. Game theory ignores the possibility that adopting the strategy of "always cooperate" may change the preferences of the other player and by this change the game. This possibility is at the heart of the famous novel *Les Misérables* by Victor Hugo. See generally VICTOR HUGO, *LES MISÉRABLES* (1862).

centive for opponents to always defect.²³ Therefore, the mutual always-cooperate does not work in a game with fixed norms.²⁴ Let us emphasize: whereas mutual tit-for-tat strategies yield permanent mutual cooperation and are in a Nash equilibrium in this game, mutual always cooperate do not. When players choose this strategy, the best response of their opponents is to always defect! To encourage cooperation in this game, it is not sufficient that both players prefer mutual cooperation.²⁵ This is because it also depends on the following condition: each player should be ready to respond to defection with a sufficient degree of defection. If each player adopts, say, tit-for-tat, then each player issues a threat to the other without ever realizing it. This surprising insight has led prominent game theorists to a strange conclusion: the decision to punish opponents heavily enough, regardless of the price of this decision, renders this very implementation (*i.e.*, the punishing) unnecessary.²⁶

2. *Against the vision of The Pax Romana*

The *Pax Romana* relied on well-advertised cruel punishment for rebellion. What Robert Aumann²⁷ said in his Nobel lecture regarding the Cold War is also valid *mutatis mutandis* to the *Pax Romana*, “[w]hat is maintaining the equilibrium in these games is the threat of punishment. If you like, call it ‘MAD’ - mutually assured destruction,

23. The best result for a player in the repeated prisoner’s dilemma will be that the player will always defect, and that the other will always cooperate. If the other adopts a strategy (*i.e.*, a complete plan of actions) of “always cooperate” regardless to what the player will do, then the best response for this will be to play always cooperate. The strategy of “always cooperate” does not provide any incentive to respond by minimal cooperation in the repeated prisoner’s dilemma.

24. Mutual always cooperate strategy is no Nash equilibrium since in this case every player has incentive to defect: the literature deems always defect the best response to always cooperate. We disagree; it is the best response only if players who adopt the always cooperate strategy do not change their strategy when their opponents defect. The literature dismisses this criticism on the strength of the observation that the last condition is fulfilled by definition: if the response to defection is any strategy other than always cooperate, then it is not the always cooperate strategy. Our response to this is as follows. This observation hides a tacit assumption: the choice of a strategy that each player makes is not open to replacement, since by definition every future replacement of the chosen strategy is a part of it. This tacit assumption contradicts the theory of Nash. He spoke of unilateral change of strategy. A change of strategy of a rational player depends not only on the opponent’s implementation of a plan, but also on the opponent’s change of plan. In real-life, every plan is open to change, especially as learning from experience. A rational player asks, does the way my opponent plays reflect a plan that is open for changes. This is an open problem in (the allegedly fully determined) game theory. It may be on the agenda of research in game theory.

25. See Robert J. Aumann, *Game Engineering* at 11 (The Federmann Ctr. For the Study of Rationality, the Hebrew Univ., Discussion Paper Series, dp518, 2009).

26. Thomas C. Schelling, *An Essay on Bargaining*, 46 *AM. ECON. REV.* 281, 297 (1956).

27. Robert J. Aumann, *War and peace*, 103 *PROCS. NAT’L ACAD. SCI.* 17075 (2006).

the motto of the cold war.”²⁸ Aumann’s lecture “War and Peace in the Middle East” praised the vision of *Pax Romana: Si vis pacem, para bellum*—if you want peace, prepare for war. We disagree. Assuming the default option that a political situation is a repeated prisoner’s dilemma (or any other games) is often a grave error. Rather than offering the best recommendations for players in a given game, in our opinion, it is obviously better to advise them against games such as prisoner’s dilemma (when it is possible) and to deliberate on the advisability of playing the game once the initial decision is made.

One way of changing the game is by changing preferences²⁹: the choice of humanist and peaceful values may prevent many risky games.³⁰ For example, the choice of liberal values may prevent a prisoner’s dilemma game between police and demonstrators. It is well known that when liberalism prevents punishment, vigilantes find it intolerable.³¹ Yet, they are in error by their own light; their conduct does not reduce crime. The same holds for the hostility to some types of demonstrations, yet suppressing them notoriously incites violence. This leads to absurd justifications for killing demonstrators.³² Some game theorists would consider some games, such as repeated prisoner’s dilemma or the zero-sum game, sufficient justifications for real

28. *Id.* at 17077.

29. What distinguishes one game from another game is the matrix of payoff. The payoffs are a function of the feeling of the players. Thus, when the feelings are changed, the player may play an absolutely different game.

30. Russel emphasized that in order to prevent wars society should develop friendly feeling and prevent hostile ones. Game theory can teach why he was right, and Russel can teach why the influencing on preferences should be a part of the (super) game. See BERTRAND RUSSELL, *WHY MEN FIGHT* 63–64 (1st ed. 2010).

31. Machiavelli claimed: “[I]f the populace be made the guardians of liberty, it is reasonable to suppose that they will take more care of it . . .” See Father Leslie J. Walker, *The Discourses of Niccolò Machiavelli* 220 (1992).

32. This was the claim of the Israeli general attorney before the Israeli high court discussing the legality of shooting “central rioters”:

The starting point of the Respondents’ position is that these riots are taking place as part of the ARMED CONFLICT existing between the *Hamas* terrorist organization and Israel – and therefore the legal framework that regulates the opening of fire is the LAW OF ARMED CONFLICT. In this context, they distinguished between fire that is opened and is regulated by the conduct of hostilities paradigm (for example, when the fire is opened as part of actual combat between *Hamas* and Israel), and fire that is opened and regulated by the law enforcement paradigm. The events which are the subject of the petitions combine both . . . The Respondents further emphasized during the hearing that the Rules of Engagement permit firing towards the legs of a central rioter or of a central inciter, but are only carried out in the framework of the armed conflict that exists between Israel and the residents of the Gaza Strip, and only as a last resort, subject to strict requirements that derive from the principles of necessity and proportionality, and after all other means have been exhausted and failed.

See Judgment at 7–8, HCJ 3003/18 Yesh Din v. IDF Chief of General Staff (2019) (Isr.).

actions. We instead recommend questioning the wisdom of the choice to play any game, i.e., the players should choose which games to play, and more importantly, which games not to play. It is obligatory to ask whether the very decision to play a given game is legitimate. If it is, then this should raise the question, is it wise to play?

Admittedly, a game in which unconditional cooperation comprises incentive for the opponent to defect is problematic. For, obviously most leading writers tacitly writerly admit, it renders the strategy of unconditional cooperation inadvisable. Conditional generosity, we claim, may very well be superior to it. In real life, where error is inevitable, *Pax Romana* is very risky. A mistake in reading the opponent's action may lead to war. Armament may lead to war in many other international games, such as the stag-hunt, as it offer incentives for increased aggressive conduct. The Romans did not consider this option, as they preferred always staying as ready for war as possible.³³ The case of the prolonged tension between Israel and Palestine is similar: no side offers any proposal for peace negotiation, Israel prefers the acquisition of territories to peace. Had Israel respected the right of Palestinians to protest occupation, an agreement to end the present tensions may be significantly more likely.

3. *In Favor of The Vision of The European Union*

Since the very consideration of waging war is expensive,³⁴ it is wiser to change the situation to enable players to rely on trust whenever possible. This amounts to the transition from the prisoner's dilemma-type game to the stag-hunt-type game. This happened in Europe after World War II.³⁵ Peace is now recognized as best for every member-state of the European Union, even if an attack on a neighbor would

33. Publius Flavius Vegetius Renatus claimed: "He who wants victory, let him train soldiers diligently. He who wishes a successful outcome, let him fight with strategy, not at random. No ONE DARES CHALLENGE OR HARM ONE WHO HE REALIZES will win if he fights." Publius Flavius Vegetius Renatus, *Vegetius: Epitome of Military Silence* (N.P. Milner trans., Liverpool University Press 2d ed. 2001).

34. See Michael Edelstein, *What price cold war? Military spending and private investment in the US, 1946-1979*, 14 *CAMBRIDGE J. ECON.* 421, 421-22 (1990); RUSSELL, *supra* note 30, at 79-116.

35. This is how the European Union leaders celebrated their 2012 Nobel Prize in their Nobel lecture:

Of course, peace might have come to Europe without the Union. Maybe. We will never know. But it would never have been of the same quality. A lasting peace, not a frosty cease-fire.

And to me, what makes it so special, is reconciliation . . .

To think of what France and Germany had gone through . . . and then take this step . . . Signing a Treaty of Friendship . . . Each time I hear these words—*Freundschaft, Amitié*— I am moved. They are private words, not for treaties between nations. But

lead to an immediate surrender. In other words, the EU countries do not play a game in which peace is based on the threat to respond by aggressiveness to aggressiveness, and they do not play a game in which the best result for a EU country is that they invade another EU country and the other EU country will cooperate with them. This situation is obviously the best goal for all international relations, as it achieves the most stability. In this situation, peace will be reasonably stable, especially in positions of strength. This is quite intriguing because in other games, this optimistic assessment of the results of war is what usually leads to wars: if both states believe that they will win the war for sure without significant losses, it will be very hard for them to come to peace, unless they prefer peace to war even when they are sure that they will win the war without significant losses.³⁶ Game theory, to repeat, does not account for the stability of the type of game that would result in a Nash equilibrium of peace.³⁷ The option of a

the will not to let history repeat itself, to do something radically new, was *so* strong that new words had to be found.

. . .

But symbolic gestures alone cannot cement peace.

This is where the European Union's "secret weapon" comes into play: an unrivalled way of binding our interests so tightly that war becomes materially impossible. Through constant negotiations, on ever more topics, between ever more countries. And it's the golden rule of Jean Monnet: "Mieux vaut se disputer autour d'une table que sur un champ de bataille." ("Better fight around a table than on a battle-field.")

If I had to explain it to Alfred Nobel, I would say: not just a peace congress, a perpetual peace congress!

. . .

The Union has perfected the art of compromise. No drama . . . No drama of victory or defeat, but ensuring all countries emerge victorious from talks. And for this, boring politics is only a small price to pay . . .

See Herman Van Rompuy & José Manuel Durão Barroso, Nobel Lecture: From War to Peace: A European Tale (Dec. 10, 2012).

36. Blainey claimed: "War is usually the outcome of a diplomatic crisis which cannot be solved because both sides have conflicting estimates of their bargaining power." *See* GEOFFREY BLAINNEY, *THE CAUSES OF WAR* 114 (3d ed. 1988); *see also* Branislav L. Slantchev & Ahmer Tarar, *Mutual Optimism as a Rationalist Explanation of War*, 55 *AM. J. POL. SCI.* 135, 146 (2011). The authors claimed: "The mutual optimism explanation is perhaps one of the most venerated explanations for how war can occur." *Id.* We add: the choice of the game may prevent wars: extreme optimism will lead to war when the parties play the game in which they wish to maximize their territories regardless to international law, but will not lead to a war in a game such as the EU game, in which the countries do not prefer easy victory in war to peace.

37. Kohlberg and Mertens claimed:

The concept of equilibrium, as defined by Nash (1951), is central in the theory of non-cooperative games. It reduces the set of all possible strategic choices by the players to a much smaller set of those choices that are stable in the sense that no player can increase his payoff by unilaterally changing his strategy. One might be tempted to conclude that Nash equilibria must actually be "strategically stable" (self-enforcing) . . . Since not all Nash equilibria are strategically stable, the natural question that arises is: which ones are?

peaceful stability was ignored when game theory was invented during the Cold War.³⁸

Nevertheless, one of the most important questions in political studies remains: how it is possible to prevent wars and arms races? Wars and arm races may result from conditions for a game of prisoner's dilemma. Therefore, it may be wise to seek ways and means to prevent situations that invite playing this game, especially in international relations. Considered mathematically, it is always advantageous to add a neutral element to any set of objects³⁹; in the case of game theory, we claim, the neutral element is the choice *not* to play.

The prevention of prisoner's dilemma situations is possible. One example of this is legislating incentive for cooperation, including compliance with contracts. To do this in international relations is to grant international courts the means to enforce their decisions.⁴⁰ International institutions may generate repeated disincentives for aggression and generate collective security mechanisms, including prizes for international cooperation and memberships in prestigious elite clubs like the European Union. The European Union deters aggression against any of its members by establishing a commitment to protect every member from aggression.⁴¹ This is a generalization of the tradi-

See Elon Kohlberg & Jean-Francois Mertens, *On the Strategic Stability of Equilibria*, 54 *ECONOMETRICA* 1003, 1003 (1986). We are interested in a more primitive meaning of stability: how much will the equilibrium be stable when the balance of powers, or the values, or the leaders are changed? In other words, we are interested in how much the (peaceful equilibrium) will be stable when the game is changed. Thus, we are particularly interested in degrees of stability.

38. See John von Neumann: *Life, Work, and Legacy*, INST. FOR ADVANCED STUDY, <https://www.ias.edu/von-neumann> (last visited June 11, 2021).

39. Peter M. Neumann, *Galois and his Groups*, NEWSLETTER (Eur. Mathematical Soc'y, Zurich, Switzerland) Dec. 2011, at 31–32, 34, 36.

40. Two urgent problems involve international courts. One concerns partial enforcement: the court may not be able to bring war criminals to justice yet be able to prevent some states from granting asylum to war criminals. The Arab Spring, and particularly the war in Syria, challenges the institution of the International Criminal Court this way: some western states prevented the compromise that gives immunity for the Syrian dictator Assad, without having the power to bring him to justice or to deprive him from power. Second, establishing international courts with enforcement mechanisms may amount to the imposition of a universal distrust between nations. This is self-defeating, as is the intent to build an international institution that generates repeated disincentives for aggression. And distrust may happen every time a new law has loopholes that invite its violations with impunity. This is why we should be wary of new legislation, which is one of the theses of Friedrich von Hayek's *The Constitution of Liberty*. FRIEDRICH A. VON HAYEK, *THE CONSTITUTION OF LIBERTY: THE DEFINITIVE EDITION* 279 (Ronald Hamowy ed., 2011).

41. According to Article 42.7 of the Lisbon Treaty:

If a Member State is the victim of armed aggression on its territory, the other Member States shall have towards it an obligation of aid and assistance by all the means in their power, in accordance with Article 51 of the United Nations Charter. This shall not prejudice the specific character of the security and defence policy of certain Member States.

tional policy of seeking a balance of powers,⁴² since the threat to expel an aggressor from an elite club, we claim, is a better means for preventing aggression, especially internationally. The opportunity for preventing international hostility encourages states to change the prisoner's dilemma game into the stag-hunt game.

This discussion is obviously incomplete: it is limited to the prevention of war with a neighbor but does not address the need to prevent war between neighbors. This is the need to devise disincentives for aggression, such as the aggression of Italy against Ethiopia before World War II, and of Iraq against Kuwait in August 1990. Besides this disincentive, no means is available other than changing national preference—the preferences for peace-loving political leaders and political parties.⁴³ This seems to be the most impressive achievement of the European Union. Today, there is equilibrium within the European Union where the preference is for peace over war.⁴⁴

Another important question that this situation raises is: why is the preference for peace not prevalent everywhere? Once we know the answer to this, only then can we move to the next question: how can peaceful countries transfer their preference for peace to others? Moreover, we can ask, which of the two preferences is stronger, for peace or for victory. The question is then the dislike of being considered “non-loyal,” “chicken,” “submissive,” “suckers,” etc., or hating to be considered barbaric? When the situation is fluid, education promoting peace is most effective; otherwise, it is just similar to a Nash equilibrium (but not quite, as it depends sensitively on other, more delicate factors). A superficial impression suggests that education in-

Treaty on European Union art. 42(7), Feb. 7, 1992, 2012 O.J. (C 326) 39.

42. Paul Kirchhof, *The Balance of Powers Between National and European Institutions*, 5 EUR. L.J. 225, 230–36 (1999). See generally HENRY KISSINGER, *DIPLOMACY* (1994).

43. Nicki Peter Petrikowski, *Angela Merkel*, BRITANNICA, <https://www.britannica.com/biography/Angela-Merkel> (last visited May 25, 2021).

44. Students new to prisoner's dilemma often object: people do not like betraying friends. The usual answer to this is that the standard description of a game takes account of the feelings of players as a part of their systems of preferences. This reply is true, but facile. Indeed, mechanisms like love survived evolution not only because they help to achieve more in a particular game, but also because they prevent some harmful games. Couples in love will be much less prone to play the prisoner's dilemma game than couples not in love. This does not impinge on the game, but it does impinge on the choice of the game. More generally, only members of an open society can choose with whom to play the game of marriage. Love reduces the frequency of situations of prisoner's dilemma games. Evolutionary scholars such as Dawkins, seek mechanisms that enable mutual cooperation in the repeated prisoner's dilemma game. See generally RICHARD DAWKINS, *THE SELFISH GENE* (1976). However, seeking mechanisms that prevent occasions for this game is more efficient by far.

creases pride in loving peace.⁴⁵ If this impression is true, then peace-lovers should help raise the educational level in their societies. This amounts to the less obvious recommendation for economically advantaged countries to be generous and invest in the education of economically disadvantaged countries in order to preclude playing the prisoner's dilemma. Incentives for this recommendation are economic—peace is considerably cheaper than war⁴⁶—and in line with the preference for proper conduct or at least for appearance of proper conduct. Similar to a low national crime rate, we claim, international peace is a Nash equilibrium that is often desired without being easy to achieve. Let us emphasize the parallel between national and international peaceful, law-abiding conduct.⁴⁷

Game theory, obviously, cannot replace social science. In our opinion, it is possible and we recommend that it should, help decide which policy to avoid in a particular game, and which policy to endorse. We can use game theory in order to recommend which policy to adopt in a particular game. However, in order to choose the right policy, we should know who plays which game under what conditions. Such decisions are outside the province of game theory. Indeed the canonical text on game theory of Von Neuman and Morgenstern opens with a given game.⁴⁸

Consider then the peace agreement between Israel and Egypt.⁴⁹ One part of it was the agreement of the United States to transfer a large sum of funds to Egypt.⁵⁰ The agreement still is a big success,⁵¹ although analysis of its effects depends⁵² on the future achievement of peace in the region. Until then, the choice to enforce peace by the

45. Madhavi Majmudar, *Human values, educating the Whole Child for peace and being a citizen in Multi-ethnic Britain*, SATHYA SAI EDUC. IN HUM. VALUES (EHV), (May 22, 2002).

46. See Edelstein, *supra* note 34, at 421.

47. See Amrei Müller, *Relationship between National and International Law*, Public International Law, University of Oslo 14 (Oct. 14, 2013).

48. VON NEUMANN & MORGENSTERN, *supra* note 3, at 48.

49. See generally *Treaty of Peace, Egypt-Isr.*, Mar. 26, 1979, 1136 U.N.T.S. 115.

50. According to Clarke:

The unabashed political purposes of aid to Egypt were and remain: to reward Cairo for making and maintaining peace with Israel; to build mass support within Egypt for the peace treaty with Israel by using ESF, development assistance, and food aid to create a link between peace and a more open, prosperous society; and to secure a strategic relationship between Egypt and the United States.

See Duncan L. Clarke, *US Security Assistance to Egypt and Israel: Politically Untouchable?*, 51 MIDDLE EAST J. 200, 202 (1997).

51. *Egypt affirms commitment to Israel peace treaty*, JERUSALEM POST (Aug. 24, 2012, 9:17 AM), <https://www.jpost.com/Middle-East/Egypt-affirms-commitment-to-Israel-peace-treaty>.

52. *How to Deal with Threats: 4 Negotiation Tips for Managing Conflict at the Bargaining Table*, HARV. L. SCH. (Apr. 19, 2021), <https://www.pon.harvard.edu/daily/conflict-resolution/how-to-deal-with-threats/>.

threat to cut funds may still be a case of the repeated prisoner's dilemma. Obviously, the obligation to enforce international treaties is inferior to other mechanisms, such as threats to cease international aid from economically advantaged countries, since war is very costly, threats to respond with war may be dismissed.

By comparison, at least, the threat to stop generous support is much more credible, since it is cheaper. Furthermore, since social norms may block the prisoner's dilemma game, we recommend the establishment of social international norms which prevent situations that may invite playing the prisoner's dilemma in international relations. Sometimes global public opinion may suffice for discouraging play of the prisoner's dilemma game.⁵³ Leading game theoreticians often make realist⁵⁴ and aggressive recommendations in questions of war and peace.⁵⁵ They tend to belittle international agreements. Instead they recommend frightening the opponent by making credible military threats.⁵⁶ They explicitly or implicitly adopt the *Pax Romana's* cruel vision.⁵⁷ We examine options for applying game theory and come up

53. Woodrow Wilson claimed: "And in order to safeguard the popular power so far as we could of this representative body, it is provided, you will notice, that when a subject is submitted, not to arbitration, but to discussion by the Executive Council, it can upon the initiative of either one of the parties to the dispute be drawn out of the Executive Council on the larger form of the general Body of Delegates, because throughout this instrument we are depending primarily and chiefly upon one great force, and this is the moral force of the public opinion of the world—the cleansing and clarifying and compelling influences of publicity—so that intrigues can no longer have their coverts, so that designs that are sinister can at any time be drawn into the open, so that those things that are destroyed by the light may be properly destroyed by the overwhelming light of the universal expression of condemnation of the world." Woodrow Wilson, Address to Peace Conference: Article XXVI (Feb. 14, 1919).

54. John Watkins claimed that game theory endorses Hobbes' assertion that "covenants, without the sword, are but words, and of no strength to secure a man at all." See John Watkins, *Imperfect Rationality*, in *EXPLANATION IN THE BEHAVIORAL SCIENCES 207* (Robert Borger & Frank Cioffi eds., 1970). We argue that game theory should lead to the contrary conclusion, *i.e.*, to the conclusion that covenants may prevent war even without sword waving, that game theory refutes the Realpolitik approach. Uri Weiss & Joseph Agassi, *Game Theory for International Accords*, 16 S.C. J. IN'L L. & BUS. 1, 13 (2020).

55. See THOMAS C. SCHELLING, *THE STRATEGY OF CONFLICT* 6 (1980); see generally Aumann, *supra* note 27, at 5.

56. SCHELLING, *supra* note 55, at 36; Aumann, *supra* note 27, at 17076–77.

57. Robert Aumann said:

If Israel wants to live in peace with its neighbours, it's actually doing everything wrong from the point of view of game theory! A very large component of game theory is about giving people incentives to do what you want them to do. So how does this work with peace? Well, study the "world champions of peace," Switzerland. The Swiss have been at peace for close to 450 years. A year ago I was vacationing in Switzerland with my grandson and saw military jet planes overhead. My grandson asked me: "Why do the Swiss need fighter planes if they've been at peace for so long?" I responded that that's exactly why! They have peace because they are strong. The runners-up to the Swiss are the Romans, who had a *Pax Romana* which lasted for about 230 years and

with dramatically different recommendations: (1) we recommend the building of international institutions that aim at the prevention of war; (2) we argue that international agreements may, and at times do, prevent wars even when they are not enforceable; (3) we recommend conditional generosity as a way to prevent wars and convince potential enemies that there is no intent to attack. The adoption of such recommendations may turn hostility into friendship. Game theory is not necessary to accomplish this. The Talmud says, “Who is the hero of heroes? . . . One who can turn an enemy into his friend.”⁵⁸ What we find amazing is that game theoreticians who write books about peace and war do not even raise the question of how it is possible to reduce hostility by changing game preferences.⁵⁹ We explain this as theoreticians’ adoption of the *Pax Romana* as their real-life model. Our real example is the European Union. Hence, our present recommendation is much more realistic than the recommendation of Aumann. We argue that there is no contradiction between goodwill and being strategically adept.⁶⁰

One of our main recommendations then is to adopt conditional generosity instead of conditional aggression. As emphasized by Aumann, mutual always-cooperate is not a Nash equilibrium in the repeated prisoner’s dilemma and a player should not play always-cooperate in the repeated prisoner’s dilemma game.⁶¹ These insights, however, are not the end of the discussion but the opening of a new one. Even if the member-states repeatedly play prisoner’s dilemma in real-life situations, it does not mean that a state should be aggressive. Thus, a state can adopt conditional generosity instead of threats. This has many advantages: first, threats to withdraw generosity are more credible than threats to declare war, since it is obviously substantially cheaper to realize such threats than to realize threats of aggressiveness. Second, adopting conditional generosity may lead the opponent to develop peaceful preferences, while conditional aggressiveness may encourage

who had a maxim: “If you want peace, prepare for war.” Yet while Israel does prepare for war, it’s not getting peace. That’s because while we may be preparing for war in *hardware* – investing in the tools of war such as tanks, missiles, ground forces and drones, we are failing to prepare for war in *software* – deep down in our hearts. To fully follow the Roman axiom, a country has to feel deep down that it is ready to fight. But our heart isn’t fully in it.

Yisrael Aumann, *Israel70 — Yisrael Aumann on gaming Israel’s future*, FATHOM (Mar. 2018), <https://fathomjournal.org/israel70-yisrael-aumann-on-gaming-israels-future/>.

58. Babylonian Talmud, Avot d’Rabbi Natan 231:.

59. SCHELLING, *supra* note 55, at 4–5.

60. Although making credible threats is difficult for most people, showing goodwill is not.

61. Aumann, *supra* note 27, at 17076.

aggressive preferences. Hence, conditional generosity can be an excellent substitute to war.

Our recommendation for conditional generosity follows John Maynard Keynes' proposal in *The Economic Consequences of the Peace*.

If the General Election of December, 1918, had been fought on lines of prudent generosity instead of imbecile greed, how much better the financial prospect of Europe might now be . . . I believe this to be an act of generosity for which Europe can fairly ask, provided Europe is making an honorable attempt in other directions, not to continue war, economic or otherwise, but to achieve the economic reconstitution of the whole Continent.⁶²

Later on, Keynes wrote,

Great Britain lives by commerce, and most Englishmen now need but little persuading that she will gain more in honor, prestige, and wealth by employing a prudent generosity to preserve the equilibrium of commerce and the well-being of Europe, than by attempting to exact a hateful and crushing tribute, whether from her victorious Allies or her defeated enemy.⁶³

History proves him right.⁶⁴ In game theory discourse about war and peace, his proposal does not receive the attention it deserves.

4. *Conditional Generosity versus Conditional Aggressiveness*

Compare conditional aggressiveness with conditional generosity. When conditional generosity is possible and responsible, its adoption is more efficient means for promoting peace and security than threats, since threats invite preparations. Mainstream game theory recommends conditional aggressiveness.⁶⁵ Although this seems easier, because it is passive, conditional generosity is more practical as it is much easier to implement and much more credible than threats of violence.

Generosity is also more visible than a future use of force. Thus, it is easier to dismiss conditional threats to use force than conditional threats to withdraw generosity, particularly if the generosity is frequent. An additional advantage is the all-too-possible oversight of incentive for cooperation, which by its very meaning inevitably may lead to war. As a deterrent then, the threat of aggression is more dangerous than threats to cease generosity. For, the undesired but possible response to it poses a bigger threat to peace.

62. JOHN MAYNARD KEYNES, *THE ECONOMIC CONSEQUENCES OF THE PEACE* 102, 164 (1920).

63. JOHN MAYNARD KEYNES, *A REVISION OF THE TREATY 193-94* (1922).

64. Actually, Marshall plan is a (too) late adoption of Keynes' program.

65. SCHELLING, *supra* note 55, at 187.

Another advantage of generosity is granting your opponent the right to enjoy the benefit of the doubt. Jonathan Bendor ran a tournament of a variant of repeated prisoner's dilemma with noise⁶⁶: they allowed for a small likelihood that one party would mistakenly read the conduct of the other, resulting in the adoption of the strategy to cooperate or to defect.⁶⁷ If the game is long, at times this will happen.⁶⁸ In the tournament, the strategy that was generous won, while tit-for-tat received eighth place.⁶⁹ The generous strategy was to cooperate fully unless the other one displayed a level of cooperation below the standard, and then to reduce the level of cooperation accordingly. This strategy allows the opponent to enjoy the benefit of the doubt.⁷⁰ Since there is noise, this strategy has the advantage of not falling into the cycle of revenge, which is the risk incurred when the tit-for-tat strategy is adopted. The Talmud offers a similar solution to the problem of how to prevent noise from leading to a cycle of revenge: "[j]udge every person favorably."⁷¹ Maimonides explained,

A person's character is unknown to you and you are not aware whether he is righteous or wicked. You saw that he performed a deed or made a statement that, according to a given set of circumstances, could be considered good, but could also be considered bad. Judge the person favorably, and do not think ill of him⁷².

In accordance with game theory, this is not only moral; it may promote self-interest akin to the case of the tournament run by Bendor.⁷³ This is an alternative to *Pax Romana* and a preferable one at that.

The generous strategy that Bendor discusses differs from our preferred strategy. Bendor's perspective on generosity was to not punish the other side if you are unsure of their lack of cooperation.⁷⁴ Given that you may always make mistakes, Bendor also believed that punishing them should only be done if they repeat their uncooperative behavior under a sufficient degree of certainty that they really did it.⁷⁵ By contrast, we spoke about generosity in the sense of giving the other

66. In the standard version of the repeated prisoner's dilemma there is no option of mistakes, mainly the parties know what the other player did, there is no "noise" of mistakes in reading what the other player did.

67. Jonathan Bendor et al., *When in Doubt. . . Cooperation in a Noisy Prisoner's Dilemma*, 35 J. CONFLICT RESOL. 691, 700–01 (1991).

68. See generally *id.*

69. *Id.* at 696.

70. *Id.* at 696–97.

71. *The Interpretation of the Maimonides* 1:6.

72. *Id.*

73. Bendor et al., *supra* note 67, at 691.

74. *Id.*

75. *Id.*

more than they are entitled to, and, in cases where generosity is conditional, incentivizing the other without punishing them. Those two kinds of generosity contribute more than deemed obligatory. The Talmud says, “R. Johanan taught, ‘Jerusalem was destroyed because its inhabitants judged according to the law.’ Should they rather have judged made arbitrarily? No; they judged strictly in accord with the law, instead of acting generously.”⁷⁶ This is the counsel to avoid any insistence on one’s rights. Game theory may present this insistence as a good strategy; nevertheless, quite often generosity (rather than honesty) is the best policy.

5. *A Game-Theoretical View of Brexit*

The withdrawal of the United Kingdom (UK) from the European Union (EU), is known as the Brexit. It was a shock to both the European union and even to Britain, since it was unexpected even in Britain.⁷⁷ The Brexit displays a major difference between games of crisis in old Europe and those in new Europe: unlike the old shaping of Europe by war and threats of war, new Europe is shaped by negotiation and by threats to limit cooperation.⁷⁸ This is the advantage of the EU model over the *Pax Romana*. The wish to leave the Roman Empire led to war; the wish to quit the EU exclusive club may make it offer a new agreement.⁷⁹ The EU is an exclusive club that does not impose membership but provides positive incentives for being a mem-

76. Babylon Talmud, Bava Metzia 30b.

77. Steven Erlanger, *Britain Votes to Leave E.U.; Cameron Plans to Step Down*, NY. TIMES (June 23, 2016), <https://www.nytimes.com/2016/06/25/world/europe/britain-brexit-european-union-referendum.html>.

78. According to Schuman Declaration:

The pooling of coal and steel production should immediately provide for the setting up of common foundations for economic development as a first step in the federation of Europe, and will change the destinies of those regions which have long been devoted to the manufacture of munitions of war, of which they have been the most constant victims. The solidarity in production thus established will make it plain that any war between France and Germany becomes not merely unthinkable, but materially impossible. The setting up of this powerful productive unit, open to all countries willing to take part and bound ultimately to provide all the member countries with the basic elements of industrial production on the same terms, will lay a true foundation for their economic unification. This production will be offered to the world as a whole without distinction or exception, with the aim of contributing to raising living standards and to promoting peaceful achievements.

Robert Schuman, French Foreign Minister, Declaration to French Foreign Ministry (May 9, 1950).

79. See Valentin Kreiling et al., *Brexit: Negotiation Phases and Scenarios of a Drama in Three Acts* (Jacques Delors Inst., Policy Paper No. 182, 2017); Ursula F. Ott & Pervez N. Ghauri, *Brexit negotiations: From negotiation space to agreement zones*, 50 J. INT’L BUS. STUD. 137, 139 (2019).

ber-state⁸⁰. Thus, the EU is much less vulnerable when tribal feeling, *i.e.*, strong feeling of affiliation plus willingness to make sacrifices,⁸¹ leads a country to quit the club. It is democracy that improves the capacities to interact with separatist groups.⁸² The logic of the *Pax Romana* cannot deter groups that adopt the strategy of freedom-or-death and thus it encourages bloodshed. Because *Pax Romana* cannot deter groups from clinging to the freedom-or-death strategy, those countries are forced to yield or fight a total war.⁸³ The Romans would play a total war with those who adopt the freedom-or-death strategy, whereas the EU would play the game of divorce with them. For, no party in this interaction will withdraw unless their goal will be absolutely met. To me *Pax Romana* strategy is clearly unreasonable when the other side can also adopt it. The liberal will not say: “if you wish to fight, let’s fight, when he has an option to leave the club without fighting.” The capacity to compromise, particularly, is one of the greatest advantages of the liberal over the aggressive. The liberal chooses to lose what is not worth fighting for, whereas for the aggressive, losing is not an option.

80. According to Article 50 of the Treaty on European Union:

1. Any Member State may decide to withdraw from the Union in accordance with its own constitutional requirements.
2. A Member State which decides to withdraw shall notify the European Council of its intention. In the light of the guidelines provided by the European Council, the Union shall negotiate and conclude an agreement with that State, setting out the arrangements for its withdrawal, taking account of the framework for its future relationship with the Union. That agreement shall be negotiated in accordance with Article 218(3) of the Treaty on the Functioning of the European Union. It shall be concluded on behalf of the Union by the Council, acting by a qualified majority, after obtaining the consent of the European Parliament.
3. The Treaties shall cease to apply to the State in question from the date of entry into force of the withdrawal agreement or, failing that, two years after the notification referred to in paragraph 2, unless the European Council, in agreement with the Member State concerned, unanimously decides to extend this period.
4. For the purposes of paragraphs 2 and 3, the member of the European Council or of the Council representing the withdrawing Member State shall not participate in the discussions of the European Council or Council or in decisions concerning it. A qualified majority shall be defined in accordance with Article 238(3)(b) of the Treaty on the Functioning of the European Union.
5. If a State which has withdrawn from the Union asks to rejoin, its request shall be subject to the procedure referred to in Article 49.

Treaty on European Union art. 50, Feb. 7, 1992, 2012 O.J. (C 326) 43–44.

81. Regarding tribal feeling, see KARL POPPER, *THE OPEN SOCIETY AND ITS ENEMIES* 25 (1st ed. 2002).

82. *Id.*

83. Paul K. Saint-Amour, *On the Partiality of Total War*, 40 *CRITICAL INQUIRY* 420, 425 (2014).

6. *Conclusion*

The considerations above may make some players switch from *Pax Romana* to the European Union game, as error is inevitable and *Pax Romana* is risky since a mistake in reading an opponent's action may lead to undesired war. Since the very consideration of waging war is expensive, it is wiser to change the situation in order to enable players to rely on stable trust whenever possible. Stable trust, then, is obviously the best goal for international relations. It renders peace reasonable, especially for those in positions of strength. This is quite intriguing, since most other types of war games do not preclude the major cause of war, namely, the over-optimistic assessments of the result of waging a war. The Romans response to the freedom-or-death strategy, as it happened in Judea, is the strategy of managing a total war. The EU, however, would prefer playing the game of divorce. This is one of the greatest advantages of the liberal over the aggressive. The liberal chooses to lose what is not worth fighting for, whereas for the aggressive, losing is not an option.