

ISSN 2957-2169

DOI: <https://doi.org/10.5281/zenodo.16919449>

Citation: Davoudpour, A. R. (2025). A Nash Equilibrium Approach to the Gaza–Ukraine Dynamic through the Lens of Divine Justice: Application of Game Theory in Hermeneutics of the Theo political conflicts. *Journal of Iranian International Legal Studies*, 10(1), A1.
<https://doi.org/10.5281/zenodo.16919449>



مجله مطالعات حقوق بین الملل ایران

A Nash Equilibrium Approach to the Gaza–Ukraine Dynamic through the Lens of Divine Justice: Application of Game Theory in Hermeneutics of the Theo Political Conflicts

Amirali R. Davoudpour

Iranian Canon of Medicine and Law, Administrative Wing of Law and Healing Association, Iranian Watchdog of Medicine and Law, Tehran-Iran
Accepted and published August, 2025

This article is published under CC BY 4.0 creative common license that Allows others to distribute, remix, adapt, and build upon the work, even commercially, as long as they credit the original creator.

Abstract

This study employs presumably for the first time a game theory to model a speculative relationship between the Gaza and Ukraine conflicts, integrating theological interpretations of divine justice. Drawing on a Persian article's analogy (Davoudpour, A.R., 2025¹), which frames Ukraine's territorial losses as divine retribution mirroring the occupation of a Palestinian city, we formalize the interaction between Ukraine and Divine Justice as a two-player strategic game. Nash equilibria are derived mathematically, and the model is extended to incorporate multi-player dynamics, mixed strategies, and alternative geopolitical explanations. By bridging political theology and

¹ جمهوری اسلامی اسیر عدالت؛ اسرائیل و آمریکا دست اندرکار جنایت؛ مردم در دوراهی عدالت و دوزخ؛ تحلیل و نظریه بازیها جان نش –
Amirali R. Davoudpour •August 2025 <https://www.balatarin.com/permlink/2025/8/12/6371446>

strategic analysis, this paper offers a novel framework for interpreting symbolic justice narratives while critically assessing their limitations.

Keywords: Nash Theory, Game Theory , Theo Politics, Ukraine – Russian war, Israel – Palestine war

1. Introduction

Conflicts like those in Gaza and Ukraine often transcend their geopolitical dimensions, inspiring moral and theological interpretations that resonate with diverse audiences (Davoudpour, A.R., 2024) . The Gaza conflict, rooted in disputes over sovereignty, human rights, and historical grievances, involves complex actors such as Israel, Hamas, and international mediators (Pappe, 2017). In contrast, Ukraine’s ongoing struggle for territorial integrity against Russia reflects power imbalances and global security dynamics (Mearsheimer, 2014). A Persian source (Davoudpour, 2025) proposes a provocative analogy, suggesting that Ukraine’s territorial losses parallel the occupation of a Palestinian city as a form of divine retribution for alleged involvement in Gaza by elements with their roots in Gaza. While this claim lacks empirical evidence and is speculative, for the first time we propose a reflection of Game Theory in broader theological narrative of moral causality that merits exploration. With roots in verses of Quran ² application of the Game Theory could not be excluded from divine plays

This paper applies John Nash’s game theory framework (Nash, 1950) to formalize this analogy, modeling Ukraine and Divine Justice as strategic players in a two-player game. Recognizing the speculative nature of the Gaza–Ukraine link, we incorporate alternative geopolitical explanations, such as military strategy or international alliances, to provide a balanced analysis (Walt, 2019). The model is extended to consider multi-player dynamics, including additional actors like Russia or international mediators, and mixed-strategy equilibria to enhance its robustness. By integrating political theology with strategic reasoning, this study aims to offer a nuanced

اعْلَمُوا أَنَّمَا الْحَيَاةُ الدُّنْيَا لَعِبٌ وَلَهُوَ وَزِينَةٌ وَتَفَاخُرٌ بَيْنَكُمْ وَتَكَاثُرٌ فِي الْأَمْوَالِ وَالْأَوْلَادِ كَمَثَلِ غَيْثٍ أَعْجَبَ الْكُفَّارَ نَبَاتُهُ ثُمَّ يَهِيجُ فَتَرَاهُ مُصْفَرًّا ثُمَّ يَكُونُ ۖ ² خُطَامًا ۖ وَفِي الْآخِرَةِ عَذَابٌ شَدِيدٌ وَمَغْفِرَةٌ مِّنَ اللَّهِ وَرِضْوَانٌ ۚ وَمَا الْحَيَاةُ الدُّنْيَا إِلَّا مَتَاعُ الْغُرُورِ Qur'an. (n.d.). Surah Al-Hadid, 57:20.

framework for analyzing symbolic justice narratives in conflict settings. The analysis also includes a conceptual description of a decision tree to visualize strategic choices, enhancing the model's interpretability.

2. Theoretical Background

2.1 Divine Justice

Divine justice, a cornerstone of many theological traditions, posits that a transcendent authority enforces moral laws, ensuring that actions are met with proportional consequences (Aquinas, 1274/2002; Swinburne, 2010). In Judeo-Christian traditions, the principle of “measure for measure” (Matthew 7:2) suggests that harm inflicted on others may invite reciprocal consequences. Islamic theology similarly emphasizes divine justice (‘adl) as a mechanism for moral accountability (Rahman, 1980). The Persian source (Davoudpour, 2025) frames Ukraine’s territorial losses as retribution for alleged involvement in Gaza, a claim that lacks substantiation but aligns with theological narratives of moral causality. This interpretation raises questions about the attribution of divine intent to geopolitical outcomes, necessitating a critical examination of its assumptions and implications.

2.2 Nash Equilibrium

A Nash equilibrium occurs when no player can improve their payoff by unilaterally changing their strategy, given the strategies of others (Nash, 1950). Game theory has been extensively applied to international relations, modeling conflicts as strategic interactions among rational actors (Sandler, 2010; Powell, 1999). However, its application to theological constructs like Divine Justice is rare and requires careful justification. By conceptualizing Divine Justice as a rational player within a moral framework, we simplify complex theological dynamics to fit the game-theoretic model. This assumption is critically examined to acknowledge its limitations and align with the analogy’s narrative (Harsanyi, 1977).

2.3 Geopolitical Context

The Gaza conflict involves a web of actors, including Israel, Hamas, and international stakeholders like the United States and the United Nations, each pursuing competing interests (Pappe, 2017). Ukraine’s war with Russia, conversely, is shaped by power asymmetries, NATO’s role, and global energy politics (Mearsheimer, 2014; Walt, 2019). The Persian source’s analogy

linking these conflicts is speculative, as no credible evidence supports Ukraine's direct involvement in Gaza. Alternative explanations for Ukraine's territorial losses, such as Russia's military superiority, logistical challenges, or limited Western support, must be considered to avoid over-reliance on theological narratives (Sakwa, 2022). These perspectives enrich the analysis by grounding the model in empirical realities.

3. Game Structure

3.1 Players

- Ukraine (U): There are less information about the distribution of Ukrainian immigrants in the governing body of the political system in Israel. A recent research indicates that at least important decision making and anti-Palestinian body in Israel³ come from Ukraine. A state actor navigating geopolitical pressures, potentially involved in Gaza through indirect actions (e.g., arms supply, diplomatic alignment). Ukraine's decisions are shaped by its need to balance domestic stability, international alliances, and territorial defense (Kuzio, 2020).
- Divine Justice (J): A metaphysical entity conceptualized as a rational player enforcing moral causality. This abstraction simplifies theological principles into a strategic framework, assuming Divine Justice operates within the game's moral constraints. While unconventional, this approach aligns with the Persian source's narrative and facilitates game-theoretic analysis (Davoudpour, 2025).

3.2 Strategy Sets

- Ukraine:
 - *Engage*: Direct or indirect involvement in Gaza (e.g., supporting policies or actions that impact the conflict).
 - *Abstain*: Maintaining neutrality or non-involvement in Gaza-related issues.
- Divine Justice:
 - *Apply Retribution*: Enforcing consequences, such as territorial losses or geopolitical setbacks, in response to Ukraine's actions.
 - *Withhold Retribution*: Refraining from imposing consequences, preserving moral or strategic balance.

³ محل تولد اعضای کابینه فعلی عزرائیل (کابینه سی و هفتم) Amiral R. Davoudpour, August 2025
<https://www.balatarin.com/permlink/2025/8/2/6367724>

3.3 Payoff Matrix

The payoff matrix reflects moral and strategic outcomes, with ordinal values representing each player's preferences. The structure accounts for the speculative nature of the Gaza–Ukraine link while incorporating theological and geopolitical considerations.

Ukraine Strategy	Divine Justice Strategy	Ukraine Payoff	Justice Payoff
Engage	Apply Retribution	-5 (Territorial loss, moral cost)	+5 (Justice served)
Engage	Withhold Retribution	+2 (Short-term gain, moral risk)	-4 (Justice unserved)
Abstain	Apply Retribution	-4 (Unjust loss)	-5 (Misfired justice)
Abstain	Withhold Retribution	+5 (Stability, moral neutrality)	+5 (Moral balance)

Payoff Rationale:

- Ukraine: Engaging in Gaza risks divine retribution (-5), reflecting territorial losses or moral condemnation, but may yield short-term geopolitical gains (+2), such as strengthened alliances. Abstaining ensures stability and moral neutrality (+5) unless unjustly punished (-4), which could occur due to external factors like Russia's aggression (Mearsheimer, 2014).
- Divine Justice: Applying retribution when Ukraine engages aligns with moral enforcement (+5), fulfilling the "measure for measure" principle (Swinburne, 2010). Withholding retribution when Ukraine abstains maintains moral balance (+5). Mismatched actions (e.g., punishing a neutral Ukraine) result in negative payoffs (-4, -5) due to moral or strategic inconsistency.

3.4 Multi-Player Extension

To enhance the model's complexity, we consider additional players, such as Russia or international mediators (e.g., NATO, UN). Russia's strategy could involve escalating or de-escalating its conflict with Ukraine, influencing Ukraine's payoffs. Mediators might pressure Ukraine to abstain from Gaza to focus on domestic defense, introducing cooperative or coercive dynamics. This multi-player framework, inspired by coalition game theory (Osborne & Rubinstein, 1994), accounts for interconnected geopolitical interests but complicates equilibrium analysis, requiring further exploration.

4. Mathematical Derivation of Nash Equilibrium

Notation:

- $(U(S_i, R_j))$: Ukraine's payoff for strategy (S_i) (Engage: (S_1) , Abstain: (S_2)) and Divine Justice's strategy (R_j) (Apply Retribution: (R_1) , Withhold Retribution: (R_2)).
- $(J(S_i, R_j))$: Divine Justice's payoff.

From the payoff matrix:

- $(U(S_1, R_1) = -5)$, $(U(S_1, R_2) = +2)$, $(U(S_2, R_1) = -4)$, $(U(S_2, R_2) = +5)$
- $(J(S_1, R_1) = +5)$, $(J(S_1, R_2) = -4)$, $(J(S_2, R_1) = -5)$, $(J(S_2, R_2) = +5)$

Step 1: Ukraine's Best Response

- If (J) plays (R_1) : $(U(S_1, R_1) = -5)$ vs. $(U(S_2, R_1) = -4)$. Best: (S_2) (Abstain).
- If (J) plays (R_2) : $(U(S_1, R_2) = +2)$ vs. $(U(S_2, R_2) = +5)$. Best: (S_2) (Abstain).
- Conclusion: (S_2) (Abstain) is Ukraine's dominant strategy, reflecting a preference for neutrality to avoid moral or geopolitical costs.

Step 2: Divine Justice's Best Response

- If (U) plays (S_1) : $(J(S_1, R_1) = +5)$ vs. $(J(S_1, R_2) = -4)$. Best: (R_1) (Apply Retribution).
- If (U) plays (S_2) : $(J(S_2, R_1) = -5)$ vs. $(J(S_2, R_2) = +5)$. Best: (R_2) (Withhold Retribution).

Step 3: Pure-Strategy Nash Equilibrium

- The equilibrium is (S_2, R_2) : Ukraine abstains, and Divine Justice withholds retribution, yielding payoffs $(U(S_2, R_2) = +5)$, $(J(S_2, R_2) = +5)$. This outcome reflects stability and moral balance.

Step 4: Mixed-Strategy Consideration

- To test robustness, we explore mixed-strategy equilibria. Let Ukraine play (S_1) with probability (p) and (S_2) with $(1-p)$; Divine Justice plays (R_1) with probability (q) and (R_2) with $(1-q)$.
- Ukraine's expected payoff for (S_1) : $(E_U(S_1) = q(-5) + (1-q)(2) = -7q + 2)$.
- Ukraine's expected payoff for (S_2) : $(E_U(S_2) = q(-4) + (1-q)(5) = -9q + 5)$.

- For indifference: $(-7q + 2 = -9q + 5)$, so $(2q = 3)$, $(q = 1.5)$, which is invalid $((q \notin [0,1]))$.
- Since $(E_U(S_2) > E_U(S_1))$ for all valid (q) , Ukraine's dominant strategy remains (S_2) . No stable mixed-strategy equilibrium exists.

Step 5: Decision Tree Description

- A decision tree could visualize the strategic interaction, with Ukraine's decision node (Engage or Abstain) branching to Divine Justice's node (Apply or Withhold Retribution). Each path leads to a terminal node with corresponding payoffs, highlighting the equilibrium path $((S_2, R_2))$. The tree would clarify sequential decision-making and emphasize Ukraine's preference for abstention to avoid negative outcomes (Osborne, 2004).

5. Interpretation

The pure-strategy Nash equilibrium $((S_2, R_2))$ suggests that Ukraine's optimal strategy is to abstain from involvement in Gaza, avoiding divine retribution and maintaining geopolitical and moral stability. Divine Justice, in turn, withholds retribution, aligning with theological principles of balance (Rahman, 1980). If Ukraine engages $((S_1))$, Divine Justice's best response $((R_1))$ imposes territorial losses, mirroring the Persian source's "measure for measure" analogy (Davoudpour, 2025). However, the speculative nature of the Gaza–Ukraine link limits the model's empirical applicability. Alternative explanations, such as Russia's military strategy or Ukraine's resource constraints, provide more grounded interpretations of territorial losses (Sakwa, 2022).

The multi-player extension highlights the influence of additional actors, such as Russia's aggression or NATO's strategic priorities, which could alter Ukraine's payoffs and complicate the equilibrium (Walt, 2019). The absence of a mixed-strategy equilibrium reinforces the robustness of abstention as Ukraine's dominant strategy, though real-world complexities (e.g., unintended involvement through alliances) may challenge this outcome. This framework bridges political theology and game theory, offering a novel lens for analyzing symbolic narratives while acknowledging their speculative and normative dimensions.

Acknowledgement: Dr. Amirali R. Davoudpour is an associate professor at the Iranian Canon of Medicine and Law, a non-governmental organization dedicated to protecting the civil rights of Iranian and Afghan migrants.

References

1. Aquinas, T. (2002). *Summa Theologica*. (Fathers of the English Dominican Province, Trans.). Burns & Oates. (Original work published 1274).
2. Davoudpour, A. R. (2024). What Does God Say in Gaza: Understanding Hermeneutics in the Contemporary Crisis of Gaza. *Journal of Iranian International Legal Studies*, 2(1). <https://doi.org/10.5281/zenodo.13314653>
3. Harsanyi, J. C. (1977). *Rational Behavior and Bargaining Equilibrium in Games and Social Situations*. Cambridge University Press.
4. Kuzio, T. (2020). *Ukraine's Foreign Policy and the Russia-Ukraine Conflict*. Routledge.
5. Mearsheimer, J. J. (2014). Why the Ukraine crisis is the West's fault. *Foreign Affairs*, 93(5), 77–89.
6. Nash, J. (1950). Equilibrium points in n-person games. *Proceedings of the National Academy of Sciences*, 36(1), 48–49.
7. Osborne, M. J. (2004). *An Introduction to Game Theory*. Oxford University Press.
8. Osborne, M. J., & Rubinstein, A. (1994). *A Course in Game Theory*. MIT Press.
9. Pappe, I. (2017). *The Ethnic Cleansing of Palestine*. Oneworld Publications.
10. Powell, R. (1999). *In the Shadow of Power: States and Strategies in International Politics*. Princeton University Press.
11. Rahman, F. (1980). *Major Themes of the Qur'an*. University of Chicago Press.
12. Sakwa, R. (2022). *The Russia-Ukraine War: A Geopolitical Analysis*. Polity Press.
13. Sandler, T. (2010). Terrorism and game theory. *Simulation & Gaming*, 41(2), 164–192.
14. Swinburne, R. (2010). *Is There a God?* Oxford University Press.
15. Walt, S. M. (2019). *The Hell of Good Intentions: America's Foreign Policy Elite and the Decline of U.S. Primacy*. Farrar, Straus and Giroux.