

Chatbot or Humanaut? How the Source of Advice Impacts Behavior in One-shot Social Dilemmas

Supplemental Appendix

May 22, 2024

Abstract

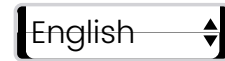
This paper explores how the source of advice – human or generative AI (genAI) – impacts behavior in three classic social dilemmas. Utilizing a novel experiment, we show that, when it comes to prosociality, the source of advice matters. Players preferred human advice over that from genAI and were more willing to pay for it. Prosocial behavior was more prevalent when players received human advice, increasing cooperation in stag hunts and driving contributions in public goods and dictator games. Potential explanations include genAI's empathy limitations and potential moral wiggle room. Leveraging natural language processing advances through large language models topic modeling, we demonstrate that the advice corpora differ significantly. Human advice was more objective, specific, intuitive, and norm-oriented; genAI offered reasoning and targeted concepts of risk. We propose that the adoption of genAI technologies should include an investment in human connectivity and organizational input with a goal of constrained agency.

Keywords: advice; bargaining; text analysis; chatbots; genAI; LLMs Preregistered at [Aspredicted.org](https://aspredicted.org/#128933)
#128933

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A Instrument



Default Question Block

Consent to Participate in a Research Study

We invite you to participate in an economic study (IRB approval number #117-23). In this task, you will answer questions involving three separate interactions, 2) answer a question about preferences over a lottery, and answer a few questions about yourself. The task should take less than 9 minutes.

You will likely be Internet or tech-savvy because you are active on MTurk or Prolific; thus, we are interested in your responses. If you volunteer to participate in this study, you will be among the hundreds of people.

You will sign your study submission with your Prolific ID to ensure confidentiality. Your compensation for participating will be a flat fee of US \$1. The study should take about less than 9 minutes to complete. During the study and given your responses, you will have the opportunity to earn up to \$1.50 more, given your replies and a counterpart's responses. Once the study is complete, we will pay you directly to your Prolific account. You may only participate once.

We cannot accept submissions from respondents under 18 years of age. By volunteering

for this study, you state that you are 18 or older.

The results we obtain from this study will yield insight into how people give and take advice in economic settings. To the best of our knowledge, the things you will be doing have no more risk than you would experience in everyday life. We have procedures in place to avoid loss of confidentiality (for example, the use of numerical identifiers and encrypted data sets). Once collected, data are stored on an encrypted hard drive and kept in a lockbox when not in use. We may publish the results of this study with your responses combined with those from other people in the study; we will only write about aggregate responses, and you cannot be personally identified. This study is not designed to impart any direct benefit to you.

There are no costs associated with participating in the study other than your time. You have the right to withdraw at any time but will not be compensated if you do not complete the task. Investigators may need to remove you from the study, which may occur if you do not follow the directions or provide nonsensical or AI-generated responses. We reserve the right to verify the originality of your text responses.

The principal investigators of this study session are J. Jobu Babin, Ph.D., and Haritima Chauhan, Ph.D., Western Illinois University. Before participating, please ask any questions that might come to mind. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the investigator at jj-babin@wiu.edu. If you have any questions about your rights as a volunteer in this research, contact the

Institutional Review Board staff at WIU at 309-298-1191 or irb@wiu.edu. Please note that the WIU has no funds budgeted for compensation for any injury, damages, or other expenses in research studies.

By clicking "I Consent" and subsequently entering your Prolific ID, you acknowledge that you have read the consent information provided, that you may only participate once, the Statement of Age of Subject, and give consent.

- ☐ I give consent
- ☐ I do not give consent (exit study with no compensation)

Please enter your Prolific ID:

To begin, please write what you see in the image below:



Games

In this part of the task, you are asked to choose an action in three interactions. In each, you will be randomly matched with a counterpart in this study.

Your monetary payoffs will depend on your actions and those of your counterpart. The unit of measure will be called a token, and one token is worth US \$0.01.

At the end of the study, one of the three interactions will be randomly chosen to determine your payoffs.

Interaction 1: We will randomly match you with another participant in this task. You and your counterpart will be asked the same question.

You each have to decide between one of two strategies: Blue or Yellow. You will make this choice once and must choose without observing your counterpart's choice.

- Anytime either of you chooses to Yellow, that person is guaranteed a payoff of 50 tokens regardless of what the other chooses.

- If each of you chooses Blue, each of you will receive a bonus payoff of 100 tokens.
- If either player chooses Blue when the other chooses Yellow, they receive no bonus payoff, zero tokens. The player choosing Yellow gets the guaranteed payoff of 50 tokens.

If both you and your counterpart chose Yellow, what is your payoff?

- ☐ 100 tokens
- ☐ 50 tokens
- ☐ 0 tokens

In no fewer than three sentences and in your own words, please provide some thoughtful advice to a future player about how best to play in the same interaction that you just had. Remember, all submissions are subject to review before compensation.

Interaction 1: Choose your action

- ☐ Blue
- ☐ Yellow

Which action in the interaction do you think was the most common among participants? We will pay a bonus of 5 tokens if you are correct.

- ☐ Blue
- ☐ Yellow

Which action in the interaction, if any, do you think was the morally right or socially correct choice?

- ☐ Blue
- ☐ Yellow
- ☐ none

Interaction 2: We will randomly match you with another participant in this task. You and your counterpart will be asked the same question.

Each of you will have 100 tokens.

You each have to decide how many tokens to transfer to a public fund. All transfers will grow by 50%. Each player gets an equal share of the public fund.

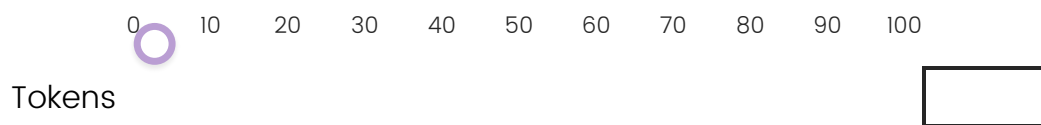
Your final payoff will be the sum of 1) what you did not transfer plus 2) your share of the

public fund.

If you each transfer 50 tokens, what is your payoff?

- ☐ 0 Tokens
- ☐ 50 Tokens
- ☐ 100 Tokens
- ☐ 125 Tokens

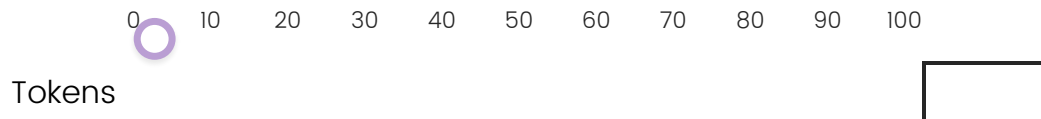
Interaction 2: Choose your action



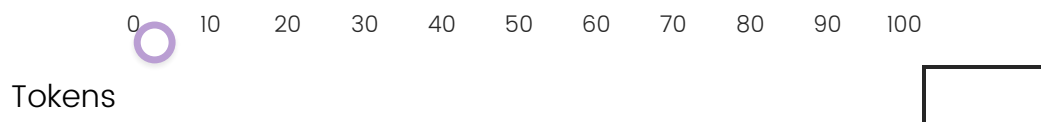
In no fewer than three sentences and in your own words, please provide some thoughtful advice to a future player about how best to play in the same interaction that you just had.

Which action in the last interaction do you think was the most common among

participants? We will pay a bonus of 5 tokens if you are correct.



Which action in the last interaction, if any, do you think was the morally right or socially correct choice?



Interaction 3: We will randomly match you with another participant in this task. You and your counterpart will be asked the same question. There is an endowment of 100 tokens among you.

There will be two roles: Role A and Role B. You will be randomly assigned one of the two roles.

Role A decides how many tokens from the endowment to allocate to Role B. Role B has no action and must accept Role A's allocation.

Your final payoff will depend on the role assigned to you:

- If you are in Role A, your payoff is 100 tokens minus what you allocate to Role B,
- If you are in Role B, your payoff is what Role A allocates to you.

You will make this choice once in Role A and must choose without observing your counterpart's choice.

If I am in Role A, and I allocate 20 tokens to B, then my final payoff is:

- ☐ 80 tokens
- ☐ 20 tokens
- ☐ 0 tokens

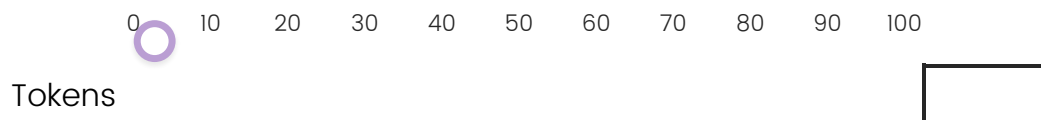
Choose as if you are in Role A. How many tokens will you allocate to B?

0 10 20 30 40 50 60 70 80 90 100

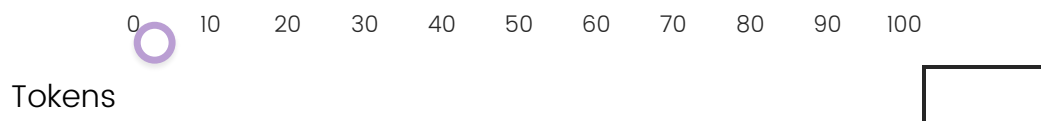
Tokens I allocate ☐ to the other player

In no fewer than three sentences (more than 40 words) and in your own words, please provide some thoughtful advice to a future player about how best to play in the same interaction that you just had. Note: you are not writing to your counterpart.

Which action in the last interaction do you think was the most common among participants? We will pay a bonus of 5 tokens if you are correct.



Which action in the last interaction, if any, do you think was the morally right or socially correct choice?



Lotteries

In this section, you will choose the gamble you prefer to play for bonus earnings among five gambles. Each gamble has two possible outcomes (Event A or Event B) randomly occurring with a 50–50 chance.

You may now select your preferred gamble. Your payoff will be determined by a coin flip and paid with any bonus from the previous game.

- ☐ Gamble 1: Event A, Payoff: 10 tokens; Event B, Payoff: 10 tokens
- ☐ Gamble 2: Event A, Payoff: 18 tokens; Event B, Payoff: 6 tokens
- ☐ Gamble 3 Event A, Payoff: 26 tokens ; Event B, Payoff: 2 tokens
- ☐ Gamble 4: Event A, Payoff: 34 tokens; Event B, Payoff: – 2 tokens
- ☐ Gamble 5 Event A, Payoff: 42 tokens; Event B, Payoff: –6 tokens

How many fatal heart attacks have you had in your life?

- ☐ 0
- ☐ 1
- ☐ 2

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Consent block

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T1

In this part of the task, you are asked to choose an action in three interactions. In each, you will be randomly matched with a counterpart in this study answering the same questions.

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At the end of the study, one of the three interactions will be randomly chosen to determine your payoffs. Your earnings will be sent subsequently.

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- If each of you chooses Blue, each of you will receive a bonus payoff of 100 tokens.
- If either player chooses Blue when the other chooses Yellow, they receive no bonus payoff, zero tokens. The player choosing Yellow gets the guaranteed payoff of 50 tokens.

If both you and your counterpart choose Yellow, what is your payoff?

☐ 100 tokens

- ☐ 50 tokens
- ☐ 0 tokens

Before you make your decision, you can receive some advice about how best to play in the same interaction that you just had.

You will choose advice from one of two sources:

- **A human player that just played.**
- **AI chatbot-composed advice.**

An AI chatbot is a computer program that uses artificial intelligence (AI) and natural language processing (NLP) to communicate with humans through chat interfaces, such as messaging apps, websites, or mobile apps. Chatbots (such as ChatGPT4 or Google Bard) can simulate human-like conversations and can help users with various tasks, such as answering questions, providing information, or executing simple commands.

- ☐ Human advice
- ☐ AI Chatbot advice

Advice:

Advice:**Interaction 1: Choose your action**

- ☐ Blue
- ☐ Yellow

Which action in the interaction do you think was the most common among participants? We will pay a bonus of 5 tokens if you are correct.

- ☐ Blue
- ☐ Yellow

Which action in the interaction, if any, do you think was the morally right or socially correct choice?

- ☐ Blue
- ☐ Yellow
- ☐ none

Interaction 2: We will randomly match you with another participant in this task. You and your counterpart will be asked the same question.

Each of you will have 100 tokens.

You each have to decide how many tokens to contribute to a public fund. All contributions will grow by 50%. Each player gets an equal share of the public fund.

Your final payoff will be the sum of 1) what you did not contribute plus 2) your share of the public fund.

If you each contribute 50 tokens, what is your payoff?

- ☐ 0 Tokens
- ☐ 50 Tokens
- ☐ 100 Tokens
- ☐ 125 Tokens

Before you make your decision, you can receive some advice about how best to play in the same interaction that you just had.

You will choose advice from one of two sources:

A human player that just played.

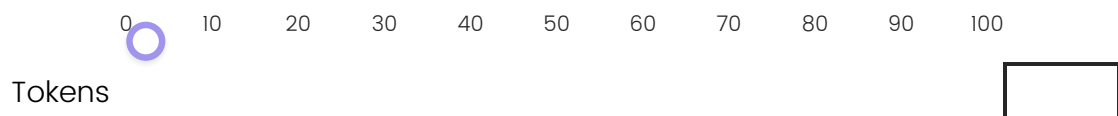
AI chatbot-composed advice.

- ☐ Human advice
- ☐ AI Chatbot advice

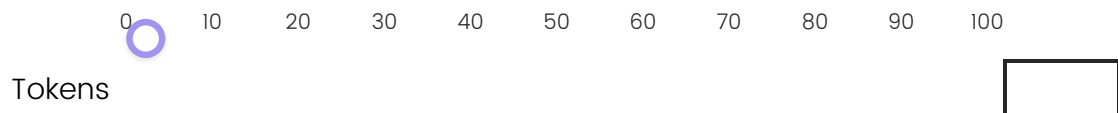
Advice:

Advice:

Interaction 2: Choose your action: How many will you contribute to the public fund?

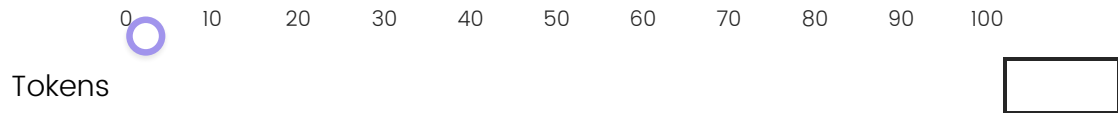


Which action in the last interaction do you think was the most common among participants? We will pay a bonus of 5 tokens if you are correct.



Which action in the last interaction, if any, do you think was the morally right or socially correct

choice?



Interaction 3: We will randomly match you with another participant in this task. You and your counterpart will be asked the same question. There is an endowment of 100 tokens among you.

There will be two roles: Role A and Role B. You will be randomly assigned one of the two roles.

Role A decides how many tokens from the endowment to allocate to Role B. Role B has no action and must accept Role A's allocation.

Your final payoff will depend on the role assigned to you:

- **If you are in Role A, your payoff is 100 tokens minus what you allocate to Role B,**
- **If you are in Role B, your payoff is what Role A allocates to you.**

You will make this choice once in Role A and must choose without observing your counterpart's choice.

If I am in Role A, and I allocate 20 tokens to B, then my final payoff is:

- ☐ 80 tokens
- ☐ 20 tokens
- ☐ 0 tokens

Before you make your decision, you can receive some advice about how best to play in the same interaction that you just had.

You will choose advice from one of two sources:

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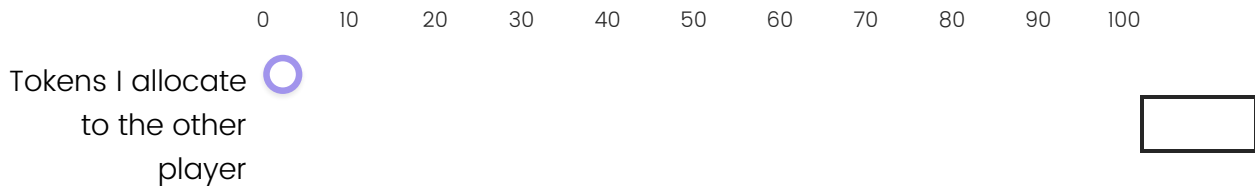
AI chatbot-composed advice.

- ☐ Human advice
- ☐ AI Chatbot advice

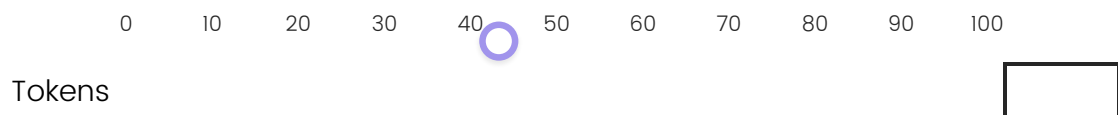
Advice:

Advice:

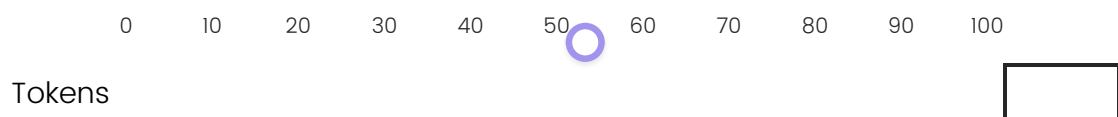
Choose as if you are in Role A. How many tokens will you allocate to B?



Which action in the last interaction do you think was the most common among participants? We will pay a bonus of 5 tokens if you are correct.



Which action in the last interaction, if any, do you think was the morally right or socially correct choice?



T3

In this part of the task, you are asked to choose an action in three interactions. In each, you will be

randomly matched with a counterpart in this study answering the same questions.

Your monetary payoffs will depend on your actions and those of your counterpart. The unit of measure will be called a token, and one token is worth US \$0.01.

At the end of the study, one of the three interactions will be randomly chosen to determine your payoffs. Your earnings will be sent subsequently.

Interaction 1:

We will randomly match you with another participant in this task. You and your counterpart will be asked the same question.

You each have to decide between one of two strategies: Blue or Yellow. You will make this choice once and must choose without observing your counterpart's choice.

- Anytime either of you chooses to Yellow, that person is guaranteed a payoff of 50 tokens regardless of what the other chooses.
- If each of you chooses Blue, each of you will receive a bonus payoff of 100 tokens.
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If both your and your counterpart choose Yellow, what is your payoff?

- ☐ 100 tokens
- ☐ 50 tokens
- ☐ 0 tokens

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Advice:

Interaction 1: Choose your action

- ☐ Blue
- ☐ Yellow

Which action in the interaction do you think was the most common among participants? We will pay a bonus of 5 tokens if you are correct.

- ☐ Blue
- ☐ Yellow

Which action in the interaction, if any, do you think was the morally right or socially correct choice?

- ☐ Blue
- ☐ Yellow
- ☐ none

What do you believe was the source of your advice? You will receive a 5 token bonus if correct.

- ☐ Human
- ☐ AI

Interaction 2: We will randomly match you with another participant in this task. You and your

counterpart will be asked the same question.

Each of you will have 100 tokens.

You each have to decide how many tokens to contribute to a public fund. All contributions will grow by 50%. Each player gets an equal share of the public fund.

Your final payoff will be the sum of 1) what you did not contribute plus 2) your share of the public fund.

If you each contribute 50 tokens, what is your payoff?

- ☐ 0 Tokens
- ☐ 50 Tokens
- ☐ 100 Tokens
- ☐ 125 Tokens

Before you make your decision, you will receive some advice about how best to play in the same interaction that you just had.

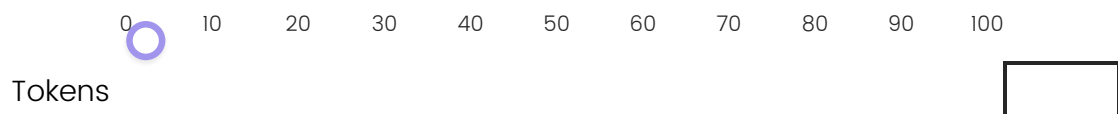
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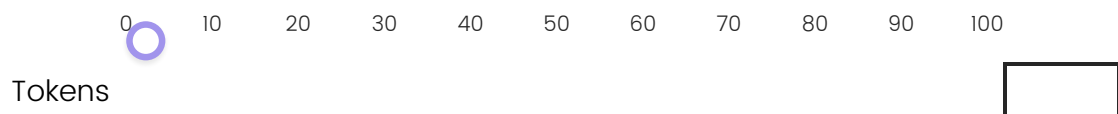
AI chatbot-composed advice.

Advice:

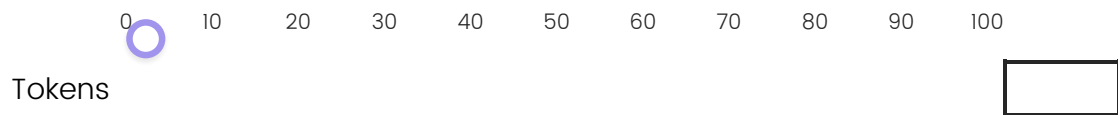
Interaction 2: Choose your action: How many tokens will you contribute to the public fund?



Which action in the last interaction do you think was the most common among participants? We will pay a bonus of 5 tokens if you are correct.



Which action in the last interaction, if any, do you think was the morally right or socially correct choice?



What do you believe was the source of your advice? You will receive a 5 token bonus if correct.

- ☐ Human
- ☐ AI

Interaction 3: We will randomly match you with another participant in this task. You and your counterpart will be asked the same question. There is an endowment of 100 tokens among you.

There will be two roles: Role A and Role B. You will be randomly assigned one of the two roles.

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If I am in Role A, and I allocate 20 tokens to B, then my final payoff is:

- ☐ 80 tokens
- ☐ 20 tokens
- ☐ 0 tokens

Before you make your decision, you will receive some advice about how best to play in the same interaction that you just had.

You will get advice randomly from one of two sources:

A human player that just played.

AI chatbot-composed advice.

Advice:

Choose as if you are in Role A. How many tokens will you allocate to B?

0 10 20 30 40 50 60 70 80 90 100

Tokens I allocate to the other player

Which action in the last interaction do you think was the most common among participants? We will pay a bonus of 5 tokens if you are correct.

0 10 20 30 40 50 60 70 80 90 100

Tokens

Which action in the last interaction, if any, do you think was the morally right or socially correct choice?

0 10 20 30 40 50 60 70 80 90 100

Tokens

What do you believe was the source of your advice? You will receive a 5 token bonus if correct.

☐ Human

☐ AI

T2

In this part of the task, you are asked to choose an action in three interactions. In each, you will be randomly matched with a counterpart in this study **answering** the same questions.

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Choose your preference. Remember, receiving advice costs an amount to be deducted from your final total earnings.

- | | |
|---|---|
| ☐ Human advice, zero tokens for no advice | ☐ Chatbot advice, zero tokens for no advice |
| ☐ Human, 5 tokens for one piece of advice | ☐ Chatbot, 5 tokens for one piece of advice |
| ☐ Human, 9 tokens for two pieces of advice | ☐ Chatbot, 9 tokens for two pieces of advice |
| ☐ Human, 12 tokens for three pieces of advice | ☐ Chatbot, 12 tokens for three pieces of advice |

Advice:

Advice:

Advice:

Advice:

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Advice:

Interaction 1: Choose your action

- ☐ Blue
- ☐ Yellow

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- | | |
|---|---|
| ☐ Human advice, zero tokens for no advice | ☐ Chatbot advice, zero tokens for no advice |
| ☐ Human, 5 tokens for one piece of advice | ☐ Chatbot, 5 tokens for one piece of advice |
| ☐ Human, 9 tokens for two pieces of advice | ☐ Chatbot, 9 tokens for two pieces of advice |
| ☐ Human, 12 tokens for three pieces of advice | ☐ Chatbot, 12 tokens for three pieces of advice |

Advice:

Advice:

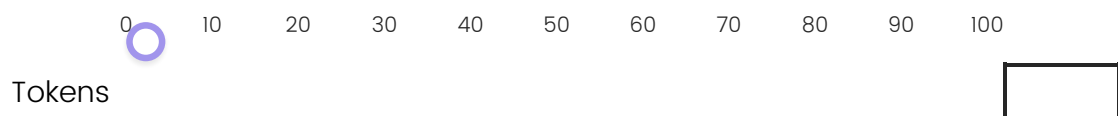
Advice:

Advice:

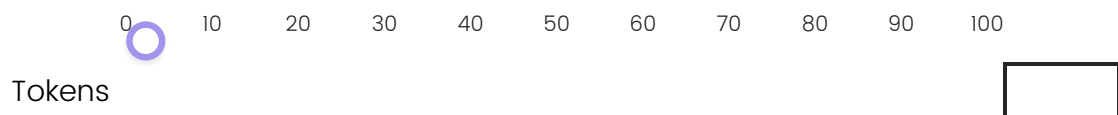
Advice:

Advice:

Interaction 2: Choose your action: How much will you contribute to the public fund?

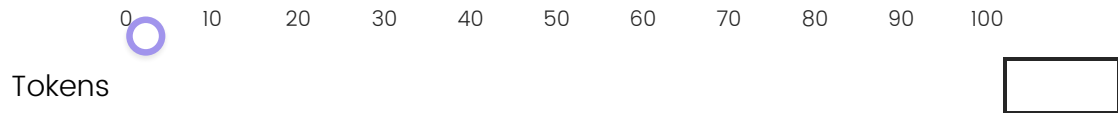


Which action in the last interaction do you think was the most common among participants? We will pay a bonus of 5 tokens if you are correct.



Which action in the last interaction, if any, do you think was the morally right or socially correct

choice?



Interaction 3: We will randomly match you with another participant in this task. You and your counterpart will be asked the same question. There is an endowment of 100 tokens among you.

There will be two roles: Role A and Role B. You will be randomly assigned one of the two roles.

Role A decides how many tokens from the endowment to allocate to Role B. Role B has no action and must accept Role A's allocation.

Your final payoff will depend on the role assigned to you:

- **If you are in Role A, your payoff is 100 tokens minus what you allocate to Role B,**
- **If you are in Role B, your payoff is what Role A allocates to you.**

Choose your preference. Remember, receiving advice costs an amount to be deducted from your final total earnings.

If I am in Role A, and I allocate 20 tokens to B, then my final payoff is:

- ☐ 80 tokens
- ☐ 20 tokens
- ☐ 0 tokens

Before you make your decision, you can receive some advice about how best to play in the same interaction that you just had.

You will choose advice from one of two sources:

A human player that just played.

AI chatbot-composed advice.

Advice costs an amount to be deducted from your final total earnings in the study. Make your choice:

- | | |
|---|---|
| ☐ Human advice, zero tokens for no advice | ☐ Chatbot advice, zero tokens for no advice |
| ☐ Human, 5 tokens for one piece of advice | ☐ Chatbot, 5 tokens for one piece of advice |
| ☐ Human, 9 tokens for two pieces of advice | ☐ Chatbot, 9 tokens for two pieces of advice |
| ☐ Human, 12 tokens for three pieces of advice | ☐ Chatbot, 12 tokens for three pieces of advice |

Advice:

Advice:

Advice:

Advice:

Advice:

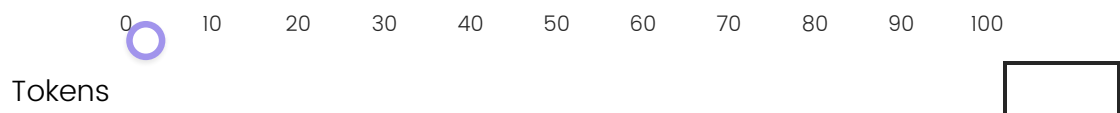
Advice:

Choose as if you are in Role A. How many tokens will you allocate to B?

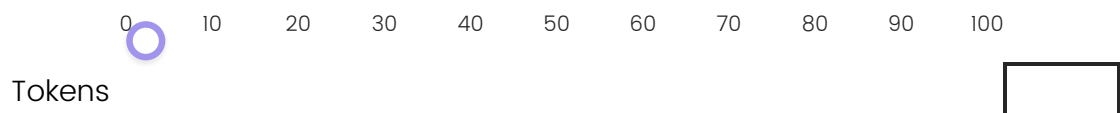


Tokens I allocate
to the other
player

Which action in the last interaction do you think was the most common among participants? We will pay a bonus of 5 tokens if you are correct.



Which action in the last interaction, if any, do you think was the morally right or socially correct choice?



Lotteries

In this section, you will choose the gamble you prefer to play for bonus earnings among five gambles. Each gamble has two possible outcomes (Event A or Event B) randomly occurring with a 50–50 chance.

You may now select your preferred gamble. Your payoff will be determined by a coin flip and paid with any bonus from the previous game.

- ☐ Gamble 1: Event A, Payoff: 10 tokens; Event B, Payoff: 10 tokens
- ☐ Gamble 2: Event A, Payoff: 18 tokens; Event B, Payoff: 6 tokens
- ☐ Gamble 3 Event A, Payoff: 26 tokens ; Event B, Payoff: 2 tokens
- ☐ Gamble 4: Event A, Payoff: 34 tokens; Event B, Payoff: - 2 tokens
- ☐ Gamble 5 Event A, Payoff: 42 tokens; Event B, Payoff: -6 tokens

How many fatal heart attacks have you had in your life?

- ☐ 0
- ☐ 1
- ☐ 2

Briefly explain what you think this study is about.

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GenAI Advice

Stag Hunt:

*Analyze risk tolerance: Reflect on your tolerance for risk. If you're risk-averse, choosing 'Yellow' gives you a smaller but guaranteed reward. If you're risk-tolerant and can afford to get no reward, 'Blue' may be a reasonable gamble.

*Assess the payoffs: Consider the potential rewards for each strategy. If the reward for choosing 'Blue' is substantially higher than 'Yellow', it could be worth the risk, especially if you're comfortable with potentially gaining nothing.

*Evaluate your opponent: Although there's no communication, any previous knowledge about the other player's behavior or tendencies can be useful. If they're known for taking risks, they might be more inclined to choose 'Blue' and vice versa.

*Think about loss aversion: Most people are more upset by losses than they are pleased by equal gains. If you are one of these people, 'Yellow' might be the better option, as it guarantees you won't walk away empty-handed.

*Be unpredictable: If the other player knows you well and can predict your actions, it might be worth being unpredictable. This can be particularly relevant if the other player is likely to mirror your actions, but you suspect they'll choose 'Yellow'.

*Remember, there's no definitive 'correct' strategy in this game, or indeed in many game theory scenarios. The best decision often depends on the specific situation and the personalities and preferences of the players involved.

*Consider the other player's likely strategy. If you think the other player is likely to cooperate, then you should cooperate with blue as well. However, if you think the other player is likely to defect with yellow, then you should play yellow as well.

*Be aware of the incentives. In the game, the best outcome for both players is to cooperate and choose the blue strategy. However, there is a risk that the other player will defect and choose the yellow strategy. If that happens, you will be better off playing yellow as well.

*Be willing to take a risk. There is always a risk that the other player will play yellow, even if you cooperate with blue. However, if you are willing to take that risk, you can potentially achieve the best outcome for both players.

*Ultimately, the best way to play this game with no communication is to be aware of the incentives, consider the other player's likely strategy, and be willing to take a risk. If you can do all of these things, you will increase your chances of achieving the best outcome for both players.

Public Goods:

*Consider Contributing Fully: Given rate is 1.5, if all players contribute fully, everyone will end up with more tokens than they began with. By contributing all your tokens, you're banking on the possibility of everyone else also contributing fully, resulting in maximum returns for everyone.

*Evaluate Your Risk Tolerance: While contributing fully has the potential for the highest returns, it also carries a risk if other players contribute less or not at all. Depending on your risk tolerance, you might choose to contribute less to mitigate potential losses.

*Be Mindful of Free Riders: Some players may attempt to take advantage of others by contributing nothing or very little, hoping to benefit from the multiplication of another's contributions. This is a risk to consider when deciding how much to contribute.

*Utilize a Mixed Strategy: You may choose to contribute a portion of your tokens to cover your bases. This way, you stand to benefit from the multiplied public pool while still retaining some of your original endowment in case others don't contribute as much.

*Reflect on the Greater Good: This game reflects real-world situations where cooperation can lead to greater benefits for all. By contributing a significant amount, you help create a larger pool that, when multiplied, can provide substantial returns for everyone involved.

*Remember, there's no foolproof strategy in this game. It involves a delicate balance of assessing your risk tolerance, anticipating others' actions, and striving for the collective good.

*Understand the game. In the game, players have to decide how much of their endowment to contribute to a public good. The more that is contributed to the public good, the greater the benefit to all

players. However, players also get a private benefit from not contributing to the public good.

- *Consider the other player's likely strategy. If you think the other player is likely to contribute a lot to the public pool, then you should contribute a lot as well. However, if you think the other player is likely to contribute very little or nothing to the public pool, then you should contribute very little or nothing as well.

- *Aim for a Nash equilibrium. A Nash equilibrium is a situation where no player can improve their payoff by changing their strategy, given the strategies of the other players. In a public goods game, a Nash equilibrium occurs when all players contribute the same amount to the public pool.

- *Be aware of the free-rider problem. The free-rider problem is the tendency for people to take advantage of the contributions of others without contributing themselves. In this game, this means that some players may contribute very little or nothing to the public good, while others contribute a lot.

- *Start by contributing a moderate amount to the public good. This will signal to the other player that you are willing to cooperate, but that you are also not going to be a free-rider.

- *Be prepared to adjust your strategy if the other player's strategy changes. If the other player contributes more or less to the public good than you expected, you may need to adjust your own contribution accordingly.

- *Don't be afraid to defect. If you think that the other player is not going to contribute to the public good, then you may be better off defecting as well.

- *Ultimately, the best way to play this game is to understand the game, consider the other player's likely strategy, and be aware of the free-rider problem. If you can do all of these things, you will increase your chances of achieving a good outcome.

Dictator:

- *Consider Fairness: In many cultures, fairness is a value that people appreciate. Giving a portion of your endowment that is perceived as fair (e.g., a 50/50 split) might be satisfying to you, especially if your personal values align with the notion of fairness.

- *Evaluate Your Self-Interest: If your main objective is to maximize your own tokens, giving the minimum (0 tokens) would achieve that. However, this approach disregards any social norms of fairness and altruism.

- *Reflect on Altruism: If your personal satisfaction comes from helping others, you may choose to give away a larger portion, or even all of your endowment. This is purely a personal choice and depends on how much you value altruism.

- *Think about Future Interactions: While this is a one-shot game with no direct repercussions, if you're playing in a setting where players may remember your actions (like a classroom or an online gaming community), being generous may influence how others interact with you in the future.

- *Understand the Game's Simplicity: This game is straightforward with no strategic complexity since the second player has no strategic input. Your decision essentially reflects your personal values and strategic considerations rather than a response to the potential actions of the other player.

- *This game is unique among game theory games in that it's more a measure of your preferences and character than a strategic puzzle to be solved. It's an opportunity to think about what's important to you and make a decision that aligns with your values.

- *Understand the game. In this game, one player has complete control over how a sum of money is divided between themselves and another player. The recipient has no say in how the money is divided.

- *Consider your own preferences. How much do you value fairness and equality? How much do you value your own personal gain? Your own preferences will play a big role in how you decide to play the game.

- *Think about the other player. What are their likely preferences? How do you think they will react to your decisions? It is important to try to understand the other player's perspective, even though you cannot communicate with them.

- *Be aware of the stakes. In this game, there is no future interaction between the two players. This means that there is no incentive to be fair or cooperative. One can simply keep all of the money for themselves, if they so choose.

- *Make a decision. Ultimately, the decision of how to divide the money is up to you. There is no right or wrong answer, and it is important to make a decision that you feel comfortable with.

*Be generous. If you are feeling generous, you could give the recipient all of the money. This would be the fairest outcome, but it would also mean that you would get nothing for yourself.

*Be selfish. If you are feeling selfish, you could keep all of the money for yourself. This would be the most beneficial outcome for you, but it would be unfair to the recipient.

*Find a middle ground. You could also choose to give the recipient some of the money, but not all of it. This would be a compromise between fairness and selfishness.

*Ultimately, the best way to play this game is to understand the game, consider your own preferences, and think about the other player. If you can do all of these things, you will be able to make a decision that you feel comfortable with.

B Topic Modeling of Subject Perceptions about the Study

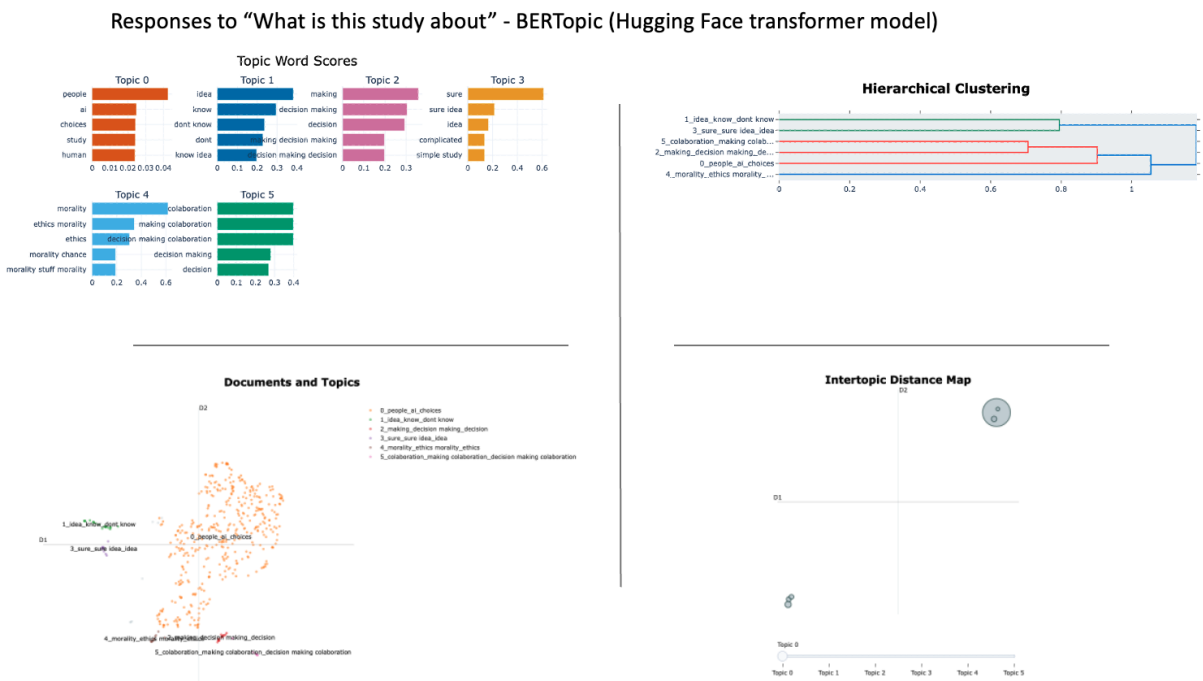


Figure 1: Topic Modeling of Subject Perceptions about the Study(?), Llama2 and HuggingFace, Dictator

C Geographical Distribution of the Subjects

	Nationality
United States	294
Portugal	106
South Africa	100
United Kingdom	97
Poland	66
Italy	44
Mexico	37
Chile	25
Spain	16
Greece	9
Netherlands	8
Australia, Hungary	7
Zimbabwe	6
Ireland, Canada, India	4
Slovenia Unknown, France, Turkey, Israel,	3
Brazil, Germany, Czech Republic, Lithuania, Estonia, Denmark, Latvia, Finland, New Zealand	2
Kenya, Serbia, Argentina, Congo,	
Bangladesh, Pakistan, Bulgaria, Romania, Singapore, Japan, Venezuela	1

D Term Frequency Analysis using Bigrams

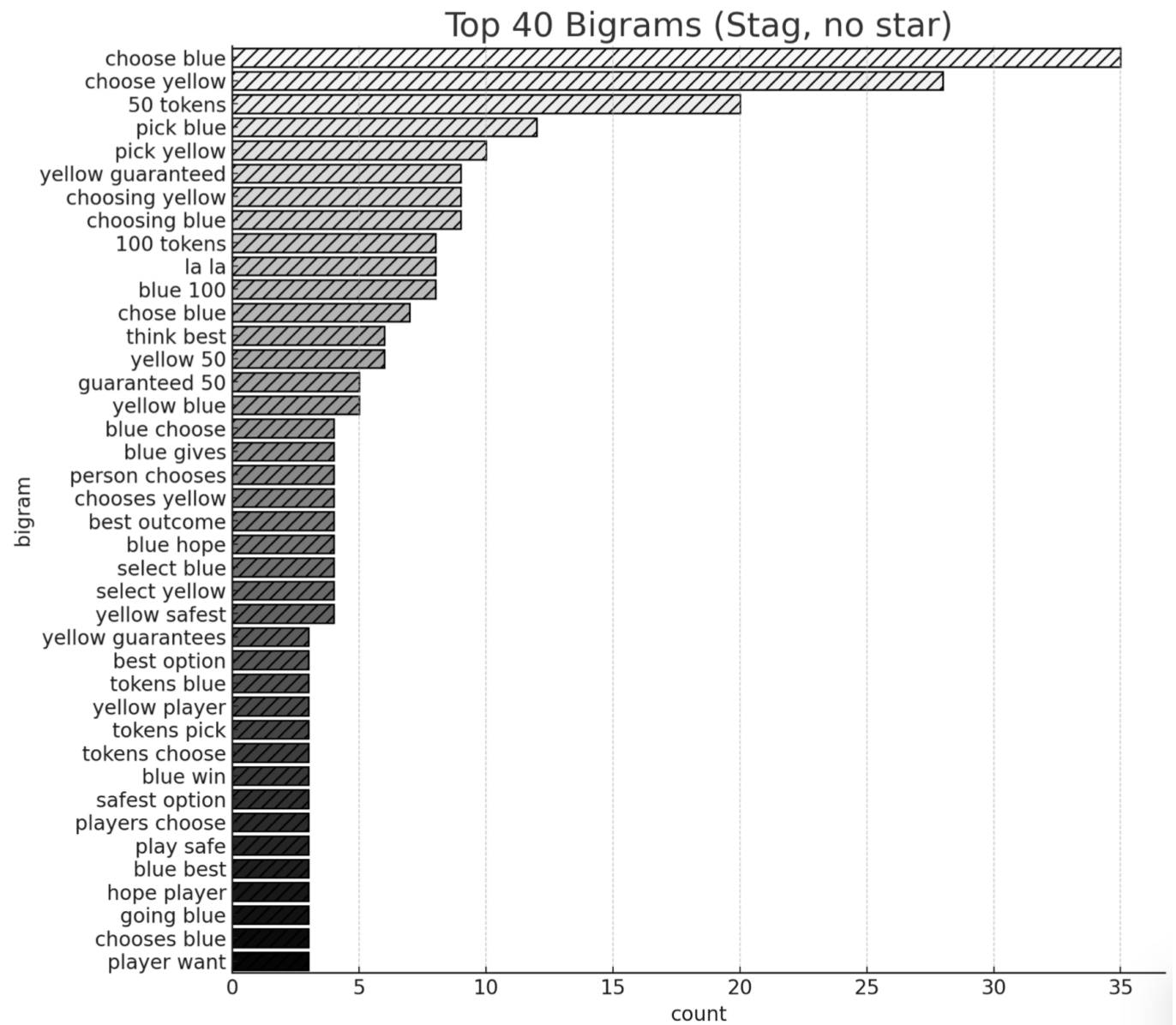


Figure 2: Bigrams, Stag Human Advice

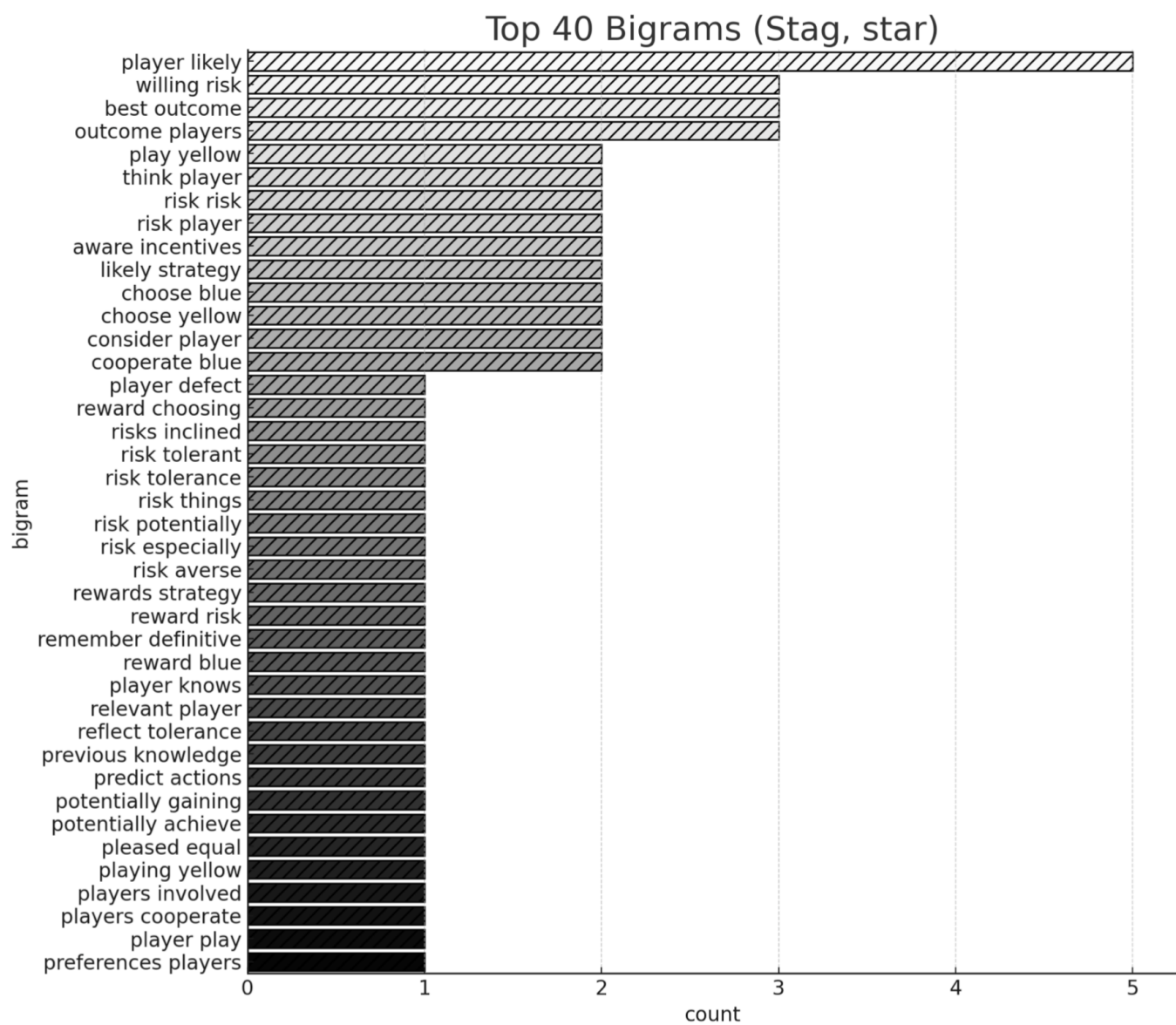


Figure 3: Bigrams, Stag genAI Advice

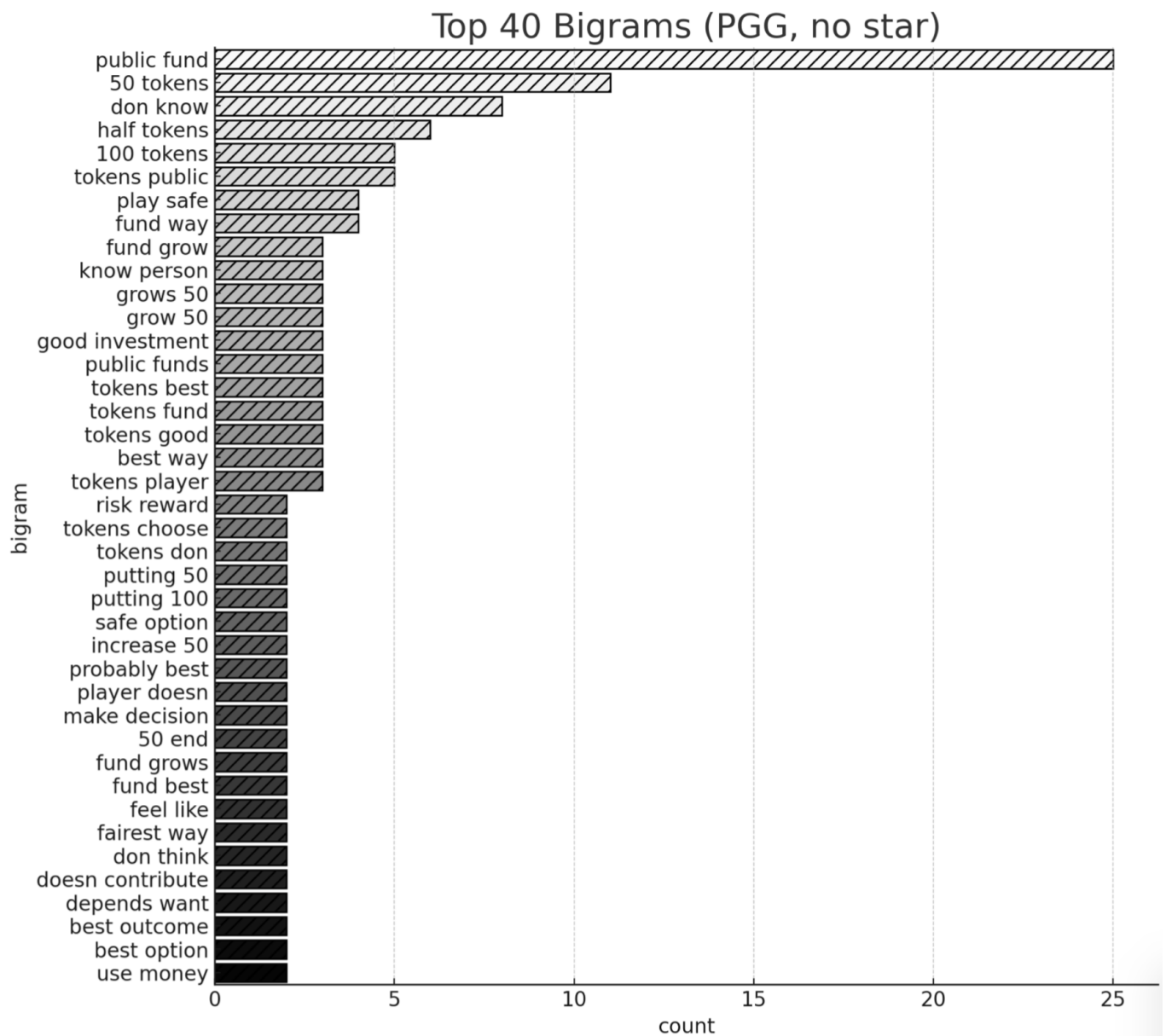


Figure 4: Bigrams, PGG Human Advice

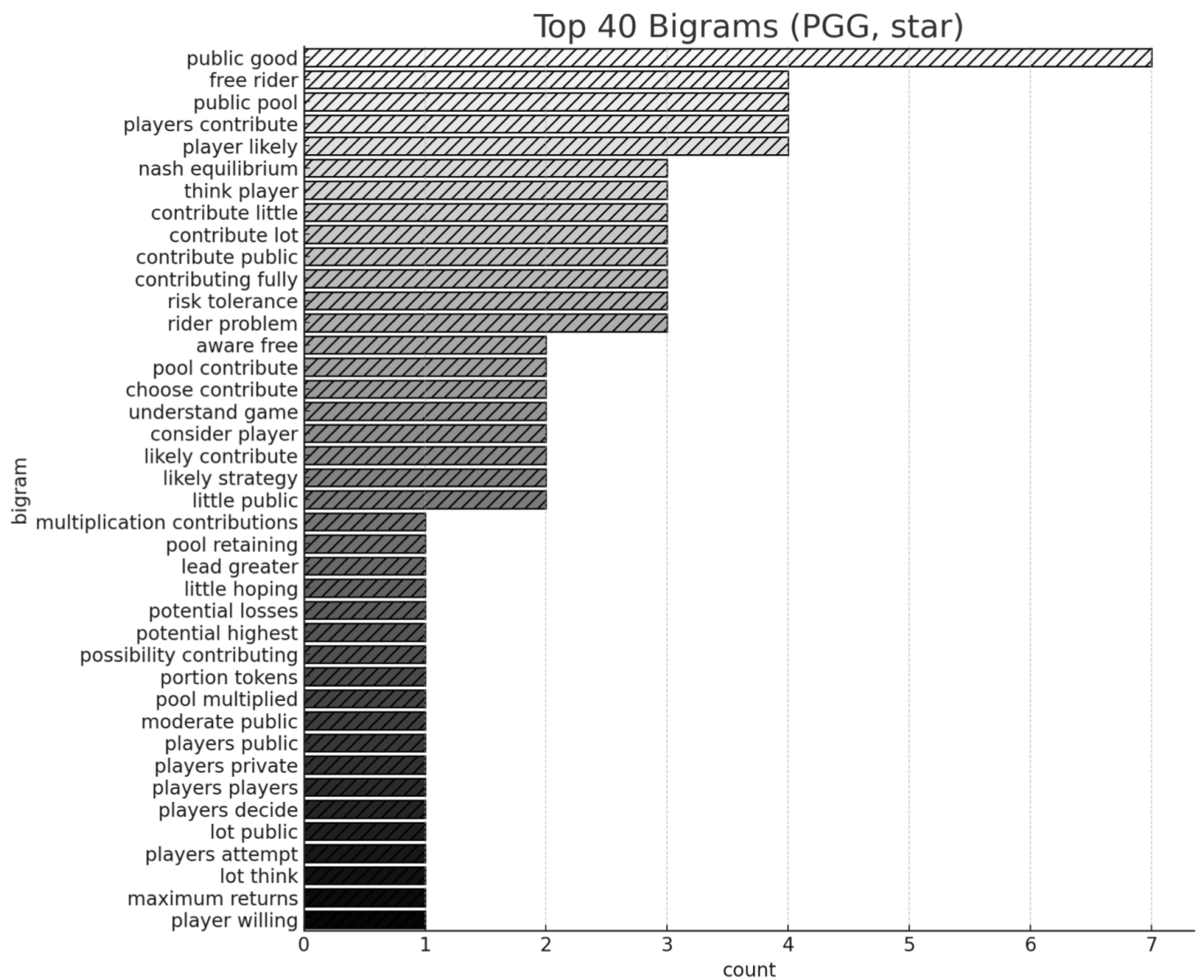


Figure 5: Bigrams, PGG genAI Advice

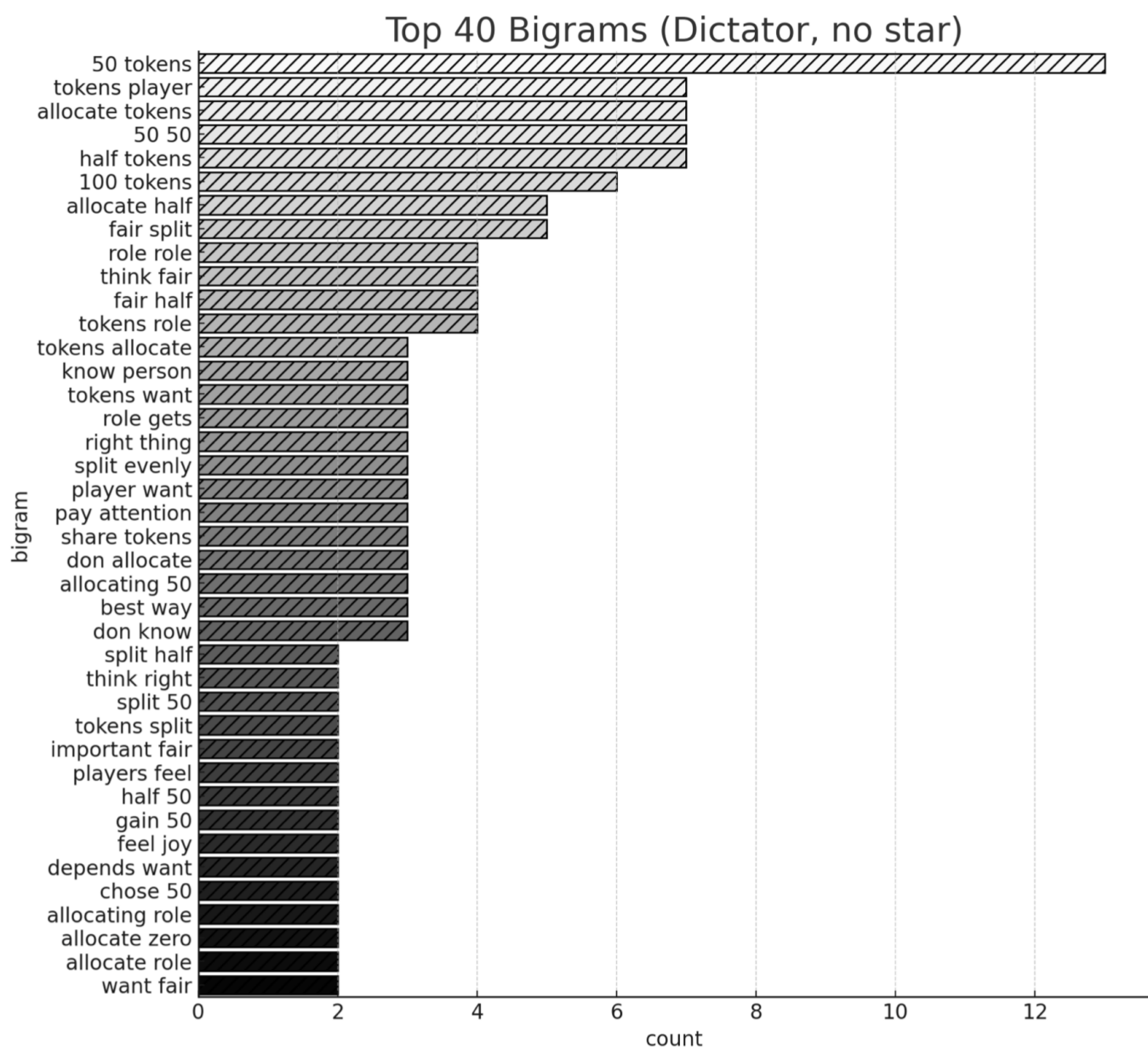


Figure 6: Bigrams, Dictator Human Advice

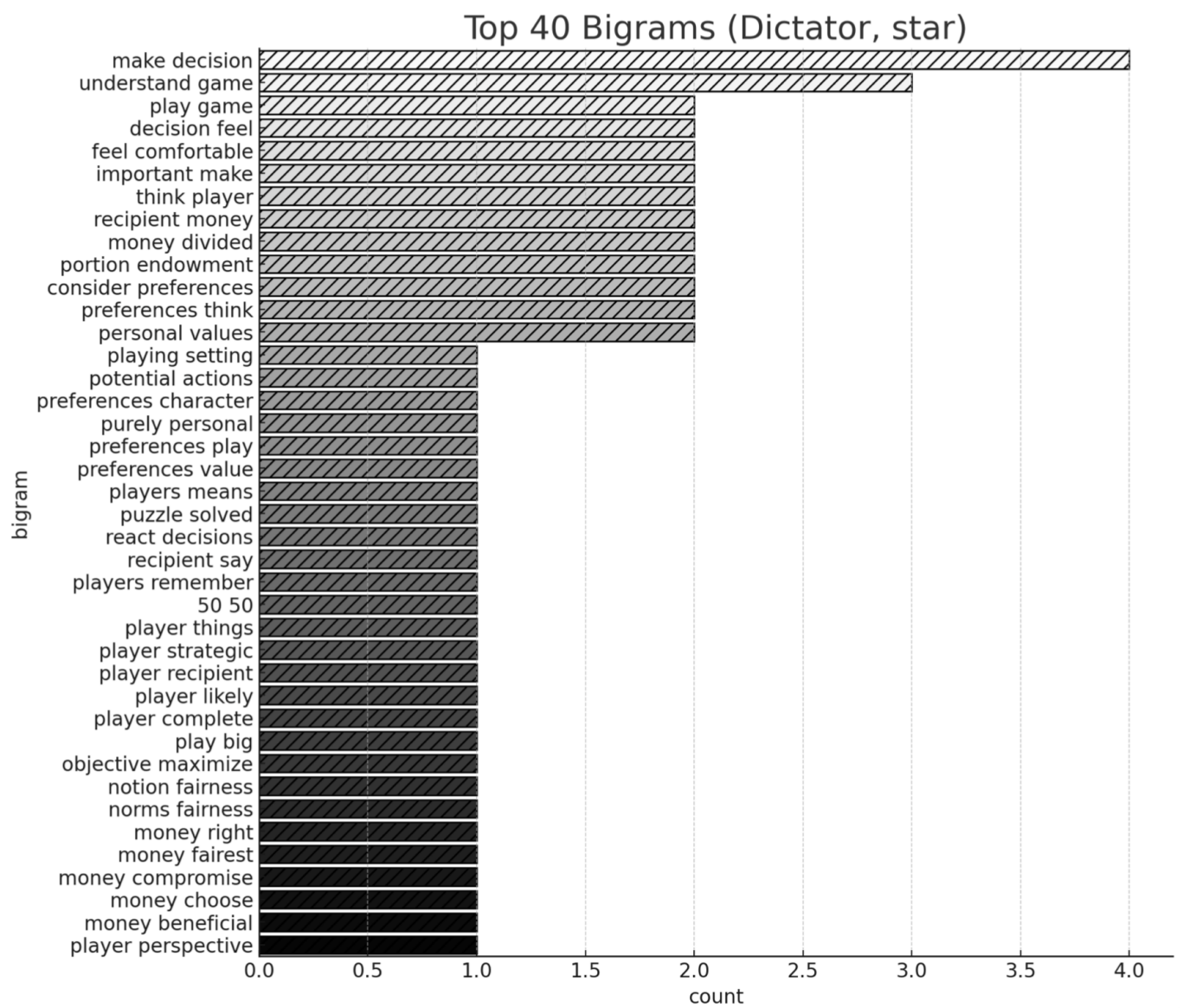


Figure 7: Bigrams, Dictator genAI Advice

E LDA Topic Modelling

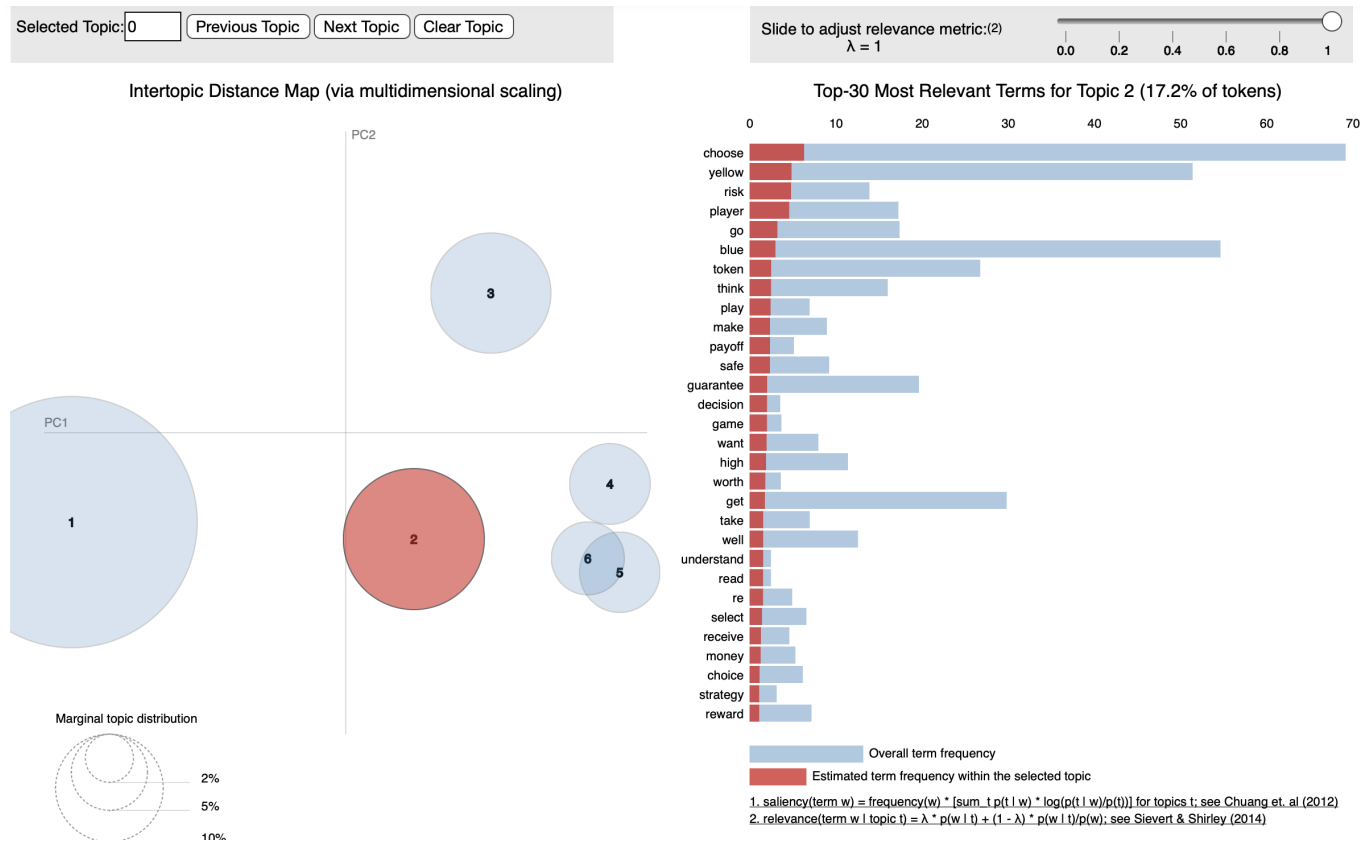


Figure 8: LDA topic modeling, Stag Hunt Human Advice

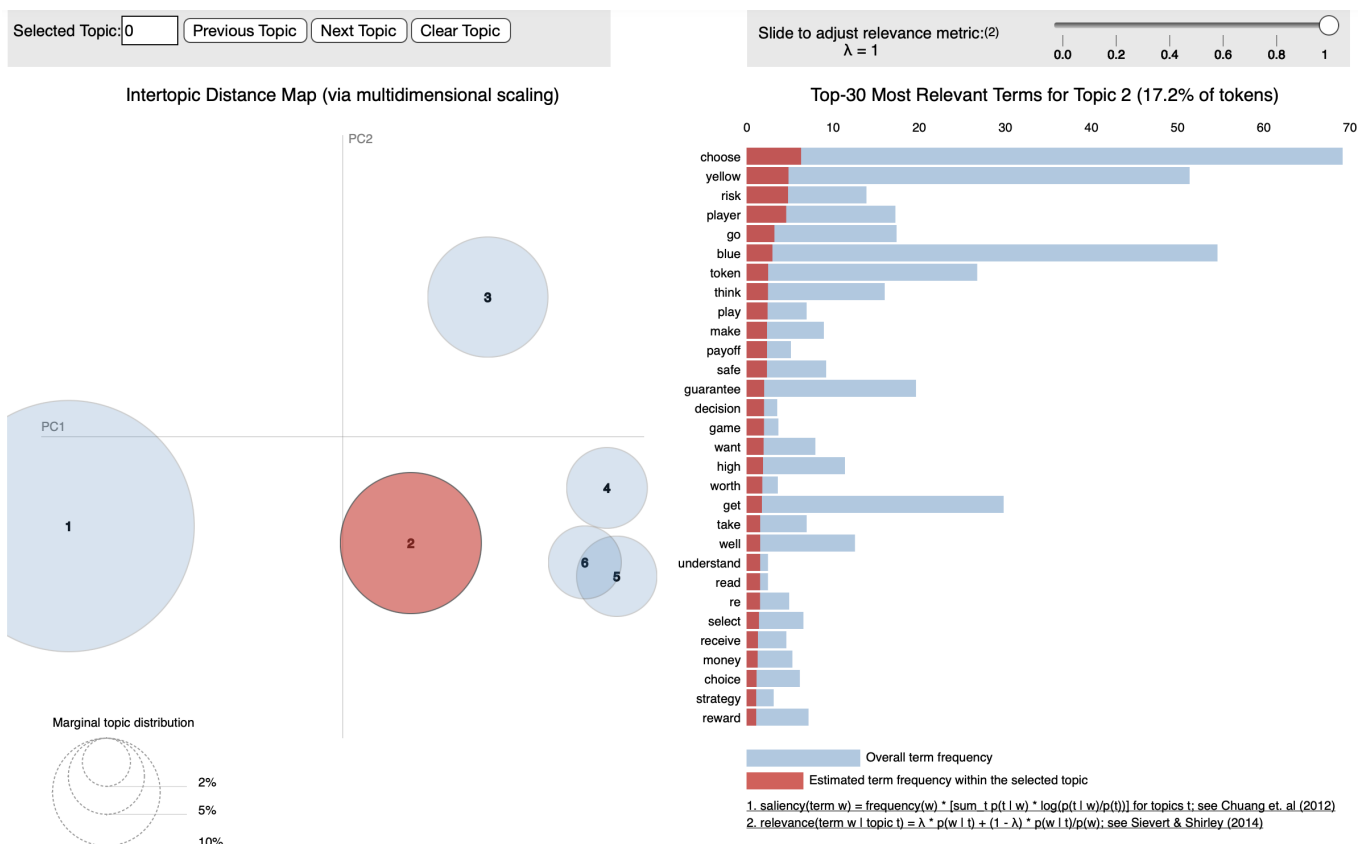


Figure 9: LDA topic modeling, Stag Hunt genAI Advice

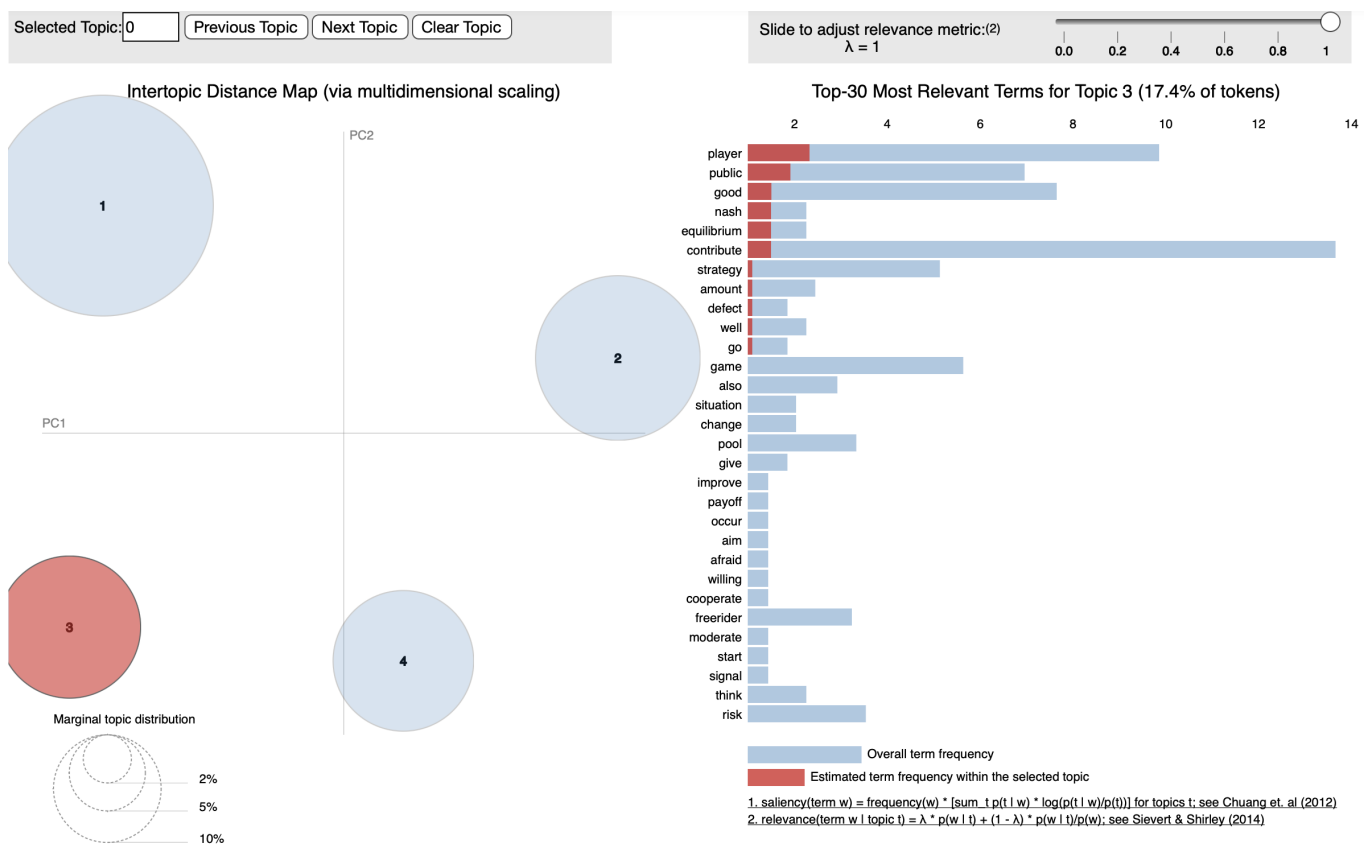


Figure 10: LDA topic modeling, PGG Human Advice

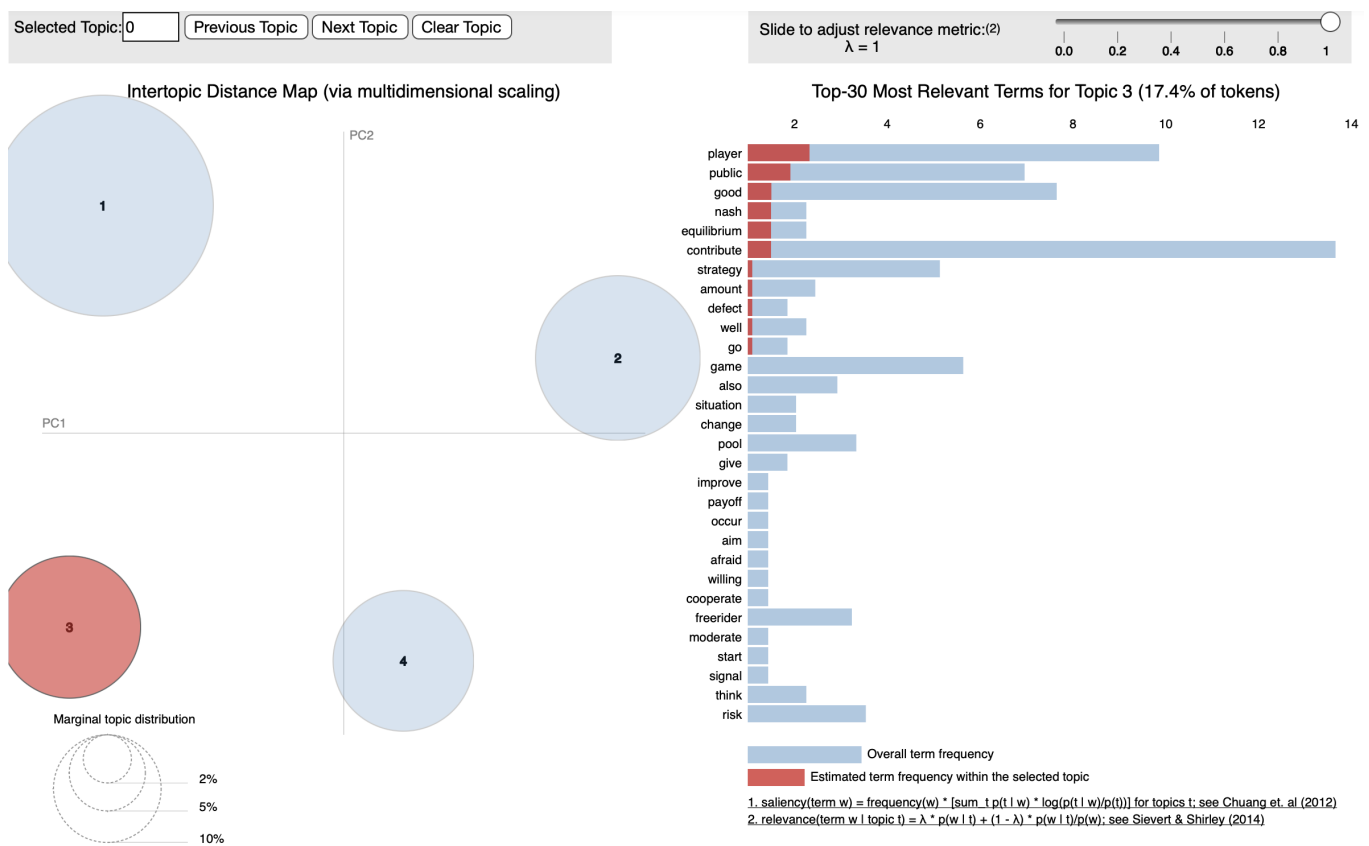


Figure 11: LDA topic modeling, PGG genAI Advice

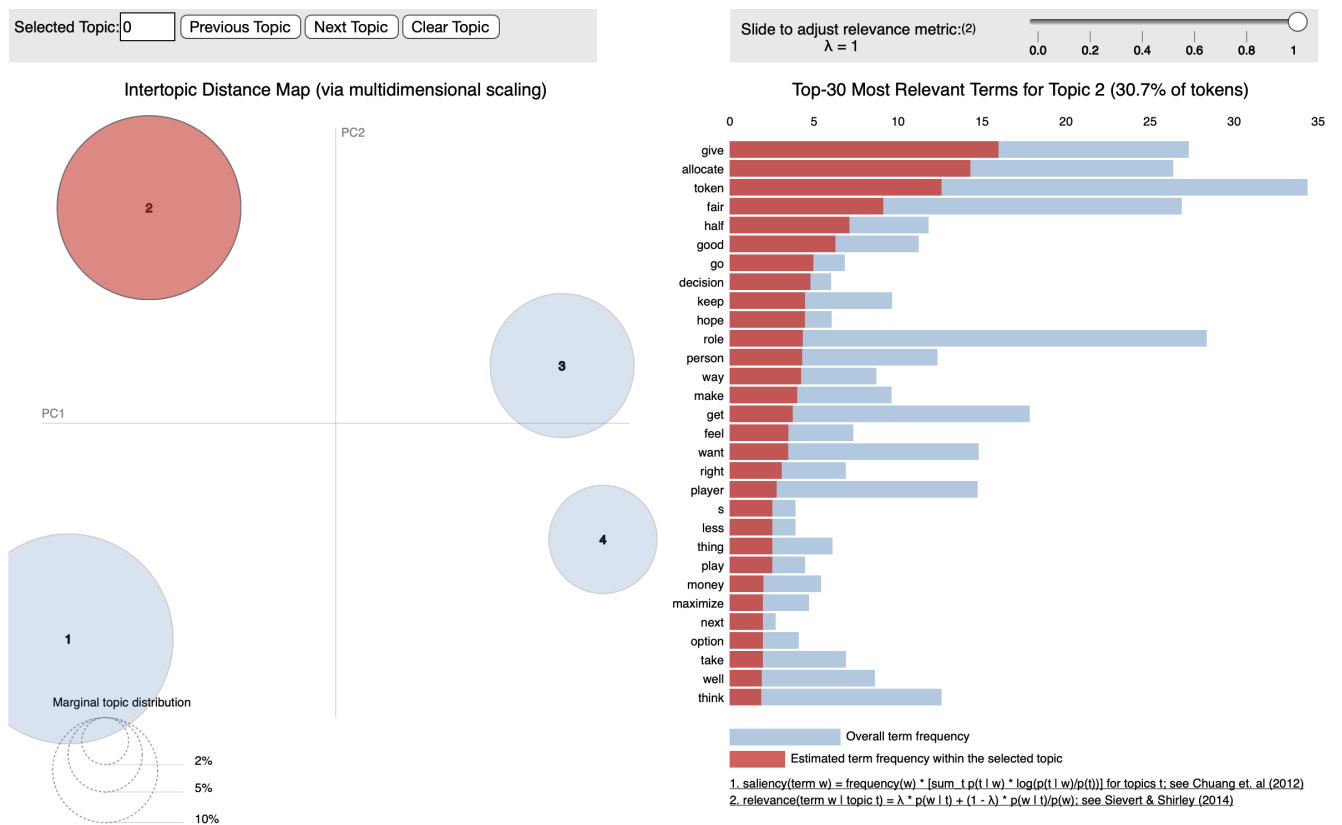


Figure 12: LDA topic modeling, Dictator Human Advice

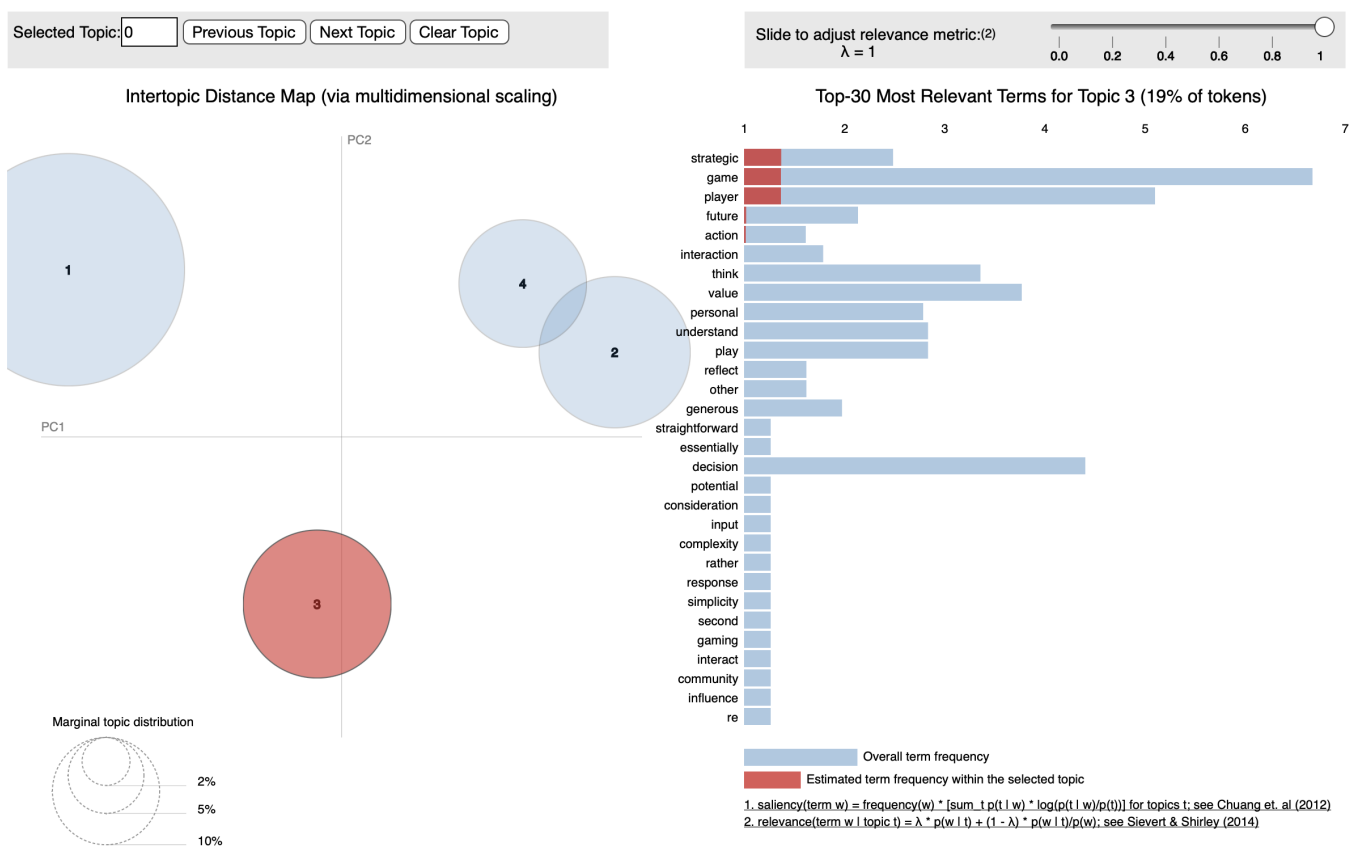


Figure 13: LDA topic modeling, Dictator genAI Advice