A CONTROL

# A NINNY, AN IDIOT AND AND AN ECONOMIC THEORIST



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### **Abstract**

Anton Chekhov's story, "The Ninny", meets the question: "What is the meaning of economic theory?"

<sup>\*</sup>Date: June 4, 2025. Author Address: School of Economics, Tel Aviv University and Department of Economics, New York University. Keywords: Economic Theory, The Ninny, Anton Chekhov. AEA classification: C00. Thanks: The translation of Chekhov's story is due to David Kriksunov. Many economic theorists disagree with my views on the meaning of economic theory; without them this paper would not have been written. Thanks to Uzi Segal who introduced me to "The Ninny", to Tuval Danenberg, Martin Osborne, Michele Piccione and especially Aron Tobias for their comments on drafts of this paper.

# 1. Early days

I was a young lecturer teaching Price Theory in the Department of Economics at the Hebrew University. I wanted to teach microeconomics as formally and precisely as possible, even if I had to stretch the students' mathematical abilities. I was particularly excited about game theory, which at the time was starting to move from the fringe of economics into the mainstream, and I wanted to integrate its basic concepts into the course material. My colleagues were not happy about the initiative, but I have never viewed teaching as a joint endeavor - so I had my own separate group of students.

After a year, I had become a popular lecturer. My teaching evaluation was high. The game theory material was the cherry on top. No economic "applications" were discussed, and none of the students complained. Students were (atypically) well-behaved in class. I felt like a rock star.

I was unprepared for what occurred in my fourth year of teaching. As always, I composed the final exam myself. I must still have a copy of the exam somewhere, but I don't dare look at it. It was a difficult exam and the students did poorly. I had no mercy on them and many received low grades or even failed. After the grades were published, I expected the students to charge into my office screaming, calling my exam unfair, and blaming me for this fiasco. Instead, one after the other, students came to apologize for not studying enough. They all blamed themselves and found no comfort in my apology for giving a difficult exam. I thought to myself: "How very easy it is for a professor to undermine his students confidence".

# 2. Transformation

In the early days, I did not devote much attention to the meaning of what I was doing. I was blessed with the naivety of youth and the exhilaration of academic life. One of my first papers (Rubinstein (1978)) dealt with the "definable preferences" of a youth who arrives in a new city and has to choose between blind dates. This was my last "applied" economics paper... But, even then I never thought about a model as a description of the real world, as a tool for prediction, or as something that can be tested, verified or calibrated. In the early nineties, I started to ask myself: "What is it that we are doing?" and began to view models in economic theory as fables.

I returned to teaching an intermediate micro course at Tel Aviv University in 2013. I still liked the material, but now, I made some changes: First, every price theory course was already overloaded with game theory, so I started to reduce the weight it received in my course. Second, I had become more aware that "As a teacher of microeconomics, I am a part of the machine that I suspect is influencing students to think in a way that I do not particularly like." (Rubinstein 2006). Most importantly, I drummed into my students that the models I am teaching are just stories.

To make a lasting impression, I began each course by reading a part of "The Emperor's New Clothes". Later, my friend Uzi Segal referred to a more fitting story, Anton Chekhov's "The Ninny". I doubt my students can recall what the Marginal Rate of Substitution is or how to calculate a competitive equilibrium in an Edgeworth box but they probably remember The Ninny. I did not explain what I was trying to do. I just read the story. When I came to the last paragraph, my voice was always quivering.

# 3. Chekhov's The Ninny<sup>1</sup>

A few days ago, I invited my children's governess, Yulia Vasilyevna, into my office. We needed to settle some debts.

"Have a seat, Yulia Vasilyevna!" I told her. "Let's settle things. You probably need money, but you are so officially stiff that you will not ask yourself". "Well... We agreed that you are entitled to thirty rubles a month..." "Forty..."

"No, thirty a month... I have it written down... I have always paid all governesses thirty a month. Well, you have lived here two months..."

"Two months and five days..."

"Two months. Exactly... I have it written down this way. You should, accordingly, receive sixty rubles... Subtract nine Sundays... You did not work with Kolya on Sundays, did you. All you did was go for walks... Add three holidays..."

Yulia Vasilyevna flared up, and her fingers touched the edge of her dress, fidgeting, but... Not a word was said!..

"Three holidays... So, strike twelve rubles then... Kolya was sick. Four days without lessons... You were teaching Varya alone... You had a toothache. It lasted three days, and my wife allowed you not to have lessons after lunch... Twelve plus seven - make nineteen. Subtract that... It leaves... Hm... Forty-one rubles... Is that correct?"

<sup>&</sup>lt;sup>1</sup>The translation of Chekhov's story was done by Constance Garnett and was published in *The Horse-Stealers and Other Stories*, Chatto & Windus, 1921. The title of the story in this translation was "A Nincompoop" but in another translation it was called "The Ninny". The translation here is due to David Kriksunov.

Yulia Vasilyevna's left eye grew red. It was now full of moisture. Her chin started shaking. She coughed nervously, blew her nose, but - nothing. Not a word!..

"Shortly before New Year's, you broke a teacup and its saucer. Subtract two rubles... The cup is more expensive than that. It is a family heirloom, but... God is with you! Where haven't we lost our own in life? Then, Kolya climbed a tree and tore his little frock coat because you were not looking carefully... That is worth ten... The maid stole Varya's shoes, and that also happened because you weren't paying enough attention. You must look after everything. You are getting constant pay. Well then, this means five more are gone... You took ten rubles from me on January tenth..."

"I did not," whispered Yulia Vasilyevna.

"But I have it written down!"

"Well, alright... good."

"Substract twenty-seven. We had forty-one and will now have fourteen left..."

Both eyes were now filling up with tears... Her pretty, long, good-looking nose was breaking a sweat. Poor girl!

"I only took it once," she said, her voice trembling. "I took three rubles from your wife... I have not taken anything else since..."

"Indeed? Is that so? I don't even have it written down! Subtract three. We had fourteen and will now have eleven left... Here is your money, dearest! Three... Three, three... One and one... Receive it!"

And I handed her eleven rubles... She took the money, her hands trembling, and stuffed it in her pocket.

"Merci," She whispered.

I jumped up and began pacing around the room. I was full of anger.

"What is the 'merci' for?" I asked.

"For the money..."

"But I underpaid you and took from you, off to the devil with it, I robbed you! I stole from you! What is this 'merci' for?"

"I did not get a thing at all working for others..."

"Did not get a thing? That is no surprise! I was joking just now. It was a harsh lesson... I will give you all of your eighty rubles! Here they are, waiting for you, ready, in an envelope! How can one be such a sour-faced girl? Why aren't you protesting? Why are you silent? How is it possible to be so toothless in this world of ours? How can you be such a softy?"

Her sour smile showed, and I read the words on her face: "You can!" I asked her to forgive me for the harsh lesson and gave her, to her great astonishment, the full eighty. She timidly uttered 'merci' and left... I looked on after she was gone and thought: it is easy to be strong in this world!

# 4. The Ninny and Economics

However you define Economics, this story is about Economics. It relates to a fundamental economic situation in which two economic agents interact to share a limited resource (their joint wealth) and it illustrates one of the Economics' most fundamental issues: the relationship between power and wages.

The story can be thought of as a sequential game. The employer repeatedly demands that the governess' salary be reduced and her repeated silence can be viewed as strategies in a two-player game in which credible threats and expectations matter.

But whereas the employer appears to be thinking strategically and correctly predicts Y's response to each of his demands, Y's behavior might be thought as an outcome of "cultural and institutional norms" rather than an inferior bargaining position. According to this interpretation, the story can be viewed as a critique of the economic approach which assumes that people always maximize utility while ignoring such things as social status.

### 5. Submission

Given that The Ninny can be viewed as a story within economics, I "advised" Anton to "submit" the manuscript to a "top five" journal. Here is the journal's "response":

## Dear Anton:

Thank you for submitting your manuscript to our journal. After consulting with 7 exceptional referees and after reading the manuscript myself I came to the following conclusions:

# **Strengths:**

- 1. The narrative craftsmanship is exceptional.
- 2. The exploration of human behavior and ethical dilemmas offers profound insights into the complexities of interpersonal relationships.
- 3. The paper touches important real-life situations.

# Weaknesses:

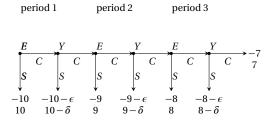
- 1. The manuscript is too short and lacks the extensive development we look for in any submission to our distinguished journal.
- 2. The manuscript lacks a formal model or empirical analysis.
- 3. There are no robustness checks.
- 4. The manuscript lacks references to the relevant literature.
- 5. Interdisciplinary Potential: Exploring connections to behavioral economics or economic sociology could enhance the manuscript's appeal.
- 6. The manuscript lacks a conclusions section.

**Recommendation:** Reject and resubmit.

# 6. Chekhov's (formal) game

Since I am acting on behalf of Anton, this time I treated the referee reports with respect. First, I planned to add a formal model:

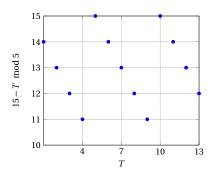
Consider an extensive game with two players: an employer (E) and Yulia (Y). The players initially agreed that E would pay Y a salary of  $w_1$  US dollars (not rubles). The game has T periods. At the beginning of period t, E chooses between paying  $w_t$  to Y (option S) or making a demand to reduce Y's wage by  $\Delta$  (option C). After such a request, Y either agrees to the demand (C) and moves the game to period t+1 setting  $w_{t+1}=w_t-\Delta$ , or rejects the request and quits (S). By quitting Y terminates the game and E pays Y the amount of  $w_t$ . It also inflicts costs on both players: E loses  $\epsilon > 0$  and Y loses  $\delta > \Delta$ . Assume that  $w_1 - T\Delta > 0$ . Both E and Y wish to maximize their monetary reward. Figure 1 illustrates the game for the case of  $w_1 = 10$ ,  $\Delta = 1$  and T = 3.



**Figure 1**. The Ninny game. The top (bottom) numbers are E's (Y's) payoffs.

**Proposition:** If  $L\Delta > \delta > (L-1)\Delta$  where L is an integer, then the game has a unique subgame perfect equilibrium, in which E and Y plan to stop the game at any one of the periods T - (Lk-1) (where  $k \ge 1$  is an integer) and both choose to continue in any other period. Thus, Y's payoff is  $w_1 - m\Delta$  where  $m = T \pmod{L}$ .

**Proof:** See the Online Appendix.<sup>2</sup> Figure 2 illustrates Y's equilibrium payoff as a function of T:



**Figure 2**. Yulia's equilibrium payoff as a function of T ( $w_1 = 15$ ,  $\Delta = 1$  and  $5 > \delta > 4$ ).

<sup>&</sup>lt;sup>2</sup>The proof is by a simple backward induction argument: In periods T-L+2,...,T it is optimal for Y to choose C as the cost  $\delta$  is larger than agreeing to all salary reductions in the rest of the game. Therefore, it is optimal for E to choose C in any of those periods. In period T-L+1 it is optimal for Y to stop the game as the cost  $\delta$  is smaller than  $L\Delta$  and therefore at this point it is also optimal for E to choose S. The rest of the argument is as if the length of the game is T-L.

# 7. The revision: An Idiot

The only "insight" that emerges from the formal analysis is that Y's payoff depends in a cyclical pattern on *T*. Despite this "fascinating" insight, I have decided to stick to the original style. So here is the revised manuscript which I "submitted" and renamed "The Idiot":

A few days ago, I invited my children's governess, Yulia Vasilyevna, into my office. We needed to settle some debts.

"Have a seat, Yulia Vasilyevna!" I told her. "Let's settle things."

"We agreed that you are entitled to forty rubles a month... but as you know we have a list of 17 reasons to reduce your salary by a ruble for each." I slowly took a book off the shelf called "Game Theory for Dummies" and said "Let's play a game".

Yulia stared at me with fear in her eyes and whispered: "I have heard that game theorists are omnipotents". No wonder – in the center of our town stands a statute of a game theorist who advised Kutuzov in 1812 and his analysis was the key to the grand defeat of Napoleon.

"Here is the game. We will move sequentially. At each stage, I will ask you if you agree to a reduction of 1 ruble in your salary for one of the 17 reasons. If you agree, then one ruble will be deducted and we will move on to the next reason. If not, you will automatically be fired and get the salary that you have already agreed to a period earlier."

I reminded Yulia that disagreement is costly for both of us: "You know Yulia, I appreciate what you do for us so much. Your departure will break my heart and it will be like losing 100 rubles. But remember that I also

like money. And you Yulia, I know you are used to our family and finding a new job will cause you a loss equivalent to 8.5 rubles. You cannot afford such a loss." Yulia's left eye reddened and filled with tears.

My strategy was clear: If Yulia is naive, then at each stage she will compare the loss of 8.5 rubles to a 1-ruble deduction in her wage and will then accept the demand. If Yulia is more sophisticated, she will figure out the game's unique subgame perfect equilibrium and will accept each of the first 8 demands.

I smiled to myself: "How clever I am and how lucky that there are 17 reasons to reduce Yulia's salary but not 18".

I started to play the game. With confidence I said: "Around New Year's you broke a teacup. Substract one ruble, OK?'

Yulia raised her head to stare at me, took a deep breath and said...
"No!" I was taken aback. I jumped up and began pacing around the room shouting: "There goes my 100 rubles".

Yulia stood up, revealing a suitcase she'd prepared earlier, and apologized for the cruel lesson she had taught me. Before leaving the room, she whispered, "How easy it is to outmaneuver a game theorist."

# 8. Economic Fables

In 1971, I was serving in Battalion 404 of the IDF. Corporal David Dahan, the sanitary "officer" (namely, the guy who cleaned the toilets) used to say: "Why do we go to sleep only to wake up; why do we go on leave only to return to the base; and why we do live only to die?" I would add: "Why

do we do economic theory when we have so little understanding of what it means?

Ten years later, I attended a conference in Lumini. We were waiting to enter the dining hall when I was surprised to overhear a top game theorist telling another top economic theorist that he does game theory simply to make a living. Are we indeed classical economic agents who are simply maximizing their material wellbeing? For years I justified economic theory as the explication<sup>3</sup> of concepts we use in thinking about social interaction. This was probably true in the context of the classical studies of rationality, social choice, common knowledge and repeated interaction, but I don't see much of that in current economic theory.

There are those who view economic theorists as engineers of economic institutions. I have reservations about the value of economic theory in this context. Even Roth and Wilson (2019) have stated that: "Mathematical models themselves play a less heroic, stand-alone role in market design than in the theoretical mechanism design literature. A lot of other kinds of investigation, communication, and persuasion play a role in crafting a workable design and in helping it to be adopted and implemented, and then maintained and adapted."

The only position I feel comfortable with views a model in economic theory as a story. One that is not as moving as The Ninny, but nonetheless a story.

There is no "right" or "wrong" story and no "right" or "wrong" model. The relevant categories for models in economic theory are "meaningful" or

<sup>&</sup>lt;sup>3</sup>Avishai Margalit, a philosopher from the Hebrew University, taught me the Hebrew word "hanhara", which means explication: the process of analysing and developing an idea or principle in detail".

"meaningless", "interesting" or "uninteresting", "realistic" or "unrealistic", "original" or "unoriginal", "beautiful" or "ugly".

The model itself is the beginning of a story; an outcome is a potential ending. The ending is required to be consistent with ingredients of the model according to the principles underlying the solution concept which we apply. An economic theory story can be thought as a chain:

 $model \rightarrow solution concept \rightarrow outcome(s)$ .

Thus, the solution concept is a fundamental part of the story. Furthermore, the proof of the consistency of the outcome with the solution concept is also a critical part of the drama. Likewise, Chekhov was constrained by (informal) principles of common sense and reasonableness. These principles are at the back of our minds and underpin our evaluation of the story.

Thinkers have long sought to understand the principles that guide an author in navigating from the beginning of a story to its end. Aristotle's "Three-Act Structure" of a story is somewhat analogous to the structure of a story in economic theory.

The *first act* (the description of the model) presents the characters, the world they move about in, their motives and their methods of reasoning. It introduces a conflict of interest, and seeks to create tension. Examples are used to illustrate the unfolding of the story. Finally, the first act raises the question of how the conflict will be resolved.

The *second act* introduces the criterion for consistency of the story's plot. By means of proofs of auxiliary claims, we start to understand how the plot might be resolved.

The *third ac*t is the resolution of the story. The propositions specify a sensible end to the story - sensible in the sense that it is consistent with the assumptions made as part of the solution concept.

The current trend of relegating proofs to the appendix undermines this structure and is partially to blame for the current malaise in economic theory. Imagine that the Ninny had only a beginning and an end with the middle relegated to an online appendix.

There is another similarity between a model in economic theory and a story: there should not be any redundant details in either. This principle is analogous to the so-called "Chekhov's gun" principle, stated by Chekhov as advice to young writers (quoted in Shchukin (1911)):

"Remove everything that has no relevance to the story. If you say in the first act that there is a rifle hanging on the wall, in the second or third act it absolutely must go off. If it's not going to be fired, it shouldn't be hanging there."

Needless to say, viewing an economic model as a story does not diminish its significance; in fact, it may enhance it. According to this perspective a model should be judged by criteria akin to those applied to stories, such as aesthetics, originality, and relevance. It does not require that a model have predictive power, nor that it be subjected to empirical testing. Essentially, crafting a compelling model is an art rather than a science.

# 9. Epilogue

I often discuss the state of economic theory with young economists. Once, I was asked to speak at a beer and pizza event at NYU. The title of the talk was "10 Q&A: Experienced Advice for "Lost" Graduate Students in Economics" (Rubinstein (2013)). Here are two of the Q&A (slightly edited):

**Q3:** I have already written 30 pages. I have repeated myself several times, and my proofs are much longer than necessary. I have added uncertainty wherever I could and have moved from a discrete case to Banach spaces. My adviser still says that I don't even have enough for a paper in Economics Letters. How long should my paper be?

**A:** If you don't have good ideas, then keep going. Don't stop at less than 60 single-spaced pages. Nobody will read your paper in any case, so at least you have a chance of publishing in a top five journal. If you have a really good idea, then limit yourself to 15 double-spaced pages. I have not seen any paper in economic theory which deserved more than that, and yours is no exception.

**Q4:** I have almost finished my paper. I was making good progress, but I found myself stuck when I got to the conclusion. Should I feel like a failure?

**A:** On the contrary, the fact that you are having trouble writing a conclusion means that after all your years in graduate school you still have integrity. Supervisors and editors demand that authors put in a concluding section—an explanation why the paper will change the world. As a result, it is typically a collection of nonsensical statements and spurious

policy recommendations. My ideal conclusion is . . . not to have one. Nevertheless, I myself have yielded to this demand several times. So I will fully understand if you do as well. But, at least you don't have to believe what you've written.

After giving such advice, I gazed into the eyes of the young economic theorists and said to myself: "How easy it is to be a professor at the end of his career and to give such advice to young scholars struggling to finish their PhD or get tenure."

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