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The meaning of the refined egoism and the prisoner's dilemma in business

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Abstract: For years one of the major questions has been centered on our willingness to cooperate with each other in order to achieve our very own selfish aims. However, one should go beyond being selfish and consider the desires of other people so to be able to not only be successful now, but in the long-run too. This development investigates both the mathematical and logical ways of thinking regarding the Iterated Prisoner's Dilemma, moreover, the emotional and social intelligence were took into consideration. The aim of the development is to prove that not only abstract mathematical facts are required for a solution of the iterated prisoner's dilemma, but also the socio-psychological sides of the long-term cooperation are of major importance.

Keywords: cooperate, the iterated prisoner's dilemma, emotional and social intelligence

Значението на изтънчения егоизъм и дилемата на затворника в бизнеса

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Резюме: В продължение на години един от основните въпроси се съсредоточаваше върху желанието ни да си сътрудничим един с друг, за да постигнем нашите собствени егоистични цели. Все пак, трябва да надхвърлим егоистичното и да помислим за желанията на други хора, за да бъдем не само успешни сега, но и в дългосрочен план. Тази разработка изследва както математическите, така и логическите начини на мислене по отношение на итерираната дилемата на затворника, а също така и значението на емоционална и социална интелигентност. Целта на разработката е да се докаже, че не само абстрактни математически факти са необходими за разрешаването на итерираната дилемата на затворника, но и голямото значение на социално-психологичната страна в дългосрочното сътрудничество.

Ключови думи: сътрудничество, итерираната дилема на затворника, емоционална и социална интелигентност.

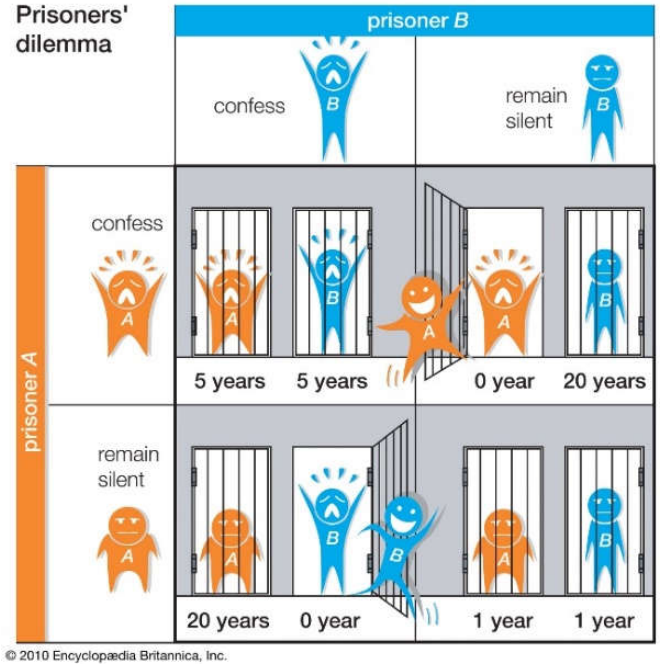
If men were actuated by self-interest, which they are not – except in the case of a few saints – the whole human race would cooperate. There would be no more wars, no more armies, no more navies, no more atom bombs.
Bertrand Russell, 1950

Introduction

A couple of years ago I watched the film “Beautiful Mind” that presents the audience with the story of John Nash. Actually, as it is shown in the movie he is one of the creators of the Game Theory as well as a Nobel Prize winner for the theory as it has influenced the global market, the international relations and even evolutionist biology. At first, I was more intrigued by the story itself but after watching the film several times and most recently a few weeks ago I became really curious about how he came up to the notion about the Game Theory and mutual collaboration. The idea struck him while he and his friends were in a college bar and they all wanted to court a blonde girl. So, if all of them went for her, they would only be an obstacle to one another and if they fail, the girlfriends of the blonde girl will reject them because nobody wants to be a second choice. But if he and his mates go for the other girls and reject the blonde all of them will benefit. Because the best score is not like Adam Smith said, that it comes from what everybody in the group do for their personal best but what everybody do not only for their personal best but for the group prosperity. After watching the film, I saw the beauty of mathematics in action as the great Leonardo da Vinci had said: “Practice should always be based on a good theory.” I

have been taught always to seek the implementation of everything that I learn, because in that way I more efficiently understand and remember the information. So, I decided to find ways of how this theory can be implemented into business and especially human relations. Eventually in my father's office I found the book: "The Art of Strategy: A Game Theorist's Guide to Success in Business and Life" which fascinated me by presenting various examples and theories like the Prisoner's Dilemma and even the Nash Equilibrium. The dogma in today's society is that selfishness is bad, but I have never believed in that, so I decided to try to prove that for the long-term cooperation of exceptional matter is refined egoism. The long-term cooperation through the view of applied mathematics in Game Theory is best represented through the iterated prisoner's dilemma, and the refined egoism - through emotional intelligence. After a long time of consideration, I came up with the title of my investigation: The meaning of the refined egoism and the prisoner's dilemma in business.

Introduction by Yavor Aleksiev



Classical prisoner's dilemma

The prisoner's dilemma scenario works as follows: Two suspects have been apprehended for a crime and are now in separate rooms in a police station, with no means of communicating with each other. The prosecutor has separately told them the following:

- If you confess and agree to testify against the other suspect, who does not confess, the charges against you will be dropped and you will go scot-free.
- If you do not confess but the other suspect does, you will be convicted and the prosecution will seek the maximum sentence of twenty years.
- If both of you confess, you will both be sentenced to five years in prison.
- If neither of you confess, you will both be charged with misdemeanors and will be sentenced to one year in prison.[1]

Mathematical presentation

Is self-interest the most important?

The dilemma can be presented mathematically with awards instead of punishments. Let's assume there are two players John and Smith. They both are asked to simultaneously write the number 1 or 2. If both of them write 1, they would get 10 dollars. If John writes 2 and Smith – 1, then John wins 50 dollars and Smith – nothing. If John writes 1 and Smith 2, the opposite takes place – the first one gets nothing and the second one wins 50 dollars. And in the end, if both write 2, they win 5 dollars. What should John do? The most probable answer is to write 2. This is due to the following: if Smith writes 1 and John does the same, they will both win 10 dollars, but if John writes 2 and Smith – 1, John will win 50 dollars, so it is better for him to write 2. But what would happen if Smith writes 2? If John writes 1, he gets nothing, but if he writes 2, he will get at least 5 dollars. So, no matter what Smith writes, it is better for John to write 2.

The dilemma is that Smith also thinks the same way because the award is the same. If he is guided by selfish interest, then he will write 2 as well. So, both of them will get 5 dollars. But, if they had cooperated, they would have won 10 dollars.

		John	
Smith		1	2
	1	10 10	50 0
	2	0 50	5 5

The inference of the prisoner's dilemma is that, although cooperation is of interest of everyone, the self-interest usually prevails in harm of the society. The conclusion till the end of the 1970s is deeply depressive. The economy during the last 200 years has been based on self-interest. But, it has become clearer that self-interest is not the optimal solution. The dilemma is that the outcome is inevitable. The evolution backs up this with an example known as "Black queen's effect" or also called by Richard Dawkins, ethologist, evolutionary biologist, author and former Oxford's professor for Public Understanding, "Evolutionary Arms Race". [3]

The Evolutionary Arms Race occurs due to the same reason as in the prisoner's dilemma every individual acts against the collective interest – the incapability of cooperation. It also applies to business where managers nowadays have to work even more and longer than before, which actually does not give them any assets. The managers and the companies have to constantly improve, so to retain their present position. If any organization sets off this tendency – if manages are to retain its market share, despite not improving its product, this clearly means that there is no competitive market. How much can that last?

In the 1970s John Maynard Smith, a theoretical evolutionary biologist and geneticist, uses the theory of games to explain why animals usually do not fight to death. His innovation consists of the frequent iteration of prisoner's dilemma.

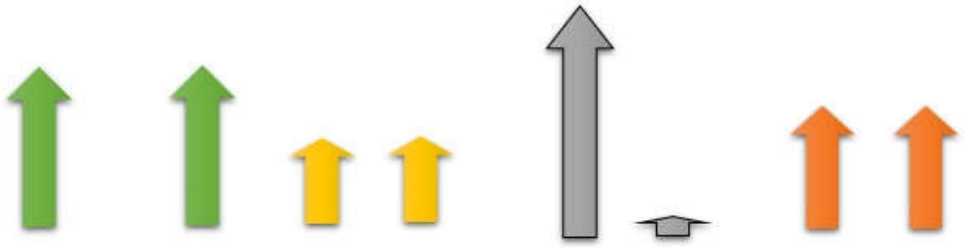
Iteration in Prisoner's Dilemma

In the early 1980s the Professor of Political Science and Public Policy – Robert Axelrod invited theorists from around the world to implement their strategies to solve the prisoner's dilemma in the form of a computer programs. These programs were divided into couples and had to play the prisoner's dilemma approximately 200 times and after that a winner was to be nominated. There were 14 strategies submitted plus the strategy 50/50, which was random. The winner was Anatol Rapoport, a professor of mathematics in the University of Toronto. His winning strategy was very simple: "tit for tat". Axelrod was stunned and decided to rerun the competition with even a greater number of participants, but again Rapoport won using the same strategy. The idea of the strategy was to cooperate at first and then just to copy what the opponent had done in the previous part. Axelrod claimed that tit-for-tat was based on four core principles, part of every effective strategy, connected with the prisoner's dilemma. They are clearness, goodwill, provocation and forgiveness. The thesis "tit-for-tat" is clear in definition – the opponent does not need any particular knowledge or calculations to comprehend what they want. It is well-intentioned, because it does not provide ground for cheating. It is provocative – in a sense that no cheat will go without a punishment, and at the end, it is forgivable, because it is not rancorous and has a desire for revival of cooperation.[4]

One of the most impressive qualities of the strategy tit-for-tat is that it works faultlessly, although it is not capable of handling its opponent in an open race and in the best cases the outcome is par. If Rapoport had participated in competitions where "the winner takes it all", he would have lost or deuce – something which would have put him back in the charts. But Rapoport did not play this game and his results only neared it. The big advantage of the system "tit-for-tat" is that always a good rating is assured. In the worst case, it is outsmarted once and later it comes to a deuce.

The reason for the win of "tit-for-tat" is that it fosters cooperation in every possible opportunity, running away from exploitation and uneven position. The others are too naive or open for exploitation or too aggressive and eventually eliminate each other.[5]

Distribution of results in relation to cooperation, Axelrod



If both cooperated for all 200 rounds, they would each get 600 points.

If both defected for all 200 rounds, they would each get 200 points.

If one cooperated and the other defected the whole time, one would get 0 and the other – 1000, the highest and the lowest possible scores.

If they went back and forth each time, they would each get 500.

Let's say two people have two options and which they pick is going to define how much stuff they get from one another. The numbers in the following tables represent the points.

	Cooperating	Defecting
Cooperating	3 / 3	5 / 0
Defecting	0 / 5	1 / 1

At one-off game defecting has no consequences and it always gives a higher payout.

Cooperate	Cooperate	Defect	Cooperate	Defect	Cooperate	
Defect	Defect	Defect	Defect	Defect	Defect	
5	5	1	5	5	1	22

If always cooperating:

Cooperate	Cooperate	Defect	Cooperate	Defect	Cooperate	
Cooperate	Cooperate	Cooperate	Cooperate	Cooperate	Cooperate	
3	3	0	3	0	3	12

If cooperating and then defecting:

Cooperate	Cooperate	Defect	Cooperate	Defect	Cooperate	
Cooperate	Cooperate	Cooperate	Defect	Defect	Defect	
3	3	0	5	1	5	17

Lining up cooperating and defection:

Cooperate	Cooperate	Defect	Cooperate	Defect	Cooperate	
Cooperate	Cooperate	Defect	Cooperate	Defect	Cooperate	
3	3	1	3	1	3	12

But if what if the person's pick changes according to the other individual's pick. For instance, if one of them starts by cooperating, but always cooperates unless the other one defects and the first one switches to defecting and defects no matter what. This strategy is called the Grudger.

Cooperate	Cooperate	Cooperate	Cooperate	Defect	Defect	Defect	Defect	
Cooperate	Cooperate	Cooperate	Defect	Defect	Cooperate	Defect	Defect	
3	3	3	5	1	0	1	1	17

Always cooperated with Grudger:

Cooperate	Cooperate	Cooperate	Cooperate	Cooperate	Cooperate	Cooperate	Cooperate	
Cooperate	Cooperate	Cooperate	Cooperate	Cooperate	Cooperate	Cooperate	Cooperate	
3	3	3	3	3	3	3	3	24

Always defect with Grudger:

Cooperate	Defect	Defect	Defect	Defect	Defect	Defect	Defect	
Defect	Defect	Defect	Defect	Defect	Defect	Defect	Defect	
5	1	1	1	1	1	1	1	12

From these graphs, it can be summed up that always defecting is not the best strategy.

So, Tit-for-tat is a simple strategy, it cooperates in the first round and from then on, it basically copies what the other person have done the previous round. It reciprocates quickly against the factors. Any strategy against tit-for-tat that tries to take advantage of it, gets instantly punished and put into a bad situation. So, if the other strategy keeps defecting, or even if it tries to go back to cooperating, it would have gained less, than it would have done if it had just kept cooperating with tit-for-tat. If tit-for-tat did not punish, tit-for-tat would have been worse off.

Tit-for-tat punishes:

3	0	1	5	3	12
Cooperate	Cooperate	Defect	Defect	Cooperate	
Cooperate	Defect	Defect	Cooperate	Cooperate	
3	5	1	0	3	12

Mutual cooperation tit-for-tat:

3	3	3	3	3	15
Cooperate	Cooperate	Cooperate	Cooperate	Cooperate	
Cooperate	Cooperate	Cooperate	Cooperate	Cooperate	
3	3	3	3	3	15

Tit-for-tat does not punish:

3	0	0	3	3	9
Cooperate	Cooperate	Cooperate	Cooperate	Cooperate	
Cooperate	Defect	Defect	Cooperate	Cooperate	
3	5	5	3	3	19

Tit-for-tat is never the first to defect. It is best to maximize long-term cooperation. Starts off cooperating and then never defects, unless one needs to punish the other. Because it is just copying, it can never beat the opponent, it can either tie or lose. It depends on whether the opponent defects in the last round where tit-for-tat cannot reciprocate.

Deuce:

0	5	3	0	5	13
Cooperate	Defect	Cooperate	Cooperate	Defect	
Defect	Cooperate	Cooperate	Defect	Cooperate	
5	0	3	5	0	13

Lost:

0	5	3	3	0	11
Cooperate	Defect	Cooperate	Cooperate	Cooperate	
Defect	Cooperate	Cooperate	Cooperate	Defect	
5	0	3	3	5	16

The results of the tournament showed that the entries, which ranked at the top in the tournament, actually did quite well with other successful entries, and thus did not rely for their success merely on their ability to get high scores with unsuccessful rules. While there were a few exceptions, such as rules 5 and 8, most of the top-ranking entries continued to do quite well for very long periods. The results also provided yet another victory for TIT FOR TAT. TIT FOR TAT had a very slight lead in the original tournament, and never lost this lead in simulated generations. By the 1000th generation it was 14.5% of the whole population, followed by the third placed rule at 13.9% and then the second placed rue at 13.1%. And TIT FOR TAT was still growing at .05% per generation which was a faster rate than any other rule.[6]

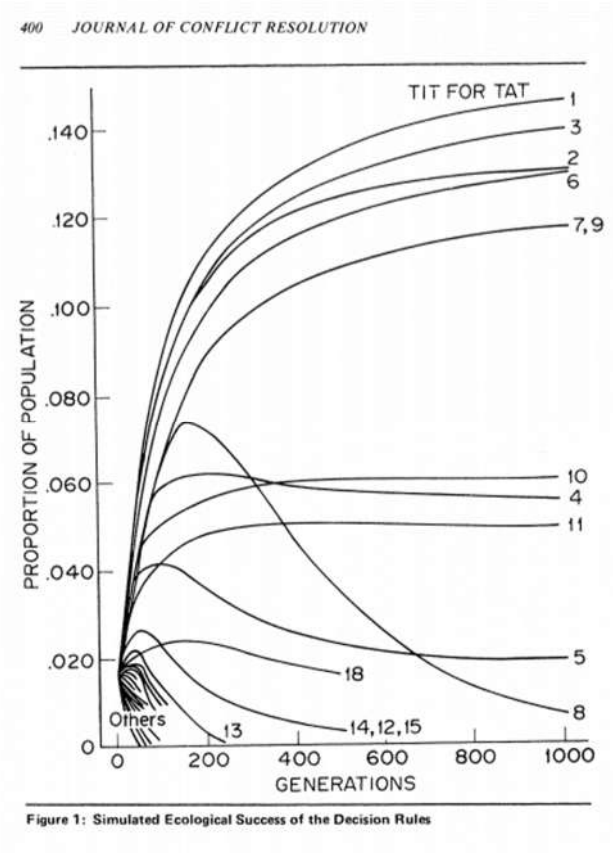


Figure 1: Simulated Ecological Success of the Decision Rules

The long-term profit

Matt Ridley, best known for his writings on science, environment, and economics, said that the most important human ingredient is mutual trust: “Our minds

have been built by selfish genes. But they have been built to be social, trustworthy and cooperative."

The history of the human evolution and the business evolution are connected with a constantly increasing cooperation. Through the years we have developed into a complicated, interconnected system of larger societies and economies, which are characterized by a gradually increasing rate of specialization and trade. Both of them are games with a positive sum. Based on mutuality, they require a habit of cooperation and collaboration for achieving long-term profit. They force us to look beyond the short-term outcomes of who wins in a particular deal. It is not self-sacrifice that they require, but a profound perspective to self-interest and also a habit of daily exchange. They require cooperation – a striving for a personal and corporate prosperity as well as the desire for other individuals, groups and the society as a whole to prosper.

Also, like the iterated prisoner's dilemma, long-term profit is a product of cooperation, not the chase of short-term self-interest. Cooperation is based on mutuality, but it goes much further. Only through generosity, self-denial and fairness it is possible to gain a reward for your cooperation. Like the later versions of the prisoner's dilemma, those prone to cooperation unite their efforts, guaranteeing engagement. [7]

Refined egoism: "the ability to understand others and to attract them for cooperation"

– Karl Albrecht

Statistical investigation

Participants

The investigation was conducted on 24th January 2017 before the beginning of a workshop. In the investigation 32 individuals took part (18 women and 14 men), aged 23 – 25, working in an IT organization. The results of 2 participants dropped out of the analysis due to uncompleted data.

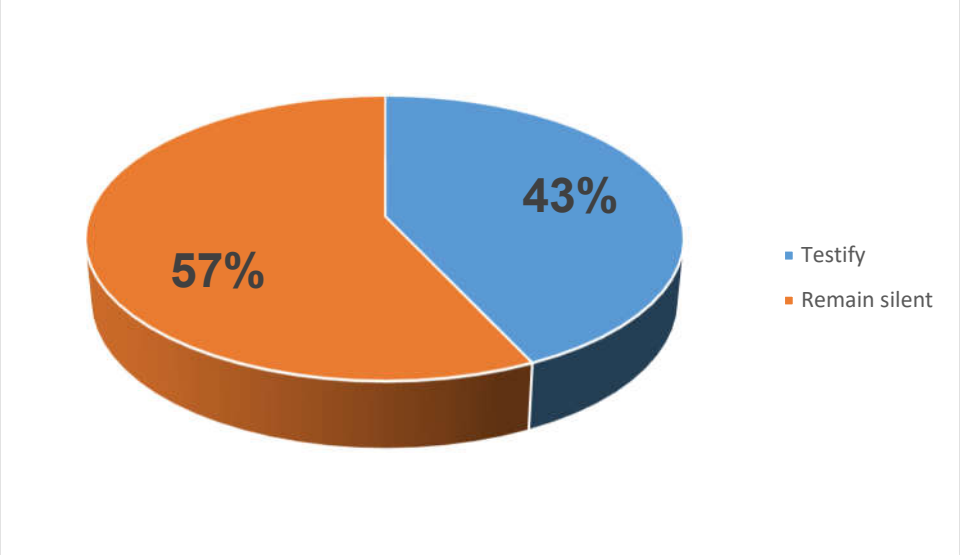
Tools and measures

- Issue – classical prisoner's dilemma
- Quest with 2 items and Likert scale from 1 (never) to 5 (at a very high rate)
- Identification of the participants by gender and age
- Emotional Intelligence Self –Assessment Checklist, by Sterrett EA[8]. 30 items with a Likert scale from 1 (almost never) to 5 (almost always)

Results and analysis

So as far as I have demonstrated that both mathematically and logically the best strategy of a player in the classical prisoner's dilemma is to defect (agree to testify). Of course, I have wondered what solution might be given by people in the business who are not initiated into the logic or algebra of the dilemma and what they might do in such a situation. So, I anonymously asked 30 individuals to answer the prisoner's dilemma. The participants were presented with two options, either to agree to testify or to remain silent.

The results of this investigation are:



As it is shown on the table 43% have made the right decision to cooperate, which for me was a surprise that over half of the participants have not acted logically – that defection leads to a better sentence despite of the opponent's decision. People in Bulgaria do not want (do not have the paradigm and the people's psychology) to cooperate with the law enforcement organs. 57% believe that their partner will do the same as they do - will not betray them. The results are paradoxical from the standpoint of the classical prisoner's dilemma, but it should be taken into consideration that the participants have worked more than 18 months together. As we will see they do not only foresee long-term cooperation but the results of the correlation analysis show a interrelationship despite being weak, between emotional intelligence and the choice made (as we are going to understand later). A conclusion can be made that the solution of the classical prisoner's dilemma into a business environment is influenced by not only the people's psychology but the organization culture, the values and attitude of the people and their experience, naivety and last but not least their emotional intelligence. They were asked about their motivation while choosing whether to testify or not:

- Some of them did not wanted to betray their partner
- Others felt guilt about forcing their partner into a longer prison sentence
- There were some who just wanted to minimize their prison sentence
- Of course, some said that they felt sympathy for their partner, while deciding their destiny

Emotional intelligence

Through the test of Emotional Intelligence – Self-assessment checklist, a normal distribution of the results of the surveyed individuals has have been established and demonstrated on the Curve bell (below). The measures of the mean and the standard deviation are made with MS Excel and they are respectively:

$$\mu = \frac{(\Sigma \times Xi)}{N}$$

μ = 111,07

$$\sigma = \sqrt{\Sigma \times (Xi\text{-}\mu)^2 \div (n\text{-}1)}$$

σ = 14,06

The table on the left shows the number of points that every participant in the survey has achieved. However, in this table the points are shown in ascending order so that to facilitate the creation of the Bell curve. Through the following formula all the points on the Bell curve are found.

$$f(x) = \frac{1}{\sqrt{2 \times \sigma^2 \times \pi}} \times e^{\frac{-(x-\mu)}{2 \times \sigma^2}}$$

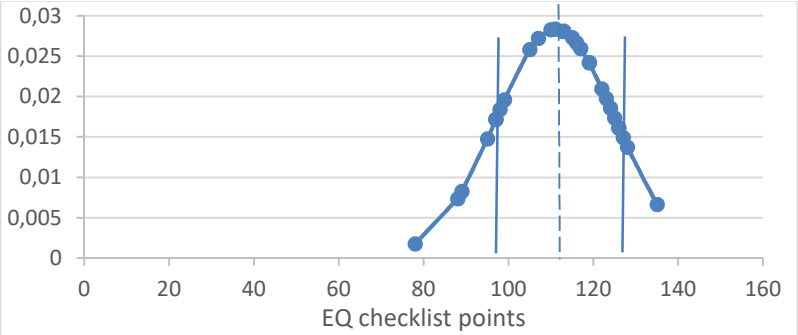
For example, the distribution on the curve of the participant with EQ equals to 78 can be found by the following formula:

$$f(78) = \frac{1}{\sqrt{2 \times 14{,}06^2 \times \pi}} \times e^{\frac{-(78-111{,}07)}{2 \times 14{,}06^2}}$$

For the bringing out of norms I used the two indicators and for the definition of the limit of the low values I subtracted from the mean the standard deviation and for the definition of the limit of the high values I added them up. As it can be seen 23% of the participants are with low EQ, 57% - indifferent, and 20% - with high EQ. A balance of the results of a both male and female observation, would be demonstrated in the correlation analysis.

Bell curve of the Emotional intelligence

The area between 30 points, the minimum achievable points, and 97 points, the difference between the mean and the standard deviation, holds 23% of the surveyed individuals, who show low indicators of EQ. Between 97 and 125 points, the sum of the mean and the standard deviation, are found 57% individuals show indifferent indicators of EQ. In the area between 125 and the maximum number of points – 150, only 20% of the surveyed people can be found, who show high indicators of EQ.



Quest for long-term cooperation

The questions from the quest are directed to searching a long-term cooperation between the surveyed individual and the organization and the people within it. The analysis of the results from the questions show that at an extremely high rate expect to be in the organization after two years, 17% at a high rate expect and 40% at a moderate rate expect. On the question: “Would you recommend this organization as a good place for work?”, 40% have answered at an extremely high rate, 37% at a high rate and 23% at a low rate will recommend the organization.

From these results, it can be summed up that almost two thirds of the surveyed individuals are with a view of long-term collaboration with the organization and the people within it, which is close to their solution of the classical prisoner's dilemma. For verification of what I have concluded I present a correlation analysis.

Correlation analysis

In the table below is presented the correlation analysis between the surveyed indicators for the seeking of the confirmation of the meaning of the prisoner's dilemma and the refined egoism in business. During the process of conducting this investigation I have reached to the conclusion that in business, to look for prosperity, is based on thrust and cooperation. The correlated coefficients in the table show that the date from the prisoner's dilemma has a moderate positive correlation with the perspective of people being part of the organization after two years. The results from the prisoner's dilemma above should be taken as a consideration. We have weak correlation comparing the dilemma and the EQ, and between Q-1 and the motivation for the choice in the classical dilemma. The other coefficients are with very low rates and that is why we can say that there is no relation between them.

	PD Choice	**Why?**	***EQ***	***Q - 1***	***Q - 2***
PD Choice			**0,388561**	**0,523697**	*0,291686*
Why?	**0,813688**		*0,210564*	**0,380526**	*0,156509*
Gender	*0,183483*	*0,189882*	*0,156563*	*0,136902*	*0,164971*

Empirical rules for the interpretation of the correlation coefficient[9]

Value of r		Interpretation of correlation
0.00 to 0.30	(-0.30 to 0.00)	Very weak positive (negative)
0.31 to 0.50	(-0.50 to -0.31)	Weak positive (negative)
0.51 to 0.70	(-0.70 to -0.51)	Moderate positive (negative)
0.71 to 0.90	(-0.90 to -0.71)	High positive (negative)
0.91 to 1.00	(-1.00 to 0.91)	Very high positive (negative)

In the table above is presented the correlation analysis of the results of the Prisoner's Dilemma and the Gender, and the Emotional Intelligence (Refined Egoism) and the two questions of the quest, which are connected to long-term corroboration. The correlation analysis is done through MS Excel which shows and explains us why 57% of the people are willing to remain silent in the classical prisoner's dilemma, because there is actually moderate positive correlation between the choice in the classical prisoner's dilemma and the long-term attitude for corroboration with the organization and its people. Moreover, weak positive correlation between the choice and the EQ, and the explanation of choice and the first question of the quest for long-term collaboration.

The other correlations are extremely weak, which can be understood as there is no correlation between these indicators. One of the important conclusions for this investigation the gender is of no influence to any of the other indicators.

So to confirm the significance of the refined egoism and the iterated prisoner's dilemma I made a correlation analysis between EQ and Q-1.

	Q-1
EQ	**0.75**

From the correlation analysis the highest positive correlation between EQ and the attitude for long-term collaboration are obvious. Analyzing the distribution of the primary data into high and low values on the indicator – EQ, and the connected to them answers of Q-1 of the quest is obvious that the average value of the answers of the surveyed individuals is 4,83. In other words around 85% of the participants with high levels of EQ are to a great extent with an attitude for long-term collaboration. 100% of the people with low levels of EQ are with moderate views of log-term cooperation. These results show that with high levels of EQ the possibility of long-term cooperation is more likely, for the business this is of exceptional importance for its prosperity, profit and for minimizing the expenses connected with the attitudes of people with low EQ about defection.

As a confirmation of my analysis for the importance of the refined egoism are the following surveys.

- In UK's Whitbread group, restaurants with high EQ managers had higher guest satisfaction, lower turnover, and 34% greater profit growth.[10]
- 75% of careers are derailed for reasons related to emotional competencies, including inability to handle interpersonal problems; unsatisfactory team leadership during times of difficulty or conflict; or inability to adapt to change or elicit trust.[11]
- People who accurately perceive others' emotions are better able to handle changes and build stronger social networks.[12]
- The reason for losing customers and clients are 70% EI-related (e.g., didn't like that company's customer service).[13]
- In one year, the US Airforce invested less than $10,000 for emotional competence testing and saved $2,760,000 in recruitment.[14]
- In a multinational consulting firm, partners who showed high EI those who took the training reported significant improvements in their sales performance. Now all incoming advisors receive four days of emotional competence training.[15]
- After supervisors in a manufacturing plant received training in emotional competencies, lost-time accidents were reduced by 50 percent, formal grievances were reduced from an average of 15 per year to 3 per year, and the plant exceeded productivity goals by $250,000.[16]
- Top performing sales clerks are 12 times more productive than those at the bottom and 85 percent more productive than an average performer. About one-third of this difference is due to technical skill and cognitive ability while two-thirds is due to emotional competence.[17]
- Emotions and reason are intertwined, and both are critical to problem solving. Social and emotional abilities were four times more important than IQ in determining professional success and prestige.[18]
- At L'Oreal, sales agents selected on the basis of certain emotional competencies significantly outsold salespeople selected using the company's old selection procedure by $91, 370, for a net revenue increase of $2,558,360. Salespeople selected on the basis of emotional competence also had 63% less turnover during the first year (Spencer & Spencer, 1993; Spencer, McClelland, &

Kelner, 1997, cited in competencies earned 139% more than the lower EQ partners.[19]

- American Express tested emotional competence training with Financial Advisors; trained advisors increased business 18.1% compared to 16.2% for a control group.[20]

Conclusion

In the end fairness and altruism have their limitations. In the long run the successful development of the society needs innovations and changes and they require individualism and will to fight the conventional wisdom and the imposed social norms – qualities that are accompanied by egoism. In this sense, it is needed to be established a balance between self-care and the care for the others. The theorists of mathematical games are not fond of connecting the end result with the influence of the socio-historical or language barriers or with relative values, like round numbers. They believe that to come up to a solution only abstract mathematical facts are required – number of participants in the game, available strategies in them, the individual profit when choosing a strategy. In verification of what this research is about is the opinion of Avinash Dixit and Barry Nalebuff, which is that the result of a game in which live participants take part in, would definitely depend on the socio-psychological sides of the game in particular. This investigation confirmed the significance of the socio-psychological sides in the long-term cooperation in business, like in the iterated prisoner's dilemma and more specifically the role of the refined egoism.

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