

The theory of love & evolution game

Momoi Tominori

(<http://momoitominori.com>)

Introduction

Game theory is Universal study applied to various fields. This theory is applied to the evolutionary biology, too(Evolutionary game theory).

If the purpose of the life is preservation and transmission of an own gene, We can assume that our behavior are all acts based on some strategies.

But in a present Evolutionary game theory, the animal and only a part of behavior of human beings are researched. Because Evolutionary game theory that explains human being's complex action style doesn't exist at present.

But I developed an epoch-making theory that explained man's complex action style. The feature of this theory is a point that one man can exercise plural strategies. Therefore, I wrote this thesis. I named this theory **Love&evolution game theory**.

Four evolution strategies

Man's evolution strategy can be divided into four strategies depending on the rectangular coordinates (refer M.Takezawa.T.Kameda, 2002).

The vector is a desire of the opposite sex ownership and a desire of the opposite sex preference.

I defined the strategy that liberates the desire of the opposite sex ownership and the desire of the opposite sex preference as a **Hawkish strategy**.

I defined the strategy that controls The desire of the opposite sex ownership and liberates the desire of the opposite sex preference as a **Peace dove strategy**.

I defined the strategy that liberates The desire of the opposite sex ownership and controls the desire of the opposite sex preference as a **Bourgeois strategy**.

I defined the strategy that controls the desire of the opposite sex ownership and the desire of the opposite sex preference as a **Saint strategy**.

Hawkish strategy

Hawkish strategy is a strategy that liberates the desire of the opposite sex ownership and the desire of the opposite sex preference. As a result, character that takes hawkish strategy will fight against the same sex. John Maynard Smith defined Hawkish strategy as <strategy that keeps being challenged to a fight until either gets wounded or other party runs away>.

Conflict and strife between people and nations are examples.

By the way, Hawkish strategy is used by people often unconsciously.

Accordingly, even if the ruler is great, the despotic rule gives birth to the tragedy.

Peace dove strategy

Peace dove strategy is a strategy that controls the desire of the opposite sex ownership and liberates the desire of the opposite sex preference. John Maynard

Smith defined Peace dove strategy as <strategy that intimidates. If the other party challenges to a fight, runs away at once>.

However, this definition might be not suitable this time.

Because this strategy doesn't struggle against the same sex, it is disadvantageous for the opposite sex's acquisition. But people can keep the peace of the community while doing communications with opposite sex in this strategy.

The friendship activity in a general community is an example.

Bourgeois strategy

Bourgeois strategy is a strategy that liberates the desire of the opposite sex ownership and controls the desire of the opposite sex preference. John Maynard Smith defined Bourgeois strategy as <strategy in that if one is an owner, one behaves like hawk and if one is an invader, one behaves like the peace pigeon.>

However, this definition might be not suitable this time, too.

Typical example is moneylending. The debtor can obtain money from the creditor temporarily, but later The debtor should keep paying the creditor principal and the interest.

In a word,for the creditor, the debtor is resources.

Only man is using a bourgeois strategy. Therefore, I can say that a bourgeois strategy is an advanced strategy.

Example: All businesses, moneylenders, investments, and speculations, etc.

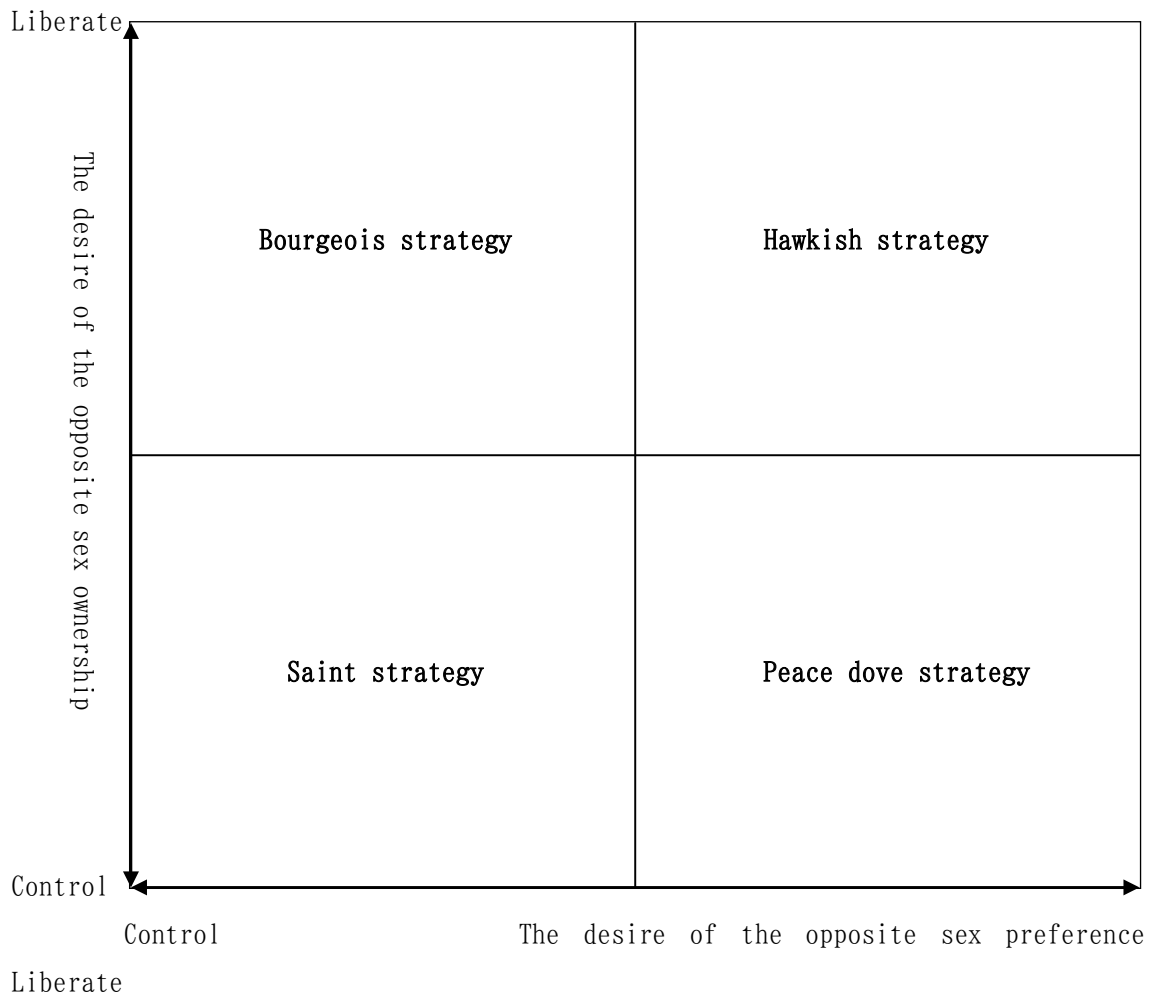
Saint strategy

Saint strategy is a strategy that controls the desire of the opposite sex ownership and the desire of the opposite sex preference. The saint strategy abandons a genital desire and obtains the guarantee of position, honor, and own safety etc.

The saint strategy is an advanced strategy that only human being uses as well as a bourgeois strategy.

Example: Religion and volunteer, etc.

Figure below: 4 strategies of evolution game.



Human being is using four strategies properly according to the occasion and the desire.

Refer to the matrix. I proved by this matrix that human beings are using plural strategies.

16 strategies

I classified human being's strategy into four. These four strategies can be subdivided to 16. Refer to the Figure below. I explain these strategies now.

By the way, In the society there are groups that jointly do the strategy. Therefore, I enumerate the concrete example in all strategies.

The nation is a complex of the group that does different strategy based on land or the race.

Figure below: 16 strategies of evolution game.

Liberate ↑ t h e d e s i r e x e c u t i o n s h i o p p o s i t e ↓ Control	Bourgeois strategy in Bourgeois strategy group	Hawkish strategy in Bourgeois strategy group	Bourgeois strategy in Hawkish strategy group	Hawkish strategy in Hawkish strategy group
	Saint strategy in Bourgeois strategy group	Peace dove strategy in Bourgeois strategy group	Saint strategy in Hawkish strategy group	Peace dove strategy in Hawkish strategy group
	Bourgeois strategy in Saint strategy group	Hawkish strategy in Saint strategy group	Bourgeois strategy in Peace dove strategy group	Hawkish strategy in Peace dove strategy group
	Saint strategy in Saint strategy group	Peace dove strategy in Saint strategy group	Saint strategy in Peace dove strategy group	Peace dove strategy in Peace dove strategy group
	Control	The desire of the opposite sex preference	Liberate	

Strategy in Hawkish strategy group

Strategy in Hawkish strategy group is strategy of the group that allows others to be damaged for an own profit.

Hawkish strategy in Hawkish strategy group

Hawkish strategy in Hawkish strategy group belongs to the hawkish strategy group, and hawkish strategy is done actually.

Example: Military forces, terrorist, and crime syndicate, etc.

Peace dove strategy in Hawkish strategy group

Peace dove strategy in Hawkish strategy group belongs to the hawkish strategy group or affirms hawkish strategy. But it doesn't do a hawkish strategy.

I suppose that people who do Peace dove strategy in Hawkish strategy group are a source of a bullying problem.

Example: Politician who affirms war (Chicken hawk), Military commentator, etc.

Bourgeois strategy in Hawkish strategy group

Bourgeois strategy in Hawkish strategy group belongs to the hawkish strategy group aiming to obtain the resource.

Example: Mercenary, arms dealer, and killer of money work, Burglar and theft, etc.

Saint strategy in Hawkish strategy group

In Saint strategy in Hawkish strategy group, own profit is abandoned and a hawkish strategy is done.

Example: Special attack corps, suicide bombing, religious believer's boxers and volunteer such as military forces, etc.

Strategy in Peace dove strategy group

Strategy in Peace dove strategy group is a strategy of the group that does friendship and the action peacefully based.

Hawkish strategy in Peace dove strategy group

Hawkish strategy in Peace dove strategy group, to defend peace and friendship, a hawkish strategy is done.

Example: The police, guard, the Self Defense Forces, samurai, knight, and amateur athletics, etc.

Peace dove strategy in Peace dove strategy group

Peace dove strategy in Peace dove strategy group does friendship and the action peacefully based.

Example: Family, friend, classmate, relative, circle companion, and hobby companion, etc.

Bourgeois strategy in Peace dove strategy group

In Bourgeois strategy in Peace dove strategy group each resource is acquired by friendship and the action peacefully based.

Example: Political party making, friend making, circle making, joint party manager and go-between, etc.

Saint strategy in Peace dove strategy group

Saint strategy in Peace dove strategy group abandons an own profit and does friendship and the action peacefully based.

Example: Peace activity and friendship activity, etc.

Strategy in Bourgeois strategy group

Strategy in Bourgeois strategy group is an action of the group that aims to increase the ownerships of own money and the property, etc.

Hawkish strategy in Bourgeois strategy group

In Hawkish strategy in Bourgeois strategy group, a hawkish strategy is used to increase the ownerships of own money and the property, etc.

Example: Takeover bid, speculation, cahal and professional sports, etc.

Peace dove strategy in Bourgeois strategy group

Peace dove strategy in Bourgeois strategy group increases the ownerships of own money

and the property, while using the peace dove strategy.

Example: Company operation, businessman, civil servant, part, and part-time job, etc.

Bourgeois strategy in Bourgeois strategy group

Bourgeois strategy in Bourgeois strategy group pursues the purpose to increase the ownerships of own money and the property, etc.

Example: Investment, usurer, and prostitution, etc.

Saint strategy in Bourgeois strategy group

Saint strategy in Bourgeois strategy group is the charity acts by using an own resource. Or, it is the charity acts through an economic activity.

Example: Free contribution, donating, Charity work of foundation and NPO, etc.

Strategy in Saint strategy group

Strategy in Saint strategy group is a group based on the saint strategy that abandons, controls the desire and voluntarily serves others.

Hawkish strategy in Saint strategy group

Hawkish strategy in Saint strategy group belongs to the saint strategy group that abandons, controls an own desire, and serves others, and a hawkish strategy is done.

Example: Crusade, jihad and terrorism of cult religious association, etc.

Peace dove strategy in Saint strategy group

Peace dove strategy in Saint strategy group belongs to the Saint strategy group and does friendship and the action peacefully based.

Example: (The money profit is not intended.)Volunteer work, medical practice, and religious association management, etc.

Bourgeois strategy in Saint strategy group

Peace dove strategy in Saint strategy group does the moneymaking action while belonging to the saint strategy group that abandons, controls an own desire and serves others.

Example: (The money profit is pursued.)Volunteer work, medical practice, and religious association management, etc.

Saint strategy in Saint strategy group

Saint strategy in Saint strategy group pursues the saint strategy that abandons, controls an own desire and serves others.

Example: Jesus Christ, monk who becomes mummy, Martyr and clergy who do not marry, etc.

Male strategy and female strategy

The male strategy and the female strategy are different clearly. This difference originates in male and female biological differences.

Male strategy

Male evolution strategy is belligerent, and a fighting type. Because man's fertility is a diffusion type. The man can leave a lot of descendants of him by sexual intercourse with the woman in a short term biologically.

Let's assume that the man who experienced a sexual awakening at the age of 15 continues the reproductive behavior with five women every day afterwards and longevity is completed at the age of 75. If it is so, $5(\text{Number of women the man has the sexual intercourse with}) \times 365(\text{Days of one year}) \times 60(\text{Years}) = 109500!$

The man can have the sexual intercourse with 109500 women during alive theoretically.

The man can have 21900 babies with women, even if the possibility that the woman gets pregnant by sexual intercourse is 20 percent.

But the population ratio of the woman and the man is almost same.

Therefore, a keen fight happens to men.

Female strategy

The strategy that is basic of the woman is cooperation and communication strategy. Female strategy is done because of woman's biological characteristic.

Female biologic feature is a point that woman keeps bearing the child in the own inside of the body for about 10 months. Naturally, she can give birth to only one man's child in one birth period. Additionally, woman loses childbirth ability by a constant age. The risk of birth is high, too.

Let's calculate the number of children to whom one woman can give birth. Assume that the period from the first menstrual period to menopause is 33 years and 3 months. 33 years and 3 months are 399 months. Period that woman needs for birth is about 10 months. When period to which woman can give birth is divided by Period that woman needs for birth, the number of children to whom one woman can give birth is obtained.

$399(\text{Period to which woman can give birth}) \div 10(\text{Period that woman needs for birth}) = 39.9(\text{The number of children to whom one woman can give birth})$. It doesn't come up to as many as only 40.

To bring up few children safely, the woman is doing the strategy of the cooperation type.

Competing rate differences of man and woman

Let's calculate the competing rate differences of man and Woman. The woman gives birth to one child in 10 months. 10 months is 300 days. The man can have sexual intercourse with $300(\text{Days}) \times 5(\text{Women}) = 1500$ women. And 20 percent (Pregnancy probability of woman) of 1500 (Women) = 300 children can be born theoretically.

But the woman who has childbirth ability is only half a number of people of the man who has childbirth ability.

As a result, competing rate differences of man and Woman is $300 \times 2 = 600 : 1$.

If the woman doesn't impose conditions, woman can get 600 times attention from men.

To fight over the woman, the man is programmed in the gene.

Evolutionarily stable strategy(ESS)

Philosopher Thomas Hobbes expressed fight generated by man's genital instinct as "War of all against all".

In this situation, men repeat the struggle and all killing one another, women cannot safely give birth to the child(child's father is killed, and the pregnant woman is forced to abort). Even if the child is born, male baby is killed.

Therefore, human beings invented an Evolutionarily stable strategy (ESS). Though typical example of ESS is "Marriage", except for "Marriage", there are ESS.

ESS of boyfriend and girlfriend

<She and I are going together,now.><I split up with him.> We often hear these dialogs in the love scene. The relation "Association with lover" means an exclusive interrelation between men and women. This relation is continued to<Separation with lover>(Cancellation of commitment) or <Marriage>(More mutual commitments including relative, etc).

The advantage of the stability strategy "Association" is that exclusive mutual commitment can be built between the man and the woman in the society. This mutual commitment has the meaning that the man and the woman date, are kissing, and furthermore, they will have sex or have already had sex.

The disadvantage of this relation is that because there is no vigor of the law, and ethical vigor is a little, the reproductive behavior cannot be done.

The marital commitment is necessary for the reproductive behavior.

ESS of marriage

the commitment of the man and the woman who give birth to a child, and bring up a child is said, "Marriage". In marital commitment, they make a material contract with the document in the country that belongs, wear the expensive ring(Signaling) and clarified the marriage officially, hold a wedding in the church or the temple and receive a religious, ethical protection and restraint(The divorce is prohibited in Catholicism.).

The marriage is the only method by which birth and bringing up a child can be officially done. The social sanction is added to opposite sex who tries to have a sexual negotiation with married man or woman.

The disadvantage is that when they marry once, they cannot exchange partners any longer. Married people who accomplished the target leaving offspring as the life are considered to be a complete adult and should accomplish a social obligation.

Because the number of divorce and couples who do not give birth to a child even if marrying increase, the system of the marriage is doubted in modern days.

Get a job about pornography

If you pursue sexual pleasure, how if you finds employment in the sex industry or become porno actor or actress? Prostitution is one of the oldest occupations in the history of human beings.

In such environment, you will be able to do sex easily. Sex is made for people as pleasure because of the descendant prosperity. It will be the highest, isn't it?

However, because you cannot receive social trust from a lot of people, the marriage and bringing up a child become difficult.

Get a sacred profession and doesn't give birth to a child - To lose is to win

You who despair of the desire to opposite sex causing a fight, an unavoidable obligation, labor, and unhappiness, the special Evolutionarily stable strategy exists.

Let's enter the so-called sacred profession. If you do so, you end without being tired from money game and trouble over opposite sex. In the world of the religion, the more the person controls one's desire, the more the person is respected, and can succeed. Actually, single through life man can succeed than marrying man in the christianity. However, the person must live while being jealous of the couple who married and gained the child. Though is respected, this is a miserable strategy.

Extra evolutionarily stable strategy

Homosexual ESS

<Because It causes unhappiness, I do not want to associate with opposite sex. However, I want love. I want to do the sex, too.> Such you have the means to become a homosexual person.

Homosexuality has the tradition since ancient Greece. Because two rivals of the opposite sex seizure decreases, The same sexes welcome homosexuality.

However, a homosexual person gets sick of AIDS etc. easily. And If homosexual person tries to approaches the refused same sex by force, it becomes criminality.

Suicide

The strategy of suicide was adopted from ancient times by a lot of people. When the time comes, the person who determined the suicide disappears voluntarily from the world. The poison had been distributed to the applicant of suicide in ancient Greece.

However, the life is a moment compared with the history of space.

I doubt human beings have the necessity for the suicide.

Afterword

This time I explained four basic strategies ,16 subdivided strategies, male strategy and female strategy, and evolutionarily stable strategy.

In any life, everything is not obtained, one obtains, and other one loses at the same time. However, the freedom of choice is given. All are unhappy but are happy.

Ladies and gentlemen, please understand this fact and send the productive life. I pray for your significant love and life.