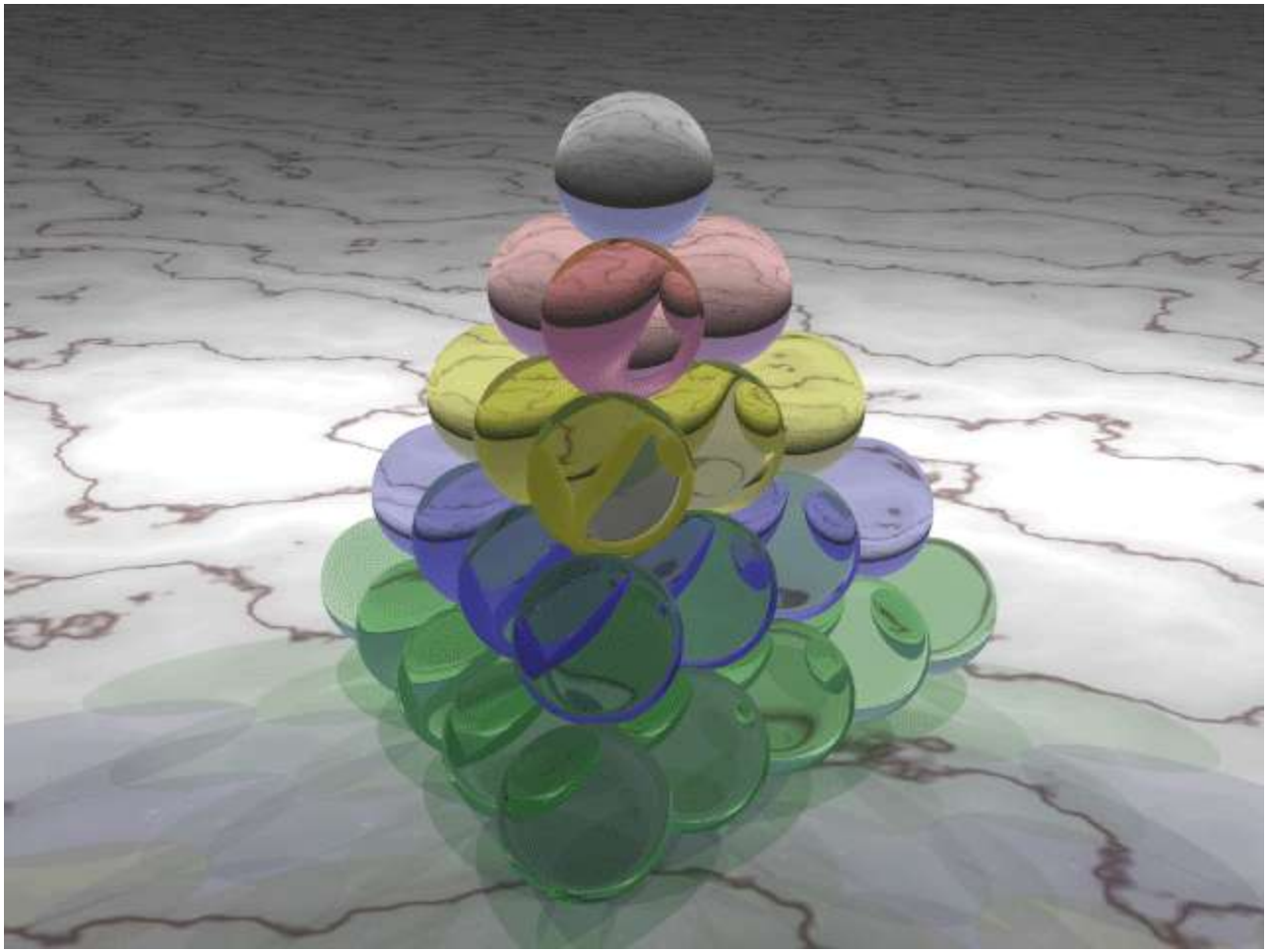
Creativity incentives and research



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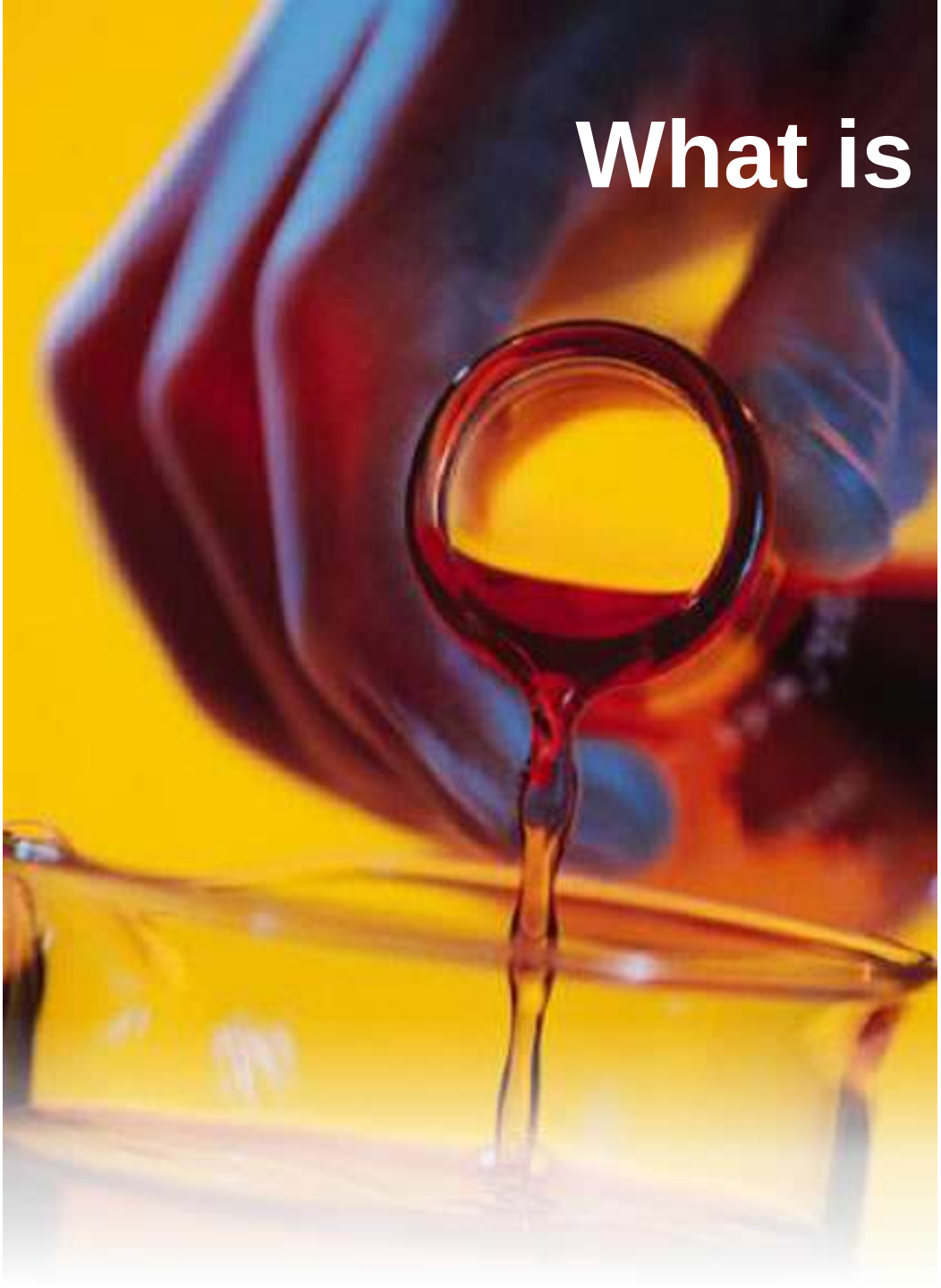
What is creativity?

Creativity is the ability to produce something new, to generate unique approaches and solutions to issues or problems or opportunities.

What is an incentive?

In economics and sociology, an incentive is any factor (financial or non-financial) that enables or motivates a particular course of action.



What is research?

Diligent inquiry or examination to seek or revise facts, principles, theories, applications, etc.; laborious or continued search after truth.

The aim of today's work

To show that in the rapidly changing world the search after truth challenges researchers to use unique approaches.

The plan of our work

1. Management as a social science.
2. The difference between researches in natural and social sciences.
3. Why is creativity needed especially in researches in social sciences?
4. Let’s conduct a small research together.
5. Case study. Researching entrepreneurship.

Social sciences

The social sciences comprise academic disciplines concerned with the study of the social life of human groups and individuals including anthropology, economics, geography, history, political science, psychology, social studies and sociology, business and **management**, education, environmental sciences, government policy, hospitality and catering, human geography, law politics, psychology.

Management

It is the art and science of preparing, organising, and executing human efforts so as to make the best utilisation of the available resources and achieve the organisational objectives (Dash, 2010)

Induction

The process of specific observations of particular instances and adducing of a number of separate facts, particulars in order to formulate a general rule is called **induction**.

The apple which had fallen onto Isaac Newton's head made him think why objects fall down when they are not supported. By observing, describing, explaining and generalizing the law of gravity was discovered.

Deduction

Deduction is inference by reasoning from generals to particulars, or the process of deducing from something known or assumed.

The classic example of deductive reasoning, given by Aristotle, is:

All men are mortal.

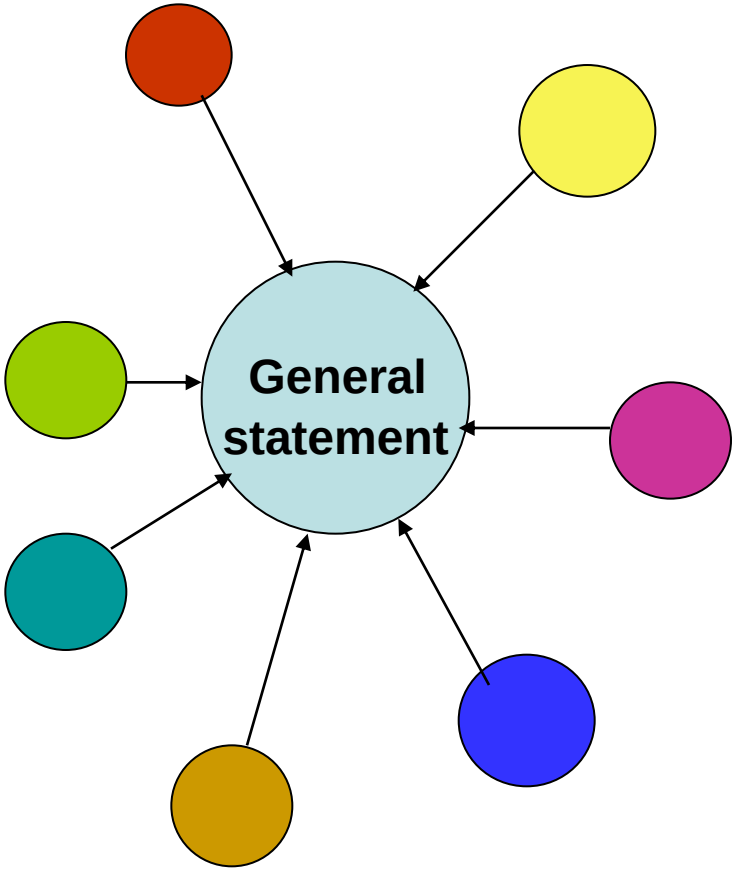
Socrates is a man.

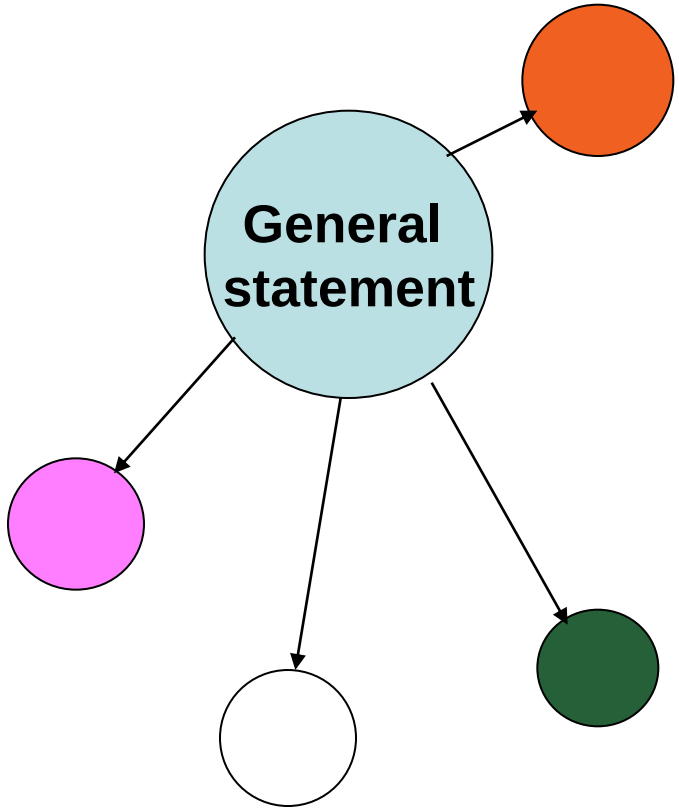
Socrates is mortal.

Induction

Hypothesis

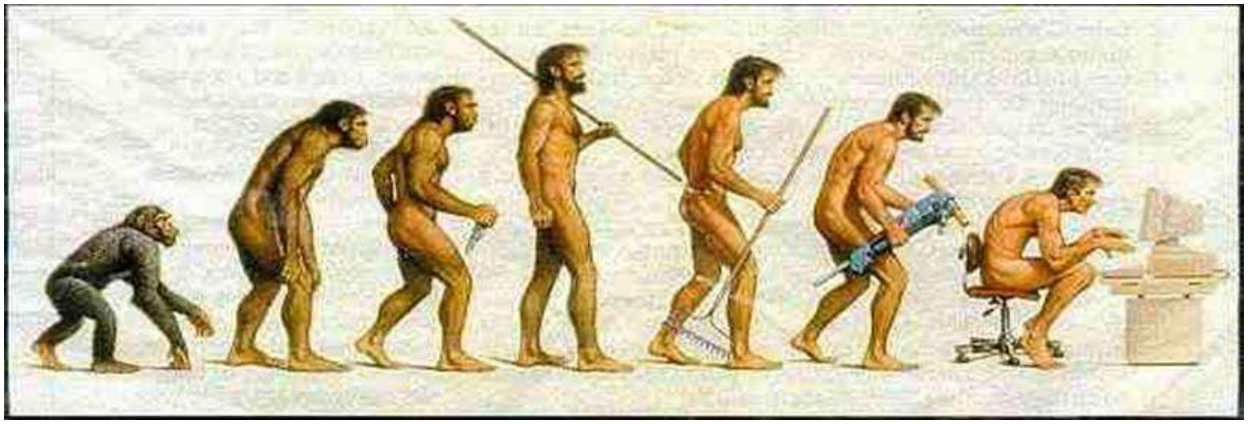
Deduction





Let’s compare natural and social worlds!

The laws of natural world are universal and do not depend on the political, economic and cultural factors.

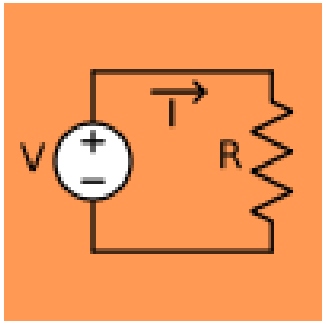


But the laws of the human society, on the contrary, have constantly been changing with the evolution of the man, the level of his education and culture, needs, value system, etc.

Let’s remember laboratory of physics and Ohm's law

The current through a conductor between two points is directly proportional to voltage across the two points, and inversely proportional to the resistance between them:

$$I = V / R$$



How could you check this mathematical equation?

August Comte
Positivism

Positivism states that the only authentic knowledge is scientific knowledge and for that positivism adopts a clear quantitative approach to investigation phenomena.

The process of measurement is central in quantitative research because it provides the fundamental connection between empirical observation and mathematical expression of quantitative relationships.

It’s elementary, my dear Watson!

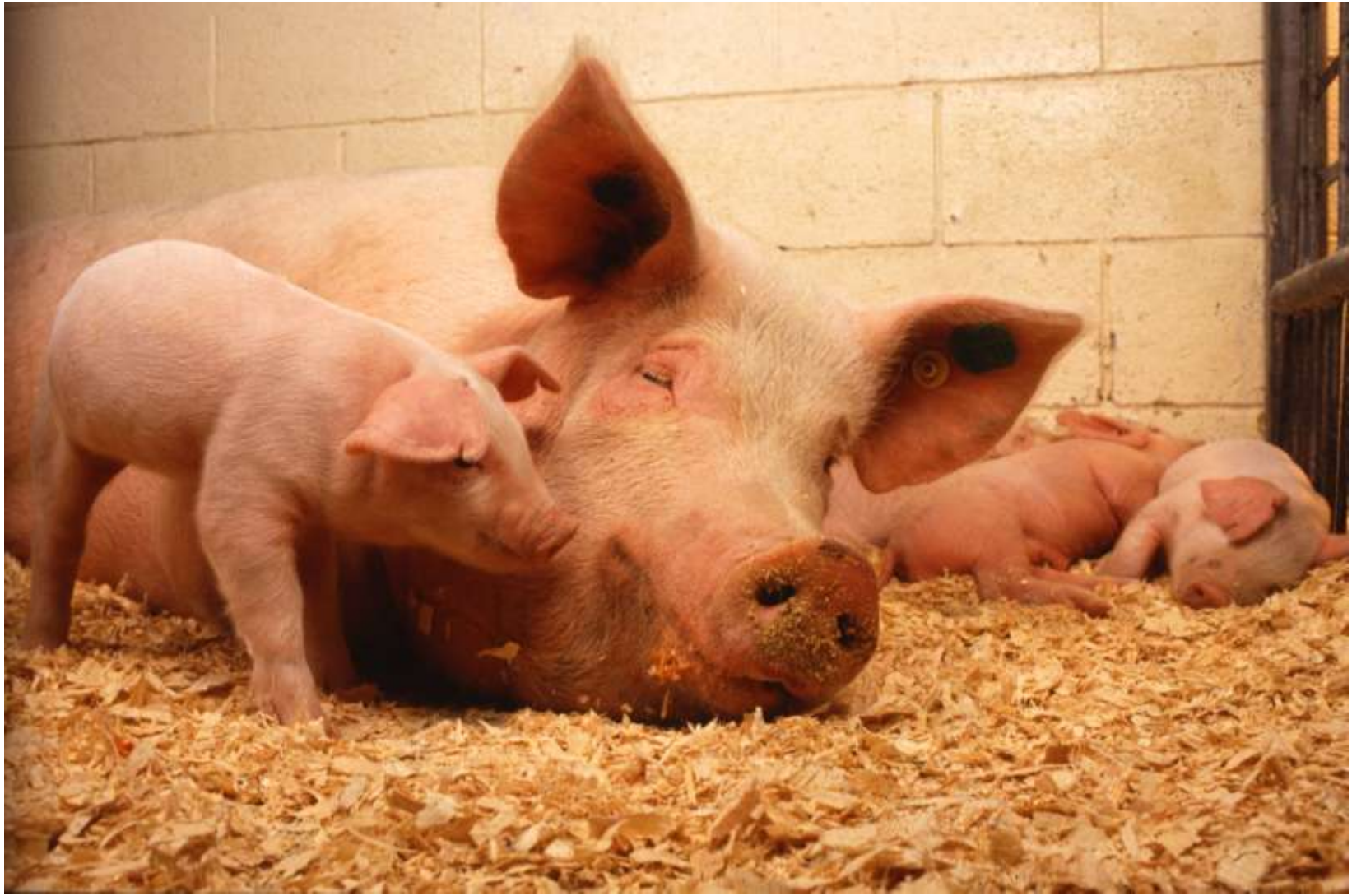
Once Dr Watson visited his fiancée Miss Mary Morstan and when he came back, Holmes, seeing a spot on his sweater, said: “Watson, I see, you had blackberry pie at Miss Morstan’s.” "Holmes, that's incredible! But how do you know?" “It’s elementary, my dear Watson. Again the method of deduction! You accidentally spotted your sweater”

“No, Holmes, you are mistaken this time. I didn’t spot the sweater accidentally at Miss Morstan’s. On the contrary, I bought a piece of blackberry pie in our sweet shop and rubbed a bit of it over my sweater with the intention to show that your method of deduction doesn’t work in all cases!

Why is creativity needed especially in researches in social sciences?

1. Social world is not just a mechanism to be defined in terms of biochemistry and biophysics.
2. Social behaviour is determined by conscience; intention; moral; cultural traditions; individualism; aesthetic, critical, creative and other forms of knowledge and experiences.
3. Social reality can’t be constrained within an analytical and verifiable fragment as it is impossible to study freedom, irrationality and various unpredictable actions that are common in individual human behaviour.
4. The dynamically changing world puts forward new tasks, throws out new challenges and lays new accents on priorities, topicalities, values and meanings.

Pig misunderstanding



sow [sau] – mother pig, to lisp – fail to use the sounds correctly

Creativity for understanding the reality

Howard County Police officers still write their reports by hand, and the data is entered later by a computer tech into their database. One theft report stated that a farmer had lost 2,025 pigs. Thinking that to be an error, the tech called the farmer directly.

"Is it true Mr. Smith that you lost 2,025 pigs?" she asked.

"Yeth." lisped the farmer.

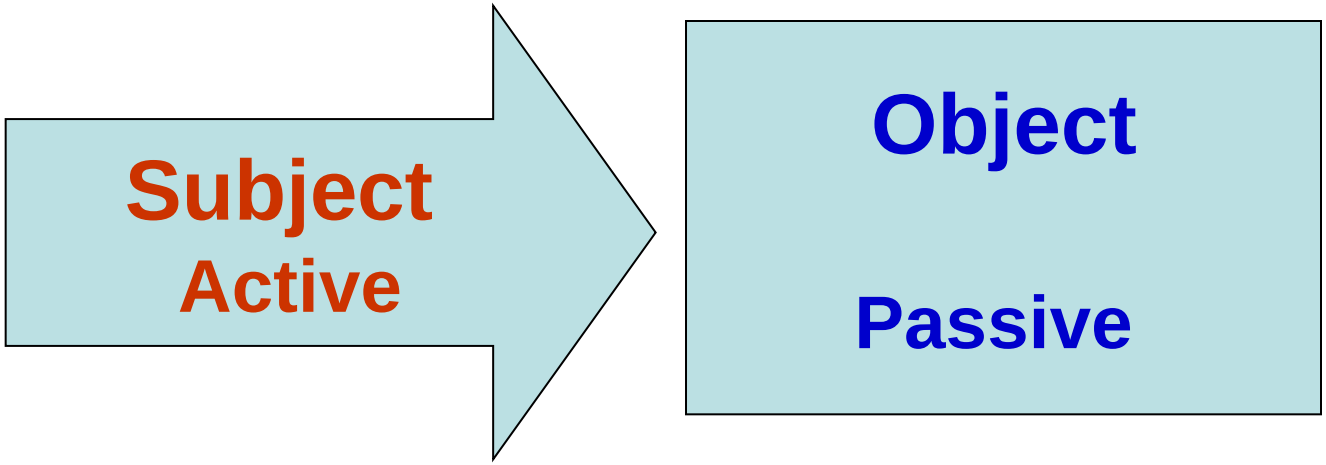
Being a Howard County girl herself, the tech entered: "Subject lost 2 sows and 25 pigs."

Positivism is for studying social objects as natural objects

Positivist approaches to the social sciences assume that things can be studied as hard facts and the relationship between these facts can be established as scientific laws. For positivists, such laws have the status of truth and social objects can be studied in much the same way as natural objects. (Smith, 1998)

Be aware!

The **subject-object problem** is a longstanding philosophical issue. It arises from the notion that the world consists of objects (what is observed) which are perceived or otherwise acted upon by subjects (observers).



Let’s conduct a small research together

We want to study food preferences of David, one of our students.

What should we do?

The comparison of object – subject approaches in social sciences

1. Let's assume David to be an object.

We will carry out certain measurement by registering what David has for the main course at lunch each time coming to the canteen during a whole month (30 days).

The data registered

Mashed potatoes with grated carrots – **9** times

Boiled potatoes with cabbage salad – **8** times

Fried potatoes with beetroot - **6** times

Green beans – **3** times

Buckwheat with cucumber salad – **4** times

Please make a conclusion on the basis of these data!

The conclusion made if David was treated as an object

1) David is a vegetarian;
2) His favorite food is potatoes cooked in various ways.

2) Let's assume David to be a subject

We will interview David explaining to him that we want to study what food students prefer to have in the university canteen.

- Are you a vegetarian?
- No, I am not. I like pork and fish, though I dislike chicken.
- Do you like the way pork and fish are cooked in your canteen?
- I do, but the prices have jumped up recently. Many students can't afford them any more.
- And what about cereals?
- I love rice but I hate the way they cook it in our canteen.
- Do you often take potatoes in the canteen?
- I do. It's just a habit from my childhood. My mum used to cook potatoes rather often as our relatives, who lived in village, regularly sent us a few sacks of potatoes each year.

Please make a conclusion on the basis of these data!

The conclusion made if David was treated as a subject

1) David is not a vegetarian;
2) David likes pork and fish;
3) David doesn’t like chicken;
4) David likes rice;
5) David is just used to eat potatoes.

Let’s compare the results

David – an object

Quantitative research

1) David is a vegetarian;
2) His favorite food is potatoes cooked in various ways.

David – a subject

Qualitative research

1) David is not a vegetarian;
2) David likes pork and fish;
3) David doesn’t like chicken;
4) David likes rice;
5) David is just used to have potatoes.

Let’s recall some aspects of the Soviet economics!

In the Soviet Union the scientific methodology was applied to study as well social spheres of human activities.

Permanent reports on millions of pairs of shoes produced showed the paradox between the real needs of people and the number of inconvenient and unattractive shoes on sale.

The researches must have been mainly quantitative, perceiving consumers as objects.

Decide!

Which of the approaches - quantitative or qualitative research is more reasonable and feasible for social sciences?

Sorry! No universal answer!

The qualitative research gave more information about David's food taste supposing that during the interview he was frank.

But David could be an introvert not willing to share his "food secrets" or could be too proud to disclose his lack of money, or just irritated to answer the current interviewer's boring questions.

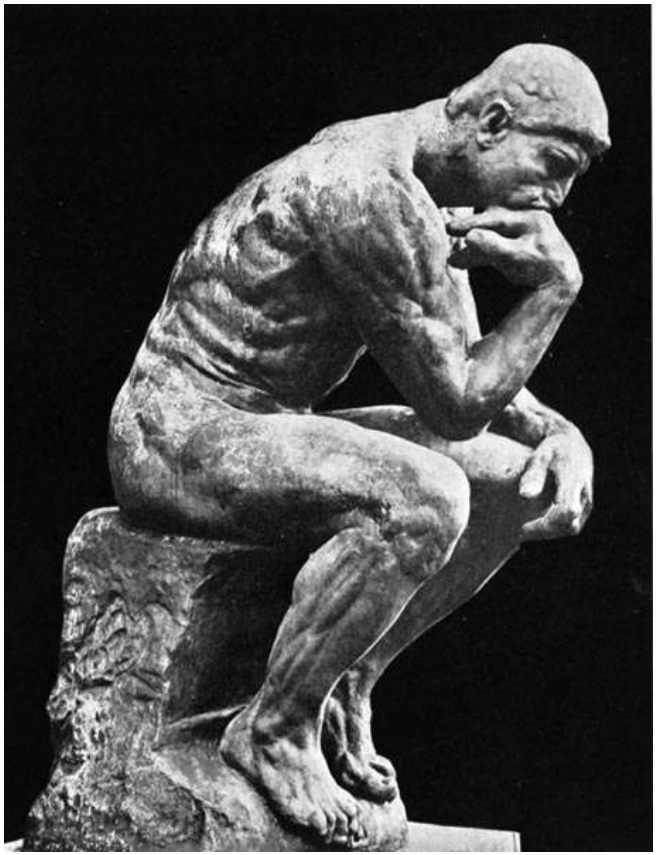
And in each case the result of the qualitative research could have been different from the one described above.

What might have happened if David had wanted to get rid of the interviewer as soon as possible

- Are you a vegetarian?
- Yes.
- Do you like the way pork and fish are cooked in your canteen?
- I don’t know, I don’t eat meat.
- And what about cereals?
- Sometimes I have some.
- Do you often take potatoes in the canteen?
- Not so often.

The new conclusion made on the basis of the qualitative research after the second version of the interview

1) David is a vegetarian. – It’s not true as in reality he eats pork and fish.
2) David has potatoes in the canteen not so often. – It’s not true as 23 lunches out of 30 were made of potatoes.



Dilemma!

How should researches in social sciences be conducted?

Neither qualitative nor quantitative research separately can fully guarantee the validity and reliability of results in the social sciences.

Only creatively mixed qualitative and quantitative researches can bring us closer to the real picture of the social world.

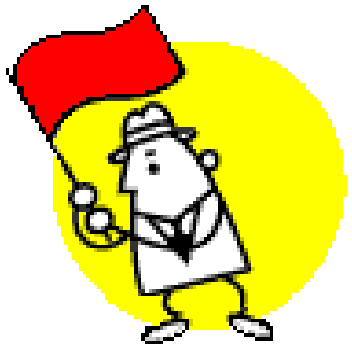
Let’s juggle with figures

Let us imagine that we are conducting a quantitative research in the result of which we calculated 96 % for one of the characteristics of the object under exploration.

Can we approximate 96 % till 100 % and state that this characteristics is typical for the object?

An interesting scientific fact

Robert Waterston, the head of a scientific team of the University of Washington (UW), Seattle, confirms in *Nature* the oft-cited statistic that **the total genetic difference between humans and chimpanzees, in terms of number of bases, sums to about 4%** of the genome (http://www.ridgenet.net/~do_while/sage/v10i1f.htm).



One of the characteristics of a good research

The internal validity of research refers to the likelihood that apparent relationships among variables are genuine and are not, for instance, the result of some other undetected factors.

Example: Let us imagine a situation that a group of students of the first course showed more enterprising capability than a group of students of the third course. Then we conclude that the longer students study in the university, the less enterprising they become.

Does this conclusion have high internal validity?

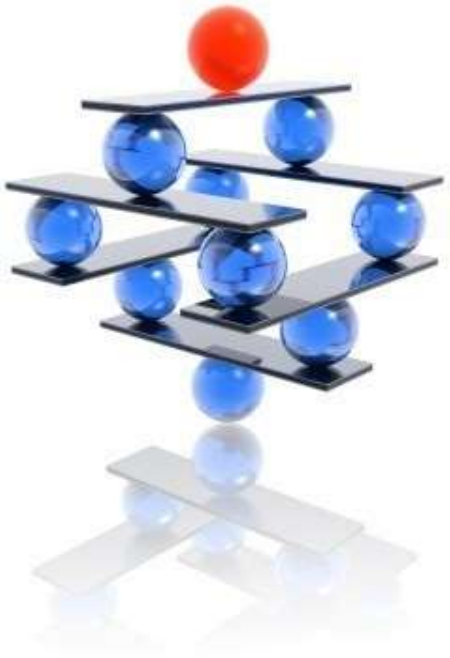
The boy is going to eat the panda. Internal validity?!

Case study

Paradoxes in entrepreneurship research

Character Traits of Entrepreneurs

Dominant, Considerate, **Controlled**, **Reserved**, Curious, Organized, Decisive, Persuasive, Energetic, Easygoing, Intellectual, Stable, Sincere, Modest, Logical, Loyal, Quick, Involved, Observant, Quiet, Confident, **Bold**, Understanding, Ingenious, Efficient, Diplomatic, Stimulating, Open-Minded, Perceptive, Practical, Painstaking, Serious, Persevering, Cheerful, Persistent, **Idealistic**, Friendly, Patient, Thoughtful, Calm, Dependable, Objective, Clear-thinking, Conscientious, Tactful, **Independent**, Forward-looking, Soft-spoken, **Sensitive**, Disciplined, Mature, Responsible, Analytical, Imaginative, **Creative**, **Frank**, Committed, Determined, Factual, Sympathetic, Enthusiastic, **Realistic**, Reliable, Thoughtful, Agreeable, Systematic, Cooperative, Intelligent, Adaptable, Warm, **Tolerant**, Mainstream, Scientific, Outgoing, Goal-oriented, Trouble-shooter, Effective, **Conservative**, **Innovative**, Gracious **(*Singer & Bloch, 1990).***



Paradoxes in entrepreneurship research

The role of education in entrepreneurship

Many successful entrepreneurs don't have any economic or entrepreneurial education or even are not educated at all in the traditional sense of it (UNESCO, 1994; McKenzie et al., 2007; Bridge, 2005).

And on the contrary, many students who studied entrepreneurship and economics in higher educational institutions don't have entrepreneurial behaviours in the result of their education (Harvard Business School, 2008; Wilson, 2007).

Theories and counter theories

Entrepreneurs have a higher need for achievement than non entrepreneurs (McClelland, 1961).

Not the achievement motivation but self-respect, innovation and self- control make the most distinguishing characteristics of entrepreneurs (Robinson et al., 1991).

Entrepreneurship starts with risk taking (Knight, 1942; Hornaday & Bunker, 1970; Rushing, 1999; Bosma et al, 2002).

Entrepreneurs minimize it to such an extent that they don't ever have to take risks at all (Drucker, 2007; Taffi, 1981; Gibb, 2007; Korunka et al, 2003; Davies, 2004; Brockhaus, 1982; Palmer, 1971)...

Contradictions in entrepreneurship research

Many researchers have tried to find out the most specific profiles of entrepreneurship to create concise theories but there always have been some other counter theories showing each other's restrictions. They argue that entrepreneurship is:

process;

individual's different qualities;

achievement motivation;

personality traits;

skills;

capabilities;

knowledge;

attitude;

risk taking;

behaviour;

competence;

risk taking.

Which of these categories is entrepreneurship in reality?

What is entrepreneurship?

Entrepreneurship is not capabilities;

entrepreneurship is not knowledge;

entrepreneurship is not risk taking;

entrepreneurship is not achievement motivation;

entrepreneurship is not personality traits, etc.

if each of them is considered as a substitute for entrepreneurship (this conclusion was made on the basis of comparative analysis of contradictory theories and conclusions made by authorities in entrepreneurship research)!!!

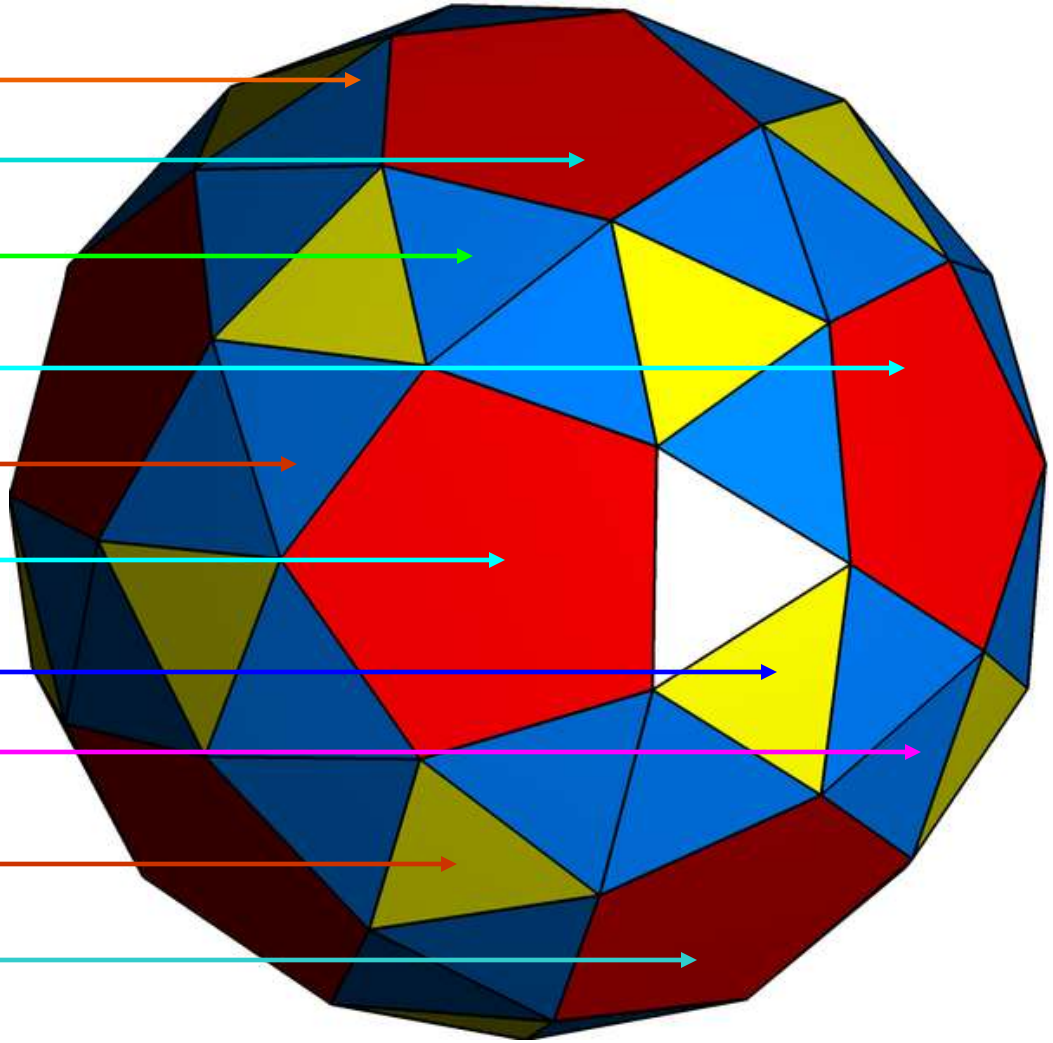
The holistic approach to the research of the matter of entrepreneurship in the doctoral thesis "The development of students' enterprise in study process"

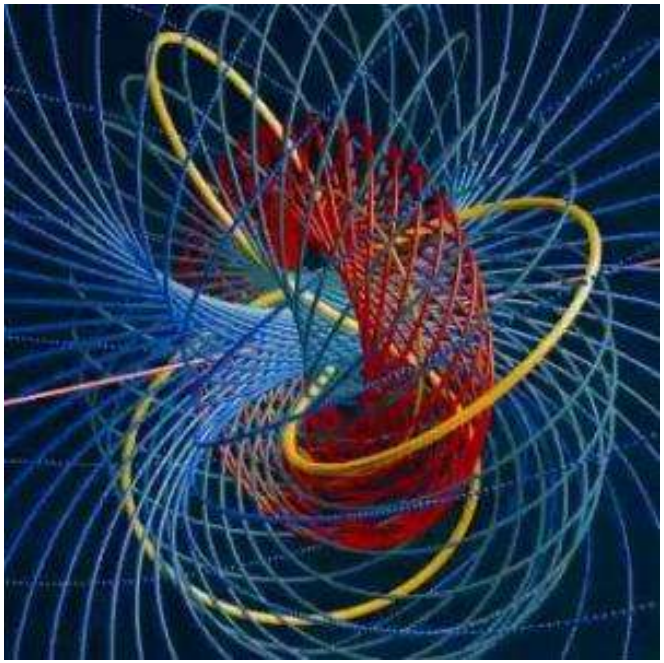
(Karine Oganisjana)

Entrepreneurship is a dynamic system and it must be considered holistically. For that it's not necessary to decide which of the entrepreneurship categories is better and which of the theories is more precise for disclosing the matter of entrepreneurship. It's more important to maximally integrate these positions as they characterize different sides of a multi-facet phenomenon.

Entrepreneurship as a dynamic system

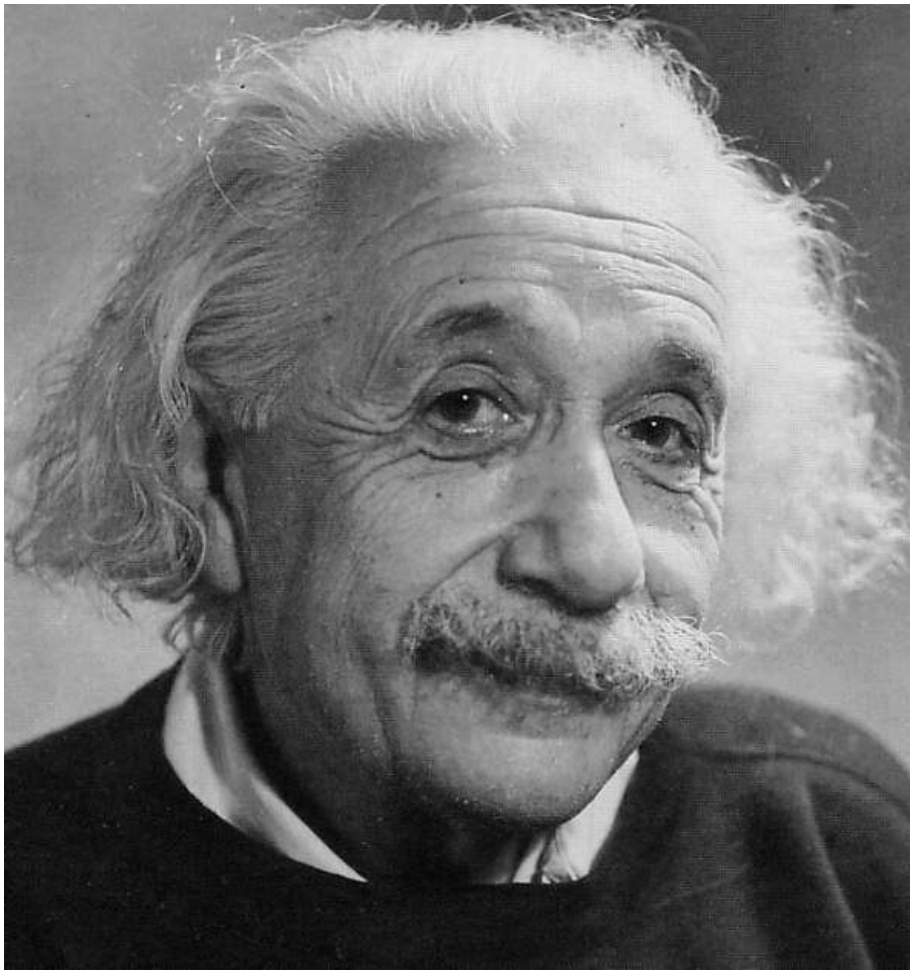
Traits
Skills
Attitude
Motivation
Emotions
Cognition
Needs
Capabilities
Learning
Behaviour





The definition of entrepreneurship, created in the PHD research "The development of students' enterprise in study process"

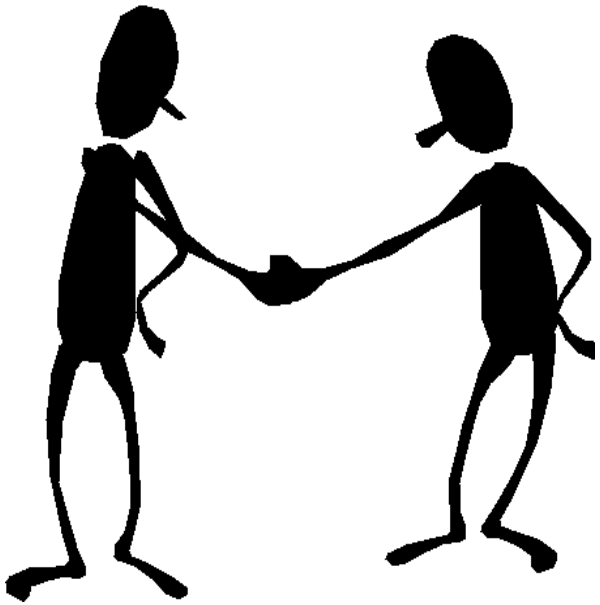
Entrepreneurship is a dynamic system of individual's causally interrelated personality traits, motivation, cognition, needs, emotions, capabilities, learning, skills and behaviour, on the basis of which an individual or a group of individuals interact with the context for identifying, generating and realizing opportunities into new values (Karine Oganisjana, 2009).



You can never solve a problem on the level on which it was created.

Albert Einstein

Thank you for attention!



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