

Questionnaire *What do you know about science and how do you perceive science*

The survey you are about to complete forms part of the research project Identification of Scientific Contexts in Society: Tools and Citizens (SCIxSOC). We most sincerely thank you for your participation. It will be used for a scientific study in the field of teaching science. We guarantee you absolute anonymity and secrecy of your replies in the strictest fulfilment of the laws on statistical secrets and personal data protection. The replies shall be codified and shall be recorded without indications that allow one to recognise the respondent.



Location questions

Remember that this survey is anonymous and confidential. Your professor will not know what you have answered.

L.1. To start, please tell us what qualification you are studying for.

Infant's Education

Primary Education

Pedagogy

Double Degree. Infant's-Primary

Master in Secondary

Double Degree. Infant's-Pedagogy

Double Degree Primary-Pedagogy

Other

L.2. At which university?

CEU San Pablo, Andalucia

Complutense University of Madrid

University of Castilla - La Mancha

University of Granada

University of Valladolid

L.3. In which city and on which campus are you studying it?

L.4a. And in which year? (the highest in which you are studying any subject)

1st of Degree or Double Degree

2nd of Degree or Double Degree

3rd of Degree or Double Degree

4th of Degree or Double Degree

5th of Double Degree

Master in Secondary

L.4b. Please tell use the number or letter in your group or class on that course

[For example, "A" if you are in "2.A", or "M1" if you are in "3rd of Morning A"]

Central questions

The following questions ask your opinion; no answers are correct or not.

Q.1. To know, we would like to know if you are very slightly, slightly, somewhat, fairly interested or very interested in the following subjects.

	very slightly interested	slightly interested	somewhat interested	fairly interested	very interested
Food and consumption					
Science and technology					
Cinema, art and culture					
Sports					
Economy and companies					
Medicine and health					
Environment and ecology					
Education					
Paranormal phenomena and occultism					
Politics					
Celebrity related					

Q.2. Now we would like you to tell us whether you consider yourself **very little**, **little**, **somewhat**, **quite** or **very well informed** about each one of those matters.

	Very little informed	Little informed	Somewhat informed	Well informed	Very well informed
Food and consumption					
Science and technology					
Cinema, art and culture					
Sports					
Economy and companies					
Medicine and health					
Environment and ecology					
Education					
Paranormal phenomena and occultism					
Politics					
Celebrity related					

Q.3. Of the following **activities**, could you tell us which you have performed in the last 12 months?

	I have not done it	1 or 2 times	3 or 4 times	5 or 6 times	7 or more times
Visiting museums or art exhibitions					
Visiting science and technology museums					
Visiting historic monuments					
Visiting zoos or aquariums					
Using libraries					
Visiting natural parks and protected natural spaces					
Going to the theatre, cinema, concerts					
Attending any activity during the Science Week					

Q.4. We shall now show you different **communication media**; we would like to know through which media you get information regarding scientific and technology matters.

Q.4a. ...in **first** place

Q.4b. ...in **second** place

Q.4c. ...in **third** place.

	1st	2nd	3rd
Internet (Webs, social media, digital press)			
Books			
Written press			
Radio			
Scientific dissemination magazines			
Weekly magazines			
Television			
Personal environment, friends, family			
School, institute, university			
Conferences, seminars, congresses			
Workplace			
Specialised stores			

Q.5. [THOSE WHO HAVE ANSWERED “INTERNET” IN Q.4] [self-administered, check]

If you have replied that you obtain information about science and technology over the Internet, please let us know through which specific media:

	Yes	No
I have not replied “Internet”		
Blogs / Forums		
Social media (Facebook, Twitter, etc.)		
Internet newspapers (El País, El Mundo, etc.)		
Webs specialised in science and technology		
Podcasts, radio on Internet		
Videos (Youtube or similar)		
Wikipedia		
WhatsApp, Telegram or similar		

Q.6. [THOSE WHO ANSWERED “SOCIAL MEDIA” IN Q.5] [self-administered]

You have replied that you obtain information on science and technology on the Internet through social media. Tell us through which specific media.

	Yes	No
I have not replied “social media”		
Facebook		
Twitter		
Instagram		
Linkedin		
Others		

Q.7. If you had to make a balance regarding science and technology taking into account the positive and negative aspects, which of the following aspects represents your opinion best?

The benefits of science and technology are greater than their harm.	
The benefits and harm of science and technology are balanced .	
Harm from science and technology are greater than the benefits.	

Q.8. If you had to make the same balance regarding some **aspects** of science and technology, which of the following options would best show your opinion?

	The benefits exceed the harm	Benefits and harm are balanced	Harm exceeds the benefits
Economic development			
Quality of life in our society			
Security and protection of human life			
Conservation of the environment and nature			
Dealing with illnesses and epidemics			
Food products and agricultural production			
New job creation			
Increased individual liberties			
Closing the gap between rich and poor countries			
Personal data protection and privacy			

Q.9. If you had to establish that balance regarding **specific applications** in science and technology, which of the following options would show your opinion best?

	The benefits exceed the harm	Benefits and harm are balanced	The harm exceeds the benefits	I do not know that application
Growing genetically modified plants				
Cloning				
Nuclear energy				
Stem cell research				
Fracking				
Mobile telephony				
Drones				
Artificial intelligence				
Animal experimentation for medical purposes				
Wind turbines or generators				
Robotics in the workplace				

Q.10. We shall now show you some terms. How much do you associate each of these with science and technology, **totally**, **fairly**, **little**, or **absolutely nothing**?

	Totally	Fairly	Little	Absolutely nothing
Progress				
Dehumanisation				
Wealth				
Inequality				
Wellbeing				
Risks				
Opportunities				
Threats				

Q.11. We now offer you a series of affirmations regarding science and technology. Please tell us your level of agreement with each one:

	Very much agree	Agree	Disagree	Very much disagree
Science and technology make our life more healthy, easy and comfortable				
Science and technology may solve nearly every problem				
Science and technology have an important role in economic and industrial development				
I would support the Government investing more in scientific and technological research				
It is better for decisions in scientific and technological policy to be made by experts instead of the public				
Most environmental issues may be resolved using technology				

Q.12. The following is another series of sentences. We would like you to tell us if you **totally disagree**, **fairly disagree**, **neither agree nor disagree**, or **totally agree** with each one of them.

	Totally disagree	Fairly disagree	Neither agree nor disagree	Fairly agree	Totally agree
We cannot trust scientists to tell the truth if they depend on private funding					
Scientists do not allow those funding them to influence the results of their work					
Restrictions should not be imposed on new technologies until it is scientifically proven that they may cause severe harm to human beings or the environment					
If the consequences of a new technology are unknown, one should act cautiously and control their use to protect health or the environment					
Scientific knowledge is the best basis to prepare laws and regulations					
In preparing laws and regulations, values are as important as scientific knowledge					
It is best to leave decisions on matters of general interest related to science and technology to the experts					
Citizens should have a more important role in decisions on science and technology that affect them directly					
Science and technology are the maximum expression of prosperity in our society					
Science and technology are a source of risks for our society					

Q.13. What **level of scientific and technical education** would you say you have received in your life?

Very high	
High	
Normal	
Low	
Very low	

Q.14. You must now choose between the pair of statements: please tell us which you think is the correct one. Reply from your knowledge and do not ask your colleagues (this is not an exam).

In this case, there are correct answers, but this is not an exam.

The Sun revolves around the Earth.			The Earth revolves around the Sun.
Antibiotics cure inventions caused both by viruses as well as bacteria.			Antibiotics cure infections caused by bacteria.
The continents have always been and will be in movement.			Continents always remain in the same place.
Laser rays operate by concentrating sound waves.			Laser rays operate by concentrating waves of light.
The first human beings lived at the same time as the dinosaurs.			Human beings have never lived with dinosaurs.
When a person eats genetically modified fruit, their genes may also be modified.			Eating genetically modified fruit does not influence the genes of the person who eats it.
The present climate change is a consequence of the hole in the ozone layer.			The present climate change is mainly due to accumulation of greenhouse gases.
The number pi (π) is usually applied, among other things, to manufacture tyres.			The number pi (π) is the relation between the legs and hypotenuse of a triangle.

Q.15. Please tell us if you identify with each one of the following statements: Do you identify **very little, a little, somewhat, fairly** or **a lot** with what is said?

	Very little	A little	Somewhat	Fairly	A lot
I believe in paranormal phenomena					
Acupuncture works					
What is predicted in horoscopes happens					
Homeopathic products are effective					
I trust healers					
There are numbers and things that bring you luck					

Q.16. And to conclude this part, we would like you to choose between pairs of statements again. Remember this is not an exam and respond from your knowledge. Once more, there are correct answers here but we are not evaluating you for the course.

Between two elementary particles of matter, there cannot be more matter.			There is more matter between two elementary particles of matter.
There may be movement without applied force.			If there is no force there is no movement.
Oxidation is only inherent to metals.			Apart from metals, oxidation takes place in other substances.
Heat cannot be stored.			Bodies store heat.
When a body dilates, it weighs more.			A dilated body weighs the same as before dilating.
Whenever heat is applied, the temperature			Heat may be applied without the

increases.			temperature varying.
Electric current remains constant during its whole route through a circuit.			Electric current wears out as it runs through the elements of a circuit.
Only some metals are attracted by magnets.			Magnets attract all metals.
Air only exerts pressure when it moves			Air always exerts pressure, even though it is not moving.
Bodies store force.			Force cannot be stored.
Plants produce oxygen, but they do not consume it.			Plants produce and consume oxygen.
The greenhouse effect is always harmful to life on Earth.			The greenhouse effect is necessary for life on Earth.
Rocks are continually formed and destroyed.			Rocks do not alter substantially after being formed.
Magma comes from the layers nearest to the surface of the Earth.			Magma comes from the core of the Earth.
The seasons are due to the nearness or farness between the Sun and the Earth.			The seasons are due to the angle at which the Sun's rays strike the Earth.
The number of chromosomes in daughter cells after mitosis is equal to those in the mother cell.			The number of chromosomes of the daughter cells after a process of meiosis is equal to that of the mother cell.
Corals are marine animals.			Corals are marine plants.
Sexual reproduction takes place in plants and animals.			Sexual reproduction only takes place in animals.
Chemical processes are always of an artificial kind.			Chemical processes may be artificial or natural.
Plants and animals adapt themselves and modify the ecosystem they live in.			Plants and animals adapt themselves to the environment they live in.
In chemical reactions, some atoms disappear and transform themselves into others.			In chemical reactions, atoms do not disappear, they just reorganise themselves.
The mass of an atom is concentrated in a very small nucleus.			The mass of an atom is uniformly distributed.
Most water on the planet Earth is fresh water.			Most water on the planet Earth is salty water.
When sugar is dissolved in water, we obtain a new substance.			When sugar is dissolved in water, we still have sugar and water.
Fossils are petrified remains of animals from the past.			Fossils are remains of biological activity from the past.
Viruses are not destroyed by antibiotics.			Viruses are combated by antibiotics.

Last questions.

Very few to go.

D.1. Could you tell us your gender?

Male

Female

D.2. Age (in years)

D.3. State which is closest to your present situation:

I live with my parents or guardians	
I live with relatives, but away from my parents' home	
I live in a university residence or similar	
I live in a shared flat with other students	
I live alone	

D.4. State your situation up to beginning university: *in my family's home ...*

...I have lived with both my parents up till now.	
...I have lived with my father or mother up till now.	
...I have lived with my guardians or in other circumstances.	
I have lived independently for some time.	

D.5. How many brothers and sisters do you have?

1

2

3

4

5

More than 5.

D.6. The expressions left and right are normally used when talking about politics. On the following scale, left-wing begins at 1 and right-wing is 10. Which box would you place yourself in?

Left					Right				
1	2	3	4	5	6	7	8	9	10

D.7. Before beginning this degree course, what was your academic level?

Secondary or Vocational Training	
Incomplete university (this or another Degree)	
Full university (Degree or equivalent)	

D.8. How do you consider yourself in religious matters?

Practicing Christian	
Non-practising Christian	
Believer in another religion	
Indifferent or agnostic	
Atheist	

D.9. At present, adding up all the members of your household and for all items, what is the average **monthly income**? Do not provide an exact amount; state the range you are in:

You have no income	
Less than or equal to €300	
From €301 to €600	
From €601 to €900	
From €901 to €1200	
From €1201 to €1800	
From €1801 to €2400	
From €2401 to €3000	
From €3001 to €4500	
From €3001 to €4500	
More than €6000	

D.10. What is your present labour status, *in general terms*?

I do not work. I just study	
I work a few hours a week, or during the holidays	
I work on a part-time contract	
I work on a full-time contract	

D.11. Which of the following electronic appliances do you usually have available in your home?

	Yes	No
Computer		
Internet or WiFi connection		
Subscription cable television		
<i>Tablet</i>		
<i>Smartphone</i>		

D.12. Province of residence of your family (or your own) regardless of academic year.
[There is a fold-down or list with a numerical code to choose the province]

[D.13. Size of the habitat]

Less than 10,000 inhabitants	
From 10,001 to 20,000 inhabitants	
From 20,001 to 50,000 inhabitants	
From 50,001 to 100,000 inhabitants	
From 100,001 to 500,000 inhabitants	
More than 500,000 inhabitants	

Many thanks for your collaboration!

If you would like more information about the results of this survey, write to us to
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