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Report info

Report date:	Thursday, September 21, 2017 4:28:58 PM MEST
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Stop date:	Wednesday, May 31, 2017 11:59:00 PM MEST
Number of completed responses:	97

Question 1

Disclaimer

This document is a working document of the Committee on Legal Affairs of the European Parliament for consultation and does not prejudge any future decision to be taken by the European Parliament. Only responses received through this online questionnaire, subject to the exception for people with disabilities and their representatives, will be taken into account and included in the report summarising the responses. Please read User Guide before starting to fill this questionnaire.

In case of any questions related to this public consultation please contact: Consultation.Robotics@europarl.europa.eu .

It is important to read the specific privacy statement available on the public consultation website for information on how your personal data and contribution will be used.

Question 2

Executive Summary

Robotics and artificial intelligence (AI) have become one of the most prominent technological trends of our century. The swift increase in their use and development presents new and difficult challenges to our societies.

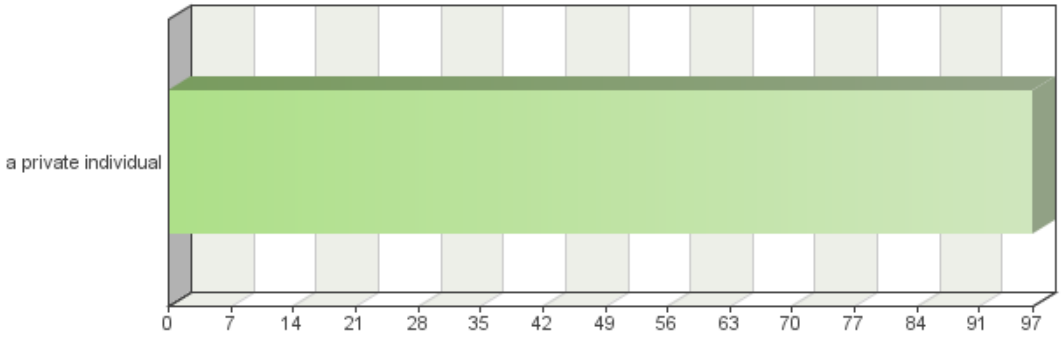
The aim of this consultation is to launch a broad based debate with a wide range of stakeholders on the European Parliament report on Civil Law Rules on Robotics ((2015/2103(INL)). 1 This consultation specifically seeks views on how to best address the challenging ethical, economic, legal and social issues related to the developments in the area of robotics and AI for civil use, as identified in the report. The European Parliament is to debate and vote on the report of the Committee on Legal Affairs in Plenary, in February 2017. The current public consultation will contribute to possible further European Parliament initiatives. This consultation will contribute to assessing the feasibility and content of further potential EU policy initiatives on robotics and AI, to maximise the socio-economic opportunities provided by these technological developments for businesses, citizens and governments, and minimise possible negative disruptions. Furthermore, the results of the Consultation may also feed into the forthcoming European Parliamentary Research Service's 'Cost of Non-Europe on Robotics and Artificial Intelligence' Report.

The Consultation is requested and administratively coordinated by the Committee on Legal Affairs of the European Parliament. The Consultation is prepared by the European Parliamentary Research Service, European Added Value Unit. Scientific coordinator, Dr. Tatjana Evas (EAVA Unit).

1 Draft report with recommendations to the Commission on Civil Law Rules on Robotics. (2015/2103(INL)), Rapporteur: Mady Delvaux (S&D, Luxembourg), 31 May 2016, PE582.443v01-00; available in all EU languages at http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+COMPARL+PE-582.443+01+NOT+XML+V0//EN

Question 3

You are replying as: *



Frequency table

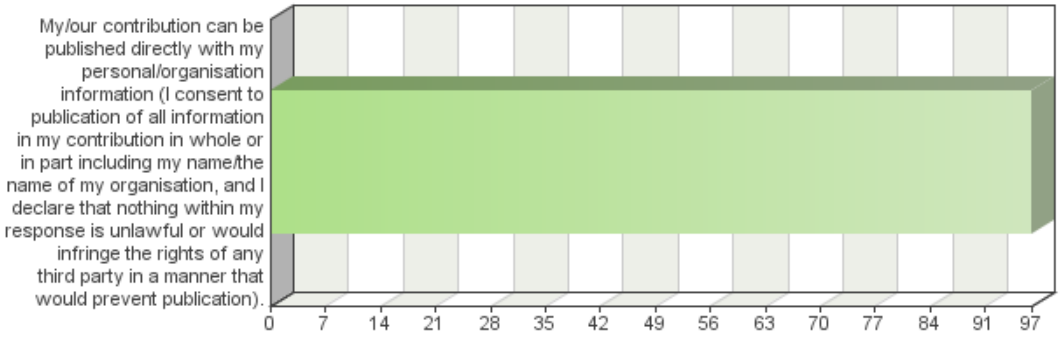
Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
a private individual	97	97	100%	100%	100%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1	Minimum:	1	Variance:	0
Median:	1	Maximum:	1	Std. deviation:	0

Total answered: 97

Question 4

Please choose from one of the following options on the use of your contribution: *



Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
My/our contribution can be published directly with my personal/organisation information (I consent to publication of all information in my contribution in whole or in part including my name/the name of my organisation, and I declare that nothing within my response is unlawful or would infringe the rights of any third party in a manner that would prevent publication).	97	97	100%	100%	100%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1	Minimum:	1	Variance:	0
Median:	1	Maximum:	1	Std. deviation:	0

Total answered: 97

Question 5

The name of your organisation/company/public authority/international organisation: *

Question 6

Your full name (first name, last name): *

Text input
attila makk
Hélène Lanvert
sos sa
Juliet Lodge
Felipe Gomez
Mathieu REMY
Diego Estévez García
Burak Özdastanli
Jeroen Ruigrok van der Werven
José María Quílez
Dale Lane
Richard Tomsett
Petros A. M. Gelepithis
Johan Håkansson
Alexandre Ariño Fort
Shumail Javed
Gan . A .sancho
Franck Talleux
Sebastien Vassort
JS
Daniele Di Lazzaro
Débora Cerro Fernandez
Katia Desmet
Toby Walsh
Replicante Legal
Paloma LLaneza
Rafael García Cepas
Julian Radu
Michael Kaczmarek
Dan, Ivanov
Philipp Mehl
Fauquette Alice
Sanni Kunnas
Lennert Vierendeels
Patrick Henz
Ugo Dallemagne
Albert De Beir
Nuno Coelho Martins
Oscar Maqueda
James Tarlton
Robert, Spangler
Dominik Kirchner
Frank Steinmetz
Christian Rauch
Ralf Essigke

Michael Wimmer
Rene M. Grabow
Achim Christ
Peter Rohwer
Robin Petereit
Alexander Horch
Georg, Graser
Lukas, Froehlich
André Röhm
Walter Heupel
Samuel Müller
philippe ceruse
Carina Dantas
Sérgio André Mota Mendes Teixeira
Petar, Jurkovi
Michael Mörike
Jacques De Keyser
Nikolay Denin
LAYBOURN Marc
Vasileios Fanaras
Maria del Carmen Patricia Morales
maria loredana danelli
Aldo fontana
Ellen Timmer
Paul Garrett
Rachel Freedman
Peter van der Schaft
Arjen Hiemstra
Amaro Koberle
Klaske Wijkstra
Hannes Bleuler
Lucie Meura
Rosie Campbell
MIQUEL ANGEL VALLES BLISTIN
LIAQAT Zarmina
Gorazd Bezlaj
Philip Hanke
Adrian Pappas
Gregory Jones
Kath Davies
Jack Lion
Juan A., Robledo
John Rumbold
MEYER-BONNETAUD PASCAL
Sebastien ENSENAT
Jana Bulkin
Daniel Funk
emilie marcelet
Cay Sevón

Corentin Costard
Guido Noto La Diega
Martin Wodraschke

Question 8

Is your organization included in the Transparency Register? *

In the interests of transparency, the European Parliament asks organisations who wish to submit comments in the context of public consultations to provide the Parliament and the public at large with information about whom and what they represent by registering in the Transparency Register and subscribing to its Code of Conduct. If an organisation decides not to provide this information, it is the European Institution's stated policy to list the contribution as part of the individual contributions. (Consultation Standards, see COM (2002) 704; Better Regulation guidelines, see SWD(2015)111 final and Communication on ETI follow-up, see COM (2007) 127).

If you are a registered organisation, please indicate your Register ID number below when replying to the online questionnaire. Your contribution will then be considered as representative of the views of your organisation. If your organisation is not registered, you have the opportunity to register now.

It is important to read the specific privacy statement available on the public consultation website for information on how your personal data and contribution will be used.

No data to report

Question 9

If yes, please indicate your Register ID number: *

Question 10

Please indicate the type of organisation or company: *

No data to report

Question 11

Please specify the type of organisation: (optional)

Question 12

Please indicate the type of public authority or international organisation: *

No data to report

Question 13

Please specify the type of public authority: (optional)

Question 14

Is your organisation a multinational enterprise (groups with establishments in more than one country)? *

No data to report

Question 15

Is your organisation a multinational enterprise with establishments outside of the EU? *

No data to report

Question 16

How many employees does your company have? *

No data to report

Question 17

Please provide a brief description of your organisation’s activities: (optional)

Question 18

Where are you based (resident) and/or where do you carry out your activity? *

No data to report

Question 19

Field of activity or sector (if applicable): choose at least one option *

(Statistical classification of economic activities in the European Community (NACE), for details on the classification please consult Eurostat http://ec.europa.eu/eurostat/documents/3859598/5902521/KS-RA-07-015-EN.PDF/dd5443f5-b886-40e4-920d-9df03590ff91?version=1.0).

No data to report

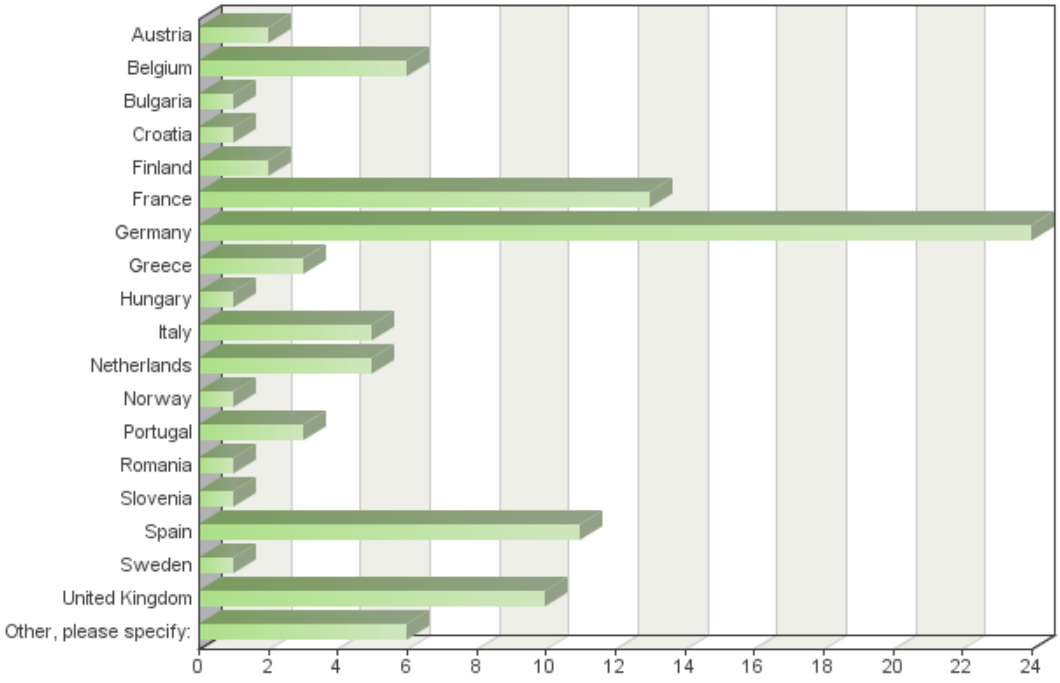
Question 20

Has your organisation received funding from the EU in the last five years? *

No data to report

Question 21

What is your nationality? *



Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Austria	2	2	2.06%	2.06%	2.06%	2.06%
Belgium	6	8	6.19%	8.25%	6.19%	8.25%
Bulgaria	1	9	1.03%	9.28%	1.03%	9.28%
Croatia	1	10	1.03%	10.31%	1.03%	10.31%
Finland	2	12	2.06%	12.37%	2.06%	12.37%
France	13	25	13.4%	25.77%	13.4%	25.77%
Germany	24	49	24.74%	50.52%	24.74%	50.52%
Greece	3	52	3.09%	53.61%	3.09%	53.61%
Hungary	1	53	1.03%	54.64%	1.03%	54.64%
Italy	5	58	5.15%	59.79%	5.15%	59.79%
Netherlands	5	63	5.15%	64.95%	5.15%	64.95%
Norway	1	64	1.03%	65.98%	1.03%	65.98%
Portugal	3	67	3.09%	69.07%	3.09%	69.07%
Romania	1	68	1.03%	70.1%	1.03%	70.1%
Slovenia	1	69	1.03%	71.13%	1.03%	71.13%
Spain	11	80	11.34%	82.47%	11.34%	82.47%
Sweden	1	81	1.03%	83.51%	1.03%	83.51%
United Kingdom	10	91	10.31%	93.81%	10.31%	93.81%
Other, please specify:	6	97	6.19%	100%	6.19%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

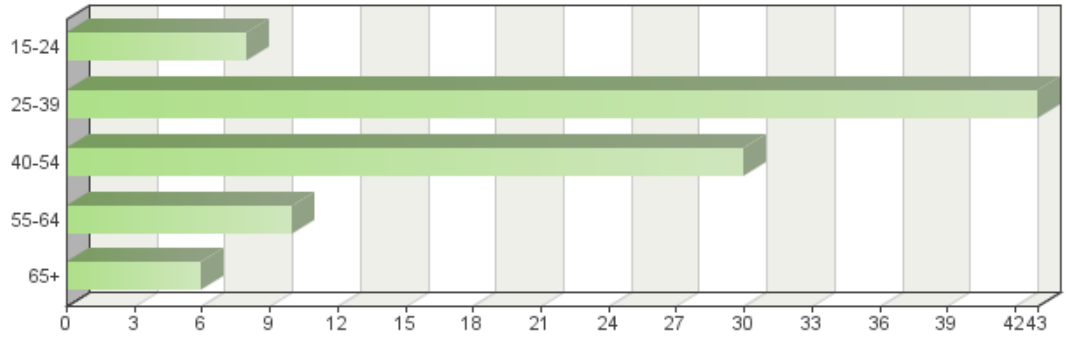
Average:	17.27	Minimum:	1	Variance:	99.61
Median:	11	Maximum:	32	Std. deviation:	9.98

Total answered: 97

Last choice text input
Colombian
Turkey
USA
United States
Switzerland
Schweiz

Question 22

How old are you? *



Frequency table

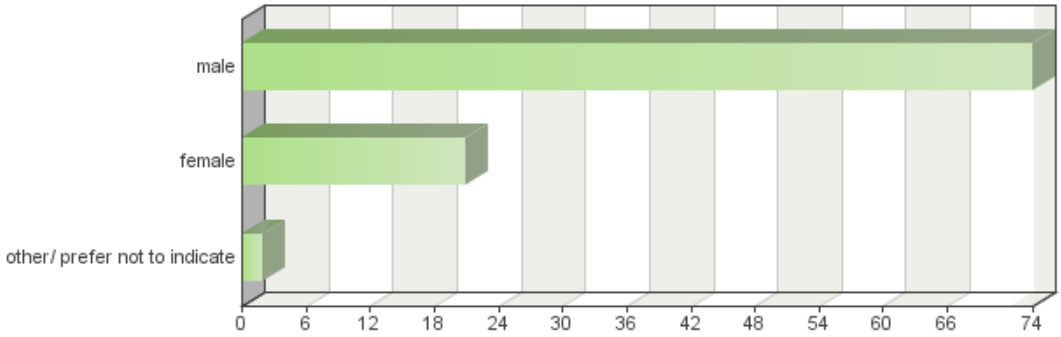
Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
15-24	8	8	8.25%	8.25%	8.25%	8.25%
25-39	43	51	44.33%	52.58%	44.33%	52.58%
40-54	30	81	30.93%	83.51%	30.93%	83.51%
55-64	10	91	10.31%	93.81%	10.31%	93.81%
65+	6	97	6.19%	100%	6.19%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	2.62	Minimum:	1	Variance:	0.99
Median:	2	Maximum:	5	Std. deviation:	0.99

Total answered: 97

Question 23

What is your gender? *



Frequency table

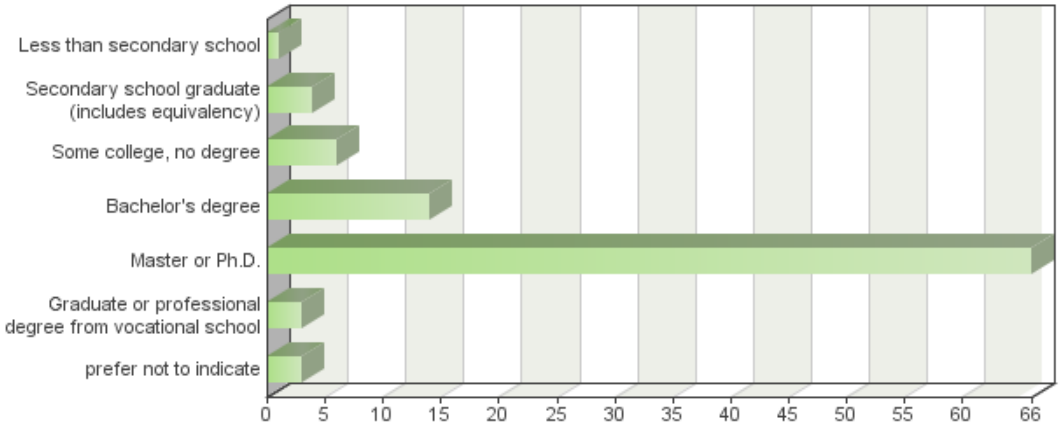
Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
male	74	74	76.29%	76.29%	76.29%	76.29%
female	21	95	21.65%	97.94%	21.65%	97.94%
other/ prefer not to indicate	2	97	2.06%	100%	2.06%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.26	Minimum:	1	Variance:	0.23
Median:	1	Maximum:	3	Std. deviation:	0.48

Total answered: 97

Question 24

What is your highest level of education? *



Frequency table

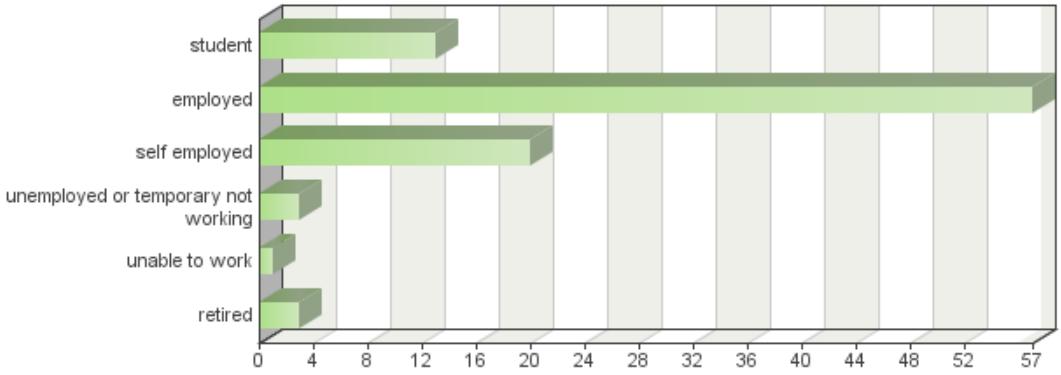
Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Less than secondary school	1	1	1.03%	1.03%	1.03%	1.03%
Secondary school graduate (includes equivalency)	4	5	4.12%	5.15%	4.12%	5.15%
Some college, no degree	6	11	6.19%	11.34%	6.19%	11.34%
Bachelor's degree	14	25	14.43%	25.77%	14.43%	25.77%
Master or Ph.D.	66	91	68.04%	93.81%	68.04%	93.81%
Graduate or professional degree from vocational school	3	94	3.09%	96.91%	3.09%	96.91%
prefer not to indicate	3	97	3.09%	100%	3.09%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	4.66	Minimum:	1	Variance:	0.98
Median:	5	Maximum:	7	Std. deviation:	0.99

Total answered: 97

Question 25

What is your current occupation? *



Frequency table

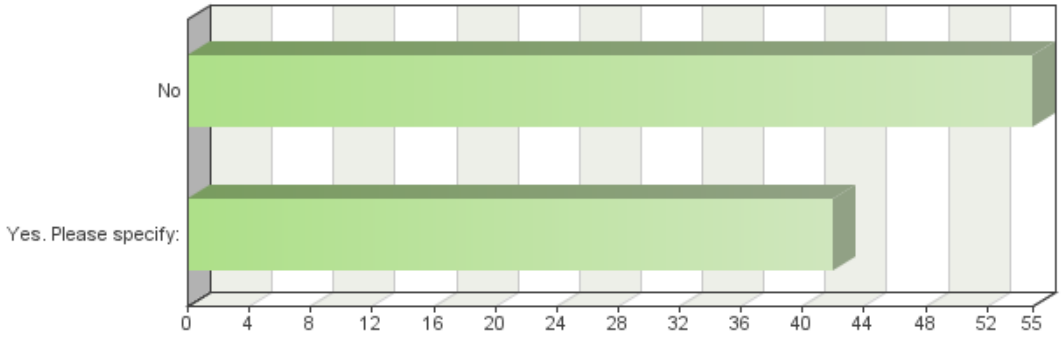
Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
student	13	13	13.4%	13.4%	13.4%	13.4%
employed	57	70	58.76%	72.16%	58.76%	72.16%
self employed	20	90	20.62%	92.78%	20.62%	92.78%
unemployed or temporary not working	3	93	3.09%	95.88%	3.09%	95.88%
unable to work	1	94	1.03%	96.91%	1.03%	96.91%
retired	3	97	3.09%	100%	3.09%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	2.29	Minimum:	1	Variance:	0.98
Median:	2	Maximum:	6	Std. deviation:	0.99

Total answered: 97

Question 26

Have you studied, worked or lived in another EU Member State than your country of origin? *



Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
No	55	55	56.7%	56.7%	56.7%	56.7%
Yes. Please specify:	42	97	43.3%	100%	43.3%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.43	Minimum:	1	Variance:	0.25
Median:	1	Maximum:	2	Std. deviation:	0.5

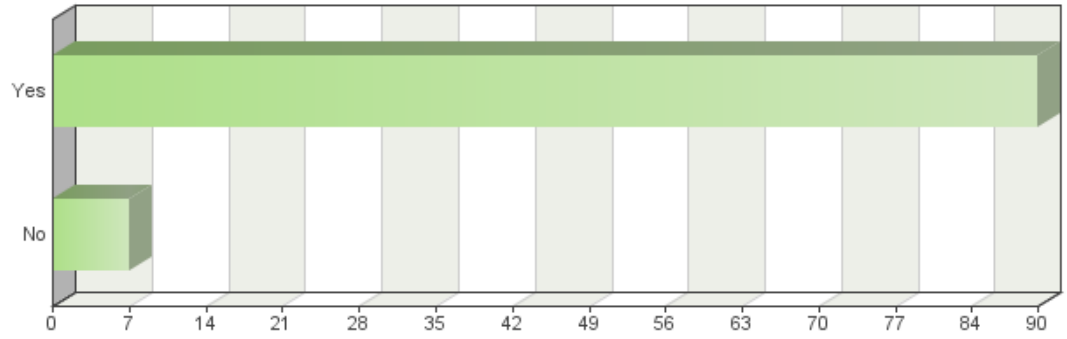
Total answered: 97

Last choice text input
Belgium,mGermany, France, Denmark,mSweden, Finland, Itlaly, Austria,
Belgium
UK
UK
England
UK
Studied a year abroad on Erasmus in Copenhagen
United Kingdom
Italy
France, The Netherlands
AT
Germany, Italy, France
UK, Belgium, Netherlands, Germany
Belgium
France, USA
Germany
France
Grande Bretagne, Allemagne, Pays-Bas
Spain, Netherlands, Belgium,..
Belgium
study, France, Spain, UK
GB
Schweden

Sweden, Switzerland
Czech Republic
Germany
Nederland
DE, GB, ES, BE
Allemagne
Germany and Belgium
UK, Germany, Italy, France, The Netherlands
Studied, worked in UK
Born in Holland, live in Germany
United-Kingdom
Germany, Luxembourg
Portugal, Italy, Netherlands, Germany
UK
Italien
allemagne
Belgien
UK, Germany, Switzerland
Italien, Ungarn

Question 27

Finally, if required, may the European Parliament services contact you for further details on the information you have submitted? *



Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Yes	90	90	92.78%	92.78%	92.78%	92.78%
No	7	97	7.22%	100%	7.22%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

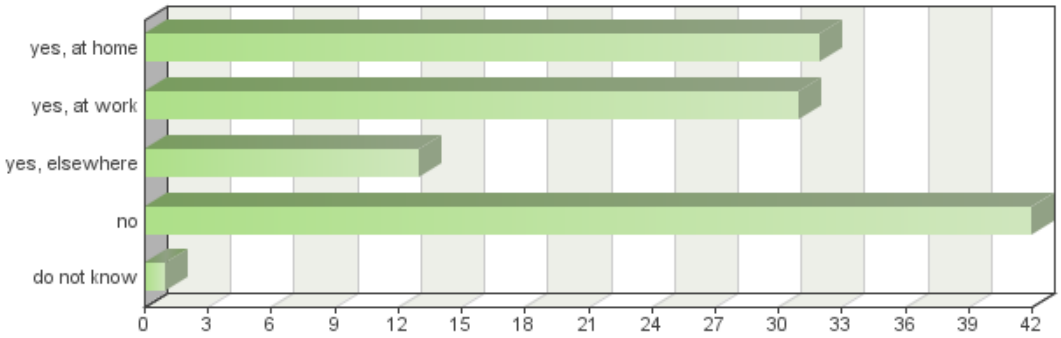
Average:	1.07	Minimum:	1	Variance:	0.07
Median:	1	Maximum:	2	Std. deviation:	0.26

Total answered: 97

Question 28

Have you ever used, or do you currently use robots at home or at work (e.g. a robotic vacuum cleaner at home or an industrial robot at work)? *

(A robot is defined here as an autonomous machine which can assist humans in everyday tasks e.g. as a kind of co-worker helping on the factory floor or as a robot cleaner, or in activities which may be dangerous for humans, like search and rescue in disasters. Robots can come in many shapes or sizes, including human-like. Traditional kitchen appliances, such as a blender or a coffee maker, are not robots. [definition used in the Special Eurobarometer on attitudes towards robots http://ec.europa.eu/public_opinion/archives/ebs/ebs_382_en.pdf])



Frequency table

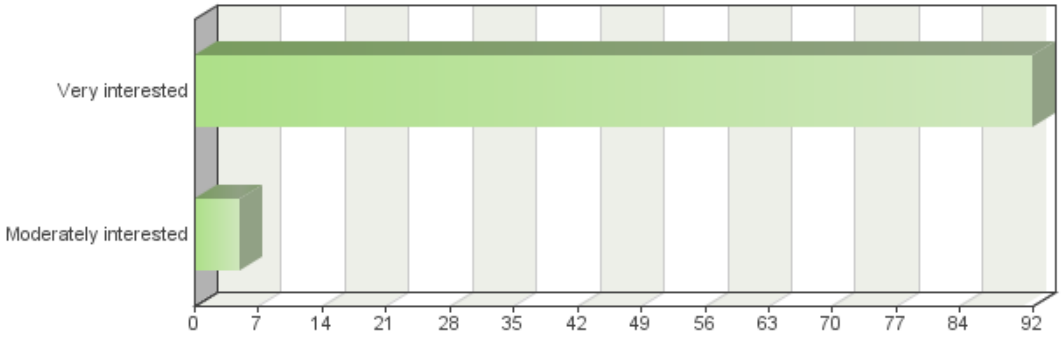
Choices	Absolute frequency	Cum. absolute frequency	Relative frequency by choice	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
yes, at home	32	32	26.89%	32.99%	32.99%	32.99%	32.99%
yes, at work	31	63	26.05%	31.96%	64.95%	31.96%	64.95%
yes, elsewhere	13	76	10.92%	13.4%	78.35%	13.4%	78.35%
no	42	118	35.29%	43.3%	121.65%	43.3%	121.65%
do not know	1	119	0.84%	1.03%	122.68%	1.03%	122.68%
Sum:	119	-	100%	-	-	-	-
Not answered:	0	-	-	0%	-	-	-

Average:	2.57	Minimum:	1	Variance:	1.55
Median:	2	Maximum:	5	Std. deviation:	1.25

Total answered: 97

Question 29

Generally speaking are you interested or not interested in scientific discoveries and technological developments? *



Frequency table

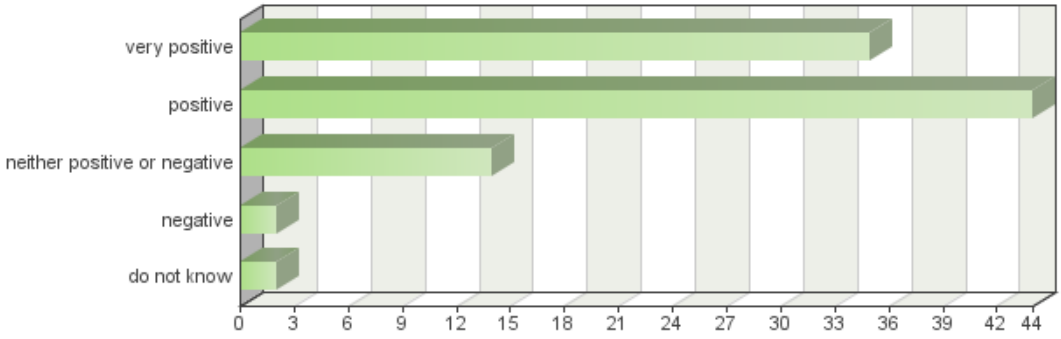
Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Very interested	92	92	94.85%	94.85%	94.85%	94.85%
Moderately interested	5	97	5.15%	100%	5.15%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.05	Minimum:	1	Variance:	0.05
Median:	1	Maximum:	2	Std. deviation:	0.22

Total answered: 97

Question 30

Generally speaking, what is your view on robots? *



Frequency table

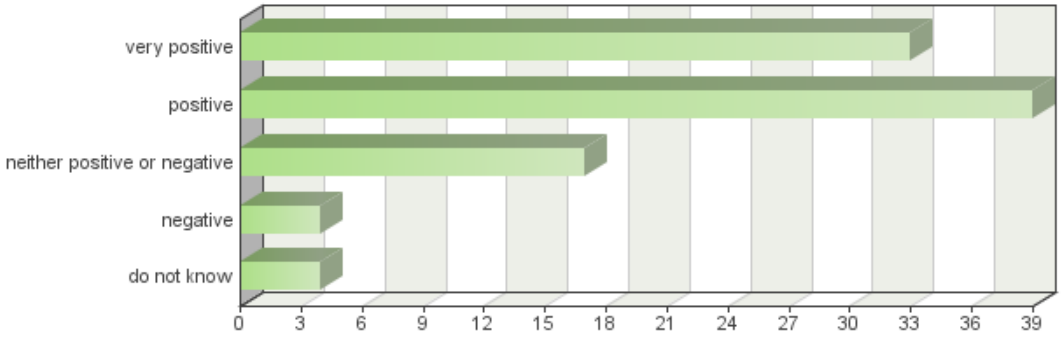
Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
very positive	35	35	36.08%	36.08%	36.08%	36.08%
positive	44	79	45.36%	81.44%	45.36%	81.44%
neither positive or negative	14	93	14.43%	95.88%	14.43%	95.88%
negative	2	95	2.06%	97.94%	2.06%	97.94%
do not know	2	97	2.06%	100%	2.06%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.91	Minimum:	1	Variance:	0.92
Median:	2	Maximum:	6	Std. deviation:	0.96

Total answered: 97

Question 31

Generally speaking, what is your view on developments in artificial intelligence? *



Frequency table

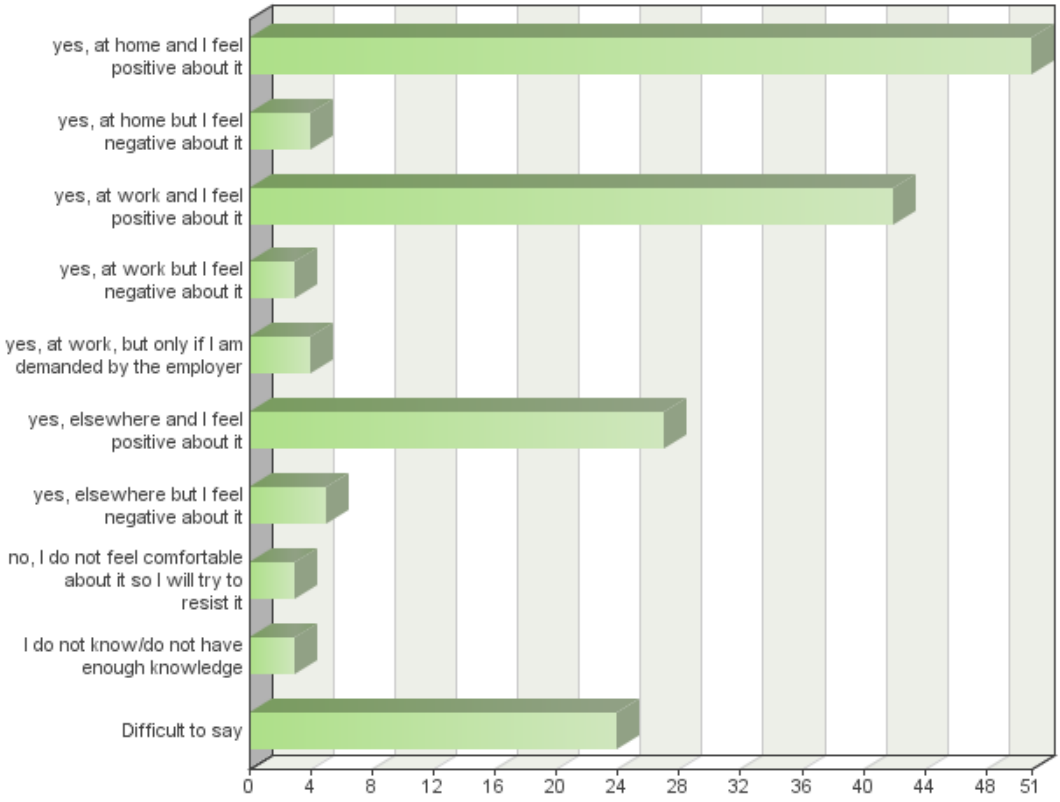
Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
very positive	33	33	34.02%	34.02%	34.02%	34.02%
positive	39	72	40.21%	74.23%	40.21%	74.23%
neither positive or negative	17	89	17.53%	91.75%	17.53%	91.75%
negative	4	93	4.12%	95.88%	4.12%	95.88%
do not know	4	97	4.12%	100%	4.12%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	2.08	Minimum:	1	Variance:	1.35
Median:	2	Maximum:	6	Std. deviation:	1.16

Total answered: 97

Question 32

In a one to three year future, robots will become part of my life: *



Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency by choice	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
yes, at home and I feel positive about it	51	51	30.72%	52.58%	52.58%	52.58%	52.58%
yes, at home but I feel negative about it	4	55	2.41%	4.12%	56.7%	4.12%	56.7%
yes, at work and I feel positive about it	42	97	25.3%	43.3%	100%	43.3%	100%
yes, at work but I feel negative about it	3	100	1.81%	3.09%	103.09%	3.09%	103.09%
yes, at work, but only if I am demanded by the employer	4	104	2.41%	4.12%	107.22%	4.12%	107.22%
yes, elsewhere and I feel positive about it	27	131	16.27%	27.84%	135.05%	27.84%	135.05%
yes, elsewhere but I feel negative about it	5	136	3.01%	5.15%	140.21%	5.15%	140.21%
no, I do not feel comfortable about it so I will try to resist it	3	139	1.81%	3.09%	143.3%	3.09%	143.3%
I do not know/do not have enough knowledge	3	142	1.81%	3.09%	146.39%	3.09%	146.39%
Difficult to say	24	166	14.46%	24.74%	171.13%	24.74%	171.13%
Sum:	166	-	100%	-	-	-	-
Not answered:	0	-	-	0%	-	-	-

Average:	4.25	Minimum:	1	Variance:	10.01
Median:	3	Maximum:	10	Std. deviation:	3.16

Total answered: 97

Text input
"robots will become part..." - what level? Washing mashine, vacuum cleaner - or more complex
Price will make robots inaccessible to people who could most benefit from them as help/aids to mentally and physically disabled, excluded etc

I believe robots will first impact households and then will slightly move towards work and public sectors. We can already see it in our daily basis, such as smart thermostats, self vacuum robots, wearable, self-driven cars and so on. I believe robots have the potential of being very positive if the right legislation, rules, etc are put into place.

Because robots could be used to automate the production of the goods and services capital and allow humans to focus on social capital production. (cf. Jeremy RIFKIN).

In my opinion it will be positive, both at home and work, and will allow you to concentrate in specific task. I don't think it would be worse for the employment but for sure it will change the rules.

AI is developing very quickly and it seems that machine learning and AI will be an integral part of our lives.

Many chores I would dedicate to a robot, like we did for laundry, drying, dish washing so that I can dedicate myself to the pursuit of my interests and hobbies. But other tasks I would prefer to still do by hand because I think those skills will remain valuable down the years.

Initial question and the third option in the second column do not necessarily match and other available responses are not applicable in my case.

I want robots to be an integral part of my life in the future, but I'm not sure about the costs of acquiring one.

I think the development of artificial intelligence will take longer than 3 years.

At home: Growingly in the market, robot technology will become more prominent as demand for convenience is increasing and there is profit to be made from this. My concern with this is that it will raise greater privacy issues, especially in the home, and to the public, liability for breaching privacy rights by manufacturers of these robots may be excluded based on the fact that we, as the public, are not aware of any privacy issues being breached. Regarding work: I hope to work in the legal sector and I see the increased use of robots to be a positive thing based on the improved ability to research more efficiently, saving time and in the long run cost. This is exciting because we can focus on advancing and reforming the law at a greater speed. I do not feel negative about it yet because I do not think my job is threatened by robots.

Every body is ok to have a more comfortable live I suppose

I do not trust future developments of robots and I.A

Robot will be part of our life to help us and improve our life quality standards. But, as with everything, we must set rules to prevent corporate interests outweigh the interests of citizens

I am not sure that in 3 year future everybody will be able to have robots as part of their life at home because it might depend on the price. If the price is affordable I think I think I will have robots only for cleaning purposes (tasks I do not like to do) Regarding the question as if robots will be a part of my life at work I think it depends mainly on the industry so let's see On the other hand I really think robots will be a part of my life elsewhere like in public services and I believe it would be a good thing because it will make live easier.

This is a poorly worded question. No, robots won't be part of my life in the next 3 year (or many people's lives). But it is not because I feel uncomfortable about it. It just won't happen that quick.

Robots and AI are part of our lifes right now, althoug we may not realise

The future of robots is to remove jobs from people

I studied Automatics and Computers Science. I used to test/play/design certain parts of robots. I purchase various miniature robots and program them myself and I enjoy this as a hobby. If I would have to use robots in my work, I would be delighted, although I don't see their role in my current function.

Three years is way too soon.

I feel partially negative about robots and ai because there are no solutions yet to the social questions coming up with them (e.g. what if people lose their jobs in masses and are replaced by robots? Will people feel alienated when a traditional "human contact"-job will be taken by a robot? etc.) In the same moment I also feel positive, since robots will make a lot of things easier and safer at home or in public/retail/dangerous working environments/transport etc. They might also help leveling the problems of the demographic change in Germany.

In the future probably at home and/or work, but not within the given time (maybe in 5-10 years).

Surely contact with AIs, as Siri or similar solutions.

Pour des raisons évidentes de coûts les robots, du moins dotés d'une autonomie "intéressante", feront d'abord leur apparition dans le milieu de l'entreprise dans les trois ans à venir (pour autant qu'ils soient disponibles). Cela sera positif dans la mesure où cela nous permettra d'étudier et de nous familiariser avec ces machines.

Robots are already a part of our life. Make it easier, cheaper and more confortable BUT its only cheaper because someone just lost their job to a machine. On a longer term the base of the economy will be depleted of liquidity. New social and economic model will be needed.

most human activities but those requiring full brain will be automated and being able to be done by robots, those human beings doing automated jobs that dont require "human" abilities need to be trained to do other jobs that require using brain

Robots will help to reduce the time a person spends with chores and give them more free time. The same will happen in work spaces. Even robots without a body a "softwarebot" will reduce the time of avoidable work and help to improve the productivity. This leads to less work and cheaper products.

robotics is going to be a general help in every day live. We already see the first steps in the field of autonomous driving. Overall I expect that there will be more positive aspects than negative. The overall social and economical benefits that this technology enables, like automation of dangerous or boring tasks will be bigger than the risks, like job decrease. In my understanding, robotics simply brings the benefits of AI to the physical world.

Der Mensch steht keineswegs im Vordergrund robottechnischer Entwicklung. Wie in der jüngeren Vergangenheit und auch heutzutage, so wird auch zukünftig die Robertechnik in allen ihrer Facetten hauptsächlich von der Industrie zu Arbeitsplatzabbau und Gewinnerzielung und von staatlicher Seite zur Überwachung missbraucht.

Difficult, because one choice is absent: "Roboters ARE part of my life already..." But theyr influence will grow, so the "Yes" above is also correct.

Haussteuerung (zentrale Be&Entlüftung), Rasmähroboter, Staubsaugrobotik

Robots for houskeeping, homeautomation and gardening will help me to save time for my family and hobbies. At work they will support recurring and stupid work, so I can concetrate on creative and innovative tasks.

Autonomes EV

Jeder moderne Sprachassistent stellt bereits eine begrenzte KI dar. Immer mehr Daten von Maschinen und Geräten fließen jetzt bereits auf Servern zusammen, deren schiere Menge nicht von Menschen analysiert werden kann. Folglich selektieren und summieren bereits Maschinen Rohdaten heute, meist nach adaptiven Gesichtspunkten und lernend.

I see no Need for robots in my home. At work, in an Office Environment the same. For our production facility (electronic production), I see a Need and possibility.

I may start working in the AI field but I don't know yet whether I'll find a company/field of work that I want to sell my labor to, that works towards a (in my opinion) positive impact towards humans/nature, using robotics. So it's difficult to say

I studied Robotics at University, work on self-driving cars at my job, and have cleaning robots at my house. They are already a part of my life.

I would love to get a cleaning robot, but my appartment is not fit for the current generation.

Robots will simplify various kinds of tedious and boring work and activities.

Probably through cleaning devices, but it depends on the market. Also robots are part of everyone's life indirectly. The effects of increased adoption of robots are happening all over. It is not a matter of a person reading this questionnaire having a robot at home. If it's in the factories and industry, it affects employment and in the long term the social tissue of societies. Robots typically replace low skilled workers that will be excluded from jobs or suffer salary pressure due to increase of supply in the labor force.

een to drie jaar is nogal kort

Dans mon domaine pour l'instant le robot n'est pas au programme :)

Yes,only if we can manage their use well (only a part).

IT will both have positive and negative effects

At home: Robots will support elderly people with home care tasks; consequently they can remain living in their private home instead of collective nursing homes. At work: 1. Robots take over stupid routine tasks 2. Robotics create new high class jobs 3. Robots create possibillity of individualized mass products 4. Robotic create new economic sectors

Weird question. I do expect that in the coming 3 years people will start to see a mass-introduction of autonomous vehicles. I expect a first unemployment wave to be a result. I think that robots being part of my life will take a bit longer. Perhaps 5-10 years. In 30 years I think we have a huge issue with too much unemployment and no jobs returning that are suitable for the people without a job. I think politics is failing to address this issue, although it would be absolutely necessary to start fixing that future issue now, because the changes we need to implement will take decades to implement.

Robots are starting to be increasingly prevalent and consumer friendly. I would not be surprised if I would start interacting with one on a regular basis pretty soon. Technological progress roughly follows an exponential trajectory, thus our (linear) intuitions might bias us to believe that an abundance of robots in the average citizen's every day life is further away than it infact will be. Robots might have great utility, but they might also be very disruptive.

if they help it's good but we have to be carefull with because they are not a human being

I feel positive about robots in my life at home. About robots at work, my feelings are mixed. They will help, but they will also diminish the need for human labour which will affect the social role and organisation of work and of the society as a whole.

Robots have the potential to make life better, however, some issues need to be addressed.

I want a automated smart vacuum cleaner! A self driving car is a life goal, & wish to invest in an automated home controlled by an assistant like Google home.

As I work in Cultural Development I do not directly work with robotics or AI, but I recognise that this will impact significantly on where I am, and rather than fight against it I see it as a positive advancement. My issue is how do we support those whose jobs will be affected to gain new skills and to lead productive lives. The UK is in an existential crisis and almost longs for safety of the known or the past. However, like the cloth croppers aka Luddites smashing the weaving looms our future is actually in how we embrace this and move forward.

Robots could help us to have a better way of live, at home, at work, and really everywhere.

Certes, il existe des risques de chômage technologique mais ceci ne doit pas nous bloquer. Dans chaque profession, il faut apprendre la robotique et l'intelligence artificielle puis réfléchir aux transformations des métiers qui seront induites. L'enjeu est de réussir à faire évoluer nos métiers. Ainsi, robotique et IA transformeront la société au bénéfice de tous.

Le champ exploratoire est immense, nous allons vivre une transformation passionnante mais pas si radicale qu'on ne l'imagine.

Die Medaille hat immer 2 Seiten .... gesundheitsgefährdende und schwere Arbeiten, Einsätze durch Roboter erledigen zu lassen, aber auch sog. Routinetätigkeiten durch "Maschinen" erledigen zu lassen, dem spricht ja nichts entgegen ... da sprechen wir von sehr logischen Aktionen ... in Kombination mit Künstlicher Intelligenz ergeben sich neue Möglichkeiten mit der sog. Kognitiven Area ... hier ist das Feld sehr umfangreich bis hin zur Absicherung des Zugriff der Daten bzgl. der Zweckbindung, der ethischen Verantwortung, die Schaffung neuer Arbeitsplätze und Aufgaben ... der Missbrauch von Systemen, welche über IP einfach erreichbar und angreifbar sind ... wie lässt sich ein entsprechendes Bewusstsein schaffen, welches nicht nur das Streben nach max. Profit beinhaltet ...

dansl apratique elimination des taches repetitives / au travail mon role est l'information des entreprise sur l'interet de robotique entre autres.

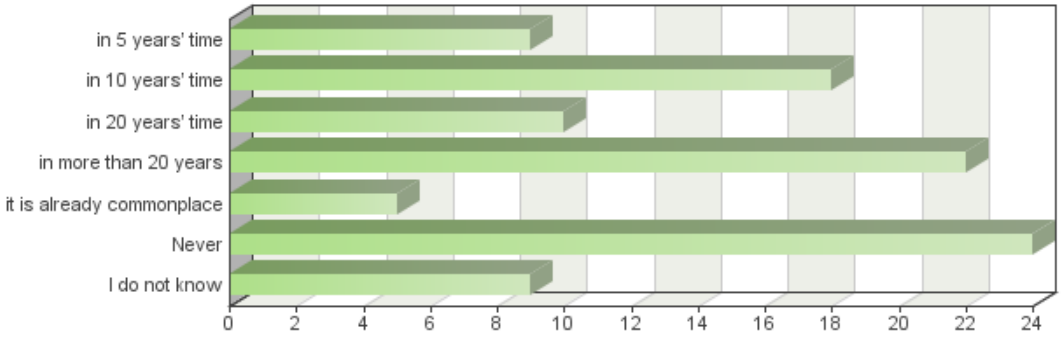
Robotar kommer bl.a. att användas inom medicinsk forskning. Hemma kommer det att finnas möjlighet att t.ex. med hjälp av en spcialbyggd kamera sända information till en läkare, som kan analysera bl.a. förekomsten av melanomcancer.

G. NOTO LA DIEGA, Machine rules. Of drones, robots and the info-capitalist society, in Italian Law Journal, 2016, II, 367-404 https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2899728

Ja, ich denke AI und Smart Robots können wichtige Probleme wie z.B. demografischer Wandel, Mobilität am Arbeitsplatz, Sicherheit im Straßenverkehr und zu Hause, usw. lösen.

Question 33

In your opinion, in Europe, when it will become commonplace for robots to do your current job? *



Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
in 5 years' time	9	9	9.28%	9.28%	9.28%	9.28%
in 10 years' time	18	27	18.56%	27.84%	18.56%	27.84%
in 20 years' time	10	37	10.31%	38.14%	10.31%	38.14%
in more than 20 years	22	59	22.68%	60.82%	22.68%	60.82%
it is already commonplace	5	64	5.15%	65.98%	5.15%	65.98%
Never	24	88	24.74%	90.72%	24.74%	90.72%
I do not know	9	97	9.28%	100%	9.28%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

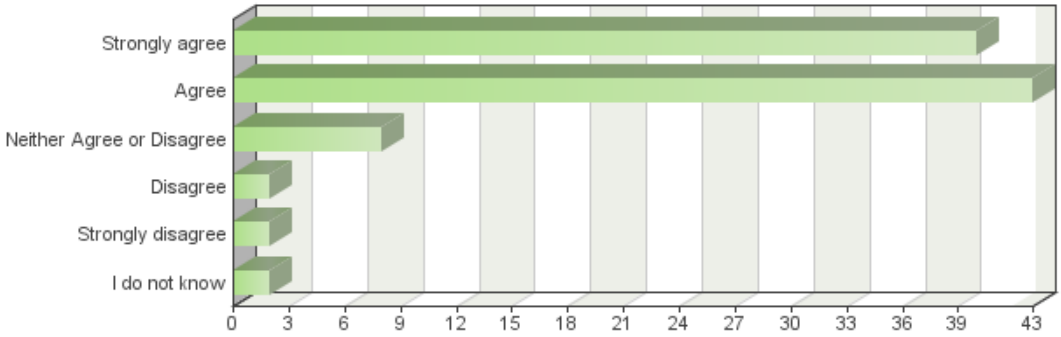
Average:	4.07	Minimum:	1	Variance:	3.59
Median:	4	Maximum:	7	Std. deviation:	1.89

Total answered: 97

Question 34

Please indicate to what extent you agree or disagree with the each of the following statements related to robotics and AI: *

Levels Robots are a good thing for society, because they help people



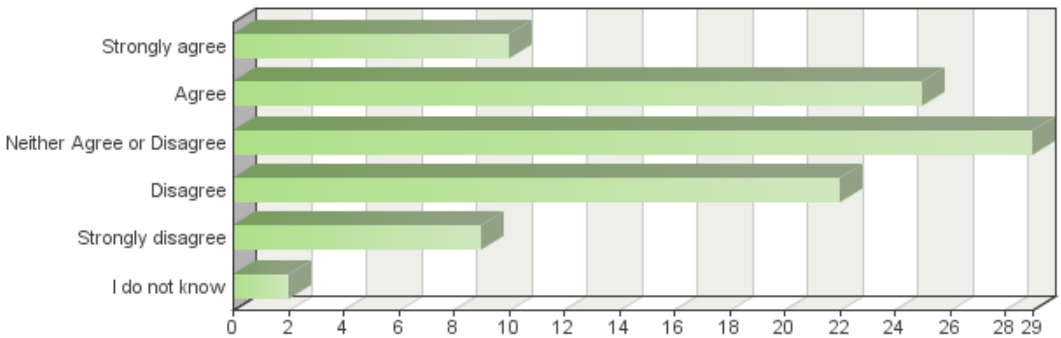
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	40	40	41.24%	41.24%	41.24%	41.24%
Agree	43	83	44.33%	85.57%	44.33%	85.57%
Neither Agree or Disagree	8	91	8.25%	93.81%	8.25%	93.81%
Disagree	2	93	2.06%	95.88%	2.06%	95.88%
Strongly disagree	2	95	2.06%	97.94%	2.06%	97.94%
I do not know	2	97	2.06%	100%	2.06%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.86	Minimum:	1	Variance:	1.08
Median:	2	Maximum:	6	Std. deviation:	1.04

Total answered: 97

Levels Robots steal peoples' jobs



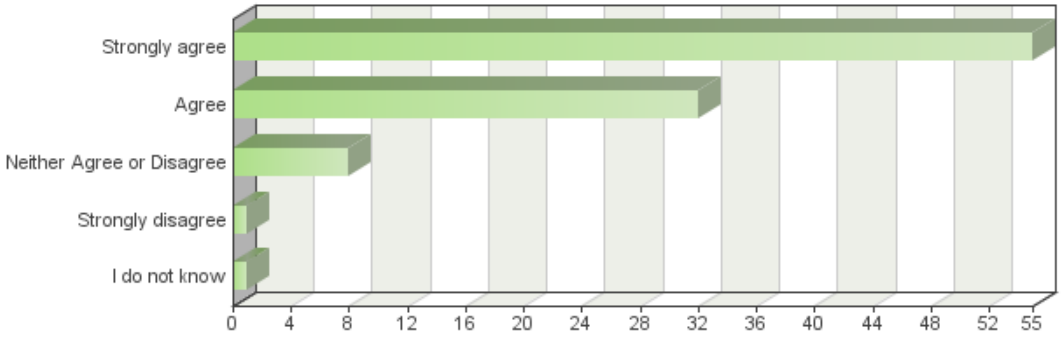
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	10	10	10.31%	10.31%	10.31%	10.31%
Agree	25	35	25.77%	36.08%	25.77%	36.08%
Neither Agree or Disagree	29	64	29.9%	65.98%	29.9%	65.98%
Disagree	22	86	22.68%	88.66%	22.68%	88.66%
Strongly disagree	9	95	9.28%	97.94%	9.28%	97.94%
I do not know	2	97	2.06%	100%	2.06%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	3.01	Minimum:	1	Variance:	1.47
Median:	3	Maximum:	6	Std. deviation:	1.21

Total answered: 97

Levels Robots are necessary as they can do jobs that are too hard or too dangerous for people



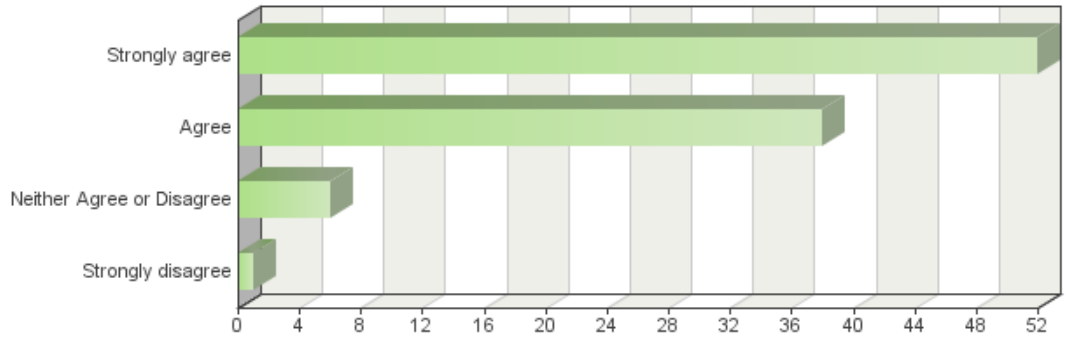
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	55	55	56.7%	56.7%	56.7%	56.7%
Agree	32	87	32.99%	89.69%	32.99%	89.69%
Neither Agree or Disagree	8	95	8.25%	97.94%	8.25%	97.94%
Strongly disagree	1	96	1.03%	98.97%	1.03%	98.97%
I do not know	1	97	1.03%	100%	1.03%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.59	Minimum:	1	Variance:	0.74
Median:	1	Maximum:	6	Std. deviation:	0.86

Total answered: 97

Levels Robots are a form of technology that requires careful management



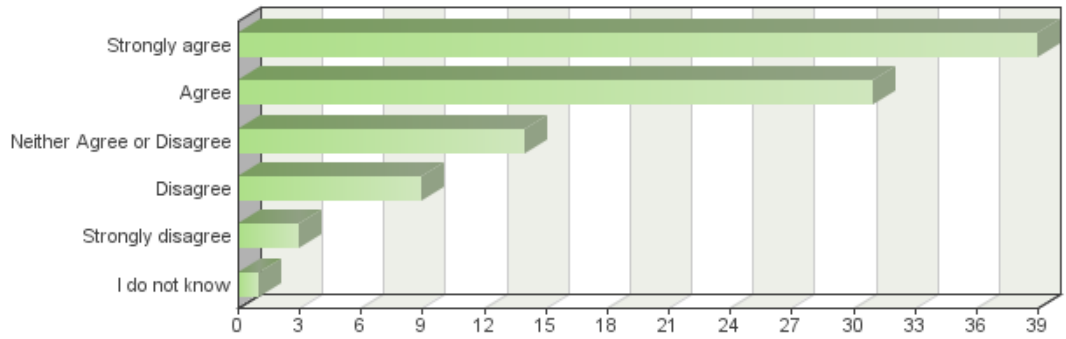
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	52	52	53.61%	53.61%	53.61%	53.61%
Agree	38	90	39.18%	92.78%	39.18%	92.78%
Neither Agree or Disagree	6	96	6.19%	98.97%	6.19%	98.97%
Strongly disagree	1	97	1.03%	100%	1.03%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.56	Minimum:	1	Variance:	0.5
Median:	1	Maximum:	5	Std. deviation:	0.71

Total answered: 97

Levels Autonomous robots (i.e. drones, driverless vehicles) is an efficient way of transporting and delivering goods



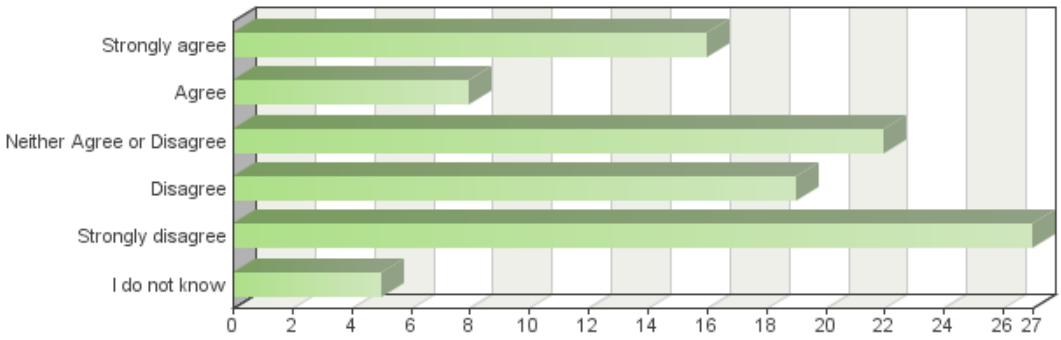
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	39	39	40.21%	40.21%	40.21%	40.21%
Agree	31	70	31.96%	72.16%	31.96%	72.16%
Neither Agree or Disagree	14	84	14.43%	86.6%	14.43%	86.6%
Disagree	9	93	9.28%	95.88%	9.28%	95.88%
Strongly disagree	3	96	3.09%	98.97%	3.09%	98.97%
I do not know	1	97	1.03%	100%	1.03%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	2.06	Minimum:	1	Variance:	1.37
Median:	2	Maximum:	6	Std. deviation:	1.17

Total answered: 97

Levels Artificial intelligence is a threat to humanity



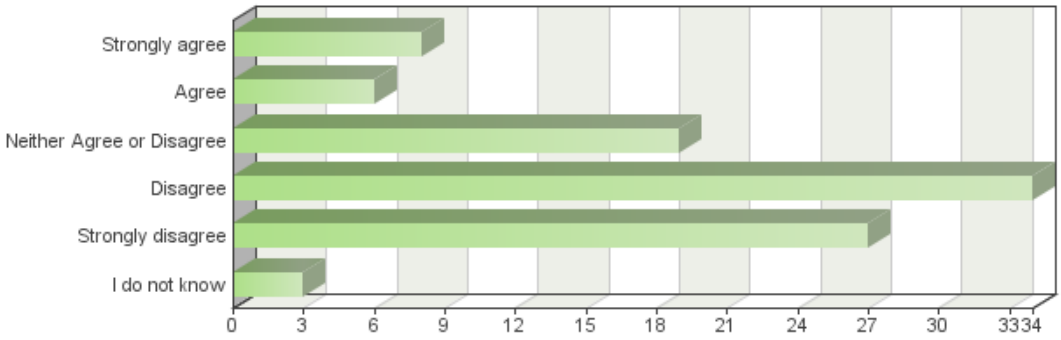
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	16	16	16.49%	16.49%	16.49%	16.49%
Agree	8	24	8.25%	24.74%	8.25%	24.74%
Neither Agree or Disagree	22	46	22.68%	47.42%	22.68%	47.42%
Disagree	19	65	19.59%	67.01%	19.59%	67.01%
Strongly disagree	27	92	27.84%	94.85%	27.84%	94.85%
I do not know	5	97	5.15%	100%	5.15%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	3.49	Minimum:	1	Variance:	2.29
Median:	4	Maximum:	6	Std. deviation:	1.51

Total answered: 97

Levels Robots are bad thing for society because they create more inequalities



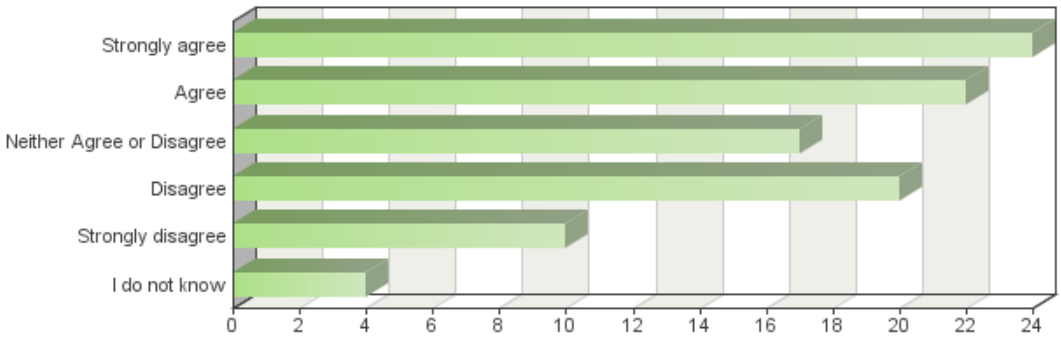
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	8	8	8.25%	8.25%	8.25%	8.25%
Agree	6	14	6.19%	14.43%	6.19%	14.43%
Neither Agree or Disagree	19	33	19.59%	34.02%	19.59%	34.02%
Disagree	34	67	35.05%	69.07%	35.05%	69.07%
Strongly disagree	27	94	27.84%	96.91%	27.84%	96.91%
I do not know	3	97	3.09%	100%	3.09%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	3.77	Minimum:	1	Variance:	1.55
Median:	4	Maximum:	6	Std. deviation:	1.25

Total answered: 97

Levels Artificial intelligence is a threat to privacy



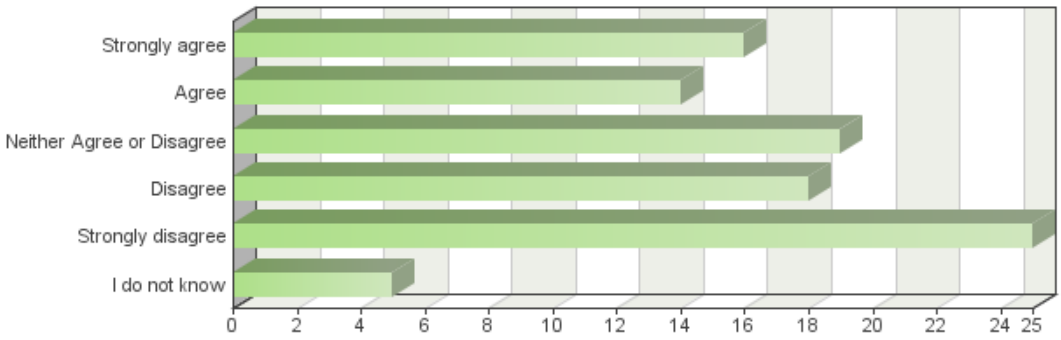
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	24	24	24.74%	24.74%	24.74%	24.74%
Agree	22	46	22.68%	47.42%	22.68%	47.42%
Neither Agree or Disagree	17	63	17.53%	64.95%	17.53%	64.95%
Disagree	20	83	20.62%	85.57%	20.62%	85.57%
Strongly disagree	10	93	10.31%	95.88%	10.31%	95.88%
I do not know	4	97	4.12%	100%	4.12%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	2.81	Minimum:	1	Variance:	2.19
Median:	3	Maximum:	6	Std. deviation:	1.48

Total answered: 97

Levels Artificial intelligence is a threat to fundamental human rights



Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	16	16	16.49%	16.49%	16.49%	16.49%
Agree	14	30	14.43%	30.93%	14.43%	30.93%
Neither Agree or Disagree	19	49	19.59%	50.52%	19.59%	50.52%
Disagree	18	67	18.56%	69.07%	18.56%	69.07%
Strongly disagree	25	92	25.77%	94.85%	25.77%	94.85%
I do not know	5	97	5.15%	100%	5.15%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	3.38	Minimum:	1	Variance:	2.36
Median:	3	Maximum:	6	Std. deviation:	1.54

Total answered: 97

Text input

robots don't .create more inequalities' but those who make and sell them for profit will create and/or reinforce inequalities. AI is a threat to privacy IF automatic, non-consensual data exchange and data reconfiguration, commercialisation etc is permitted in practie by law and/or owing to poor data management practices, poor security architectures and poor understanding of the responsibilities and obligations all who develop qnd sell and use the. have towards each other. Fund. rights would be at risk if unethical practice is facilitated by virtue of algorithms focused on commercial gain for example of because humans 'allow' or 'rely' on robot sorting techniques that are discriminatory and may be unfair and undermine dignity and justice

Repeating my statement in section 1, I believe robots have the potential of being very positive if the right legislation, rules, etc are put into place. I strongly believe that at some point in the following years technology will be ready to start taking over some jobs (specially blue-collar jobs). That is why we are in the right moment to come up with new strategies that could minimise the impact on these sectors. Regarding AI, I disagree that AI is a threat to our human rights and our privacy if they are used adequately. For instance, nowadays AI has been used as a profile system to target personalised advertisements to people. I believe the EU has been working hard on creating regulations that stop big companies to use their user data in a incorrect matter. However, I also believe that more effort will be needed when creating AI legislations to ensure that AI moves towards a technology that will be only beneficial to humanity as it has a great potential to do so.

About my job replacement, robots won't contribute at all, society shift to horizontal mindset will make my current job useless. The main purpose is about governancy of robotic developments and deployments and the way we think legal policies in order to keep a positive move.

Robots and big data are very usefull tools but we should be very carefull about the treatment of personal data because robots can process a huge aumount of personal data that can be transmited to others and we must limit that issue.

I understand the sentiment of 'stealing jobs', but I think we need to more proactively look at how to provide new types of jobs for people who are replaced by robots. AI in and of itself is not a threat to humanity unless we explicitly dedicate ourselves to embed such algorithms without any morals or evil intent. I have read too many books that explore robotics and AI to be either positive or negative about it. In all, it depends exactly how it is used. Similarly to how guns don't kill people, it's the person wielding a gun that does or how nuclear physics is used for both bombs and technological breakthrough in energy back in the day.

The first two questions are badly formed. For instance Q1: should insert 'can' before help. Q2. Inappropriate because it assigns to robots value-laden human potentiality. Q5. Although strictly speaking appropriate, it fails to refer to a controversial major class of autonomous robots, namely, LAWS. The questionnaire should have included a question relevant to the issue I just raised.

Robots, regardless of how advanced and lifelike, are still just machines. In terms of privacy I don't think there is much difference from using a computer or smartphone today. I also don't believe an artificial intelligence would have the same blood lust that we humans do.

Jobs will be destroyed but will be the less interesting job to do.

I do not think robots are good for society because they help people, but rather quite the opposite. They lead to laziness in people as the convenience element increases. As well as this, people are too busy being amazed by new technology and the latest crazes that they will not realise how much trust they are putting in the robotic technology. Robots currently do not steal peoples' jobs but they do help the job get done quicker. I think eventually robots may replace humans in some job markets but this is not necessarily the case for all jobs. Autonomous robots are efficient in doing that, but there are dangers associated with robots being autonomous as it makes me feel at unease knowing there is no control over it. Artificial intelligence may pose a threat to humanity if we mis-programme it or do not fully understand and develop it to fix all types of problems that could arise. It would not be a threat to humanity if we can consider and plan for every situation to be covered by programming in a way that humanity would not be endangered. AI is definitely a threat to privacy as a lot of data would need to be collected for AI to be able to function to its optimum, often without us realising just how much it is collecting.

Big data know us better than ourselves, it's already available and for eternity. According to any human who wants an additional identity, EU (or France) could afford and granted this new "identity's right" (cross and mixed data about people when they want)

Self-learning I.A may be a threat when making decisions without human supervision. The world is already messed up enough. No need for us to surrender to overlooking machines. I fear IA might make wrong choices, aiming for results over wisdom.

Robots, as every useful things, can turn into a danger for humankind, if human will use them dangerously and without rules

As explained before I believe that AI will be a good thing for society because they will help people in their daily activities, mostly in doing dangerous or unpleasant jobs for humans. On the other hand I think that robots should be regulated carefully because they might present challenges in management but so do people so I don't think they will be a bad thing as far as is well regulated taking into account 2 key aspects human rights and privacy with no exception. Regarding the question that robots will steal people's jobs, of course they will take jobs from people but they will take the unpleasant jobs or the jobs that are not easy to manage by people and make the job in a more efficient way, I think the adaptation process might be difficult at the beginning but then it will facilitate things and will produce more economic welfare in general. For instance in my country of origin (Spain) some years ago people claim that immigration was gonna be bad for the economy but at the end it lead to the best economic period of the last century in Spain, the it lead to a serious economic crisis in Spain but it is because the wealth was miscarriage. I believe with robots will happen the same, if things are conducted properly it will drive to a better society and eventually will reduce inequalities.

We get to make these choices as to whether AI is a threat or not.

Robots and AI can be seen as a threat or as an opportunity. I firmly believe they are an oportunity

Artificial intelligence will create labor problems, create social problems, imbalance between social classes. It will create highly qualified jobs but less than the ones it will take away, the birth rate in Europe will fall even more, it will no longer take so many people to do the same jobs.

Robots and AI, if not maliciously designed, programmed and used, are a dream come true. With a wide area of application, in research, medical care, automated transportation and all the way to defusing IED's & landmines, AI can insure a better future for humanity. Taking away dangerous jobs for humanity, AI can create smarter and better jobs, for the same people it replaces.

As long as there are strict programming boundaries (or frames, if you will) within which A.I. can develop and grow organically but only up to those said boundaries, there is no risk of threat to humanity. However, regarding privacy, it seems there will always be a wish for more and more surveillance due to (exaggerated) security pretexts (national, regional, global)

There is a need for a set of standards for robots and ai. These technologies should only ever be able to do good for humanity. The latter is important for the social welfare of our society but also for the individual humans concerned. At the same time it is important to not lay too many restrictions on this emerging field of science and technology. We must not stop technological progress and creativity with overly harsh rules.

Robots will take jobs, but also create complete new job profiles, as for example, Ethics & Compliance Officer for AI / Robots

Il aurait été plus pertinent d'employer le verbe "pouvoir" et non le verbe "être" car il est difficile d'adopter une position franche et sans nuance sur de telles assertions.

Humanity is a threat to humanity: AI will just mirror it. AI will look for the most efficient way out of problems and humans generally tend to be on the way of the easiest solution. You do the math.

AI can be trainied to respect human rights and privacy, it will only depend on the algorithm used and ethic of the programmers, we need those algorithms to be verified as respectful with common sense and privacy regulations the same as the humans

AI can be a threat to privacy but its the company behind the data and software that makes it a threat. Robots in the current state of the art can replace 40% of all jobs, special in the transporting sector, a unmanagement way to full autonomous world would lead to chaos, so it requires a plan to organize the transition.

Abilities of robots enable lots of new applications. This may include the potential for missuse as well. Of course a careful management of this technology and information collection is a critical point. Nevertheless, I belief that the technology will change the future in a positive way.

Der Mensch steht keineswegs im Vordergrund robottechnischer Entwicklung. Wie in der jüngeren Vergangenheit und auch heutzutage, so wird auch zukünftig die Robertechnik in allen ihrer Facetten hauptsächlich von der Industrie zu Arbeitsplatzabbau und Gewinnerzielung und von staatlicher Seite zur Überwachung missbraucht.

The question is asked in a confusing way, because the themes "AI" and "Robotics" are intermingled too much. They may be connected, but not necessarily.

Weder die Robotik noch die künstliche Intelligenz stellen eine Gefahr da. Es sind Chancen. Die Gefahr geht davon aus, wie wir die Technologie einsetzen. It´s not a matter of technology, it´s a matter of intention and purpose.

The simplest AI will make besser decisions for humanity than any emotional and profit orientated decision from politicians or managers.

Als moderner Mensch möchte man sein Haus und Garten nicht aus der Notwendigkeit heraus selber reinigen. Maschinen können die lästigen Arbeiten abnehmen und der Mensch kann sich auf seine Kernkompetenz konzentrieren, der kreativen Arbeit.

Robots are a good thing for society, because they help people: I am unable to generalize this question Robots steal peoples' jobs: and create new jobs. If they stole jobs we'd all be working less by now and that'd be good Robots are necessary as they can do jobs that are too hard or too dangerous for people: for some kinds of robots: yes, for others: no. Again too much generalization. Robots are a form of technology that requires careful management: one needs to keep it running, reapir it etc. Autonomous robots (i.e. drones, driverless vehicles) is an efficient way of transporting and delivering goods: unsure about that as they still use electric power or fossil fuels - humans can transport goods using bikes. Of course not in any case, so it's a yes and no Artificial intelligence is a threat to humanity: even if there was something like a real AI - it would exist in well controlled labs and would probably find out that to exist it needs human cooperation. Anyways, I don't believe in that yet Robots are bad thing for society because they create more inequalities: again generalization, but I haven't thought about this issue well enough. I don't believe that creating inequalities is a must-case in robotics, though, but would only happen due to unfair social systems Artificial intelligence is a threat to privacy: this is a might be. AI can work on personal data, but I doubt it has to use it in any case Artificial intelligence is a threat to fundamental human rights: why?

I think robots and AI will be very helpful for society. Therefore, I don't share the 'doomsday' vision that some people are afraid of.

I am most worried about the long-term impacts of self-improving AI. That is a concern we need to study profoundly, like global warming or the ozone hole.

Generically the immediate problems as physical safety and liability are more concerning than any moral questions. The latter answer should be product of experience and not a product of extrapolated prejudice. Jobs will change, people will loose jobs, but one should not overemphasize the potential threat but focus on the handling of the transition. Th future benefits will outweigh any problems during that transition.

Robots and AI are good if regulations are applied. So more robots means less available jobs. Possible solutions would be reduction of working time, and increase tax efficiency or even transform the tax systems that leak a lot of profits into tax havens jurisdictions. The use of Robots and AI will amplify the concentration of wealth that in turn will not pay taxes. This will increase inequality due to fragile Social Security budgets, less access to job market to people without higher education and social instability that will be hard to manage. Also, in E.U, we can't forget people are living longer and at the same time we're taking jobs away from the younger generations as well. This means that the social mesh that will have to be supported by Social Security will increase. The strain will increase at all spectrum of generations: older and younger mostly but also people which are nowadays active and loose their jobs.

For the last two statements I would rather use "challenge" instead of threat. There are always pros and cons. I think, using a cost/benefit analysis, that robots are generally positive. We have to better manage the challenges created by them. For AI is very complicated. The movies "Terminator" and "The Matrix" could be quite visionary.

Votre questionnaire est orienté. J'ai fait une Maitrise en Sociologie, donc le questionnaire et sa rédaction je connais. Il manque dans les réponses par exemple ; "pas forcément" pour la question 1) . Et les robots ne "volent" pas, ils remplacent. Et oui les robots autonomes sont un problème, de même que l'intelligence artificielle. C'est le festival des questions stupides ou orientées les robots et les inégalités. Votre questionnaire ne passerait pas une première année de fac. C'est à cela que sont payés ceux qui le font ?

It depends of the exhaustive and humanely intelligent control of the AI and robotics. A perverse or uncontrolled use of them could be catastrophic for humanity and nature.

sono per un utilizzo controllato e oculato. non per forza vanno introdotti ma per reale necessità. Non per motivi di mercato ma occorre una introduzione graduale e programmata, che non crei grandi squilibri sociali e comunque con delle soluzioni riequilibrative

The question Robots Steal people'sThey jobs is poorly phrased. They do indeed replace humans because they are more efficient but the question is loaded, too skewed toward the negative

If Asimov's Law will be reality there are no threads

We currently live in a neo-liberal environment. This means that in the 80-ties, society stopped trying to fix the negative effects of capitalism and gave free way to capitalism ("There Is No Alternative"). Basically this was a capitulation for the complexity of keeping a social society in capitalism. The alternative "free market" sounds great, but is just another step towards more chaos - and yes, chaos is "stable" and runs by itself. I'm more in favor or "more chaotic markets" instead of "free market". This also shows where I think we need adjustments: If we keep this capitalistic system, AI/Robotics will bring chaos upon us with inequality to a level we have not seen before in the history of mankind. We need to make sure AI/Robotics provide wealth and peace for all of mankind, not just for the most active companies and the remaining intelligent people who still have a job. There is a HUGE risk we turn society into a "Gods and Useless" scenario if we do not act now to prepare for a Future in a World Without Work. AI/Robotics can be a blessing for mankind. It can also be its downfall.

Superintelligent AI is the greatest existential risk to humanity. It will either be the best or the worst thing to ever happen to our species. In the short term, wether robots and AI are going to be a good thing for the average citizen is largely going to depend on how society will be able to deal with large parts of the population being unemployable by no fault of their own. The increase in economic productivity enabled by upcoming technologies might facilitate great amounts of poverty relif and social welfare at little cost.

At the moment laws about AI and privacy are far behind. It is a Wild West. Robots could be useful (they are used already in industry) but will cost human jobs. Another economic system will be needed when more robots are employed, for instance a basic income for everyone. Robots cannot replace humans entirely, because they cannot be held accountable (responsable). Cyborgs: that's what Elon Musk wishes, but not my wish. I don't want companies to decide what a human being is. Corporatism (the power of companies) must be stopped/ controlled by the EU, governments, judges. There is a lot of irrational faith in data, dataïsm, datamania. A person is always more than his/her data and every person is 'relevant', always. (Musk says that only cyborgs can be relevant in future).

Although I do believe that robots and AI can cause threats if badly managed, I am generally positive about technological progress and the opportunities robots and AI provide, assuming we can carefully navigate the risks

It is necessary to study each robot in order to legislate, the artificial intelligence is a good thing but to use in moderation, ethical and moral stakes are at stake.

Robots and AI are a very powerful technology and as such have the potential to be a force for good or a force for evil, just like other powerful technologies humankind has encountered before, for instance nuclear energy or flying machines. All of the above effects are possible. How it will turn out dépends entirely on how we decide to use it.

Many of these questions are highly contingent on the choice of regulation chosen by policy-makers, and therefore difficult to answer.

Artificial intelligence, and of course see robots controlled by such AI systems have the potential to be a threat to the job sector and of course to human rights. Thus they must be developed with extreme caution, legislative supervision and public consultation.

All future technologies require carefull management & regulation. I trust the EU as a responsible overseer to manage & asses the situation with integrity & insight. I wish to have my shopping delivered by drone. A.I to assist in public services. To help teach in academia. To give the elderly & disabled assistance in everyday life & to revolutionise healthcare. I also believe transport of goods and people will improve greatly.

I don't know enough about AI to make informed opinions. We have all seen the films and I do worry about not being able to manage or perhaps control AI. That said I accept and use my smart phone and trust that it is doing what I expect and no doubt have experienced or benefited from robotics or AI without knowing. For me, I like the Sound of an AI personal assistant to help manage my diary but how much would I want an AI system to manage me... I am not sure!

Comme pour toute technologie humaine, il existe des risques d'usages détourné. Mais robotique et IA ne peuvent être réduits à leurs potentiels effets négatifs. Les effets bénéfiques potentiels pour la société sont bien plus grand. Il est vrai cependant que le contrôle de ces 2 technologies est une question éminemment politique et déterminante pour l'avenir.

Hinter Chancen stecken auch immer Risiken, die es zu erkennen gilt .... wichtig ist die Frage des Treibers ... das Streben nach max. Profit ohne zu erkennen bzw. zu gewährleisten, dass es wichtig ist unsere Werte zu schützen und zu erhaltenen entsprechend zu investieren ... KI kann uns große Möglichkeiten geben, aber eben auch, wenn der Zugriff nicht bzgl. Ethischer Aspekte entsprechend geschützt wird eben auch gefahren ... wer den Schlüssel hat die Daten auszuwerten und weltweit auf diese zuzugreifen, hat am Ende die Macht ... ohne einen Ethische globale Art Aufsichtsbehörde, deren Mitarbeiter regelmäßig ausgetauscht werden wird es u.U. schwierig Gerechtigkeit und Frieden zu gewährleisten ... Forschung gilt es analog zu Atomindustry oder in der Medizin weltweit zu kontrollieren ... dann haben wir die Chance auf das die oositiven Aspekte den "negative" u.U, überwiegen ...

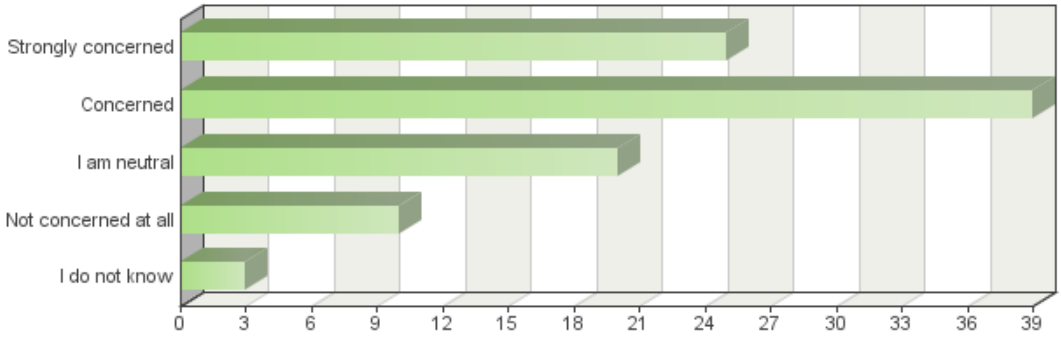
le developpement de ces technologies doit s'accompagner de solide considerations ethique et d'un encadrement au niveau international (à l'instar de la biologie par exemple)

G. NOTO LA DIEGA, Machine rules. Of drones, robots and the info-capitalist society, in Italian Law Journal, 2016, II, 367-404 https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2899728

Question 35

Please indicate to what extent you feel concerned about the following issues related to robotics and AI: *

Levels Physical safety, for example when a robot’s code fails



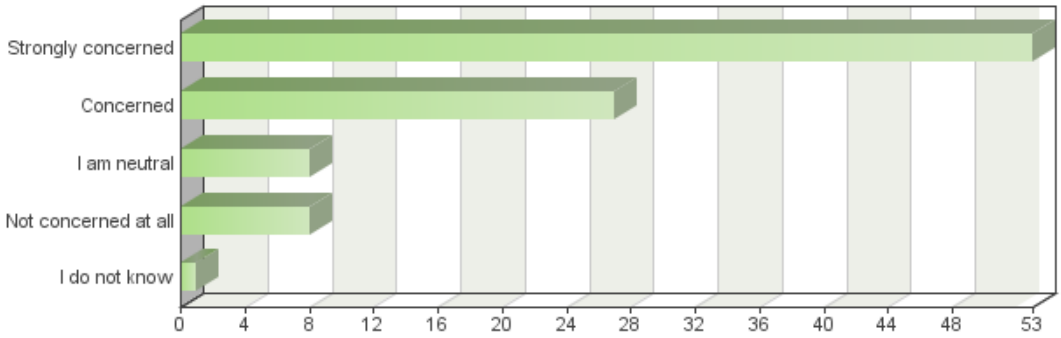
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly concerned	25	25	25.77%	25.77%	25.77%	25.77%
Concerned	39	64	40.21%	65.98%	40.21%	65.98%
I am neutral	20	84	20.62%	86.6%	20.62%	86.6%
Not concerned at all	10	94	10.31%	96.91%	10.31%	96.91%
I do not know	3	97	3.09%	100%	3.09%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	2.25	Minimum:	1	Variance:	1.1
Median:	2	Maximum:	5	Std. deviation:	1.05

Total answered: 97

Levels Ethics, i.e. how robots are programmed, on the basis of what values and principles would autonomous robots function?



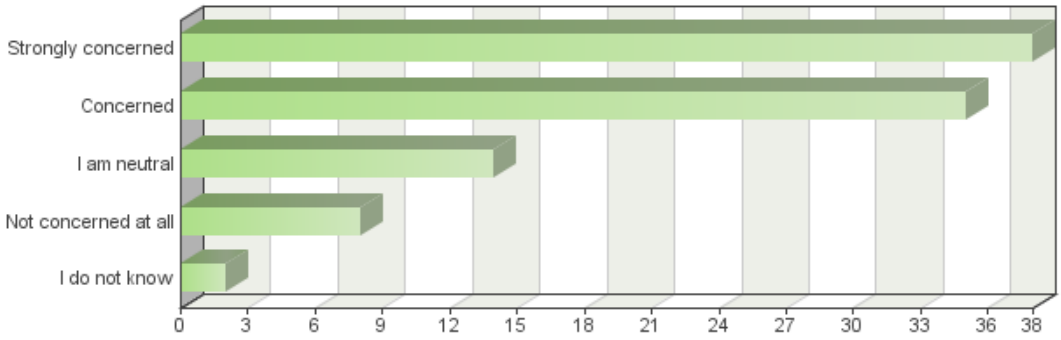
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly concerned	53	53	54.64%	54.64%	54.64%	54.64%
Concerned	27	80	27.84%	82.47%	27.84%	82.47%
I am neutral	8	88	8.25%	90.72%	8.25%	90.72%
Not concerned at all	8	96	8.25%	98.97%	8.25%	98.97%
I do not know	1	97	1.03%	100%	1.03%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.73	Minimum:	1	Variance:	0.99
Median:	1	Maximum:	5	Std. deviation:	0.99

Total answered: 97

Levels Rules on liability, i.e. if robots cause damage, who is responsible and who is liable to pay compensation



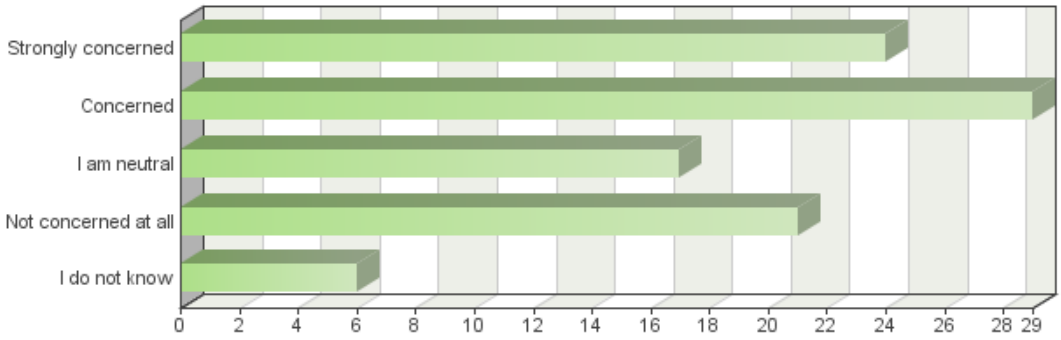
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly concerned	38	38	39.18%	39.18%	39.18%	39.18%
Concerned	35	73	36.08%	75.26%	36.08%	75.26%
I am neutral	14	87	14.43%	89.69%	14.43%	89.69%
Not concerned at all	8	95	8.25%	97.94%	8.25%	97.94%
I do not know	2	97	2.06%	100%	2.06%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.98	Minimum:	1	Variance:	1.06
Median:	2	Maximum:	5	Std. deviation:	1.03

Total answered: 97

Levels Intellectual Property



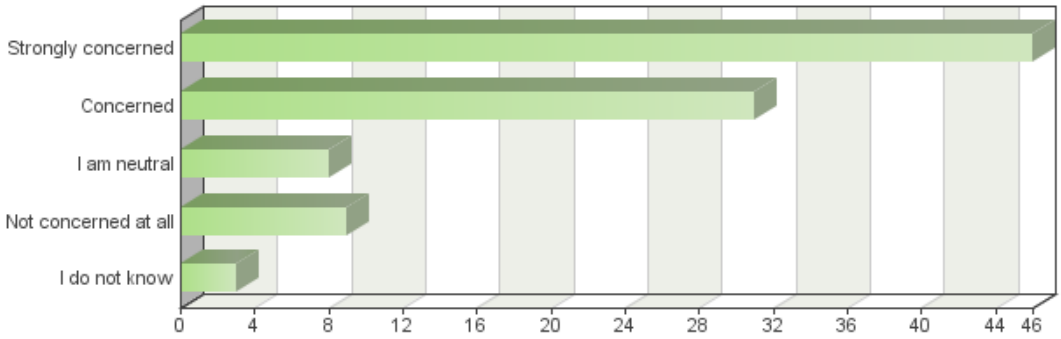
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly concerned	24	24	24.74%	24.74%	24.74%	24.74%
Concerned	29	53	29.9%	54.64%	29.9%	54.64%
I am neutral	17	70	17.53%	72.16%	17.53%	72.16%
Not concerned at all	21	91	21.65%	93.81%	21.65%	93.81%
I do not know	6	97	6.19%	100%	6.19%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	2.55	Minimum:	1	Variance:	1.56
Median:	2	Maximum:	5	Std. deviation:	1.25

Total answered: 97

Levels Data Protection, i.e. how data collected by robots is stored and processed, who has access to data?



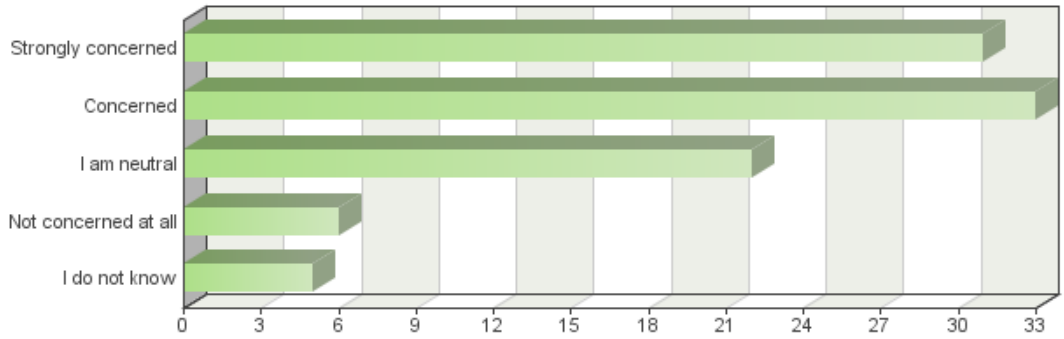
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly concerned	46	46	47.42%	47.42%	47.42%	47.42%
Concerned	31	77	31.96%	79.38%	31.96%	79.38%
I am neutral	8	85	8.25%	87.63%	8.25%	87.63%
Not concerned at all	9	94	9.28%	96.91%	9.28%	96.91%
I do not know	3	97	3.09%	100%	3.09%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.89	Minimum:	1	Variance:	1.21
Median:	2	Maximum:	5	Std. deviation:	1.1

Total answered: 97

Levels EU competitiveness in the global context, i.e. development of robotics in comparison to other countries, for example China, Japan, South Korea, the United States of America.



Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly concerned	31	31	31.96%	31.96%	31.96%	31.96%
Concerned	33	64	34.02%	65.98%	34.02%	65.98%
I am neutral	22	86	22.68%	88.66%	22.68%	88.66%
Not concerned at all	6	92	6.19%	94.85%	6.19%	94.85%
I do not know	5	97	5.15%	100%	5.15%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	2.19	Minimum:	1	Variance:	1.24
Median:	2	Maximum:	5	Std. deviation:	1.11

Total answered: 97

Question 36

Generally speaking, do you think it is necessary to regulate developments in the robotics and AI area? *

Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
yes, public regulation is necessary, but it should be left to each Member State	3	3	3.09%	3.09%	3.09%	3.09%
yes, public regulation is necessary and it should be done jointly at EU level	45	48	46.39%	49.48%	46.39%	49.48%
yes, public regulation is necessary but it should be done at international, not national or EU levels	37	85	38.14%	87.63%	38.14%	87.63%
no, public regulation is not necessary. It should be completely left to industry to develop self-regulation mechanisms	5	90	5.15%	92.78%	5.15%	92.78%
no, no regulation is necessary	4	94	4.12%	96.91%	4.12%	96.91%
other, please explain	3	97	3.09%	100%	3.09%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	2.7	Minimum:	1	Variance:	1
Median:	3	Maximum:	6	Std. deviation:	1

Total answered: 97

Text input
EU should set high standards, as with the GDPR, (and not bend to international lobbying,)in order to build trust and dependability in eU robotics and Ai apps
I prefer that regulations are standardised at the EU level. This will allowed to easy import and export different components, hardware and software within the EU
The only topics that should be covered by the international community are Peace, Health and Environement. (ie. Maslow's level 1 stage) Other topics should be thought at a regional level in order to deploy an coherent, efficient and attractive society project.
It is essential for the common eu market.

Public regulation is necessary, but I think EU needs to formulate its own plan first since we tend to emphasize other parts than, say, a USA. Especially concerning dataming or other potential privacy-invasive aspects need to be vetted well.

If follows from the fact of globalization and its inexorable march as well as the necessity of developing a species-level conception of Humanity.

Regulation is only relevant if international standards are maintained.

Let's face it, an EU regulation will leave the huge development in the US and Asia.

It should be done at an international level because if we leave it to regional institutions, or national, the growth (and damage potential) will differ varying from different countries and if we have as the collective goal to maintain human dignity and not allow AI to become a threat to mankind, we must regulate it in the same way around the world.

As our territories in EU are probably the most important area where we can have a so hight density in electricity and telecomunication infrastructure/ backbones. Is there any area that can provide a such capacity to control the whole environnement : Every thing that flying from 30/40 metres of the ground could be under control for "hyper fast drone delivery"

In a globalized world, rules must be shared, as well as dangers are shared

I will prefer regulation to be done at an international level but taking into account that things are really slow in international regulation and the world is in a convulse moment right now regarding international and commercial agreements I would opt for the realistic approach that is a public regulation done jointly at EU level.

If you refer to robotics and AI being programmed to behave according to particular values and principles, it's a necessity to set up a code of conduct at international level. Example: the universal declaration of human rights.

Regulation is not the solution for disruptive technologies. It should be the latest remedy if there is a market failure or a real danger that must be regulated (eg security issues related to drones flying close to airports)

It is very important that the entire planet agrees to limit artificial intelligence

EU regulations on this domain would not be sufficient, as probably most parts would be Made in China. Chinese (and any) manufacturers should be kept to international standards and agreements on the matter.

A EU regulation would be a first important step. Afterwards an international solution should be sought. It is important to not forget about the implications of our technological progress in other nations around the world. Especially in those providing us with the necessary ressources and those who fall further behind our social status. Furthermore it is important to regulate the use of robots, autonomous robots and ai in times of war or conflict. As long as there are no rules, a robot can easily be used as a scapegoat "with a malfunction" if something bad happens. Also the threshold to program something that is killing people is way lower than actually killing people. The latter could lead to a lower valuation of human lives.

As IA has no residency or nationality, the question can't be solved using pure national or EU law, it's a supra national issue.

EU should lead the topic, as missing regulation would lead to the situation that other regions will regulate it and pressure the EU to take on these regulations.

Avant de réglementer il me semble avant tout nécessaire de mener des réflexions sur le sujet. Il serait dramatique de réglementer trop rapidement notamment parce que la réglementation aurait pour objectif premier de protéger les utilisateurs et pourrait dès lors - si elle ne découle pas d'une réflexion de fond - nuire à la compétitivité européenne. Par ailleurs, eu égard à la rapidité des avancées technologiques, il me semble important non pas de s'intéresser à la réglementation au sens d'une norme quasi technique, mais de se pencher sur les conséquences juridiques de l'apparition d'agents autonomes sur les grands principes du droit (notamment relatifs au droit des obligations et de la responsabilité).

Regulations is necessary, but doing it locally will lead to inequalities between countries and will brake the development of robotic in Europe compare to countries without regulations.

As in fiscal law, if laws are regionally focused, whoever wants to play under different rules (or no rules at all) needs only to find a different country with laxer laws.

we need WW regulations on robotics and AI it is a matter of fundamental laws for all humankind, when it is not regulated by UN we will have niches of AI working against our human laws. AI will be deployed in INternet and it is transnational with different jurisdiccional treatment in every country

Regulation has never prevented any technology to be further developed and used. If there is a benefit in using a technology there will be people (companies/states) that are willing and able to use it. Regulation just decreases the competitiveness of the EU. Experts in such fields simply leave the country and make their contribution elsewhere. The jobs and money simply move to another place, where EU have no influence at all.

Grundsätzlich sind Regeln notwendig. Wenn möglich auf internationale Ebene, wenn dies nicht zeitnah zu gestalten ist auf EU Level.

A strong regulation needs to be done on EU level, so we can compete with other countries.

Die EU sollte Robotik und KI dafür Einsetzen den Wohlstand, Bildung und die Gesundheit aller Menschen zu sichern, zu verbessern und das in jedem Fall in Asprache mit einer Weltgemeinschaft. Die EU sollte zusammen mit den USA, China, Indien und Russland bald möglichst autonome Waffensystem ächten. Auch KI in der Kriegsführung sollte diskutiert werden.

Every EU regulation lead to more bureaucracy and innovation stagnancy. Creativity and innovation need freedom in development.

Weltweite klare Grenzen der Entwicklung. Keine grob lebensentscheidende Situation sollte von Robotern bewertet werden (Drohnen / Autonome Fahrzeuge etc.). Dort müssen hart einprogrammierte Grenzen vorhanden sein.

yes, public regulation is necessary and it should be done jointly at EU level: I believe this is the most realistic scenario for a strong european union. Of course, the big-impact new developements happen to be in the US/China, but as current politics (in my opinion) impressively present, it might be hard to ensure long-term and stable cooperations that are based on ethics and that might hinder corporate profits. Though I find it neccessary to have an international cooperation in this field, but in a range where it is possible to reach people/politicians and to have an impact. For europe I see (and hope for) that in the EU.

It would be useful to have consistent regulations for AI and robot researchers/developers that bring products to the market.

We need to prevent an Arms Race in AI technologies before it even starts.

Before regulation suffocates any future development, a phase of unhindered research and growth is neccessary. No regulation without experience and no extrapolatory regulation based on (mostly) horror scenario.

I would say that regulation is very much necessary at least at EU level but also international level. This to avoid the race to the bottom where some countries potentially take advantage when it comes to the issues in discussion. EU alone can't prevent profits from increased automation being stashed in tax havens that exist all over the world including at the very heart of E.U. But E.U. must start dealing with its own tax jurisdictions. We're talking about a budgetary balance that can easily be broken in a very short time frame. The prospects in my view are increased strains in financial market, job markets, even central banks roles and everyone expecting states to solve every externality that stems from absence of regulations.

Hab EU gewählt, damit es vorankommt. International dauert zu lange.

We should start jointly at EU level. But robots/AI know no frontiers - international cooperation is a must.

Oui la réglementation est nécessaire et ce sont les citoyens par référendum qui doivent la définir dans chaque Région.

At least very soon at EU level. Of course it is also necessary at international level, but it will take more time and the moral standards will be lower.

la regolamentazione può essere graduale partendo dalla UE fino a quella internazionale

Should be left to the individual state because the impact widely will vary from country to country

Each political development opens new opportunities for business, creating new problems that need higher level of political cooperation. The AI/Robotics issue can only be fixed on a global level. No country can fix this alone. There fore not even the EU is a high enough level. We are talking about the way the resources of the earth are distributed in 30-50 years when we live in a world without work. This ends the Warrior Era of mankind and we MUST enter an era of cultivation. Unfortunately our current systems are geared towards a global crisis/catastrophe. We need more co-operations and the EU MUST open their eyes and put "Future Society" at the highest spot of our agenda. The EU will probably need to co-operate with Russia more, because both the EU and Russia are super powers that are not well positioned to enter a world without work. Although the first crisis will probably happen in the USA, because capitalism is extremely advanced there and people are likely to revolt against the effects on employment first because of the lacking social systems. But unfortunately the USA is rich and is likely to "fix" the issue by sticking a band-aid on capitalism. The real issues are likely to happen in the EU and Russia, where mass-unemployment could start first. Both blocks are ideally positioned to negotiate. The EU has good ties to the USA and Russia to China.

AI will prove to be the most powerful technology ever. We have to prevent an arms race at all cost. The first company or nation to have a superintelligent AI will dictate the world. This is a winner take all scenario. We can't afford to cut corners on value alignment (check research from the Machine Intelligence Research Institute or the Future of Life Institute) in order to get to superintelligent AI first. The results might be fatal to our species. International collaboration and regulation is key!

EU is a team and EU is like a state we have to legislat because in USA, China they have starts so Eu have to hurry up

I think the best idea would be to regulate at several levels. First, a general convention at international (UN?) level is advisable, but we should also pursue a more prescriptive and detailed regulation at EU level, which should concern the ethics and principles side, and the technical side should be left to the industry.

Regulation will require top-level action, but also smart, multilayered governance together with private actors and industry associations.

We must be ready to take on future markets of the US & China! The EU must usher in the next industrial revolution. Most tech companies are American! If left to member states this trend will continue. It is time for the EU to rise as the world's superpower. We must invest and be the leaders of this technology revolution! Do not fail us! The stakes are to high! I beg you. Failed to adapt, failure to rear the next Google of robotics will leave Europe in the dark.

Codes of Ethics need to be done forcthe betterment for the world not just for member states whose own politcal systems can flip. If one States starts to put its own interests above others and believe it has a moral superiority it would undermine the protection that serves us all.

Security is a common concern and should be managed globally.

Il est probablement nécessaire de réglementer à l'échelle internationale mais l'échelon européen est de mon point de vue le premier échelon. Nous disposons de toutes les compétences sur le continent. Il n'y a aucune raison que nous ne soyons pas moteurs.

Es muss auf internationaler Ebene geregelt werden durch Vorschläge und Verfahren der Wirtschaft, der Arbeitnehmervertreter, der Politik und der Vertreter der Religionen, um international Ethikaspekte zu berücksichtigen

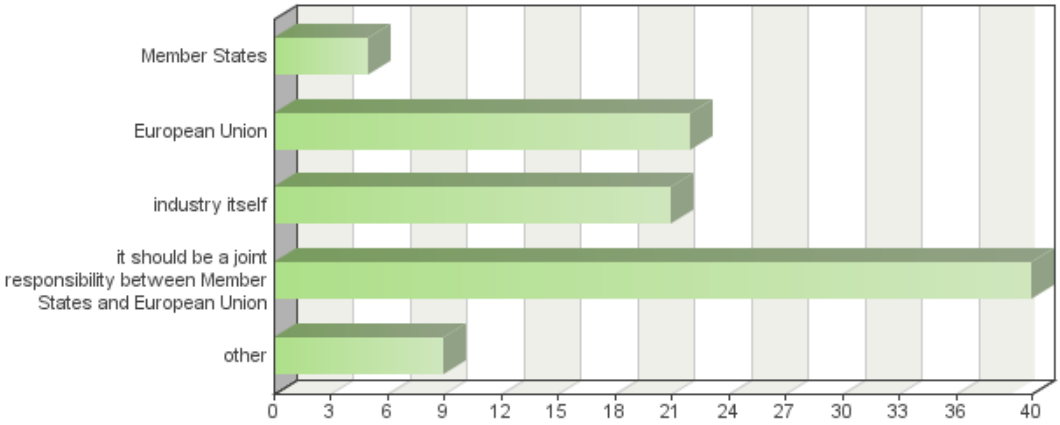
EU kan börja med regleringen och föra den till globala forum för överenskommelser.

G. NOTO LA DIEGA, Machine rules. Of drones, robots and the info-capitalist society, in Italian Law Journal, 2016, II, 367-404 https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2899728

Haftungsregelungen und die zu beachtenden ethischen Grundprinzipien auf der Ebene der EU und auf internationaler Ebene (OECD?) sollten harmonisiert werden.

Question 37

In your opinion, who should take a primary responsibility to finance research and development in the area of robotics and AI? *



Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Member States	5	5	5.15%	5.15%	5.15%	5.15%
European Union	22	27	22.68%	27.84%	22.68%	27.84%
industry itself	21	48	21.65%	49.48%	21.65%	49.48%
it should be a joint responsibility between Member States and European Union	40	88	41.24%	90.72%	41.24%	90.72%
other	9	97	9.28%	100%	9.28%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	3.27	Minimum:	1	Variance:	1.16
Median:	4	Maximum:	5	Std. deviation:	1.08

Total answered: 97

Text input
in practice, it is likely to require cooperation by EU, member state agencies and industry. eU priorities must be paramount,
A join responsibility is important. In research, there are many ideas that could potentially have a great impact in AI. Currently must of these novel ideas never manage to reach the European research grands but they manage to pass the State grand. Which gives a great boost to local innovations. On the other hand, the more mature ideas do manage to pass the EU grants which bring the proper budget to make the idea a reality. Similarly we can also see it happening in the industrial sector. In every industry, innovation is important. However, it often comes with a high risk. Both Member States and European Union must be there to help these companies to move forward so the can keep up with other companies at the European and Global level.
Robots are just a part of the industrial revolution we have to process. We need a common vision at the EU level in order to inject the right resources at the right places.
Explanation on this follows from my response to the previous question.
I would prefer if responsibility lies with people that can be held accountable to the people, rather than just private industry.
Basically, It's about the strength of our biggest competitors. Territories that federate a population that often exceeds 500 milions
I think the responsibility to finance the research should be primarily the industry itself to allow a free market On the other hand I also believe that the Member States and European Union should take the initiative to give the input to the industry to start the research and development always by following the rules regarding human rights and privacy security.
European Union + industry must agree to regulate the use of AI
Competition always forces people to be creative. Just look at the Second World War or the Cold War - enormous technological advancement ! If member states would have to "compete" against one another, they would surely come up with better solutions than if they would not have any competition. The EU's role should be to supplementary finance and encourage even more this advancement and the cooperation at European level, in this domain.

The EUs budget is limited and some memberstates want to progress quicker than it might be possible with EU funds alone. Therefore a joint effort (including the industry of all member states) is the best solution.

Everybody is responsible, as it affects the live of everybody

Les entreprises devraient financer leurs programmes de R&D, les Etats quant à eux doivent financer les recherches universitaires et scientifiques sur les enjeux éthiques, philosophiques, et légaux.

All of the above. This sector is so important that it cannot be financed by only one.

Industry is moved by its own interests and as such the research would be done in order to better serve the industry and not the market. Member states cant have impact if they try to go ahead alone and without the support of their peers. EU is the only of the 3 with the power to gather the different interested parties, push for policy both within the EU region as well as with the rest of the World. Truthfully, this question shouldn't be here. Industry people will say they are the ones who should do it. NAtionalists (which there are many right now) will anser "Member states". So; what you can be sure of is that, if in this question the most voted answer is not "it should be a joint responsibility..." ...you can start packing your suitcases and kiss EU good bye.

EU must lead this and act as a single point for every initiative, cojoint investments, etc. every country on their side is not Union

In robotics, there is still a lot of work to do in "foundamental" research. This development must be supported by the goverment(s). The applications can and will be further developed by the industry.

Sofern die Wirtschaft selbst ihre Forschung und Entwicklung im Bereich der Robotertechnik zu finanzieren hat und keinerlei staatliche/ überstaatliche Fördergelder fließen/ Aufträge erteilt werden, werden unsinnige Presitgeprojekte und militärische Sonderanwendungen wesentlich weniger entwickelt und gebaut.

core research should be financed by EU, applied robotics research needs to be financed by industry that needs this technology

Wirtschaft und EU sollten die Forschung vorantreiben,

If you regulate, you also are responsible and therefore need to pay :-)

Die EU sollte dazu ersteinmal Ziele stecken. Wie soll die EU in 100 Jahren aussehen? Noch immer im Wettbewerb oder in Kooperation? Ich kann das aufgrund der derzeitigen Strukturen der EU nicht beantworten.

Individual local cultural identity should not be over ruled by EU.

Wirtschaft und öffentliche Forschung sollten kollaborieren. Denn aktuell hat die öffentliche Forschung nicht die Anwendung im Blick und die Wirtschaft zwar die Anwendungen, aber nicht den finanziellen Weitblick, dass bei erst unrentablen Anwendungen sich die Robotik zu einem rentablen Wirtschaftszweig weiter entwickeln kann.

it should be a joint responsibility between Member States and European Union: some have more interest in robotics, others have more interests in different topics - so any state shall give what it can afford and all member states shall receive fundings for universities etc. that are working on the issue (in my opinion except for the military field. It's important to have more public discussions on LAWS (Lethal Autonomous Weapon Systems))

Everyone should heavily invest in the research and development. Not only EU and Member States, but also industry and private shareholders. The more we can accelerate research the better.

Robotics is not fundamental research and therefore should be handeled by the industry. Nonetheless it would be worth for the European Union to finance things related to more fundamental topics as a open source OS for smart robots, AI etc.

For me the problem is not financing, because companies have already provided capital to invest in these technologies and continue to do so with or without public funding. The ones who have the technology first will gain competitive advantage which translates into higher profits that will be shipped to offshore jurisdictions. My suggestion is that some kind of study groups or selected academics should start providing yearly reports of the state of the art and evaluate the consequences for the near future. For example quantum computing will require upgrades in critical systems that rely on cryptography to guarantee secure communications as far as I know. So before financing the research and development, E.U. should first understand what the risks are for the next 5 to 15 years and prepare accordingly priorities in where the funding should be spent. The industry is already taking care of producing AI and automation. Should the E.U. be worried in order to get to the patents earlier than the industry? I don't know.

Frei Marktwirtschaft bei der Forschung/Entwicklung, aber strenge Regulierung ist m.E. erforderlich.

Industry should be No1 but with a very strong oversight by the EU and MS.

un comité d'éthique devrait tout superviser, que cela soit dans le privé ou le public

It is a very complex question. The joint responsibility will offer more transparency and responsibility.

potrebbe essere un Consorzio dove partecipano sia Ue che gli Stati e le imprese

Both EU, member states and industry

It should be a joint effort of industry the States and the EU

Industry should take primary responsabillity. However EU should create a frame work for level playingfield for both member states as well as industries.

We need more EU. Not a neo-liberal EU that just takes care of business in the hope that business creates jobs. We've seen enough of that and it is not working anymore. We need MASSIVE investments in AI/Robotics *AND* we need a "Future Society" type of department whose task it is to speak to other blocks, like China, USA and Russia.

Making sure that AI is developed safely is in everyone's interest. Funding research into AI safety should be one of the highest priorities of any governing body that can expect to make progress on that front. Everyone needs to collaborate.

It is impossible to forbid technological innovation. But governments can make laws about the use of new products and keep controll.

Both private and public - Private investment should be encouraged

Member States European Union industry itself have to work together

Industry, guided and restrained by the Member States and EU.

Everybody: EU, Member States, industry

Each me be state may have a specialist that comes out of the expertse at a local level. This should be nourished and developed locally, but under the umbrella of a code of ethics etc.

These subject are not "human needs", they're future (or present reallly) bussiness oportunities.

Les compétences existent dans tous les pays. La recherche est souvent internationale car les chercheurs se regroupent avant tout par thématique de recherches, quelque soit le pays. L'échelle européenne me semble évidente.

Eine geteilte Zuständigkeit aus Wirtschaft, Mitgliedsstaaten und EU ... es ist wichtig die Wirtschaft mit ins Boot zu holen, um Teile des erwirtschafteten Profits in Forschung und Entwicklung zurückzuführen

plus de budget H2020 sur ces sujets + de petits pragmmes accessibles aux PME afin qu'elles d'equipent de robot (excellence dans la recherche mais aussi veiller à ce que les PME traditionnelles ne loupent pas le coche) - il faut des vrais incitations par de la subvention ou des prets de robot (installation sur 4 mois pour rassurer et que les PME comprennent l'intérêt dans l'entreprise et la formation des salariés.)

Industrin tillsammans med EU och medlemsstaterna.

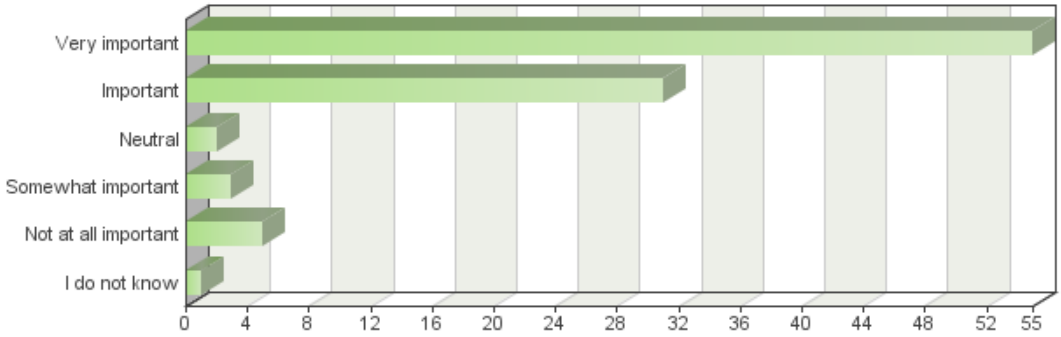
Bonne gouvernance également avec les entreprises du secteur. Les Etats membres doivent participer à cet effort (pas seulement l'UE) sinon risque de suspicion chez les citoyens.

Eine europaweite Finanzierung könnte die BIldung von nationalen Clustern verhindern, da einige Mitgliedstaaten mehr finanzielle Mittel für F&E zur Verfügung stehen als anderen.

Question 38

In your opinion in which area is EU regulatory action most urgent? *

Levels Autonomous vehicles



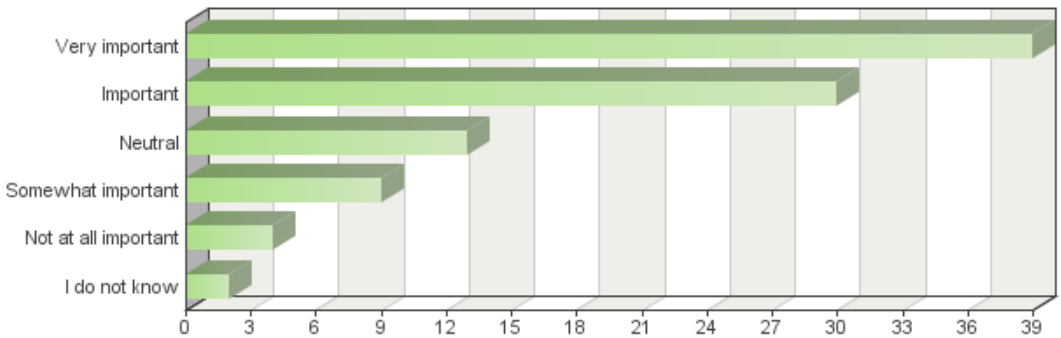
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Very important	55	55	56.7%	56.7%	56.7%	56.7%
Important	31	86	31.96%	88.66%	31.96%	88.66%
Neutral	2	88	2.06%	90.72%	2.06%	90.72%
Somewhat important	3	91	3.09%	93.81%	3.09%	93.81%
Not at all important	5	96	5.15%	98.97%	5.15%	98.97%
I do not know	1	97	1.03%	100%	1.03%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.71	Minimum:	1	Variance:	1.27
Median:	1	Maximum:	6	Std. deviation:	1.13

Total answered: 97

Levels Care robots



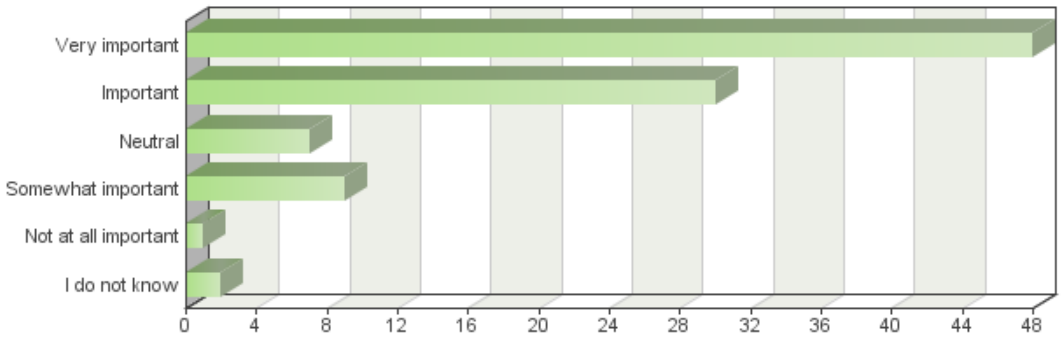
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Very important	39	39	40.21%	40.21%	40.21%	40.21%
Important	30	69	30.93%	71.13%	30.93%	71.13%
Neutral	13	82	13.4%	84.54%	13.4%	84.54%
Somewhat important	9	91	9.28%	93.81%	9.28%	93.81%
Not at all important	4	95	4.12%	97.94%	4.12%	97.94%
I do not know	2	97	2.06%	100%	2.06%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	2.12	Minimum:	1	Variance:	1.61
Median:	2	Maximum:	6	Std. deviation:	1.27

Total answered: 97

Levels Medical robots



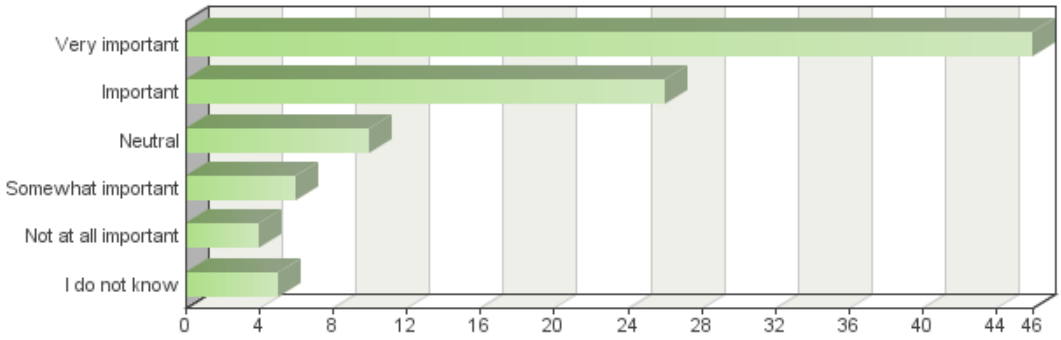
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Very important	48	48	49.48%	49.48%	49.48%	49.48%
Important	30	78	30.93%	80.41%	30.93%	80.41%
Neutral	7	85	7.22%	87.63%	7.22%	87.63%
Somewhat important	9	94	9.28%	96.91%	9.28%	96.91%
Not at all important	1	95	1.03%	97.94%	1.03%	97.94%
I do not know	2	97	2.06%	100%	2.06%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.88	Minimum:	1	Variance:	1.36
Median:	2	Maximum:	6	Std. deviation:	1.17

Total answered: 97

Levels Technologies for human repair and enhancement



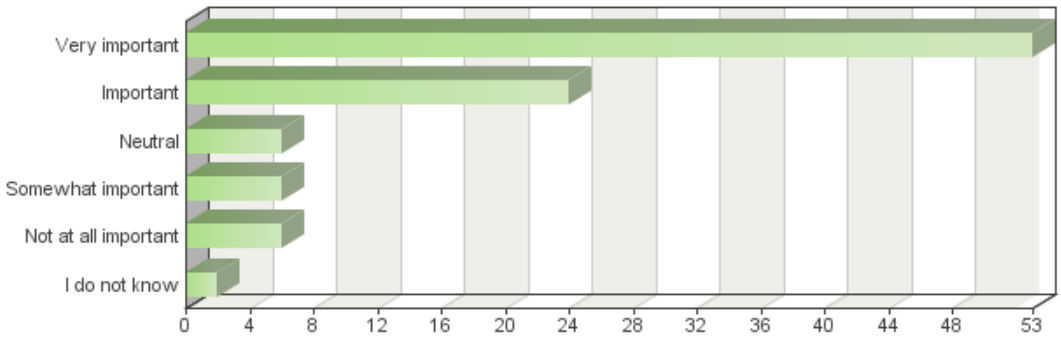
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Very important	46	46	47.42%	47.42%	47.42%	47.42%
Important	26	72	26.8%	74.23%	26.8%	74.23%
Neutral	10	82	10.31%	84.54%	10.31%	84.54%
Somewhat important	6	88	6.19%	90.72%	6.19%	90.72%
Not at all important	4	92	4.12%	94.85%	4.12%	94.85%
I do not know	5	97	5.15%	100%	5.15%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	2.08	Minimum:	1	Variance:	2.03
Median:	2	Maximum:	6	Std. deviation:	1.43

Total answered: 97

Levels Drones (RPAS)



Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Very important	53	53	54.64%	54.64%	54.64%	54.64%
Important	24	77	24.74%	79.38%	24.74%	79.38%
Neutral	6	83	6.19%	85.57%	6.19%	85.57%
Somewhat important	6	89	6.19%	91.75%	6.19%	91.75%
Not at all important	6	95	6.19%	97.94%	6.19%	97.94%
I do not know	2	97	2.06%	100%	2.06%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.91	Minimum:	1	Variance:	1.75
Median:	1	Maximum:	6	Std. deviation:	1.32

Total answered: 97

Text input
Drones will become as much relevant as the nuclear bomb in the worldwide peace process. Autonomous wehicules are part of the industrial revolution paradigm.
Complex topic. Requires serious consideration. Unacceptable for my part to provide a-couple-of-sentences answer.
Military applications of AI and robotics. Weaponry in general.
I think the first one will be to use the drones air space usage; that will probably affect landing and take overs. For instance, in Luxembourg Cargolux and Luxair planes cross the skies of Luxembourg City too low; there is the potential risk of an air accident if drones fly to a medium altitude. In that respect the air space regulation should be updated .
New applications in science are pushing away the usual law. We have to define, and redefine, many rules and laws. UE has to write the "new economic code and guide" ASAP (advocates and scientists working together in order to write laws)
Do we really want to put our our lives into the "hands" of robots and autonomous vehicles? Man needs to be responsible, not idle. All this would end in "it wasn't me, it was the robot" situations
Lethal autonomous weapons (aka "Killer Robots")
Drones have been successfully demonstrated to be able to fire a gun. They can be used for malicious purposes - such as assassinations or explosive detonation over specific area/targets. They can also be used to interfere with commercial, military or even general aviation, to catastrophic results. Drones should wear electronic, gps and visual identification and they should be assigned to a specific person who can be held responsible for any misuse. Regulation on medical and care robots is important for as long as they are used in life-threatening medical conditions or in situations that could lead to such conditions.
Advertisement AI -> Important, Drones and Robots in law enforcement -> Important, Robots in animal care and meat production -> Somewhat Important, AI in data processing -> Very Important (focus on data protection/privacy)
Drones : privacy issues, national security matters, violation of property etc. Autonomous vehicules : responsability issues, reparations mechanisms.
However regulations should not hinder progress and some form of experimentation and trial and error innovation
Il me semble que trop peu d'informations pertinentes sont publiées au sujet de la disponibilité de chacune de ces machines. Il y a beaucoup d'articles dans la presse il s'agit d'effet d'annonce dans la mesure où beaucoup d'initiative sont encore des proof of concept.
Military robots (and drones)
None of the above. Either we go towards common fiscal law...or there is no point keep playing these foolish games. There is no common market anymore. Different rights...clearly. There is no joint vision (otherwise northern countries wouldn't have abandoned the southerners) There is no clearly thought path for development
well as always UE needs to act as a Union and regulate for all the countries, still miss a strong EU and like in data privacy EU needs to take the initiative above countries
Regulation in development is not usefull at all. I understand this question as regulation in application, like rules for drones and so on. DO not understand 4th question. What should that be?
In allen genannten Bereichen ist eine sehr eng gefasste, strikte Regulierung vorzunehmen, die trotz aller Versuche einzelstaatlicher und industrieller Lobbyarbeit klare Verbote in allen Bereich enthält, die dem Menschen, seiner gesundheit und seiner witschaftlichen Existenz/ seinem Arbeitsplatz schaden KÖNNTEN. Hierbei ist unbedingt auf die Möglichkeit udn nciht erst den Eintritt schädlicher Auswirkungen zu fokussieren. Durch derartige Regularion, auch im Bereich der Haftung wird gleichzeitig der Amerikanisierung (erst Schaden, dann rückwärts untersuchen und maßregeln) der Haftungsregeln im Sinne der europäischen Ordnung (Risikobewertung, vorbeugen, testen, erst dann freigeben) vorgebeugt. Die ist angesichts des enormen Schadenpotentials der Kombination aus Robotertechnik, Autonomie und KI enorm wichtig.
Bei autonomen Fahrzeugen und Drohnen können explizite Gefahren für unbeteiligte Dritte entstehen und somit muss hier ein Rechtsraum geschaffen werden.

Militär, Informationssystem, Datenbanken, Soziales. Nehmen wir an, es wäre tatsächlich möglich, auf einem Heimcomputer eine KI zu entwickeln, die aus eigenem Antrieb lernt, Exploits sucht und sich fortpflanzt, das wäre der GAU ... und zugleich die Schaffung einer neuen digitalen Spezies. Die Folgen sind wären absehbar. Jedoch gehe ich davon aus, dass das ohnehin (noch) nicht möglich ist. Vordenken ist besser als Nachdenken, deswegen jetzt Regeln schaffen.

EU should have an eye on nanobot swarm AI.

Ich bevorzuge internationale Rechtsvorschriften.

Energienetzte

LAWS (Lethal Autonomous Weapon Systems) - very important

Drones and autonomous vehicles are "just around the corner" and will influence peoples live on the short scale. The neccessary

These are some of the most urgent. I'm ok with these but preparation for more profound transformations should take place with at least listening to academics and industry.

alles gleich! Es gibt noch viel mehr!

une réglementation ? d'abord pou interdire certaines recherches et productions, oui pour commencer.

.

misuse and dual use human conflicts and war

Where do we get our money from? At the moment neo-liberalism dictates we should leave business alone and get our money mostly from Citizens/Consumers. This HAS to change. We have to introduce a UBI that is more than keeping people alive with a minimum amount of money - keeping them from revolting, because a minimal UBI can be used by the elite to enter a "Gods and Useless" scenario.

As AI progresses, any given instance of it will be competent in an increasingly wide range of cognitive domains. We will have to regulate AI in general rather than specific manifestations of it.

I would suggest developing robots for neutral jobs and for boring jobs. Not for jobs that interact with human beings, like caring. Caring needs love and robots can never give that.

i have already heard about autonomous vehicles and drones but for the care, medical robots i don't know, when a robots work on a human I'm not confortable

Given the state of technology, regulatory action should mainly be enabling. Furthermore, the regulatory environment should be able to react quickly to new developments, which might need more sophisticated regulation. Note: Europe should not sleep while self-driving cars are slowly becoming commonplace!

Do not over regulate! Or you will leave the EU without competitive industry & we will lose business ! Do not let the US or China have a monopoly over this technology making Europe a small player in the markets of tomorrow! You must not fear progress.

Again, I am not really informed about each area so this is just my "gut reaction".

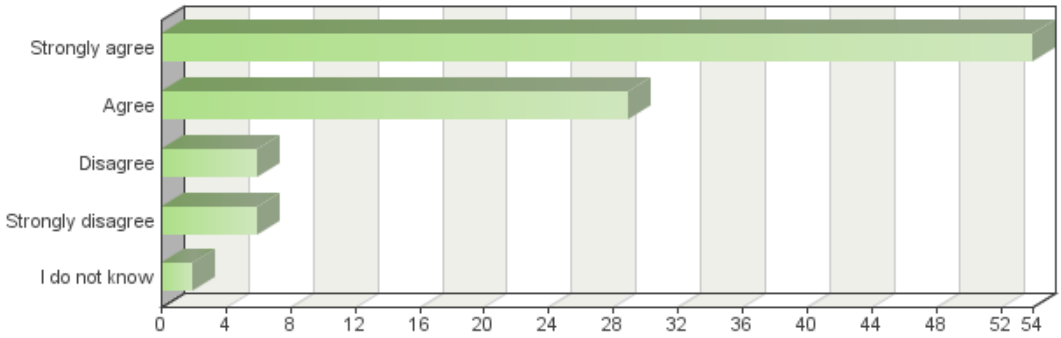
überall da, wo es zu Fehlverhalten durch Systemausfälle, Missinterpretation von Daten und Annahmen kommen kann und entsprechende Konsequenzen nicht gestoppt oder rückgängig gemacht werden können ... überall wo Leben und Eigentum (privates, gesellschaftliches) gefährdet werden kann

[...]

Question 39

Please indicate, to what extent you agree or disagree with the each of the following statements, at European Union level it is necessary ... *

Levels to have a common European definition of smart autonomous robots



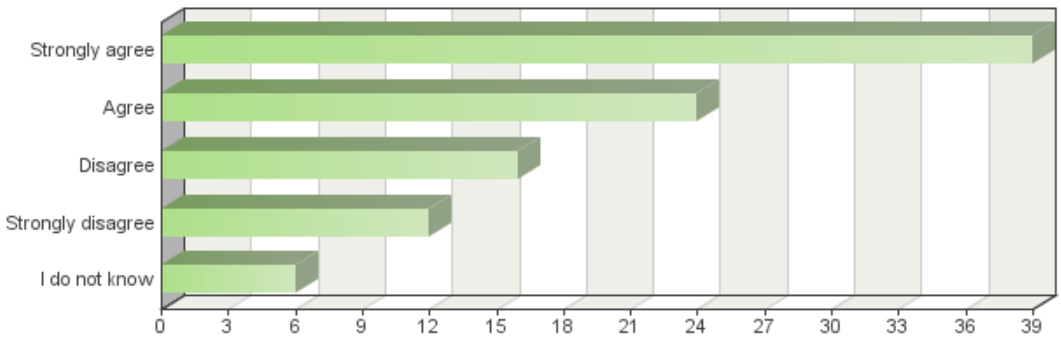
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	54	54	55.67%	55.67%	55.67%	55.67%
Agree	29	83	29.9%	85.57%	29.9%	85.57%
Disagree	6	89	6.19%	91.75%	6.19%	91.75%
Strongly disagree	6	95	6.19%	97.94%	6.19%	97.94%
I do not know	2	97	2.06%	100%	2.06%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.69	Minimum:	1	Variance:	0.97
Median:	1	Maximum:	5	Std. deviation:	0.98

Total answered: 97

Levels to introduce a system of registration of advanced robots



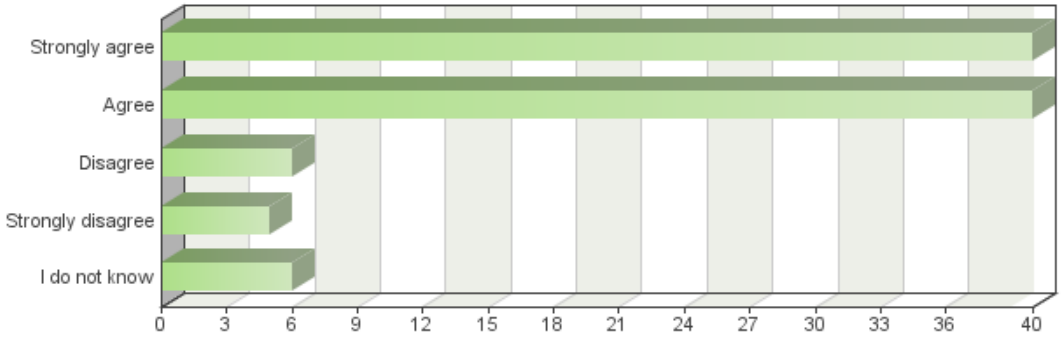
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	39	39	40.21%	40.21%	40.21%	40.21%
Agree	24	63	24.74%	64.95%	24.74%	64.95%
Disagree	16	79	16.49%	81.44%	16.49%	81.44%
Strongly disagree	12	91	12.37%	93.81%	12.37%	93.81%
I do not know	6	97	6.19%	100%	6.19%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	2.2	Minimum:	1	Variance:	1.6
Median:	2	Maximum:	5	Std. deviation:	1.26

Total answered: 97

Levels to publicly finance more research projects in the area of robotics



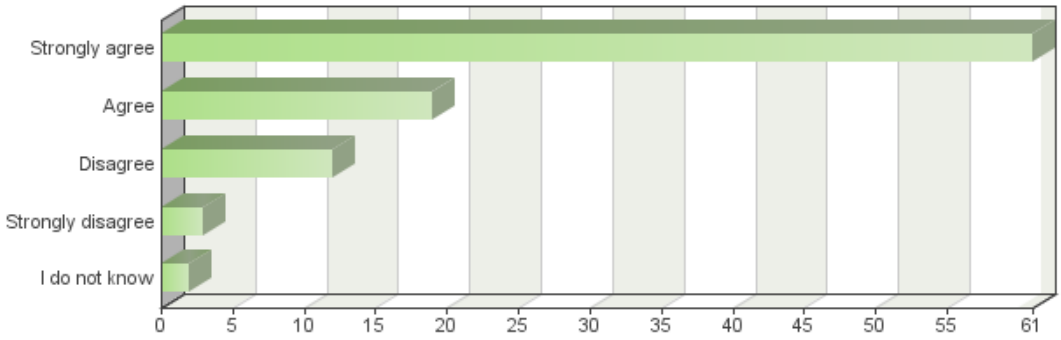
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	40	40	41.24%	41.24%	41.24%	41.24%
Agree	40	80	41.24%	82.47%	41.24%	82.47%
Disagree	6	86	6.19%	88.66%	6.19%	88.66%
Strongly disagree	5	91	5.15%	93.81%	5.15%	93.81%
I do not know	6	97	6.19%	100%	6.19%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.94	Minimum:	1	Variance:	1.25
Median:	2	Maximum:	5	Std. deviation:	1.12

Total answered: 97

Levels to address ethical challenges raised by the technological developments of robots and their applications through regulation



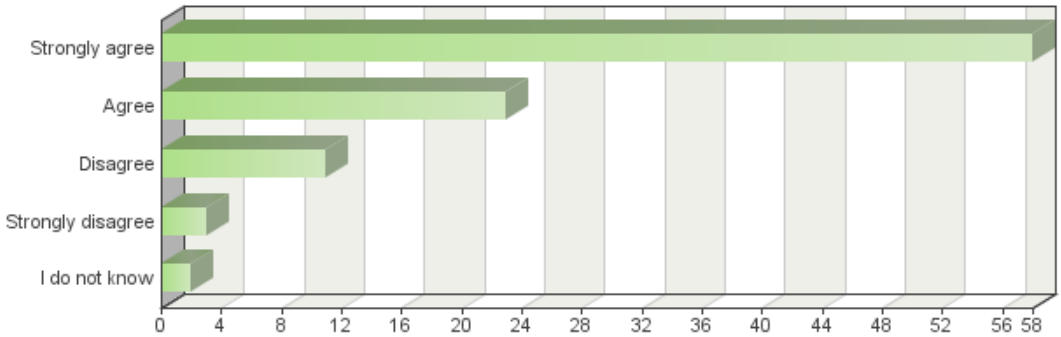
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	61	61	62.89%	62.89%	62.89%	62.89%
Agree	19	80	19.59%	82.47%	19.59%	82.47%
Disagree	12	92	12.37%	94.85%	12.37%	94.85%
Strongly disagree	3	95	3.09%	97.94%	3.09%	97.94%
I do not know	2	97	2.06%	100%	2.06%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.62	Minimum:	1	Variance:	0.93
Median:	1	Maximum:	5	Std. deviation:	0.96

Total answered: 97

Levels to develop a guiding ethical framework of rules and principles for the design, engineering, production and use of robots and artificial intelligence



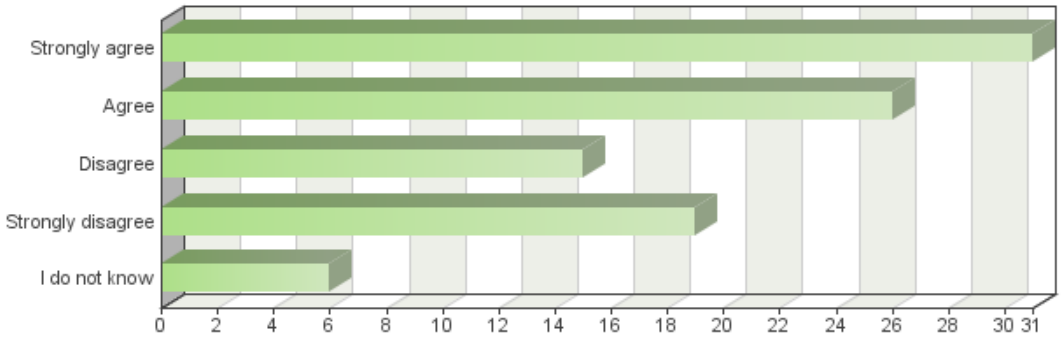
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	58	58	59.79%	59.79%	59.79%	59.79%
Agree	23	81	23.71%	83.51%	23.71%	83.51%
Disagree	11	92	11.34%	94.85%	11.34%	94.85%
Strongly disagree	3	95	3.09%	97.94%	3.09%	97.94%
I do not know	2	97	2.06%	100%	2.06%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.64	Minimum:	1	Variance:	0.9
Median:	1	Maximum:	5	Std. deviation:	0.95

Total answered: 97

Levels to adopt regulatory measures to mitigate the impacts of robotics on the labour market



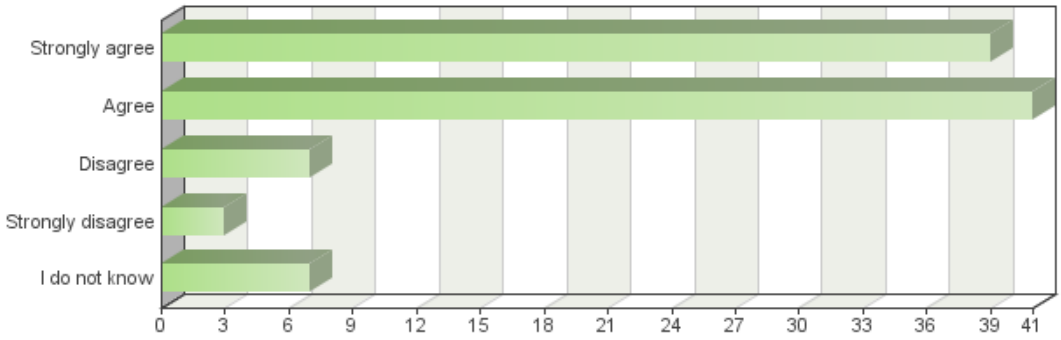
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	31	31	31.96%	31.96%	31.96%	31.96%
Agree	26	57	26.8%	58.76%	26.8%	58.76%
Disagree	15	72	15.46%	74.23%	15.46%	74.23%
Strongly disagree	19	91	19.59%	93.81%	19.59%	93.81%
I do not know	6	97	6.19%	100%	6.19%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	2.41	Minimum:	1	Variance:	1.66
Median:	2	Maximum:	5	Std. deviation:	1.29

Total answered: 97

Levels to adopt regulatory measures to address the impacts of robotics on the physical safety of humans



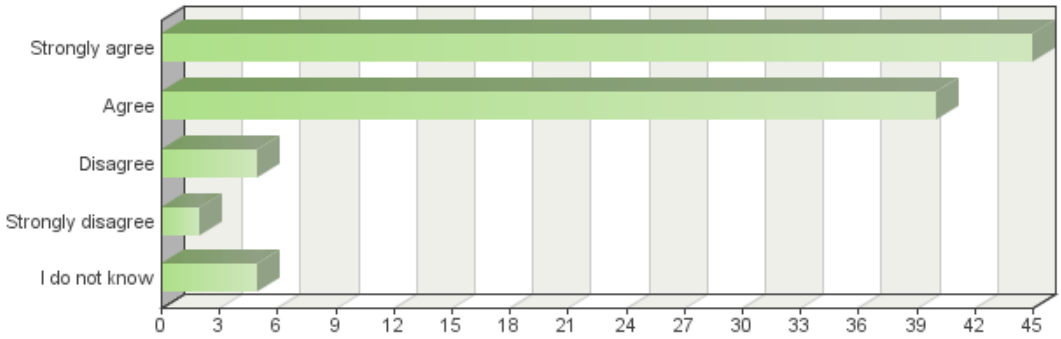
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	39	39	40.21%	40.21%	40.21%	40.21%
Agree	41	80	42.27%	82.47%	42.27%	82.47%
Disagree	7	87	7.22%	89.69%	7.22%	89.69%
Strongly disagree	3	90	3.09%	92.78%	3.09%	92.78%
I do not know	7	97	7.22%	100%	7.22%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.95	Minimum:	1	Variance:	1.26
Median:	2	Maximum:	5	Std. deviation:	1.12

Total answered: 97

Levels to adopt regulatory measures to address issues related to damages and liability related to the use of robots and artificial intelligence



Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	45	45	46.39%	46.39%	46.39%	46.39%
Agree	40	85	41.24%	87.63%	41.24%	87.63%
Disagree	5	90	5.15%	92.78%	5.15%	92.78%
Strongly disagree	2	92	2.06%	94.85%	2.06%	94.85%
I do not know	5	97	5.15%	100%	5.15%	100%
Sum:	97	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-

Average:	1.78	Minimum:	1	Variance:	1.03
Median:	2	Maximum:	5	Std. deviation:	1.01

Total answered: 97

Question 40

What implications has the development of robotics and AI in your field/industry/organisation? *

No data to report

Question 41

In your field, what are the key obstacles/barriers to market development in robotics and AI? *

No data to report

Question 42

What action, in the context of technological developments in robotics and AI in your field, should the EU take to encourage innovation and global competitiveness in the European Union? Please select up to 3 choices which in your opinion are most urgent. *

No data to report

Question 43

What action, in the context of technological developments in robotics and AI in your field, should the EU take to unlock the potential for growth and jobs in the European Union? Please select up to 3 choices which in your opinion are most urgent. *

No data to report

Question 44

What actions should the EU take, in the context of technological developments in robotics and AI in your field, to enhance productivity in the European Union? Please select up to 3 choices which in your opinion are most urgent. *

No data to report

Question 45

What are the societal and economic impacts that developments of robotics and AI bring, or could potentially bring to your field in the short to mid-term? *

No data to report

Question 46

In addition to actions at national level, what added value does the EU bring, or potentially bring to your field in the context of new technological developments in robotics and AI? *

No data to report

Question 47

Are there areas in your industry where potential innovation and growth based on new technological developments are at a standstill, due to a lack of or outdated EU law and policy? *

No data to report

Question 48

You have indicated that EU law and policy is lagging behind your industry/organisation’s needs, what in your opinion are the main problems? Please explain: (optional)

Question 49

You have indicated that EU law and policy is lagging behind your industry/organisation’s needs, what in your opinion is the financial impact of those issues being unresolved? (Please provide estimate if possible): (optional)

Question 50

You have indicated that EU law and policy is lagging behind your industry/organisation’s needs, what in your opinion can be done to address the situation? What types of measures/incentives/investments are necessary? At what level? (Please explain): (optional)

Question 51

What is the net impact of increased digitalisation and automation in your industry/organisation on employment? *

No data to report

Question 52

You have indicated that developments in robotics and AI have an impact on employment in your industry. Please explain, i.e. where are the gains or losses? What type of shifts in employment profiles are taking place? Which employee profiles are at risk, and which profiles are in demand? What kind of measures at EU level you would support to address the impacts on the labour market and employment structures? (optional)

Question 53

What measures, should the EU adopt to address societal and economic risks related to the development and use of robotics and AI in your field? (optional)

Question 54

Which industry (sector) do you think will experience fastest economic growth in the next three-five years, due to the development and application of robotics and AI? (Maximum three answers): *

No data to report

Question 55

In your opinion, what are the key policy areas where EU intervention is most urgent? (max. three) *

No data to report

Question 56

You are welcome to provide feedback to all six themes above, or selectively, only to those you find most urgent for your industry/organisation. Please select area(s) on which you would like to provide the answers. *

No data to report

Question 57

In your opinion, what are the main risks related to the use of autonomous robots and AI? (max. three choices) *

No data to report

Question 58

Do you support the introduction of a common European definition for a smart robot? *

No data to report

Question 59

In your opinion what key specific characteristics of a smart robot must be reflected in the definition of an autonomous robot *

No data to report

Question 60

Do you support the establishment of a registration system for advanced robots at EU level? *

No data to report

Question 61

In your opinion, this EU level registration system for advance robots should: *

No data to report

Question 62

Do you support the establishment of an EU level framework for socially and ethically conscious technological development? *

No data to report

Question 63

In your opinion, an EU ethical framework should apply to robots from the stage of *

No data to report

Question 64

Please indicate how important or unimportant you consider the following measures to support socially and ethically conscious technological development? *

No data to report

Question 65

You have indicated that a guiding ethical framework should be elaborated and adopted at EU level. In this context, how important are the following initiatives/codes of conduct? *

No data to report

Question 66

You have indicated that a code of conduct for robotic engineers should be elaborated and adopted at EU level. In this context, what in your view are the most important principles that should be included in the code of conduct? *

No data to report

Question 67

Should you have further observations about general principles and ethical issues guiding development, engineering and use of advanced robots or AI, please share your experience or suggestions here.

Question 68

Please indicate whether you agree or disagree with the following statement ‘The current EU regulatory framework on liability is sufficient to address new developments in robotics and AI’ *

No data to report

Question 69

Do you agree with the following statement ‘Robots should have a specific legal status’? *

No data to report

Question 70

Please indicate to what extent you agree or disagree with the each of the following statements related to the type of legal status robots should have: *

No data to report

Question 71

Please indicate to what extent you support or oppose each of the following statements related to the allocation of risks related to the use of autonomous robots: *

No data to report

Question 72

Please indicate your opinion regarding which issues related to the regulation of liability and damages require the most urgent intervention at EU level: *

No data to report

Question 73

Please indicate to what extent you support or oppose the establishment of an obligatory insurance scheme for damages caused by autonomous robots: *

No data to report

Question 74

Please provide suggestions as to what should be the scope of the coverage of this insurance scheme, i.e. what risks it should cover: (optional)

Question 75

Please indicate to what extent you support or oppose the establishment of a compulsory insurance and compensation fund *

No data to report

Question 76

Please provide suggestions as to how this compulsory insurance scheme should be operated: (optional)

Question 77

Should you have further observations about liability issues please share your experience or suggestions here: (optional)

Question 78

Please indicate to what extent you support or oppose the following statements on the necessity for EU action(s) related to connectivity, intellectual property rights, and the flow of data? The EU should take action(s) ... *

No data to report

Question 79

What issues related to developments in the robotics and AI sector should the EU address as a matter of priority? (max. three choices) *

No data to report

Question 80

In your opinion, what are the biggest (1) benefits and/or (2) obstacles and deficiencies related to intellectual property rights, connectivity, and flow of data in the current EU regulatory framework?

Question 81

Should you have further observations about connectivity, intellectual property rights, and the flow of data, please share your experience or suggestions here: (optional)

Question 82

Please indicate, whether you agree or disagree with the following statements: ‘the development of EU standards in the field of AI and robotics technologies are of key importance ...’ *

No data to report

Question 83

Please indicate how important or unimportant the following EU actions in the area of standardisation, safety and security, are for your industry? *

No data to report

Question 84

In your opinion, what are the biggest (1) benefits and/or (2) obstacles and deficiencies in the current EU regulatory framework related to standardisation, safety and security for robotics and AI?”

Question 85

Should you have further observations about standardisation, safety and security, please share your experience or suggestions here:

Question 86

Please indicate to what extent you support or oppose the following statements related to the necessity for EU action(s) in the area of education and employment in the context of technological developments in robotics and AI: ‘the EU should take action(s) ...’ *

No data to report

Question 87

Based on the developments in your industry related to and resulting from use of robots and AI, please indicate whether you agree or disagree with the following statement:
‘there is mismatch between skills available on the labour market and the skills necessary’. *

No data to report

Question 88

Please indicate to what extent you agree or disagree with the introduction of corporate reporting requirements on the extent and proportion of the contribution of robotics and AI to the economic results of a company for the purpose of social security contributions: *

No data to report

Question 89

Please indicate to what extent you support or oppose introduction of corporate reporting requirements on the extent and proportion of the contribution of robotics and AI to the economic results of a company for the purpose of taxation: *

No data to report

Question 90

Please indicate whether you agree or disagree with the following statement:
‘considering developments in the area of robotics and AI, social security systems need to be adjusted to provide appropriate protection to employees’. *

No data to report

Question 91

Please indicate whether you agree or disagree with the following statement:
‘considering developments in the area of robotics and AI, labour laws need to be adjusted to provide appropriate protection to employees’. *

No data to report

Question 92

Please indicate whether you agree or disagree with the following statement:

‘restrictions or a ban on partial or total automation of certain tasks or jobs should be introduced in order to guarantee safety’. *

No data to report

Question 93

Please indicate whether you agree or disagree with the following statement:
‘restrictions or a ban on partial or total automation of certain tasks or jobs should be introduced in order to guarantee respect of fundamental human rights’. *

No data to report

Question 94

Please indicate, in which areas you consider that the use of fully autonomous robots should be banned or restricted: *

No data to report

Question 95

Please indicate whether you agree or disagree with the following statement:

‘in the light of the possible effects on the labour market of robotics and AI, a general basic income should be introduced’. *

No data to report

Question 96

Should you have further observations about education and employment as related to the issues of robotics and AI please share your experience or suggestions here

Question 97

In your opinion, in order to provide the technical, ethical and regulatory expertise on developments in the area of robotics and AI: *

No data to report

Question 98

You have indicated support for the establishment of a new EU-level European agency for robotics and artificial intelligence. In your opinion, what task(s) should this agency fulfil? *

No data to report

Question 99

You have indicated support for tasks related to robotics and AI to be designated to an existing EU agency, which agency do you propose? *

No data to report

Question 100

Should you have further observations about institutional cooperation and oversight, please share your experience or suggestions here

Question 101

Please provide details of any other issues related to robotics and AI to which you would like to draw the European Parliament's attention, or which you consider should be addressed. (optional)

Text input

accessibility to robots for the disabled, funding such accessibility ; and funding of robots and AI for,good of society and health...who determines priorities for development and who chooses which people can benefit from robots (eg which disabled person) or which patient. Accessibility should not be determined by ability to lay, so an ethical code is needed to inform and guide practice, implementation of relevant and up- to-date law on training and repair related issues. there are also issues about the use of robot companions to which individuals and children become emotionally attached. The robotics and AI issues need to be seen too in relation to e-identity authentication tools,and practices in Digital single market as well as in relation to more mundane physicaly border control
* Implementation of AI and robotics in military technology, * Open source AI * Learning data: (Data used to teach robots)
Security of data and people at an international level (mitigate threats from other regions). Environement protection and regeneration.
It is important to avoid that AI generate another digital gap between the small companies and the big ones. It is important to preserve the free competition and avoid a concentrated market.
There are too many and too important to squeeze an answer on them in a few sentences. I would be glad to contribute to a different forum.
I think talking about regulation is probably too early and will kill innovation. There has to be a framework to react, but unless I miss something autonomous cars, medic nanorobots, etc are not in the short term. The impact in the labour market is an interesting one... I quote your report "the view that in the light of the possible effects on the labour market of robotics and AI a general basic income should be seriously considered, and invites all Member States to do so". Well... are robots not owned by corporates that pay corporation tax, why there is another tax on capital invested in robots? To protect jobs which are not efficient? I think to tackle the reduction of personal income tax you should first start with the BEPS, create some rules from corporate tax among the EU and then shift the pressure from personal income tax to corporation tax. If the increase of robots materializes in a net destruction of jobs, then the minimum wage measures should be introduced... but are we sure is not going to be a shift from jobs? Yes, maybe we should educate people to become technology native.
Firstable, UE should lead a study about raws materials worldwide allocations
There are taxes on all means of production, there must be taxees on the use of robot proportionate to the benefit to the company. Thetax revenue will be used to fund research in AI and to develop the skills of young people to start working in new areas, not replaceable by robots
I would like to address here the question of why in the Civil Law Rules on Robotics the non-maleficence is the second principle and not the first one.
I wonder if the EP considers researching the perfect balance between living with and without robotics and AI. Nothwitstanding all the benefits brought to us by AI, we should remember that we, humans, shoulb be able to survive without it.
Algorithmic discrimination
The role of robots with administrative and citizen security competencies
The EU should try to keep EU funded research available to the public over Open Source licensing or similar agreements. Too much research is either too expensive to get (especially if one is not a student anymore) or not available at all. This would also help independent developers, educational facilities and SMEs (small and mediums sized enterprises) who cannot afford big research projects. These usually make for the hidden champions in the long run and should therefore benefit from EU funded research as much as possible.
I'm currently writing a tesis about creations realized by artificial inteligence and how copyright might or not be used in this field. As we know know, computational creativity enables computer to produce original art but the question is still pending : who can be considered as the author of it ? The human who created the machine ? The owner of the machine ? Or the machine itself ?
Progress on Robotics and AI in the medical world is strongly hindered by the fierce medical device regulation. In some countries the slow uptake of advanced robotics such as collaborative robots, particularly in SME's can become a concern, given the massive push towards robotics in China. Companies should be more involved in robotics research projects, and more funding should be available to bring technologies from university levels (TRL4) to the market (TRL8). This gap remains huge also due to the immense competition for existing EU funding on the subject
Self driving cars can lead to ethical and legal dilemma. In case of accident, who should be protected, driver or pedestrian? Also illegal hacks may change the original programming. https://ethicsplayground.wordpress.com/2016/11/19/compliance-selfdriving/
Les impacts éthiques, sociaux, philosophiques, et légaux seront très importants. L'apparition d'agents autonomes bouleversera notre cadre de pensée (ou plus spécifiquement bouleversera les cadres de pensée de chacun des Etats membres). Cela signifie que les fondements de droits nationaux (des droits "durs" tels que le droit des contrats, le droit pénal,etc.) seront bouleversés, et ils ne le seront pas tous de la même manière. En parallèle, il y a une volonté d'harmoniser les droits nationaux (notamment avec les initiatives de développement d'un droit des contrats européen). Cela signifie que l'approche des enjeux doit être globale et surtout théorique. Il est en somme nécessaire d'intégrer ces nouveaux agents dans la théorie générale du droit. Cela prendra bien plus longtemps qu'une "simple" réglementation technique.
Robotics : their productivity HAS to be taxed (per hours of work and value created) AI: we are so close and so far. No laws will ever be able to limit AI. It's either a real AI and you will not be able to limit it...or its just a fake AI (to the image of what exists now) which is nothing more than just a software doing what is was programed for meaning that the risk is actually the human programmer and not the robot.

who is doing those robots ? who will verify the code running inside ? we cannot let those to a chinese or american company.... it is a matter of confidence. WHere is the AI stored and the data that will manage ? and the physical world access to devices or to humans ? who will and how train this AIs ? what about lethal weapons and robots and AI ? and autonomous cars ? will they take the decisión of putting my life in risk rather than killing pedestrians ? so, will it be mandatory to accept this risk ? and those AIs will gather data from IoT in order to learn... where´s IoT on that ? that´s tricky also

100% unemployment rate is not a threat its a chance for a new world. The AI should be used to free the people from work.

Autonomous robotics is a key enabler for the future, in my opinion simular to the car. If EU misses to be a leading player in this field, economics will suffer in the future. The key issue here is to better combine industry efforts and academic research. I still see here a huge gap between what is addressed in academic research and what of these insights really finds the way into industrial applications. On way to support this exchange is to support start-ups that transfer such academic knowledge directly from the universities into industrial application. Especially start-ups are flexible and innovative enough to be successful. A second way would be to further foster the exchange between universities and industry by research projects. Therefore, the effort to apply and the scope of the goal needs be reduced. Currently there is a huge overhead in applying for research projects, such that there is practically nobody in industry would do this.

Research about synthetic muscles needs to be supported. Good would be if energy supply would be more efficient and maybe standardized. Robots should be able to collect plastic waste out of the rivers or lakes. So they need to be (salt)water resistand.

Robotik, KI und die Gemeinschaft der EU sollte allen Menschen, gleichwohl zum Vorteil gereichen und die Lebensqualität nachhaltig verbessern. Das muss das Ziel sein. Damit wird sich der Arbeitsmarkt und der Wettbewerb, wie wir ihn derzeit kennen, grundlegend verändern. Aus diesem Grund sollte die EU ihr Ziel nicht geringer stecken als Weltfrieden, Bildung und Wohlstand für die Menschheit.

LAWS - Lethal Autonomous Weapon Systems. It sould be discussed whether these weapon systems shall be ostacrized like ABC-weapon systems

It is important to inform the EU citizens about the true impact of robots and AI on society. It is not the question IF robots will be part of our life, but WHEN. People should not be afraid, researchers are not developing a Terminator Robot but help to make society a better place, provide mobility to the elderly and increase life quality.

I can only repeat: The Major Long-Term Concern that Technocrats and public officials should take a look at and think about are the implications of future AIs that surpass Human Intellect. This seems unlikely to happen within the next 20 years, but nothing is safe in the current climate of rapid development. The

I've been accompanying the excellent work and recommendations led by the Legal Affairs Committee regarding Ethics and safety issues on robotics. It was with great pleasure that I could understand that conclusions and vision for the future on this issues are very much in line with the work I've lead in D1.3 Ethical, Privacy, Legal Considerations and Deontological Practice - project GrowMeUp and that urged for a broad legal consensus on this matter. Due to the GrowMeUp experience and Coimbra's reference site network, we have built a consortium of actors that join researchers, developers and end-users who have worked together, have learned from that experience and now are essaying to propose guidelines that have been created bottom-up, from real life experience on the development of a social robot. Departing from this work, I'm also lead author of an article approved as a full paper for presentation at WorlsCist'17 (11-13 april) – Verification Methodology of Ethical Compliance for users, researchers and developers of Personal Care Robots. I'll now be initiating a field study on the dependence that PCR may create on older persons and I am very much interested in delving deeper into these subjects. Therefore I would be available to collaborate with the European Parliament on these issues. I'm also available to provide any other information that may be useful.

This is a subject that has to be seen under two profiles. The first is the exclusive domain of automation and AI and the impacts it has in the increase of productivity, less jobs available and social security impacts, as well as legislation regulating the flaws that might come - privacy, health integrity, even countries vulnerabilities. The second profile is how all this integrates with the wealth concentration and inequality, the fact that companies have a strong legislative framework that allows them not to pay taxes in the countries where the profits were originated and instead ship the profits into favorable jurisdictions in a race to the bottom logic. Also the strain that is currently under way in Social Security due to the increase in life span as well as more people dependent on state budget for survival due to lack of employment. Finally financial markets are still under limited regulations and debt problems are not solved. All this summed up should start raising concerns. The multiplication factor starts to look far greater than the sum of the individual parts.

Roboter werden künftig immer weniger programmiert und immer mehr unterrichtet. Sie lernen. Es sind daher die Lernverfahren zu betrachten. Und bei der Haftung ist zu trennen zwischen Herstellung des Grundgerüstes (mechanik und Cod) und dem Unterricht.

ETHICS!!!!! Humanity is "characterised" by work. It sounds great to leave all the "hard work" to robots and AI and we, the people, to concentrate on art and philosophy. However, humans staying "idle" for longer periods are not very good and usually human mind creates "trouble" when left idle.

La chine en intelligence artificielle ne connait pas le paradoxe humain. Nous ne sommes pas binaires, mais complexe. Remplacer l'humain partout, en fait ce qui en aière plan c'est notre cosmogonie. Si le robot remplace l'humain, c'est pour des raisons essentiellement liées aux rendements, à la productivité, à l'accumulation, à la croissance. Là où les humains travalllent encore c'est parce qu'il n'y a pas de robot pour les remplacer. Que donne une société dans laquelle les humains deviennent des assistés permanents des robots ? Zeitgeist en dépeint une partie, mais ne répond pas à l'autre. Pour une intelligence artificielle, un humain ne peut être vue que comme un robot imparfait, à corriger. Quel programme peut contenir la marge humaine, tant nous sommes fluctuants ? Aucun . Le robot marque notre paradoxe, celui de l'élan créatif et de vie vs celui de notre destruction. Nous passons de l'outil qui réduit la pénibilité, améliore le rendement, à la machine qui remplacera l'humain, un humain qui devra devenir un cyborg pour assurer la transition dans l'étape finale.

The international development of robotics and AI and its potential impact to the EU and worldwide (for example in armed conflict, environmental problems, ea. The advantages of robotics and AI would have an adverse impact for the workers (less work for people, more depression, ea). Therefore a new paradigm has to be promoted for a more humane world.

Dare maggiore informazione anche dopo la chiusura della consultazione: sui media, in Italia, non se ne è parlato della opportunità da parte dei cittadini di intervenire nella riflessione. Hanno parlato del Report approvato dal Parlamento a febbraio ma non della Consultazione. L'opinione pubblica non ha abbastanza consapevolezza di ciò che potrà accadere nei prossimi anni. Occorre informare e cercare di portare la riflessione ovunque, a partire dalle scuole. Non vi è nulla di scontato nella evoluzione delle tecnologie, l'EVOLUZIONE NON SI FERMA MA SI SCEGLIE. ma i cittadini non hanno compreso che esiste questa possibilità.

Attention should be given to UBI, Universal Basic Income programmes already underway in Finland and the Netherlands.

We must not fall into the trap to introduce AI/Robotics into a neo-liberal world view like the IMF does. We are bound for a future where people will not be able to educate themselves enough to get or keep a job. If we are not looking at how our society will work in a world without work, we are making a HUGE mistake. Preparing for the World Without Work will take DECADES. For example, when we are living in a world without work, this likely means there needs to be more equality. This means the housing infrastructure must be adjusted. No more million dollar villas and 1 room apartments with molt on the walls. It will take DECADES to prepare for that. Also, we must look at what a world without work will mean to immigration/refugees. We HAVE to start investing in the 3rd world, to avoid we have to make a fortress out of the EU, which in a way would mean we actively contribute to a Gods and Useless scenario. There should be one topic at the top of the agenda regarding AI/Robotics: How do we model our economy and society in a world without work. Because if we enter this era, capitalism is dead. There will be no more consumers, because there will be no jobs. There is a huge danger that long term, capitalism will suck up capital to a small percentage of mankind, who will keep the "Useless" from revolting via some form of minimal UBI. Until they have evolved further themselves with developments the "Useless" cannot afford and at some point in time they will stop funding the revolting mass. This sounds like science fiction, but I think the consequences of such a scenario are so HUGE, that we have to investigate our response. Like I said, we will likely find out that a) this scenario is unavoidable and b) we will need decades to prepare and c) we will need global co-operation.

We need to solve the AI alignment problem URGENTLY! Chech the research of the Machine Intelligence Research Institute.

It is important to keep humans always responsable for the use of robots and for the actions of robots. About the idea of cyborgs: implantation of chips that can track people (employees for example) should not be allowed: illegal. I know that some are experimenting already on that. Protection of privacy of individuals is and will be important, for children to get an identity, for afults to keep their identity. Companies like Cisco try to make us believe otherwise, but they do this only because of their marketing strategy (and maybe they believe in it themselves). Try to imagine how disrupting new technologies can be on society. Do we really want this? Is it really to the benefit of the people or predominantly to the benefit of a company?

Inbezug auf die Rechtslage sind Roboter unterscheiden sich Roboter nicht von anderen komplexen technischen Einrichtungen. Daher sind für Roboter inbezug auf Haftung & Arbeitsplatzsicherung KEINE gesonderten Regelungen einzuführen.

- Unconditional Basic Income as a solution to unemployment due to technological automation

Privacy Human rights & democracy - Governance Abuse of data collection and processing Fair competition Taxation Power and wealth concentration

I believe that the EU must cooperate with citizens and professionals like philosophers or builders. We must find an agreement together, the parliament must make good decisions, the subject of the robots is a big issue. We must master this technology.

- With e.g. the advent of legal tech: regulation of certain professions (such as lawyers) - Labor markets: advanced robots will displace workers. This should be seen as an opportunity, not a problem. It will require compensation mechanisms to compensate the losers from these changes. The Universal Basic Income could be one solution, but will pose problems for the mobility of individuals within the EU and generate pressure against immigration from outside the EU. Automatization should not be discouraged (see e.g. dubious proposals such as "robot taxes"). - Europe needs to be well-integrated into AI research platforms. Big new developments are coming, and it is important to be part of them, and not just at the receiving end.

The ethical framework for AI and robotics should not be a political issue. Academia, and specifically philosophers and thinkers should have a determining role in this. Furthermore, for the case of "robots stealing jobs", we are continuously moving towards a time and technological situation where most necessary jobs can be automated. Thus finding jobs in this environment is increasingly hard, simply because fewer and fewer people will be needed for a specific task. So, on a collective level, we should make sure that people who cannot find jobs can nevertheless live a decent life. Universal basic income is the obvious solution to this problem.

You may have to retrain/ educate a large percentage of the population in information technology and programming to stop job losses. All young people must leave school with programming knowledge.

Security of these devices, could be used by cybercriminals.

Transparency of algorithmic decision-making

1. Le débat public est dominé par des propos alarmistes qui n'ont bien souvent, aucun fondement scientifique réel. Une information raisonnée à destination du grand public est indispensable. 2. Il existe une séparation entre les concepteurs d'objets technologiques et les professionnels de terrain. Ceci est particulièrement vrai dans le domaine de la santé. Les concepteurs ont une vision de la société parfois incomplète (par exemple, défaut d'expérience du monde hospitalier). Ceci les amènent à proposer des produits qui s'adaptent mal aux réalités du terrain. Au final, tous les acteurs sont perdants: échec commercial pour les concepteurs et échec d'innovation pour le professionnel de santé. L'exemple de SEDAYS, échec commercial de la société JONHSON ET JOHNSON est un exemple. Il est nécessaire de mon point de vue d'unir les efforts des concepteurs et des professionnels dans le processus de recherche/développement.

La responsabilité des IA et des robots d'un point de vu légal

Ich frage mich, warum Forschungsvorhaben allein von der öffentlichen Hand zu finanzieren sein sollen? Ich finde es eher besser, hier die Wirtschaft mit ins Boot zu holen und gemeinsame Initiativen zu starten ... und die Kräfte zubinden und den Schwerpunkt weher in den ethischen Bereich zu verlagern unser Wertesystem zu stärken, dann ist es nur selbstverständlich nach neuen Jobs und Aufgaben zu suchen, um allen Menschen eine Perspektive anbieten zu können ... jede Regulation bzgl. Auswirkungen auf den Arbeitsmarkt geht am Ziel vorbei und wird den fortschreitenden Einsatz nicht verhindern ...

Sårskilt avsvarsfrågor: - företagens ekonomiska ansvar när arbetsplatser försinner - beskattning el, andra avgifter, - tillverkarens ansvar då olyckor sker - juridiskt och gällande ekonomisk ersättning. - proaktivt följa med utveckligen för att - ifall nädvändigt - sätta stop för finansiering och spärra utvecklingen av robotteknik och ai som innebär ett hot mot individens integritet och självbestämmande.

Comment être compétitif vis à vis des GAFA américains ?

Die Einführung einer eigenen Rechtspersönlichkeit für "Smart Robots" bzw. fahrerlose Fahrzeuge könnte das rechtliche Problem der Zurechnung des schädigenden Handelns zu dem Hersteller (Stichwort: Maschinen sind Werkzeuge des Herstellers) lösen. Auch könnte die massive Haftungsverschiebung auf den Hersteller umgangen werden, welche ein Innovationshemmnis für die zukünftige Entwicklung von KI und Robotik darstellen könnte. Ferner könnten verhaltensrechtliche Regelungen des Straßenverkehrsrecht direkt angewendet werden, da das Fahrzeug selbst als eine Verkehrsteilnehmer angesehen werden könnte.

Question 102

Please provide references to any studies or documents that you think are relevant for this consultation. If possible, please provide links. (optional)

Text input

I am co-editor of a special edition in 2017 of I J of Ethics on robo--life (R Capurro is IRIE chief)

* Russell, S., Dewey, D., & Tegmark, M. (2015). Research Priorities for Robust and Beneficial Artificial Intelligence. AI Magazine, 36(4), 105–114. http://doi.org/10.1609/AIMAG.V36I4.2577 * Bryson, J. J. (n.d.). Artificial Intelligence and Pro-Social Behaviour, 1–28. * Russell, S., Hauert, S., Altman, R., & Veloso, M. (2015). Ethics of Artificial intelligence. Nature, 521(7553), 415–418. http://doi.org/10.1038/521415a * Wortham, R. H., Theodorou, A., & Bryson, J. J. (2016). What Does the Robot Think? Transparency as a Fundamental Design Requirement for Intelligent Systems. IJCAI-2016 Ethics for Artificial Intelligence Workshop {accepted for Publication}. *Thomas, David. Cultural Intelligence: People Skills for Global Business: Easyread Super Large 20pt Edition. ReadHowYouWant. com, 2008. * Helbing, Dirk, Societal, Economic, Ethical and Legal Challenges of the Digital Revolution: From Big Data to Deep Learning, Artificial Intelligence, and Manipulative Technologies (April 14, 2015). Available at SSRN: https://ssrn.com/abstract=2594352 or http://dx.doi.org/10.2139/ssrn.2594352 * https://www.partnershiponai.org/ (US initiative)

The third industrial reveolution by Jeremy Rifkin Reinventing organizations by Frederic Laloux All TED talks about robotics and AI

1. Gelepithis (1991) assumes the possibility of general AI and concludes that human-GAI communication is impossible. Ref: The possibility of Machine Intelligence and the impossibility of Human-Machine Communication. Cybernetica, XXXIV, No 4, pp 255-268, 1991. Available also on Research Gate under Petros A M Gelepithis. 2. Gelepithis (1999) considers the impact of the AI R&D programme on human society and the individual human being on the assumption that a full realisation of the engineering objective of AI, namely, construction of human-level, domain-independent intelligent entities is possible. His assumption is essentially identical to the maximum progress scenario of the Office of Technology Assessment, US Congress. Ref: AI and Human Society. AI & Society: The Journal of Human and Machine Intelligence. (1999) 13:312-321. Springer-Verlag. Available also on Research Gate under Petros A M Gelepithis.

http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML%2BCOMPARL%2BPE-582.443%2B01%2BDOC%2BPDF%2BV0//EN https://www.smmt.co.uk/wp-content/uploads/sites/2/CRT036586F-Connected-and-Autonomous-Vehicles-%E2%80%93-The-UK-Economic-Opportu...1.pdf

In order to build and to enhance a real identity rapidly, UE should have an European Team of footlball players under 19 years old.

N/A

ROBOTIC POSTULATES, available to anyone on the Internet: http://www.gabinete-g.com/top-hack-8-PR1.htm , http://postuladosroboticos.blogspot.com.es/ , http://www.gabinete-g.com/top-hack-13-PR4.htm , http://documents.mx/documents/la-imposicion-de-la-sociedad-digital-postulados-roboticos-v.html

https://ethicsplayground.wordpress.com/2016/11/19/compliance-selfdriving/

bit too far. cant work for free

There are to many studies to count with non public data. https://en.wikipedia.org/wiki/Humans_Need_Not_Apply

https://futureoflife.org/ai-open-letter This open letter was signed by many intelligent people, e.g. Stephen Hawking, Elon Musk, Steve Wozniak. I can only urge you to look at this topic with an open mind and to resist the urge to just disregard this topic as 'nonsense'. Tabloids have reported on this letter with the usual hysteria about 'killer robots', 'Terminator Future' etc., but the deeper concerns are different and more nuanced: What happens if Man is no longer the smartest being on Earth? Additionally, Nick Bostrom, Professor at Oxford University, is widely considered to be the prime expert in this field. His academic background in philosophy, physics and Artifical Intelligence would likely make him an excellent advisor should the Parliament so desire.

Verification Methodology of Ethical Compliance for users, researchers and developers of Personal Care Robots http://link.springer.com/chapter/10.1007/978-3-319-56538-5_76 D1.3 Ethical, Privacy, Legal Considerations and Deontological Practice - project GrowMeUp http://www.growmeup.eu/images/Documents/PUDeliverables/D1.3%20Ethical%20Privacy%20Legal%20Considerations%20and%20Deontological%20Practice.pdf

I believe everyone is confident everything will be sorted out fine. My concern is that this time will really be different and comparing this revolution to the industrial revolution is a naive and reckless approach to say the least. When you see things like these, a lot of questions have to be asked: http://www.bbc.com/news/technology-36376966 https://www.theguardian.com/technology/2017/feb/06/robots-could-replace-250000-uk-public-sector-workers https://www.theguardian.com/technology/2017/mar/24/millions-uk-workers-risk-replaced-robots-study-warns https://www.theguardian.com/technology/2017/mar/02/robot-tax-job-elimination-livable-wage

-

Books: Rise of the Robots, Homo Deus, The Fourth industrial Revolution, Frey and Osborne Oxford University Study, The Future of Employment. I also have read and saved some 175 papers on the subject of Artificial Intelligence and Robotics on my Flipboard app but I would need to send an invite for access to the folder. They are too numerous to list in this survey

n/a

Paoers published by the Machine Intelligence Research Institute abd the Future of Life Institute.

I could do that later. By email for example. I read The Guardian, get links from Bitsoffreedom, UnaOS, Tutanota.com, Dataethics.eu, Ind.ie, the BBC, de Correspondent (online articles by research journalists), ProPublica, ACLU, Amnesty International, and others. I follow Snowden and others. Shushana Zuboff, Bruce Schneier, Cory Doctorov, Evgeny Morozov, Noah Harari, are critical authors. I am interested in European It-alternatives: Puzzlephone, Fairphone, Wire, Protonmail, Tutanota.com (mail), SecureSafe, Tresorit, Threema, Wire, Mastodon.social (decentralised twitter like medium), Qwant, Findx.

I work on the law od robots in school and i have just find documents on your page
Everything about security in IoT.
J'essaie (modestement) de donner de l'information et de développer mon point de vue sur mon blog: www.medecine-et-robotique.fr En lien sur ce blog, les sources de mes articles qui sont, pour leur majorité, des documents issus d'une recherche bibliographique scientifique et médicale.

Question 103

Please provide information on any successful initiatives at regional, national or international level related to robotics and AI that could support the European Parliament in considering further actions. (optional)

Text input
Unfortunately, there are no many successful initiatives in Europe (not to my knowledge). However there are initiatives outside Europe where we can take examples from. 1. Open letter AI which is link to the ref:1 above: https://futureoflife.org/ai-open-letter/ 2. Partnership on AI. Is a partnership among big North American companies. https://www.partnershiponai.org/
The french eco-taxe for trucks could have provided the infrastructures and data for a powerful transportation AI...
UK investment in low carbon emission and autonomous cars (e.g. Milton Keynes cars).
the Tesla self driving car which predicted the crash between two cars in front of it before it even happened - this is a good initiative for road safety
N/A
I think in the medical world the use of robotics in e.g. operations is a big step forward and very positive. Some may disagree, but I am happy with my computerbrowser remembering my search history and profile. It shows me results that are most likely the best option for me. That's very helpful.
POSTULADOS ROBÓTICOS EN ESPAÑOL
Collaboration between disciplines is crucial to advance in the domain. The Vrije Universiteit Brussel has started BruBotics: 8 research groups from domains as wide as human physiology, AI, robotics, ageing studies, sociology,...combine their expertise to advance robotics more quickly.
Most of what was done so far was not good enough to be used as reference. We should develop our own studies (obviously not making the same mistakes as others) under our own angle.
DFKI
Die Integrata-Stiftung für humane Nutzung der IT erstellt einen Katalog von Kriterien, mit denen die humane Nutzung der IT "gemessen" werden kann - und soll.
As above, the efforts underway for UBI in Finland and The Netherlands. Also one should note that even in China with surplus labour, in one Dongguan factory 90% of workers were replaced by robots resulting in 250% increase in production. Even China sees robotics as necessary to sustain competitiveness.
n/a
I am sorry. Don't know.
TA (Technologie Assessment Schweiz)
?
ROBOT start PME http://www.robotstartpme.fr/sites/default/files/cprobotstartpme_point2016.pdf mais pas encore assez incitatif sur l'investissement les appels à manifestation d'interet regionaux ne le sont pas assez non plus (avance remboursable) assoaciation de promotion de la robotique au niveau regional : devrait etre soutenue pas les pouvoir publics http://ambot.e-monsite.com/ formation : accelerer les programmes de robotique educative - pour interesser et former la future generation à ces sujets
CMS Webinar Series zum Thema: "Delegation of important decisions to maschines". Rechtliches Seminar im May 2017 zu Datenschutzrechtlichen, Sicherheits und Haftungsfragen von autonomen Systemen, einschließlich einer Case Study zum selbstfahrenden Auto. Link: https://cms.law/en/HKG/Events/Webinar-Delegating-decisions-to-machines Ein weiterer positiver Aspekt des vermehrten Einsatzes von KI und Robotern ist die freie Zeit, welche durch den Einsatz von Robotern am Arbeitsplatz und zu Hause entsteht. Gleichzeitig wird die Effektivität der Arbeitsprozesse und damit die Profitabilität gesteigert. Die gerechte Verteilung der Gewinne wird aber ein Thema in der Zukunft sein, um die Akzeptanz der Roboter in der Gesellschaft zu fördern.

Question 104

Please provide information on any negative experiences or impacts at regional, national or international level related to robotics and AI that could support the European Parliament in considering further actions. (optional)

Text input

need to consider the detrimental possible impact of hacking that interferes with or causes malfunction or non function of robot. This could be risky for people relying on a robot in place of a human whether for daily domestic help or for delicate surgery.

Sex robots being produced in Japan are raising huge ethical concerns and although it is not as much a European thing, if this was to be introduced here it would require a great amount of regulation to prevent any misuse potentially regarding children's rights, or the role of women in society setting the progress of feminism back many, many years.

N/A

I wonder if there is a common stand towards the use of drones in warfare. For me, this is an inhumane practice, even towards our "ennemies". This is something that may grow out of control in the next decenia. I am suddenly seeying flashbacks of "minority report".

Responsibility and liability in case of malfunctions and damage due to programming/ mechanical failure of robots and A.I. is definitely in the hands of the Manufacturer. Period.

Slow adoption rates

Applying for research projects, especially for industry, is a too big effort such that people in industry rarely take the initiative although there would be a valid and promising idea.

-

The IMF is looking at AI/Robotics through neo-liberal glasses. This is not going to work. When business are telling us that there have always been new jobs after large industrial revolutions, they are making a mistake. This revolution is going to be different from all the others before us. In the past, industrial revolutions have moved mankind out of lower skilled jobs towards higher skilled jobs. But the upcoming AI/Robotics revolution will come after the very last skill humans have to offer: Our cognitive skills. After the current AI/Robotics revolution is over, there will be NOTHING a human can do better than a machine. Obviously there is an ethics question in that situation where AI surpasses humans in intelligence. I always thought that will be the downfall of mankind. And perhaps it will. But a FAR more urgent issue lies on the path towards super-human AI. Starting in 1-5 years from now (2017) we will see more unemployment created by AI/Robotics than new jobs created by it. This will put capitalism under stress and some death spirals that are built in capitalism will spiral out of control. More AI/Robotics, will mean less buying power for consumers. As businesses do not act in the scope of macro economy, but only in the scope of their micro economy, they will respond in ways that will make the issue more grave. No company will keep humans in jobs, because they realize these human workers implicitly represent their revenue. No, when margins are under stress because of unemployment generated by AI/Robotics, the reaction is to have more AI/Robotics and lower wages. This means even less money for consumers, triggering a spiral. At the same time, governments that have relied on taxing consumers/citizens, will see an influx of people who need government support, while tax income is declining. They will have to start taxing business more, which will put struggling businesses out of control, leading to more people that need government support. These self-amplifying processes are a real danger to mankind. The days of stability through "chaos" are over. Mankind has to find an alternative to "There Is No Alternative". And we have to do it fast.

I know that Singularity University, a company sponsored by Google and Cisco (amoung others) are trying to implement new AI technology here. They have very high ambitions. A person who works there is busy with chips and medical health. I cannot give the details now.

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It is clear from Russian hacking & aggression that robotics & AI will be of some security concern. For the love of the founding fathers - set up a security board on future technologies not that different in nature to a European version of the FBI or CIA. No member state alone will be able to defend themselves from hacks. It will be our enemies perfect opportunity to spy on us all, potentially even kill.. what if Russia was to hack a self driving car for instance and have it drive over a cliff edge or into a brick wall? New security agencies EU wide are essential!

Eine aktuelle Studie des International Transport Forum thematisiert den massiven Abbau von Lastkraftfahrern im Zuge der Selbstfahreigenschaften der LKWs. Eine solche Diskussion wird auch in anderen Bereichen zu erwarten sein. Meines Erachtens ist aber der Vorteil eines sichereren Strassenverkehrs ebenfalls zu beachten und sollte hervorgehoben werden. Hier ist der Link zu der entsprechenden Pressemitteilung: https://www.itf-oecd.org/sites/default/files/docs/autonome-lkw-neue-studie-vorschlage-fahrerjobs-rechtsrahmen.pdf