



I&R – INSTRUCTIVE DEBATE ON ROBOTICS

What use of robotics do we have today?

Random and strange utilization of robotics: is it becoming too big, too dangerous? What importance does it take in our life?

INTRO 30'' M & N	Project and student presentation 1' All	T1: Robot therapy (medicine) 1'30'' N	T2: Theme park 1' All	MUSIC 1 <i>Technologic, Daft Punk</i>	T4: Transport 1' All	T5: Models and design 1'30'' M	MUSIC 2 <i>Technologic, Daft Punk</i>	Debate – topic after topic 5' All	EXTRA 20'' M & N
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Hey everybody,

Welcome on Delta FM 90.2,

You are listening to the LP2I's radio wave,

where the stupendous International Week is right now taking place

for today an international few minutes-long broadcast,

Because we are here,

members of the engineering European Comenius project: **engineering and robotics, I&R.**

2 Italians, 3 Maltese students and 2 French

I'm Nicolas, and I am from the French delegation.

And I'm Manon and French as well.

And what we want to present you today

is our work and thoughts on the use of robotics

in different fields,

funky and strange uses.

So our topics for today are:

- robot therapy, for which our Italian colleagues are specialists

Lara - Michaela - Elaine - Josmarie - Abigail - Miriana - Giorgio - Matteo - Manon - Nicolas

- fun fair, with robots in theme parks - such as the one we have here just beside: the Futuroscope and its beloved ***Dance with the Robots*** the attraction number one
- high techs, a great market today, and how it comes closer and closer to Asimov's definition of Robots in its terrifying aspects
- transports, driverless cars is an up to date innovation as the debate on society and robotics is
- models, a very funky use of robots raising some fundamental issues on society.

And those many subjects,
we will discuss and debate during the next 20 minutes.

Therefore,
we will have the pleasure to hear points of view from 3 different places in Europe!
Everyone will be able to give their opinion and we will be expecting yours!

Just react on Facebook on the page: **Libre Antenne Delta**
(Could you please spell it, **Lara**? You are from Malta, and it's probably one of the first time you happen to spell such a French word.)

Let's start all over by presenting ourselves:

Matteo
and Giorgio,
You come from Italy:
..... *(school? interest for robotics? Trip? –one after the other)*

And the rest of the speakers are mainly girls:
with the students from the girl school of Malta:
Lara, Michaela, Elaine, Josmarie, Abigail, Miriana *(whom?)*
(school? interest for robotics? Trip? –one after the other)
...

T1: PROJECT AND STUDENT PRESENTATION

Now, the big question:
Why are we here together speaking to you?
The I&R project is a European Comenius

(meaning an educational project founded by European Union)

regrouping the 3 schools of:

Gozo girl's secondary school,

IT IS Pininfarina Moncalieri,

and the LP2I from the Futuroscope you know.

The IES Alpañès School from Aranjuez is also part of the project

but, unfortunately,

cannot participate in this broadcast.

Now, who can give us the precise name of the project?

I&R - EUROPEAN INDUSTRIAL TECHNOLOGY AND ROBOTICS, NEW EDUCATIONAL APPROACHES FOR CREATIVE LEARNING

And the thing is,

that our work is divided in activities,

which are the following:

-Plan & Design a Robot

-Robotics: History, Art, Literature & Movies

-Renewable energies & Eco-friendly devices

-Research & Robotics

-Development and impact of industry on society / environment

-Industrial World and Job Opportunities in the UE

-Factories & Labs visits –the ones we will do

And this particular show is part of all this!

So before you get lost with all these explanations,

here is the headline topic of the show:

“Robot therapy and medicine”,

right after a jingle.

Keep listening,

We're right back on Delta Fm 90.2!

JINGLE

T1: ROBOT THERAPY (MEDICINE)

Alright,

You -together with the Italian class -have been working on Robot therapy,

So before you tell us about this interesting topic,

We're going to introduce on very general issues on medicine,

It's well known that,

Robotic arms or medical computers or consoles

have been used in medical procedures for a while now.

But to what extent is it useful?:

First:

it provides surgeons a level of steadiness and precision

that few human hands can replicate.

And:

they are used for "minimally invasive" surgery

-this are your words-

requiring high accuracy, in particular surgery in the field of small dimensions,

On very particular fields.

This is:

Sample analysis, autopsy, surgery

In fact, medical high techs is a very up-to-date evolution,

just because the demand is vital.

So you have worked on different systems,

Different robots used in medicine.

And one of them -you worked on-

Is

AIBO

a robot used in medicine concerning autism.

AIBO isn't the humanoid robot you'd think of...

It actually has the form of a dog!

What else can you tell us about this example of robot medicine?

AIBO (Which stands for Artificial Intelligence Robot) was created by a Japanese brand

-we will not name

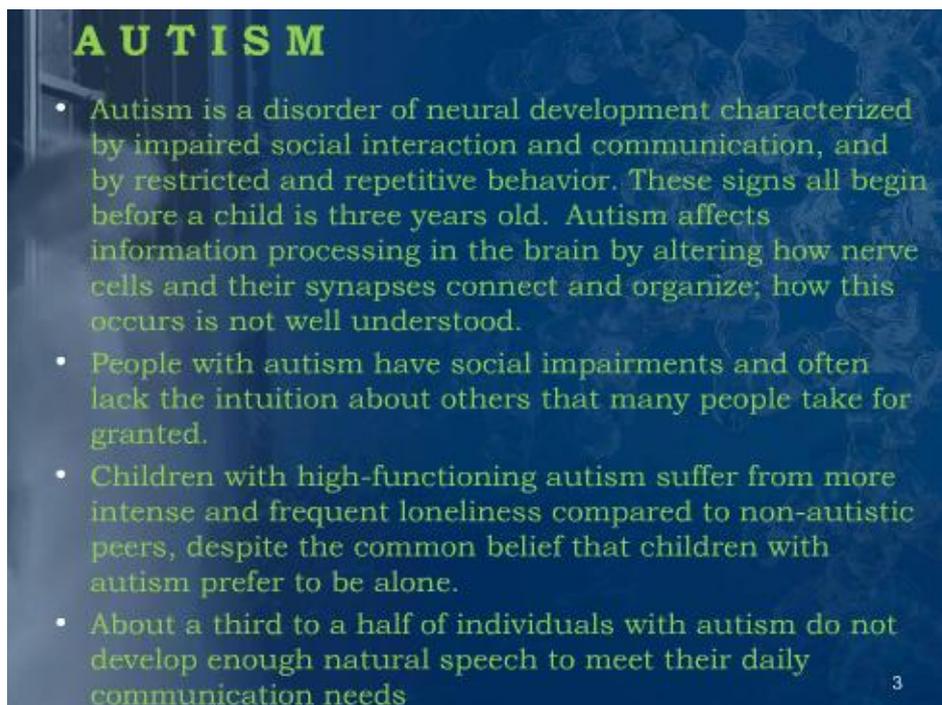
but how and why was it invented?

How can it cure autism?

Does it actually cure autism, or is it more of a help to the diseased?

We cannot really speak of like a disease, do we?

- No, actually it isn't. Autism is a disorder of neural development characterized by impaired social interaction and communication, and by restricted and repetitive behaviour. These signs all begin before a child is three years old. Autism affects information processing in the brain by altering how nerve cells and their synapses connect and organize; how this occurs is not well understood.
- People with autism have social impairments and often lack the intuition about others that many people take for granted.
- Children with high-functioning autism suffer from more intense and frequent loneliness compared to non-autistic peers, despite the common belief that children with autism prefer to be alone.
- About a third to a half of individuals with autism do not develop enough natural speech to meet their daily communication needs



OK,

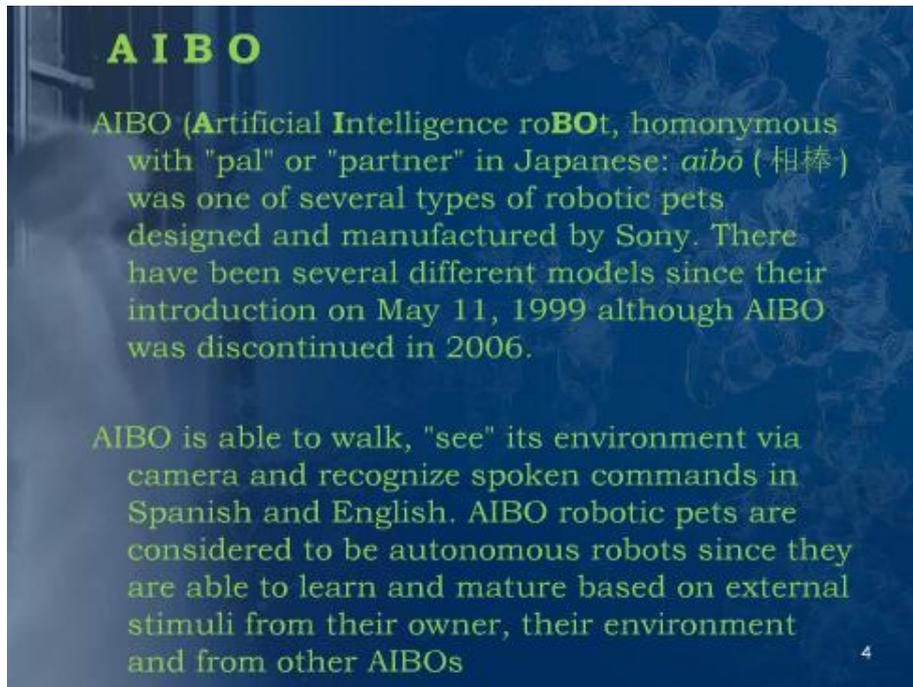
Now more about, the robot itself:

What is it like? I mean by this: what is it able to do?

AIBO means Artificial Intelligence roBOt and is homonymous with "pal" or "partner" in Japanese. It was one of several types of robotic pets designed and manufactured by a famous Japanese company.

There have been several different models since their introduction in 1999 although AIBO was discontinued in 2006.

AIBO can walk, "see" its environment via camera and recognize spoken commands in Spanish and English. AIBO robotic pets are considered to be autonomous robots since they are able to learn and mature based on external stimuli from their owner, their environment and from other AIBOs.



To what extent can we call it a robotic pet?

-first of all because, as we said, it is able to learn and mature thanks to the external inputs coming from its owner. Moreover, in some ways, Aibo can act as a real dog without the... inconvenience of your pet. On the other hand, we mustn't forget it will never be able to give the love and affection you can receive from your own puppy!

-because they are considered to be autonomous since they are able to learn and mature based on external stimuli from their owner

How does that work? What is the robot equipped with?

Ok, what do think about this?

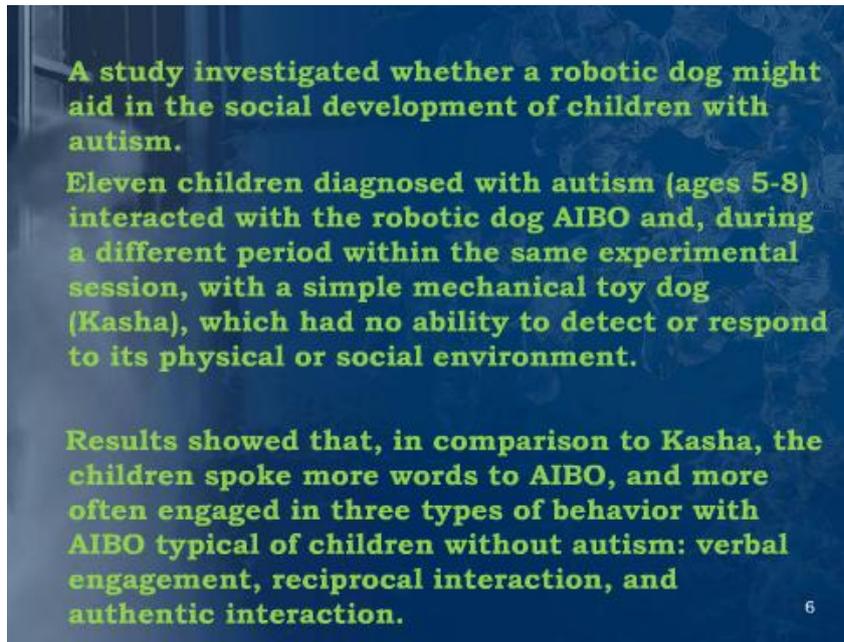
Do you think it can be noxious, harmful anyhow: in the way that it might replaces doctors?

No, it can't, it is perfectly safe, being an artificial pet, its reactions are predictable and the instructions are always given by its owner.

Or even human contact with the diseased?

Now, you have been working around this robot through 2 surveys, 2 studies,

What have you found out?



How did the doctors and engineer proceed?

A first study investigated whether a robotic dog might aid in the social development of children with autism. Eleven children diagnosed with autism and aged between 5 and 8 interacted with the robotic dog AIBO and, during a different period within the same experimental session, with a simple mechanical toy dog (Kasha), which had no ability to detect or respond to its physical or social environment.

What were the results?

Results showed that, in comparison to Kasha, the children spoke more words to AIBO, and more often engaged in three types of behavior with AIBO typical of children without autism: verbal engagement, reciprocal interaction, and authentic interaction.

In what consists the second survey?

Another study investigated the interactions of 72 children (ages from 7 to 15) with AIBO in comparison to a live Australian Shepherd dog. Results showed that, obviously enough, the children preferred the live dog to AIBO, but, that said, a surprising majority of children conceptualized and interacted with AIBO in ways that were like a live dog, that is to say they almost behaved with AIBO as if it were alive.

So Aibo looks like a real dog even though it is a robot. Children with autism feel more comfortable with robots than with other people, at least initially, because robot interactions are simpler and more predictable and the children are in control of the social interaction.

There is,

to my eyes very important issues around this first example,

as medicine is vital.

It's not about entertainment or communications,

It's about human lives.

How can we put our lives in the hands of robot?

Is it,

on the contrary,

a great evolution in medicine, surgery... with mostly advantages?

We will be able to speak of all this at the end of this broadcast,

because we now move to the next subject:

fun fair and team parks / amusement parks.

Another study investigated the interactions of 72 children (ages 7 to 15) with Sony's robotic dog AIBO in comparison to a live Australian Shepherd dog. Results showed that more children conceptualized the live dog, as compared to AIBO, as having physical essences, mental states, sociality, and moral standing. Based on behavioral analyses, children also spent more time touching and within arms distance of the live dog, as compared to AIBO. That said, a surprising majority of children conceptualized and interacted with AIBO in ways that were like a live dog.

Children with autism spectrum disorder typically feel more comfortable with robots than with other people initially, because robot interactions are simpler and more predictable and the children are in control of the social interaction.

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T2: THEME PARKS

Right away,

the next subject:

A local one, you will see..

In Jaunay Clan,
not far from our high school,
we have a theme park called Futuroscope.
This amusement park is different from others
because a lot of the attractions that it contains
are inspired from new technologies like
" Dance avec les robots"
(who will be "Dance with the robots" translated to English).

But don't expect to learn dancing salsa with an humanoid robot!
This game has been created with original robots taken from car industry.
Seating in the robots hand,
7 meters (23 fts high) above the ground,
you will have to choose between
three levels of difficulties and enjoy the dance!!

This genius idea,
set in 2006 on a platform of 2000m²,
uses 10 robocoasters built by a German industry,
KUKA,
the European leader of industrial robotics.
Those robots can make accelerations of 3G thanks to a six articulation arm
and handle a weight of 500kg.

At that time,
you could move to the rhythm of "I love rock'n'roll" or " Stayin' Alive".
Nowadays,
the attraction has been totally remade with electronic music
supported by one of the biggest French DJs,
Martin Solveig.
We can only recommend you this attraction you are never going to get weary of!
Even if you are afraid of heights
you can attend to this show from a little balcony
where you can see the others on the robots.

MUSIC 1

Technologic, Daft Punk

T4: TRANSPORT

<http://www.arabiangazette.com/google-scores-win/>

Since the past 50 years humans pass more and more time

Locked up in his car...

Driving or even in traffic.

Long was the utopia of flying cars or driverless cars in the rage,

but few months ago,

appeared the brand new autonomous car,

produced by the company holding the search engine number one...

You MUST which one we're speaking about,

So,

Let's see about this fantastic new technological advance.

First let's explore it's features,

and how does it work.

Just before asking the same question about this thing again,

can a robot intelligence replace the human mind?

Can you tell me,

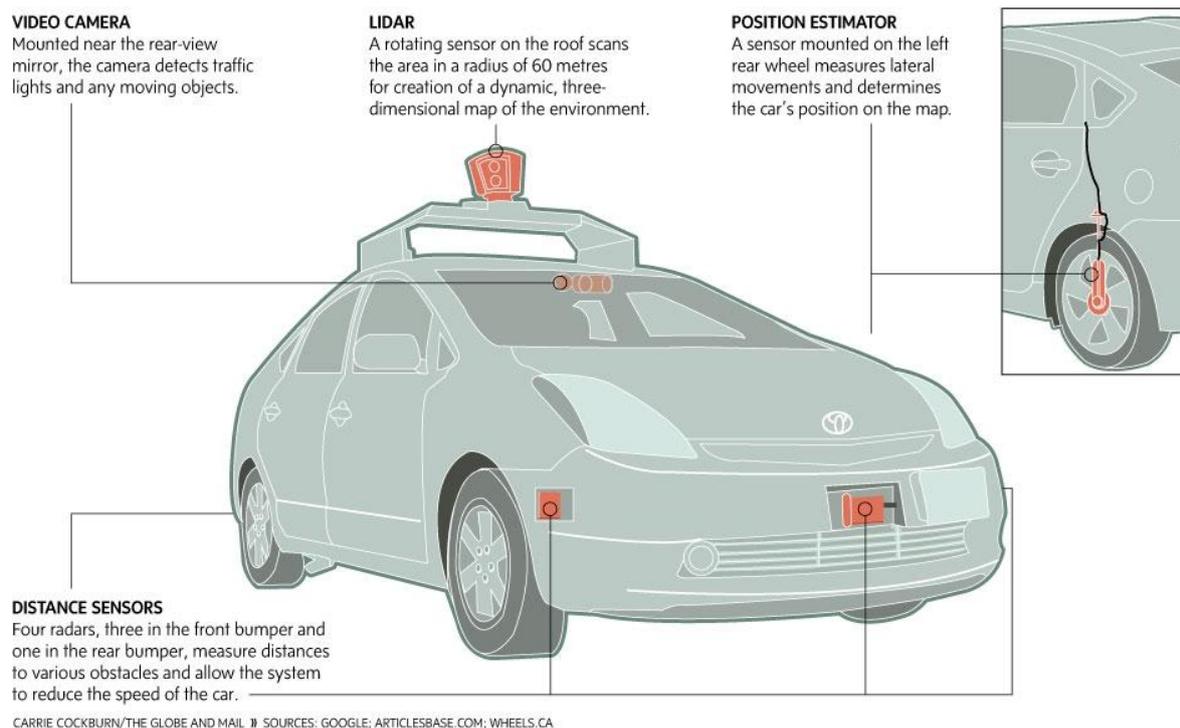
by looking to the producer's plan,

what the system behind this robotic-car is?

...

"The Google driverless car is a project by Google that involves developing technology for autonomous cars. The software powering Google's cars is called Google Chauffeur.^[2] Lettering on the side of each car identifies it as a "self-driving car". The project is currently being led by Google engineer Sebastian

Thrun, director of the Stanford Artificial Intelligence Laboratory and co-inventor of Google Street View. Thrun's team at Stanford created the robotic vehicle Stanley which won the 2005 DARPA Grand Challenge and its US\$2 million prize from the United States Department of Defense.^[3] The team developing the system consisted of 15 engineers working for Google, including Chris Urmson, Mike Montemerlo, and Anthony Levandowski who had worked on the DARPA Grand and Urban Challenges.”



T5: MODELS AND DESIGN

It seems that

after all Japanese engineer have developed,

they are going to import technologies at another level developing new kinds of robots for the fashion industry.

So what should we think about those iron models?

Are they a solution against the growing phenomenon of anorexic models

or just another step into industrialization?

We are here to answer all those questions about robot models!

Yes!

The development of humanoid robots could soon revolutionize the fashion week!

With technological advances robots are more and more similar to humans and can even have facial expressions.

As professor Hiroshi Ishiguro,

the creator of the world's most advanced android puts it,

"It wouldn't be that hard to pass off a robot as a human on TV because the most important thing is appearance and behavior".

I think we are soon going to be invaded by those machines!

But don't worry!

the developers are only at the first step of the project.

Even if robots models present a lot of advantages for fashion creators,

it's going to take years to replace monuments of fashion like Kate Moss or Natalia Vodianova!

And what kind of advantages

can a fashion creator have to work with androids

instead of humans?

The first advantage

is the price for hiring a model.

Human models can be paid \$10 000.

Developing a robot like this would cost £1,4 million only once!

The second one is that robots never get old!

So a designer could have one muse for all his collections and never change it!

But people would get rid of it!

And they're going to change their vision of fashion.

Personally,

when I watch a fashion show /parade I like looking at models

and spot potential clothes that I could buy for me. But with robot models

I would feel less attracted by the clothes.

MUSIC 2

Technologic, Daft Punk

DEBATE – TOPIC AFTER TOPIC

This was ,

On Delta Fm 90.2.

You're still listening to our international broadcast,

on the use of Robotics,

with: the Maltese and Italian delegation.

And this is the time for the debate!

Just to remind you:

It's the time when everyone gives his opinion freely but in the rule of law,

and you all can react as well:

Just react on Facebook on the page: **Libre Antenne Delta**

(Could you please spell it again, **Lara**?)

Let's go:

Should we take one topic after the other...

Questions?

EXTRA:

Fine!

This broadcast is coming to an end,

This was a special program from the European I&R project.

We hope you enjoyed,

and if you did,

you can always podcast it on the LP2I's website,

on the page:

www.lp2i.ac-poitiers.com/deltafm

Today's presenters were:

the Maltese delegation with -

along with the Italian one:

Matteo and Giorgio.

Thank you to you all.

Do you have anybody to thank or anything to say?

The project continues,

so just follow us on the blog:

Lara - Michaela - Elaine - Josmarie - Abigail - Miriana - Giorgio - Matteo - Manon - Nicolas

You're still listening Delta Fm on the 90.2 Fm or on internet,
and we are back to the playlist.