



Is it ethical to tamper with the
autonomy/brain of a living thing?

A POWERPOINT BY CHRISTIAN PIERCEY

The what (Computer Controlled Creatures)



DARPA wanted to create micro-drones (2006)

- DARPA held a "Science fair" to try and create an insect drone.
- They managed to turn find out how to control living and dead flower beetles.
- They are also able to do this with rats but not to the same extent.



The Science

- There are two ways they are able to do this.
- 1. Inserting a chip and wiring into the pupae of a flower beetle to allow them to control it when it matures.
- 2. Dissecting a dead beetle and inserting the chips and wiring to be able to control the dead beetle.



How does it work?

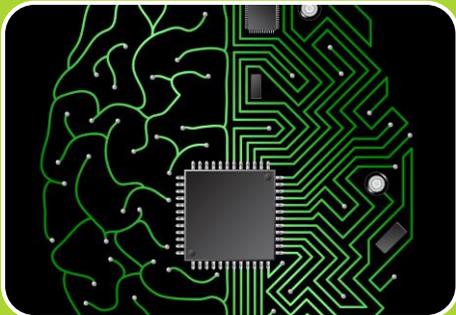
- The chips are connected to a computer and give off electrical signals to the wires to move the muscles.
- They are able to make the beetle walk, turn left, turn right and take off, although it cannot land.

The what (Cybernetics)



Scientists wanted to create a working mechanical arm that could be controlled at will.

- Scientists were able to connect a monkey's brain to a mechanical arm and the monkey could move the arm separately.
- This monkey was the first mammal to have three independently working arms.
- If this can be done with monkeys, it is plausible to replicate it with apes and therefore humans.



The Science

- This can also be done one of two ways
- 1. By implanting a chip into the monkey's brain that reads its brainwaves and translates them into movement of the mechanical arm.
- 2. By applying patches onto the monkey that also reads its brainwaves and translates them into movement of the mechanical arm. Although this method isn't as good because the monkey cannot move around much.

Do individuals get a choice in whether or not these things happen?

The research itself is already happening

There are also no laws prohibiting civilians from replicating this

You can even find tutorials on how to make your own cyborg-beetle

With the right technology and money you can also create a mechanical arm that is connected to a neural interface

On a government/military level, you do not get a choice in whether or not it happens.

Are these ideas ethical/safe?

Computer controlled Creatures

1. No physical side effects
2. Many creatures (Specifically mammals) are self aware
3. If the creature is still alive, are they aware that they cannot control themselves?
4. When is too far?

Cybernetics

1. No physical side effects
2. Could help millions suffering from limb loss or other physical limitations
3. Possibility of being hacked
4. Potential unknown side effects of rewiring brains

What are the benefits? Who is helped?

Computer controlled Creatures

1. The US military are the main people who benefit
2. In theory, computer controlled creatures could make infiltration/spying both easier and more safe
3. The public wouldn't get much use out of this technology

Cybernetics

1. If we can find a way to replicate and refine this with humans, we can help millions
2. Those with spinal injuries, limb-loss etc. could live more normal lives
3. From what we know so far, it is fairly safe

Are there any groups that oppose these ideas?

Computer controlled Creatures

1. There aren't any particular groups that oppose this idea
2. Depends on your personal view on the morality/autonomy of animals
3. Many animals (dogs, cats, elephants, parrots, apes, monkeys etc.) are capable of forming bonds, mourning etc.

Cybernetics

1. There aren't any particular groups that oppose this idea
2. Though there are certain people who view cybernetics as anti-humanism but luckily for them, it is very likely that cybernetics would be completely optional

The solution

Computer controlled Creatures

1. I believe that legislation should be put in place prohibiting this kind of technology with anything more than insects.
2. Insects, unlike other animals, do not have the ability for conscious thought therefore it isn't immoral.

Cybernetics

1. I believe that cybernetics is a field that we should continue research in because we would be able to help millions of people live normal lives



The End

THANK YOU!

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