

The power of open source

and why you should want to use it

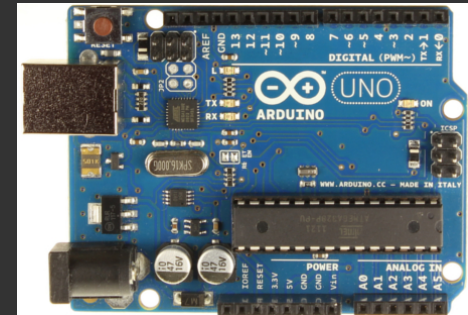
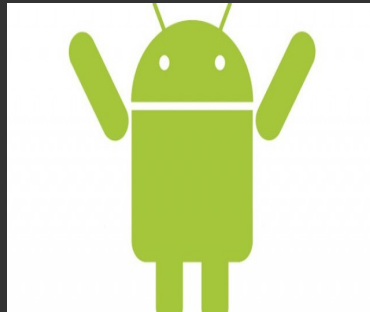
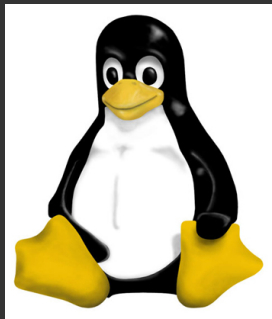
11th SONA international conference
André Maia Chagas – PhD student
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What is open source/access?

- Philosophy where the blue prints for a product/design are made universal via a free license.
- Sounds very nice, but does it work in real life?

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Why open source?

Social and scientific benefits:

- Costs
- Transparency
- Portability
- Innovation

Costs

behavioral setup:

- Proprietary:

- 2 PCs (2 x 250€)
- DAQ card (610€)
- Windows (130€)
- MATLAB (500€)*
- Microsoft office (214€)
- Total: 1954€

- Open source:

- 01 Raspberry Pi (31€)
- Arduino (45€)
- Linux (0€)
- Python (0€)
- LibreOffice (0€)
- Total: 76€

Transparency

- “Analyses were conducted using custom written routines in X”.

```
1 # script to generate a file for storing data from the posner test run in arduino:
2
3 #import necessary libraries:
4 import os #library that enables system operations
5 import datetime #library to get the current date
6 import serial #import library to read/write serial port
7
8
9 #serial port address
10 portName="/dev/ttyACM0"
11 #check to see if there are any devices connected to the serial port:
12 if os.path.exists(portName):
13     #create the serial comm object (first par is the serial port and the second,
14     #the baud rate)
15     ser = serial.Serial(portName, 115200)
16     serFlag=1
17 else:
18     serFlag=0
19     print("no serial devices connected!")
20     print("continuing without serial communication \n")
21
22
23 #get the current date
24 tmpNow=str(datetime.datetime.now())
25
26 #path of the file to open
27 folderPath="/home/andre/Documents/code/Posner_test/test/"
28
29 #set the subject name
30 subjectName='samyra'
31 #set the name of the file
32 print tmpNow[0:10]+"_"+subjectName+".txt"
33 fileName=tmpNow[0:10]+"_"+subjectName+".txt"
34 print fileName
35
36 #check to see if the folder where you want to create
```

Portability



Innovation

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nature

OPINION

Most people are not WEIRD

To understand human psychology, behavioural scientists must stop doing most of their experiments on Westerners, argue **Joseph Henrich**, **Steven J. Heine** and **Ara Norenzayan**.

and behaviour. A 2008 survey of the top psychology journals found that 96% of subjects were from Western industrialized countries — which house just 12% of the world's population³. Strange, then, that research articles routinely assume that their results are broadly representative, rarely adding even a cautionary footnote on how far their findings can be generalized.

Innovation

Most people are not WEIRD

To understand human psychology, behavioural scientists must stop doing most of their experiments on Westerners, argue **Joseph Henrich**, **Steven J. Heine** and **Ara Norenzayan**.



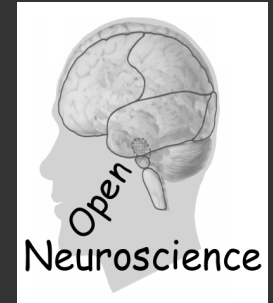
What else is available?

open ephys



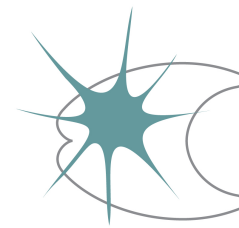
frontiers

More information:



- All projects mentioned today and some more at:
openneuroscience.wordpress.com
- Google
- Also feel free to make contact with questions and suggestions:
- openneuroscience@gmail.com

- acknowledgments:



Graduate School of
Neural & Behavioural Sciences
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Thank you!