EVENTO 2018
BIGDATATECH

DATA FOR HUMAN

Prof. FABIO BABILONI

SAPIENZA UNIVERSITÀ DI ROMA
BRAIN Signs

Cognitive Neuroscience and Big Data: a possible marriage

MILANO | 25 OTTOBRE 2018

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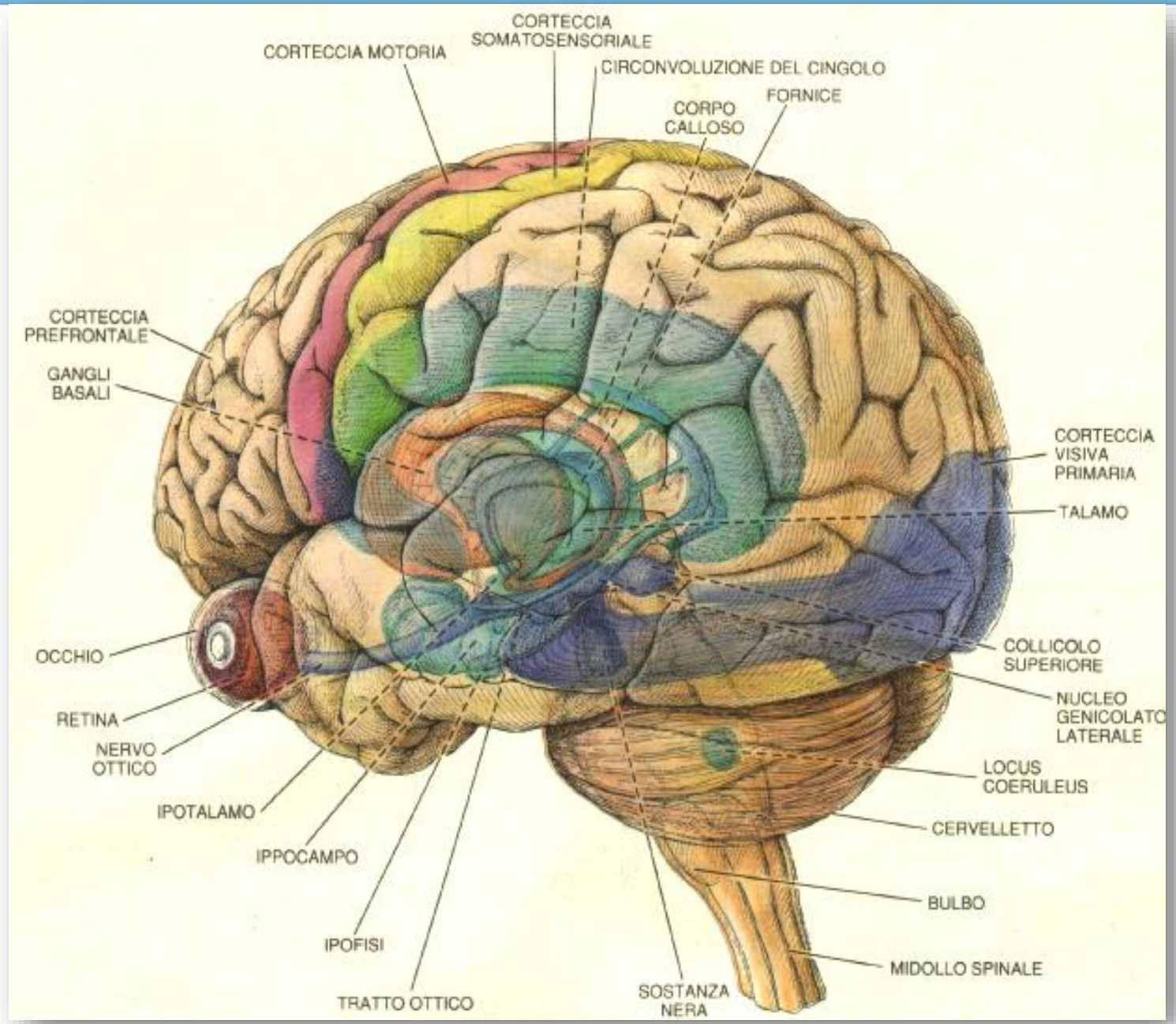
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FORNICE
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CORTECCIA VISIVA PRIMARIA
TALAMO
OCCHIO
COLLICOLO SUPERIORE
NUCLEO GENICOLATO LATERALE
RETINA
NERVO OTTICO
LOCUS COERULEUS
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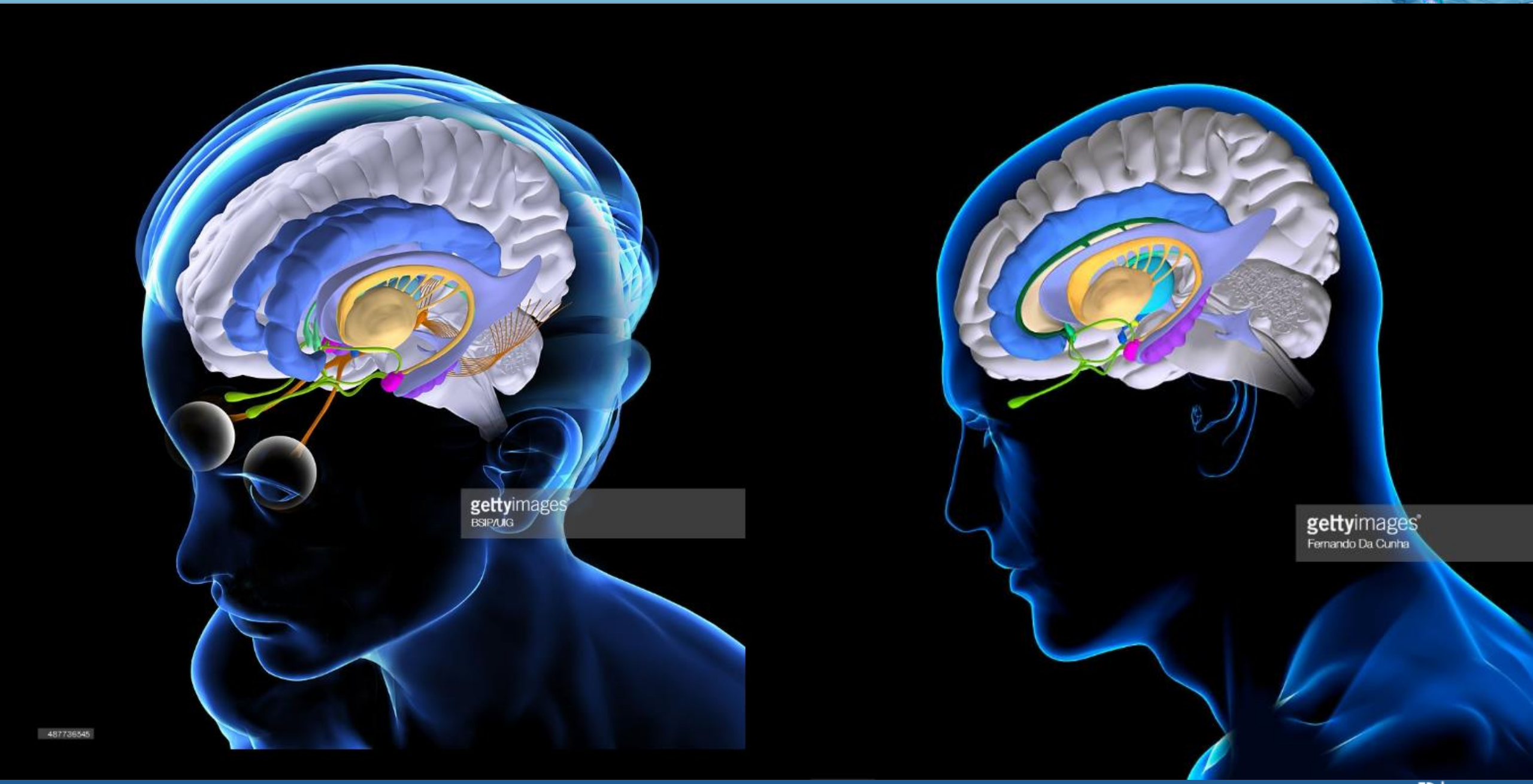
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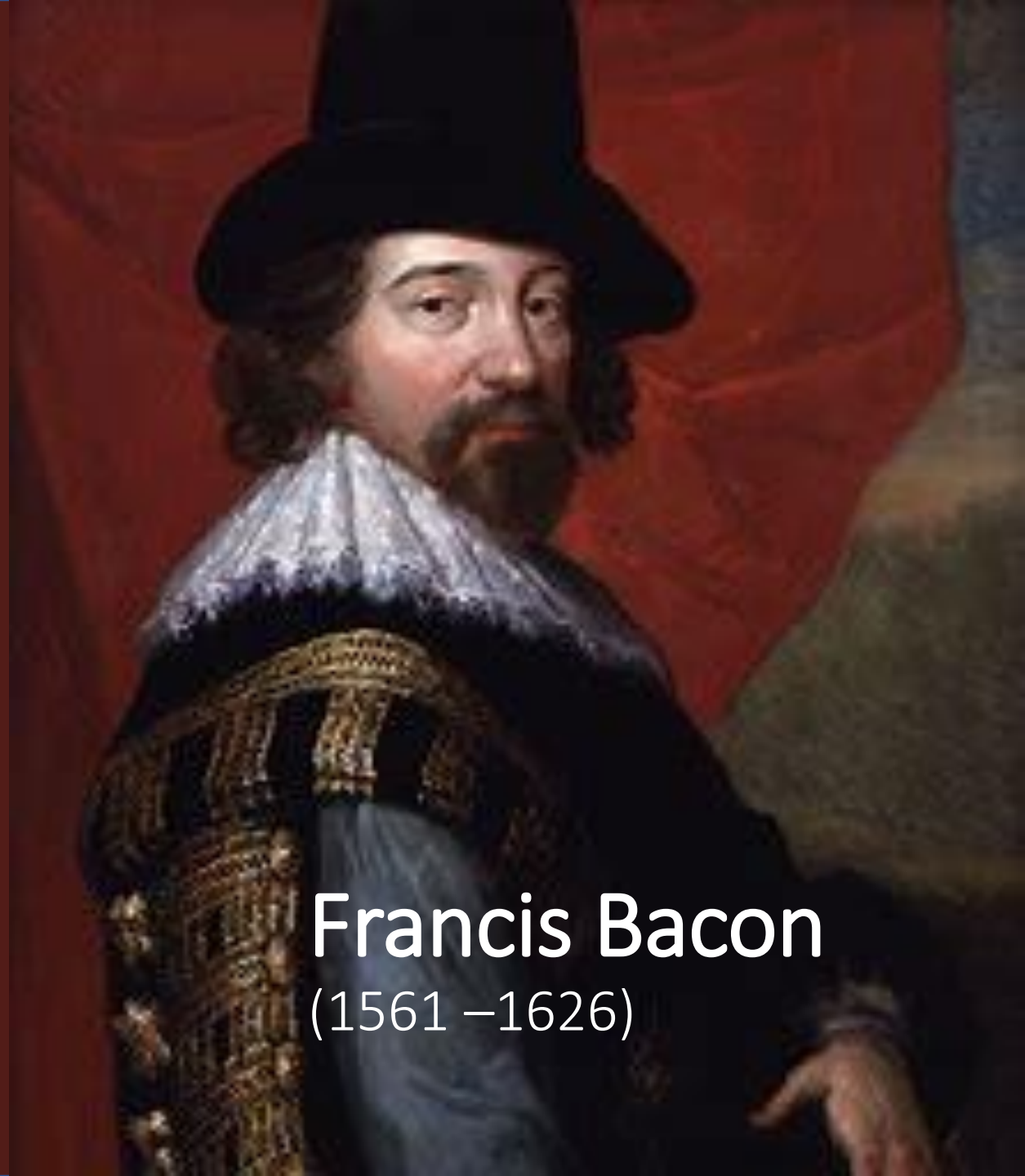
Fernando Da Cunha

- Modern science was born in the seventeenth century as a fusion of observation and reason
- Radical empiricism (data without reason) and rationalism (reason without data) were rejected in the quest for knowledge of Nature
- …a mere groping, as of men in the dark, that feel all round them for the chance of finding their way, when they had much better wait for daylight, or light a candle, and then go.
- But the true method of experience, on the contrary, first lights the candle, and then by means of the candle shows the way; commencing as it does with experience duly ordered and digested, not bungling or erratic, and from it educing axioms, and from established axioms again new experiments.



Francis Bacon

(1561 –1626)

- The present does not seem to me to be an opportune time to enter into the investigation of the cause of the acceleration of natural motion, concerning which various philosophers have produced various opinions . . . .
- Such fantasies, and others like them, would have to be examined and resolved, with little gain.
- For the present, it suffices our Author that we understand him to want us to investigate and demonstrate some attributes of a motion so accelerated.
- Science concerns the mathematical description of behaviour

Galileo (1564-1642)

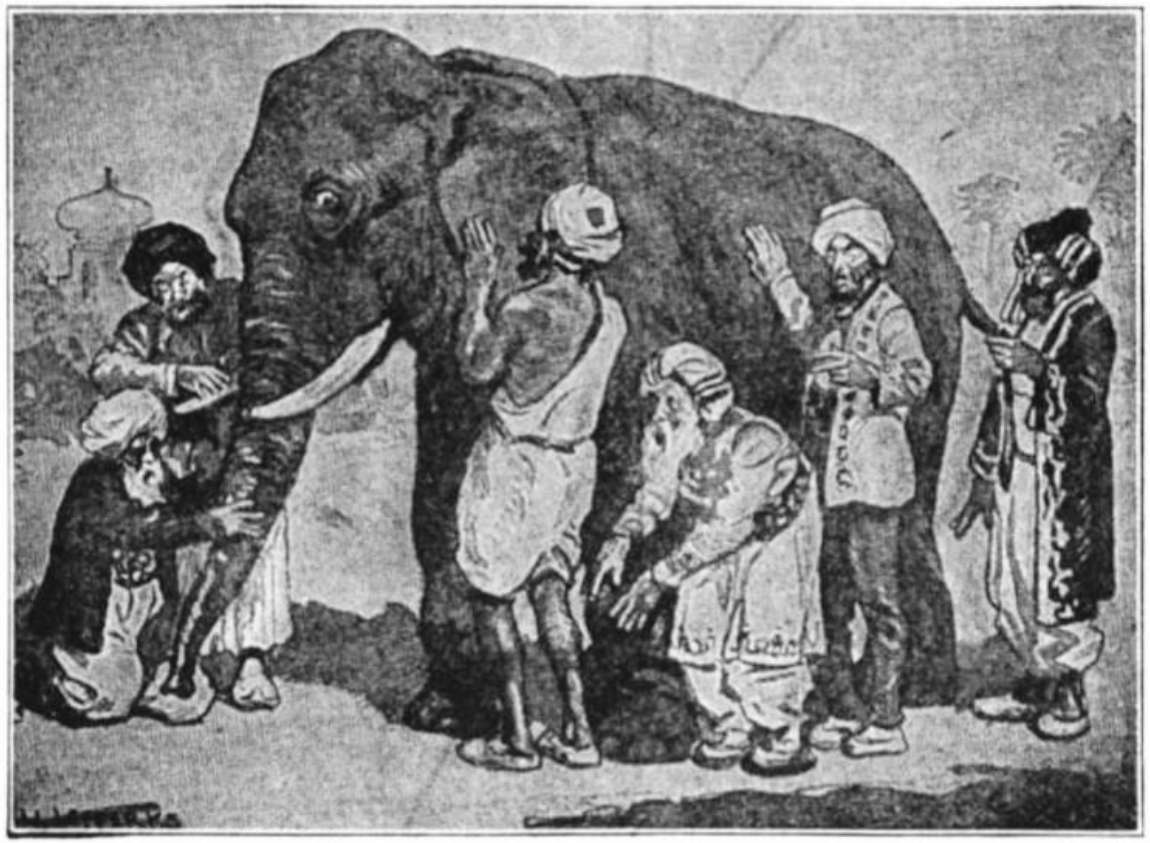
- For I here design only to give a mathematical notion of these forces, without considering their physical causes and seats.
- Hitherto I have not been able to discover the cause of those properties of gravity from the phenomena, and I frame no hypothesis.
- for whatever is not deduced from the phenomena is to be called an hypothesis; and hypotheses, whether metaphysical or physical, whether of occult qualities or mechanical, have no place in experimental philosophy

Newton
(1642-1726)

Perception without conception is blind; conception without perception is empty

IMMANUEL KANT
1724 - 1804

The myth of blind men and the elephant



Local data are difficult to interpret without a mental model of a pachyderm.

PHILOSOPHICAL TRANSACTIONS A

rsta.royalsocietypublishing.org

Opinion piece

Cite this article: Coveney PV, Dougherty ER, Highfield RR. 2016 Big data need big theory too. *Phil. Trans. R. Soc. A* **374**: 20160153. http://dx.doi.org/10.1098/rsta.2016.0153

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One contribution of 17 to a theme issue

Big data need big theory too

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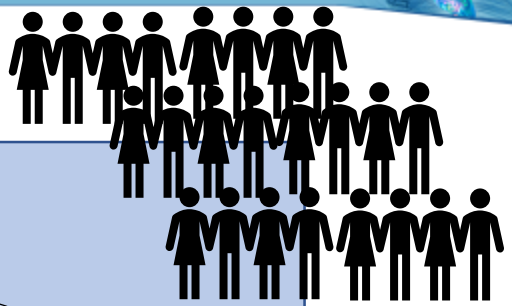
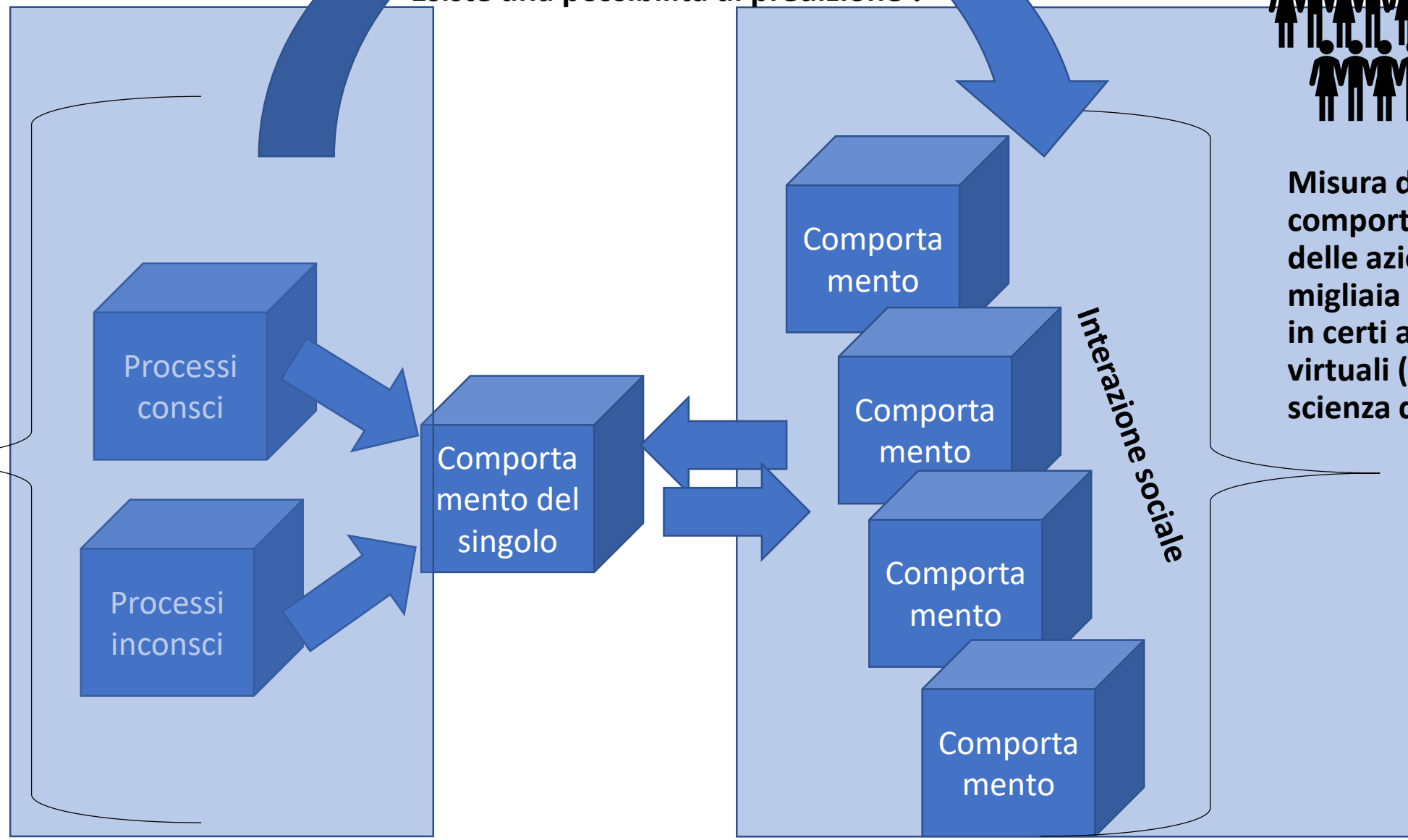
The current interest in big data, machine learning and data analytics has generated the widespread impression that such methods are capable of solving most problems without the need for conventional scientific methods of inquiry. Interest in these methods

Misura attività emozionale e cerebrale di una persona con le neuroscienze (EEG, GSR, HR, eyetracking)

Esiste una possibilità di predizione ?



Misura del comportamento delle azioni di migliaia di persone in certi ambienti virtuali (o no) con la scienza dei big data



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Journal of CONSUMER PSYCHOLOGY

Journal of Consumer Psychology xx (2011) xxx–xxx

A neural predictor of cultural popularity

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Abstract

OXFORD

Social Cognitive and Affective Neuroscience, 2016, 1853–1862

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Advance Access Publication Date: 12 August 2016
Original article

Awake canine fMRI predicts dogs' preference for praise *vs* food

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MAARTEN A.S. BOKSEM and ALE SMIDTS*

Although much progress has been made in relating brain activations to choice behavior, evidence that neural measures could actually be useful for predicting the success of marketing actions remains limited. To be of added value, neural measures should significantly increase predictive power, beyond conventional measures. In the present study, the authors obtain both stated preference measures and neural measures (electroencephalography; EEG) in response to advertisements for commercially released movies (i.e., movie trailers) to probe their potential to provide insight into participants' individual preferences as well as movie sales in the general population. The results show that EEG measures (beta and gamma oscillations), beyond stated preference measures, provide unique information regarding individual and population-wide preference and can thus, in principle, be used as a neural marker for commercial success. As such, these results provide the first evidence that EEG measures are related to real-world outcomes and that these neural measures can significantly add to models predicting choice behavior relative to models that include only stated preference measures.

Keywords: neuromarketing, consumer neuroscience, electroencephalography, beta, gamma

Brain Responses to Movie Trailers Predict Individual Preferences for Movies and Their Population-Wide Commercial Success

JOURNAL OF MARKETING RESEARCH, AUGUST 2015

Come è possibile misurare la risposta emozionale alla pubblicità

Un brand non è solo
un nome, un logo, un prodotto.

Un brand è una promessa.


TELECOM
ITALIA


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TELECOM
ITALIA


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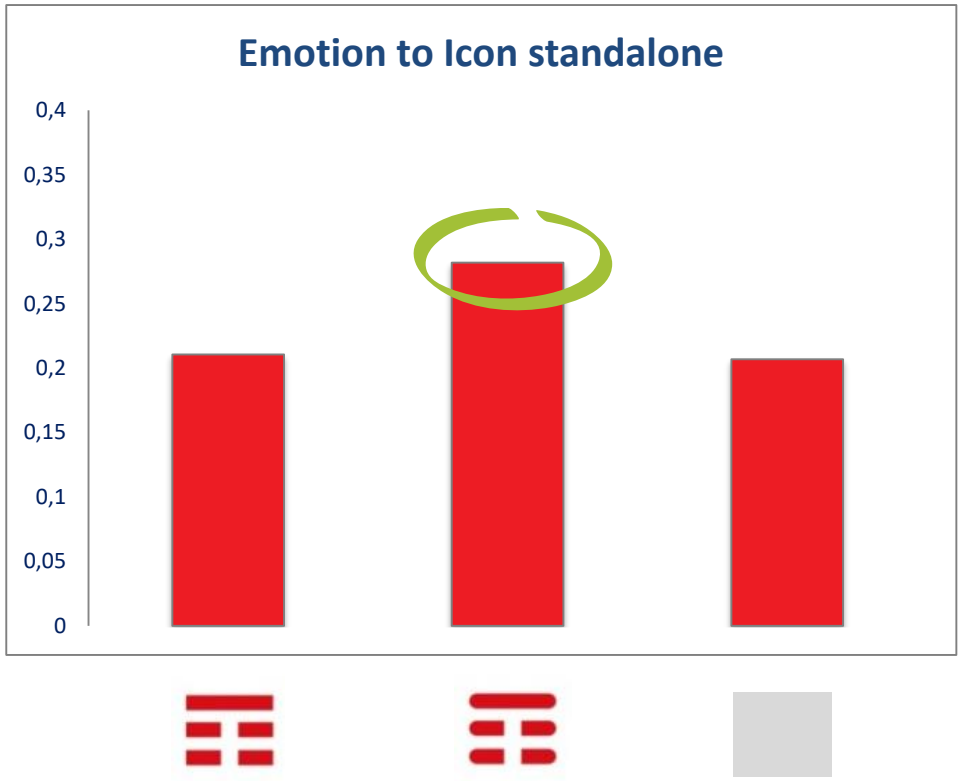
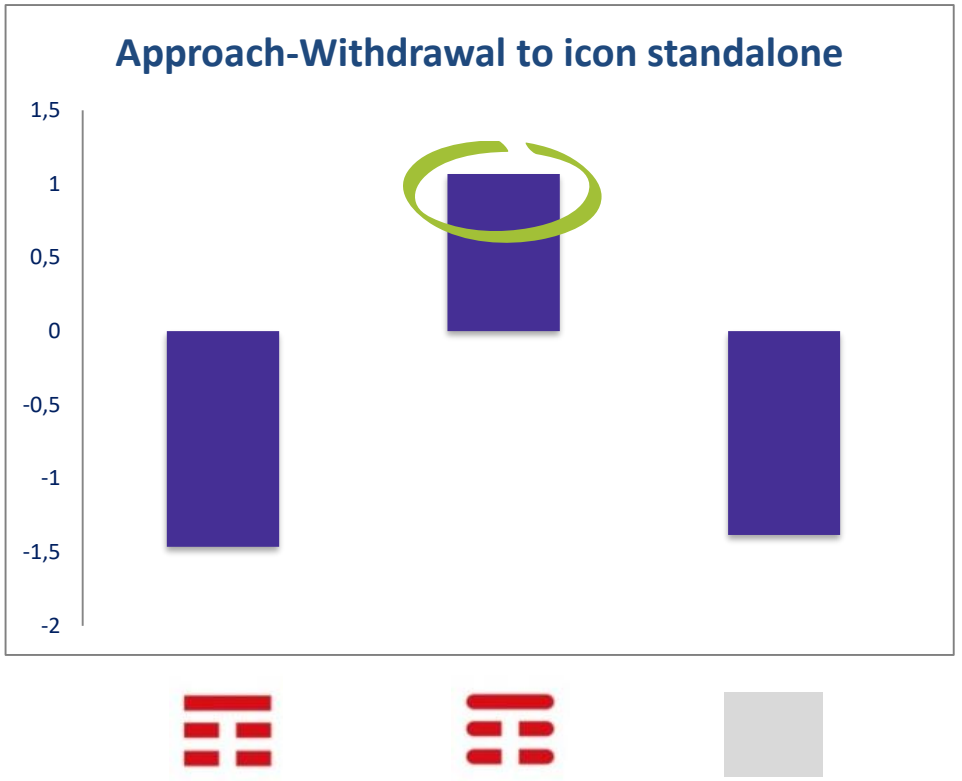
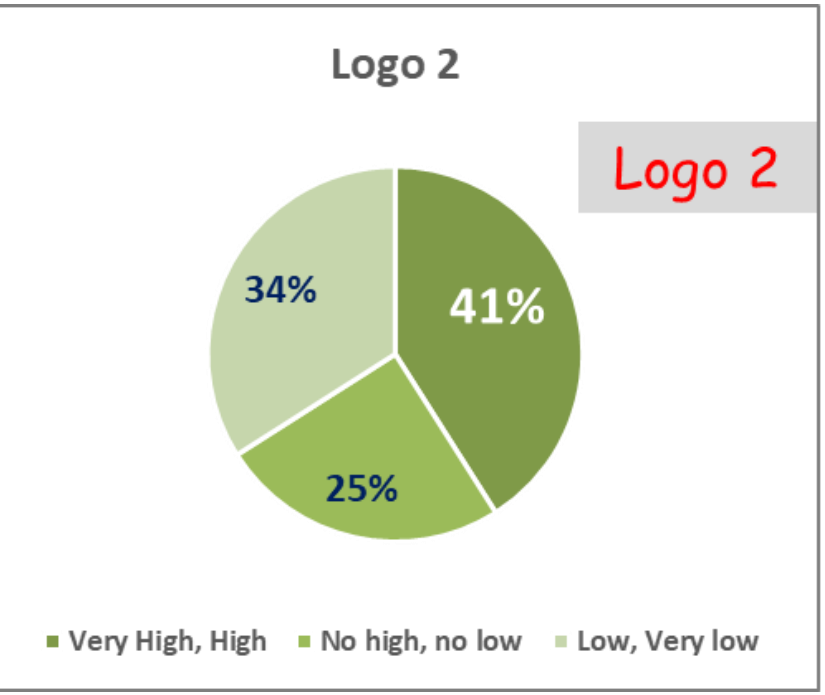
Brand expression

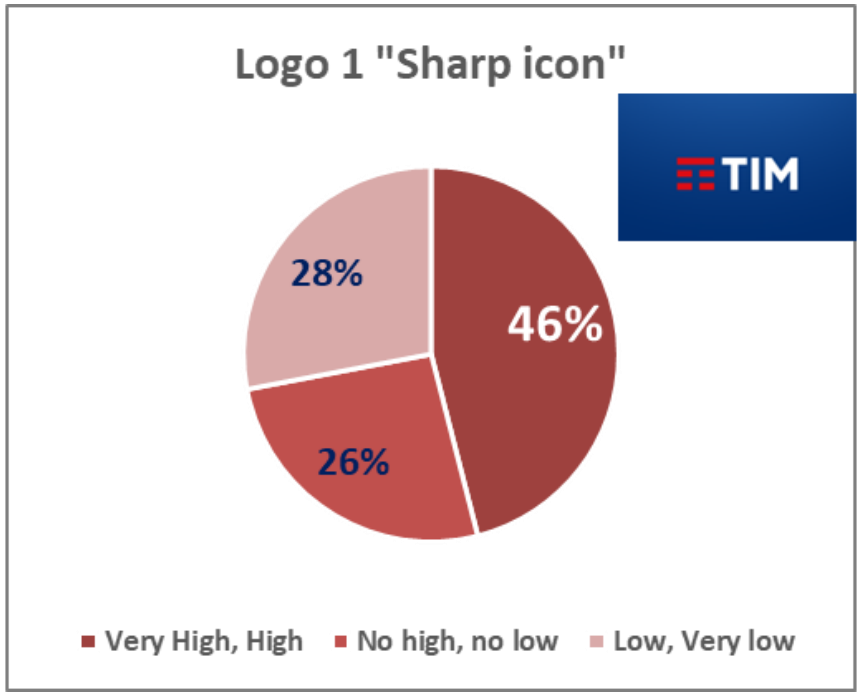
NMKTG results on Graphical icons “stand alone”

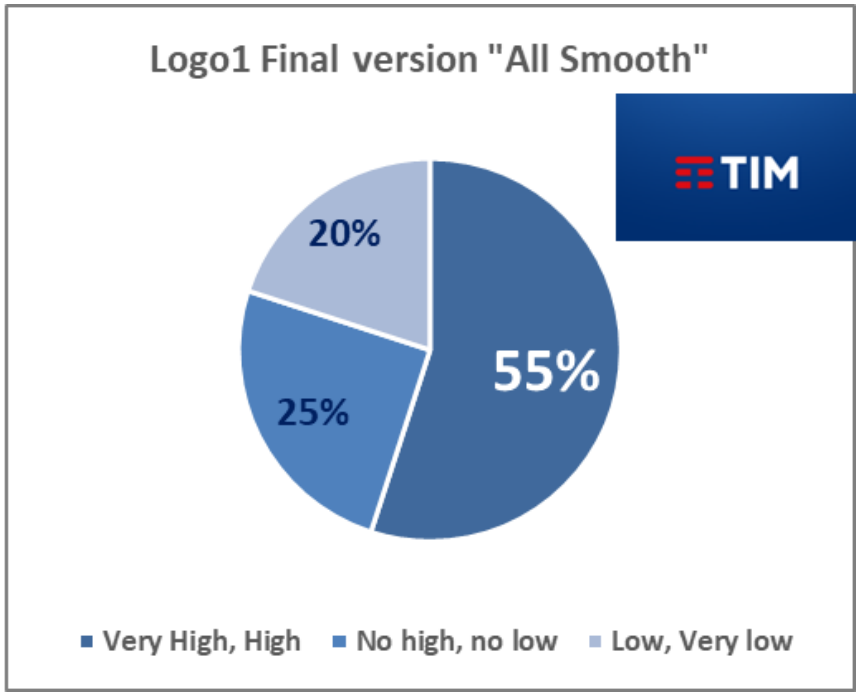




Final survey: compared overall liking results





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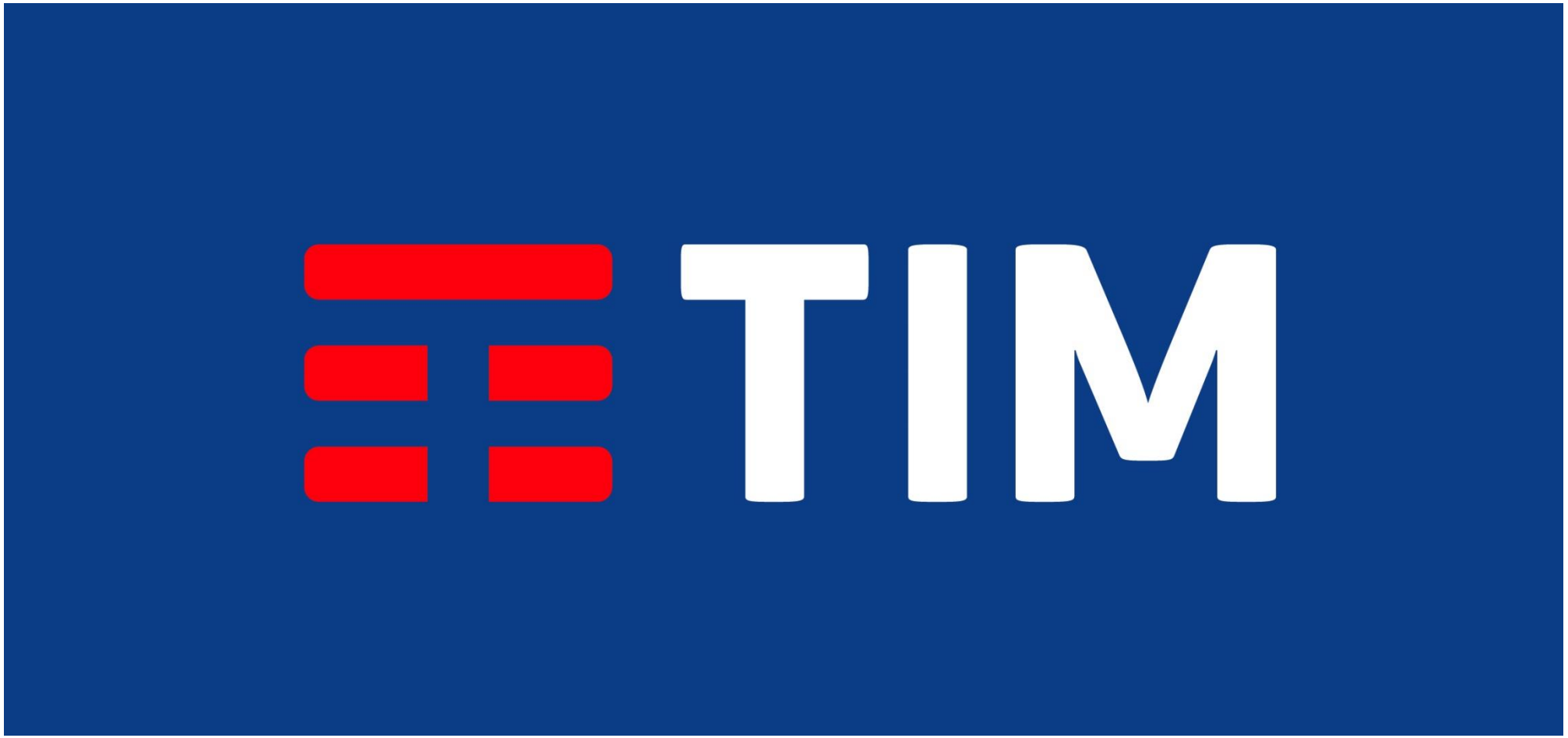
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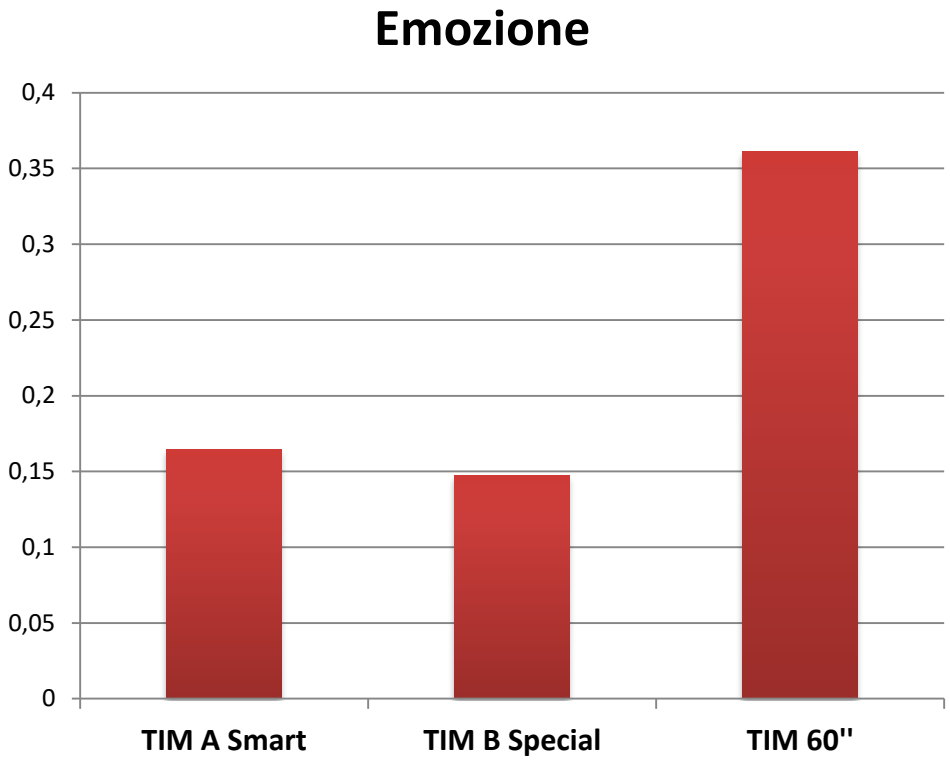
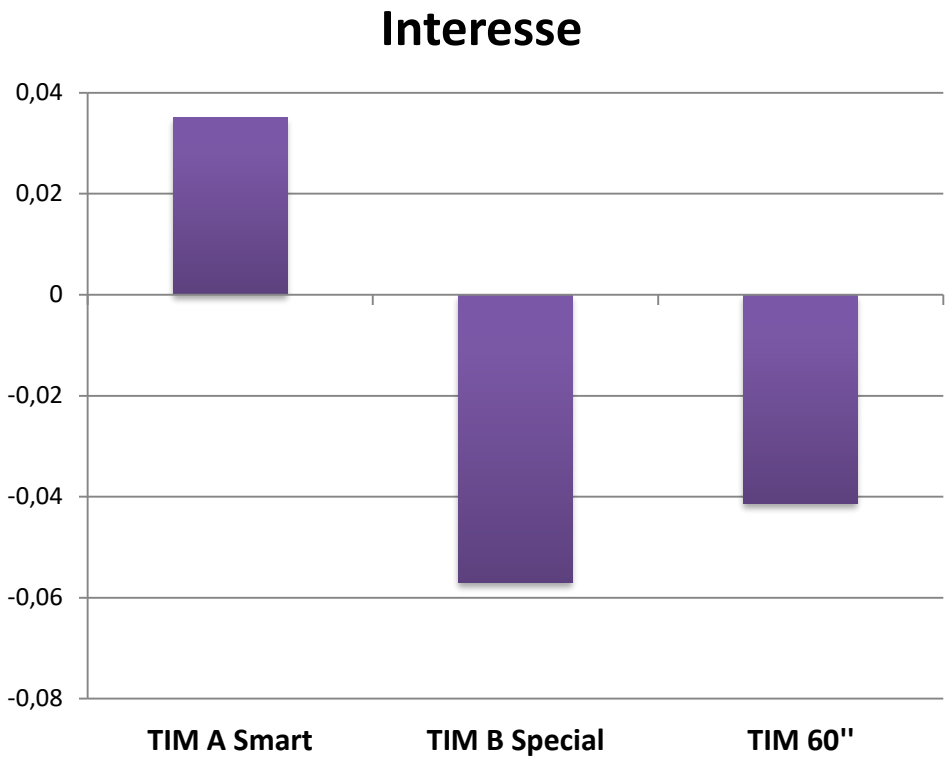
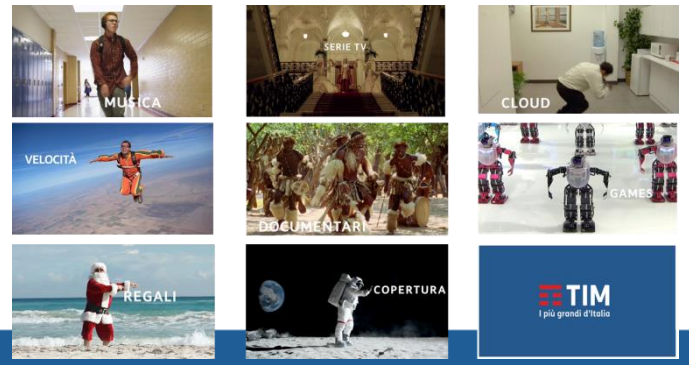
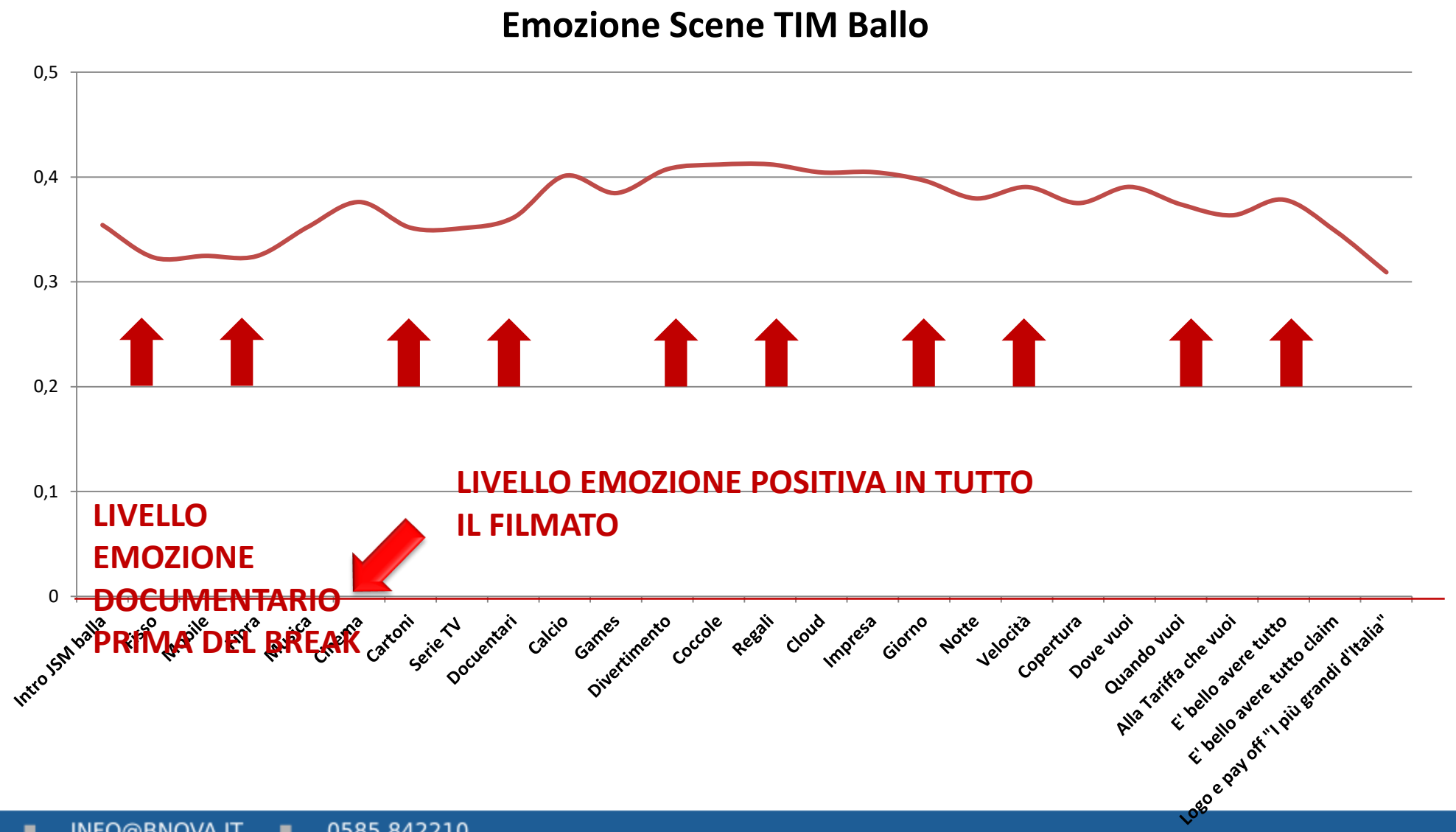
Spot – Emozione – Totale campione

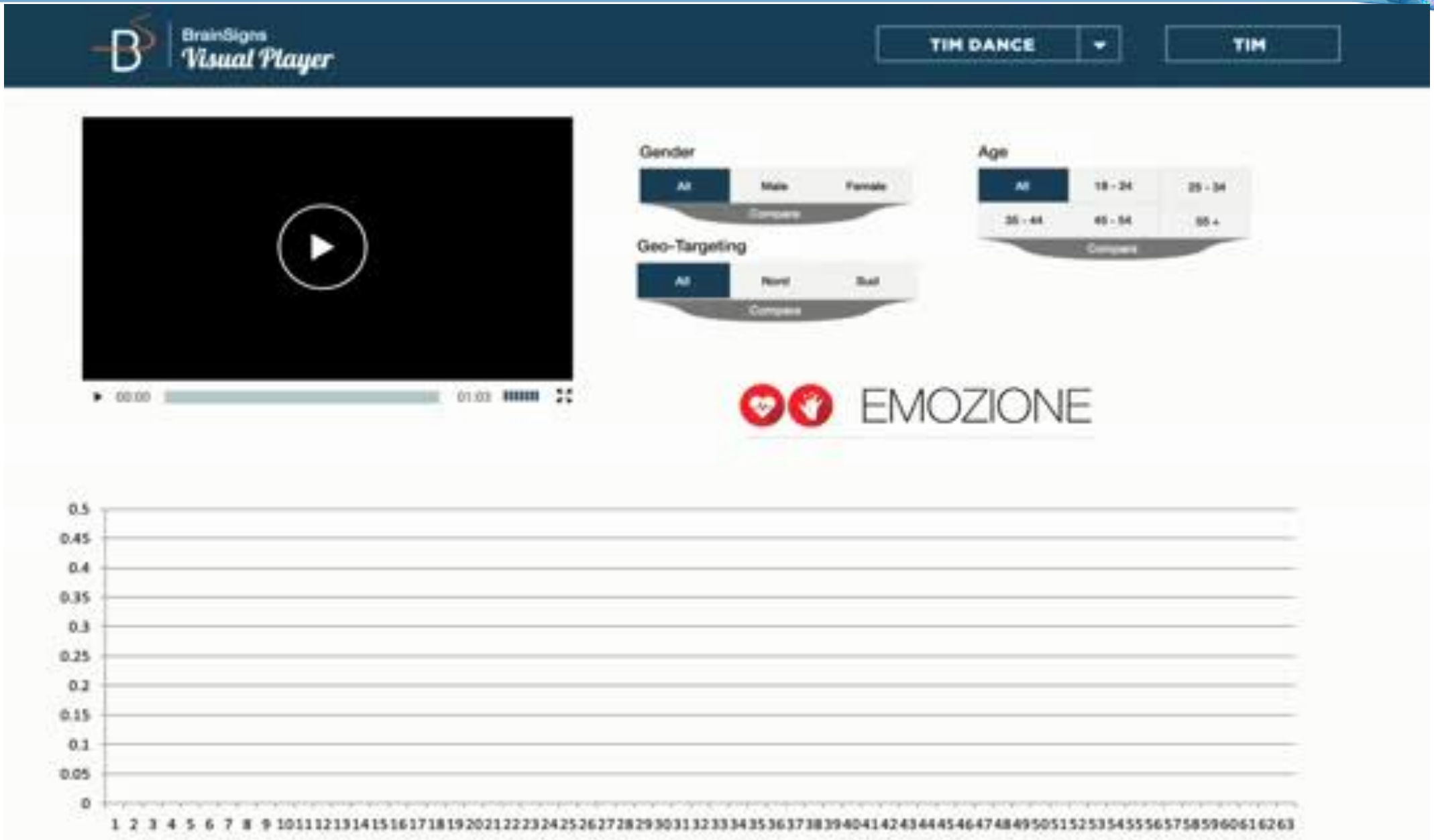






TIM Ballo – Scene Emozione – Totale campione




BrainSigns
Visual Player
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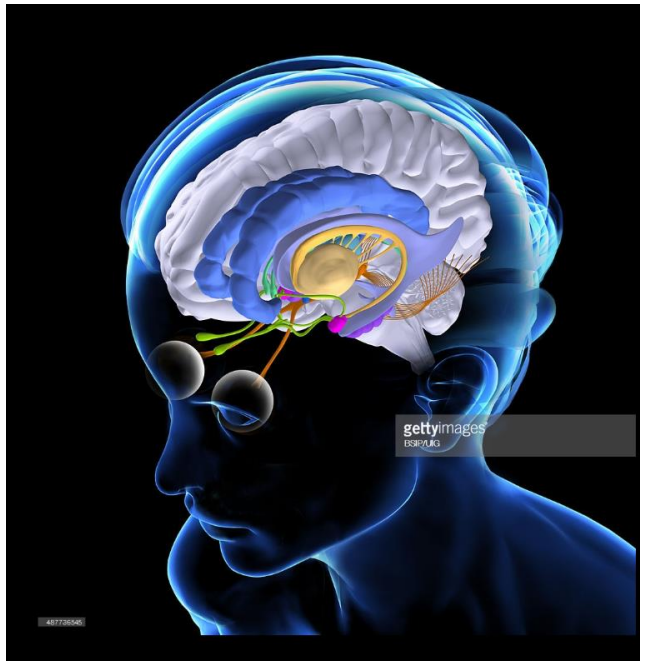
Summarizing

- Big data science needs model and theory more accurate.
- The measure of the unconscious reaction to incoming stimuli needs to be inserted in model of collective behavior.
- The possible marriage between neuroscience and big data will make possible new and more precise prediction of collective behavior.



GRAZIE PER L'ATTENZIONE