From: **Lisa Feldman Barrett** l.barrett@northeastern.edu
Subject: Re: Cultivate Experiential Blindness!
Date: October 24, 2017 at 6:46 AM
To: YON - Jan C. Hardenbergh jch@jch.com

LF

Dear Jan

> Thanks for signing my book.

You are welcome. Thank you for attending the talk.

> I really liked it when you said “long term meditators cultivate experiential blindness”. I think Cultivate Experiential Blindness would make a good bumper sticker.

:-)

> In your talk, the term brain was ambiguous in this (rough) quote: “If the prediction is close enough, then the perceived info does not enter the brain”. Consciousness? Or are you saying that the input is dampened before it gets to V1?

What I said was no NEW information enters the brain - what I really meant (but was too technical to say) is that no new info enters V1. That being said, there are cortical projections to the lateral geniculate nucleus (thalamus) and even to the superior colliculus so, yes, info can be damped even before it reaches V1.

> Have you read any recent papers about consciousness that you like?

Seth Anil has some nice papers. There are also papers by Bjorn Merker.

> More questions on TCE paper. http://www.affective-science.org/pubs/2017/barrett-tce-scan-2017.pdf
>
> What might a neural correlate of a concept be?

A pattern across the brain -- a brain state.

> Would closely related concepts have similar neural correlates?

Yes.

> Can cascades stabilize? If I develop an instance of fear and hold it, does the cascade stay active?

That is the hypothesis, yes.

> BTW, the TCE paper says both the prediction and prediction error are both cascades - are they the same bidirectional cascade? If so, please make that clearer in Figure 6-1 in the book. As you can tell, I’m still a little confused.

Yes, that is correct.

> When you say "I am claiming that these (and other) domain-general networks can be mapped to many psychological categories at the same time.” Is that simultaneously? If so, different categories and concepts can be incorporating different neurons of the network simultaneously?

Yes, that is correct. See work by Eve Marder.

> When you say "To understand the nature of emotion, we must also model the brain systems that are necessary for making meaning of physical changes in the body and in the world.” Is anyone building a computational model?

We are attempting to, yes.

> Do they need any visualization? FWIW: 3 second animation I did of the Globals Workspace CorticoThalamic stream of 3 thoughts. http://www.jch.com/jch/notes/ctanim/fast0725.svg

Very interesting!!

> BTW, In the TCE paper, it seems that the caption Fig. 4 was influx for this preprint?

Not really -- the publisher made mistakes with many of the figures because they are complex

> The prediction and error labels in the diagram at the top right seem to be swapped.

No, they are correct.

> And there are no “cell bodies depicted as triangles” as mentioned in the caption.

In the final version, that phrase is there

> T H A N K Y O U ! ! !

THANK YOU!

Best wishes
Lisa

> YON - Jan C. Hardenbergh <> www.jch.com <> Pixelsmith
> Jeff Lehman's five virtues: a love for complexity, a patient spirit, a will to communicate, a sense of humor, and an optimistic heart.
>
> > On Sep 8, 2017, at 12:20 AM, YON - Jan C. Hardenbergh <jch@jch.com> wrote:

Dear Lisa,

I don't want to take anymore of your time now. While this is the most interesting thing going thru my brain these days, it is not the most urgent.

I'm hoping you will entertain my question again when I can clarify it, unless reading make it clear.

I do have a suggestion that would help other armchair neuroscientists like me. Put a link to the TCE paper in a prominent place on the HEAM site. I would have loved to read this as I was creating notes about the book.

http://www.affective-science.org/pubs/2017/barrett-tce-scan-2017.pdf

I came across this as I was skimming:

• I am not saying that concepts are stored in the default mode network. I'm saying that the default mode network represents efficient, multimodal summaries, from which a cascade of predictions issues through the entire cortical sheet, terminating in primary sensory and motor regions. The whole cascade is an instance of a concept.

That's a great update on Koch's 2006 prediction #3: Conscious precepts are the results of a single winning coalition of neurons with at some prefrontal parts of the network.

Thanks again for figuring this stuff out and writing it down! And helping me to find it. Back to the more mundane…

YON - Jan C. Hardenbergh <> jch.com <> Pixelsmith
Do what you can, with what you have, where you are.
Teddy Roosevelt

> On Sep 6, 2017, at 7:08 AM, Lisa Feldman Barrett <l.barrett@northeastern.edu> wrote:
>
> Dear Jan
>
> Is your question this: is the brain circuit for a particular action, like growling or hissing, similar for cats and dogs? I don't know for sure, but I imagine that they are probably similar. But keep in mind that (1) growling and hissing is not anger and (2) it is very likely that Panksepp's particular proposed circuit might not be correct -- about a decade ago my lab read through the literature to see if there was evidence to support his hypothetical circuits, and we did not find much.
>
> Best wishes
>
> Lisa
>
> On 9/5/17 11:49 PM, YON - Jan C.Hardenbergh wrote:
>> Dear Lisa,
>>
>> I totally believe that are no specific "rage circuits", but, are you saying there is no commonality in the various brain networks when cats and dogs are growling/hissing? Especially, given the similarity of cat brain structures and macaque and the similarity of threatening behaviors in dogs & cats?
>>
>> Wow, many publications for 2017!! Thank you so much for all of this info. It will take me a while to get thru Historical Pitfalls. I'm working on Sapolsky's Behave now.
>>
>> Lots to digest. Thanks again, -Jan
>> P.S. only 2 events, Concord, MA and London, sigh.
>>
>>> On Sep 5, 2017, at 7:27 AM, Lisa Feldman Barrett <l.barrett@northeastern.edu> wrote:
>>>
>>> Dear Jan
>>>
>>> Thanks for your email.
>>>
>>> Please see below:
>>>
>>>> I wish I understood your thinking on where the interface is between the brain, the body budget, interoception, and the primal mechanisms of the 4Fs. Do you have any papers or other technical writing that might help me?
>>>
>>> This information is in my book. For technical papers, you can see http://www.affective-science.org/publications.shtml
>>> In particular, you might find these papers helpful:
>>>
>>> Barrett, L. F. (2017). The theory of constructed emotion: An active inference account of interoception and categorization. Social Cognitive and Affective Neuroscience, doi: 10.1093/scan/nsw154.

Barrett, L. F. & Simmons, W. K. (2015). Interoceptive predictions in the brain. Nature Reviews Neuroscience, 16, 419-429.

> And what I think is related is whether you think Panksepp's common circuits and primal states of mammals has any validity, but, you disagree that they are similar to human emotions? In the podcast, you said he did not have convincing evidence for his grand theory, but, did it support parts of his theory?

Jaak's circuits were hypothetical. Please see the attached paper. Please also see chapter 12 in my book.

Barrett, L. F. (2017). Functionalism cannot save the classical view of emotion (short version). Social Cognitive and Affective Neuroscience, doi: 10.1093/scan/nsw156. There's also an extended version of the paper.

Barrett, L. F. (2017). Categories and their role in the science of emotion. Psychological Inquiry, 28, 20-26.

> It seems that Panksepp's Rage is common between dogs and cats. Whether it has any real similarity to a human emotion is certainly an open question, but the similar of vocalization and raised hair seems very similar. I was not able to get too far into Pankseep's Archeology of the Mind. Even with a co-author it is no where near as readable as HEAM. Still, the idea that mammals share common circuits and that we have common primal "emotions" seems reasonable.

There is no "rage" circuit in any brain. There are circuits for actions, and as humans, we make sense of these actions as "rage." There are no "primal emotions."

> I had October 23rd in Concord in my calendar to get my book signed by you, but, alas, I will be in Minnesota that day. Do you give any public talks and could I bring my book to one and have you sign it?

please see events listed on lisafeldmanbarrett.com

All my best

Lisa

> Thanks, -Jan
>
> > On Jul 6, 2017, at 5:53 AM, Lisa Feldman Barrett <l.barrett@northeastern.edu> wrote:
> >
> > thanks so much!
> >
> > yes, this is my idea. some scientists have written about the brain modeling the world, but they say nothing about your body budget, and they restrict the model to memory -- not all of mental life (memory, emotions, thoughts, perceptions, etc.)
> >
> > On 7/5/17 10:22 PM, YON - Jan C. Hardenbergh wrote:
> >
> > > Dear Lisa,
> > >
> > > Done, done & done. I'm not sure how long it will take Amazon to update the review.
> > >
> > > Please, please tell me is this is your idea (p287): "your brain is wired to model your world, driven by what is relevant for your body budget, and then you experience that model as Reality"
> > >
> > > If not, who I should read?
> > >
> > > Thank you!
> > >
> > > -Jan
> > >
> > > > On Jul 5, 2017, at 5:08 PM, Lisa Feldman Barrett <l.barrett@northeastern.edu> wrote:
> > > >
> > > > Dear Jan
> > > >
> > > > thanks so much for the kind words and for your time and effort on the webpage (and the amazon review).
> > > >
> > > > First, a request -- please remove the words about the "bumble bee" (p.29) and "hidden bee" (p.142), both on your webpage AND in your review on Amazon -- if they remain, they will ruin the illusion for new readers.
> > > >
> > > > Also, there is a point of clarification for your webpage:
> > > >
> > > > - I am not claiming that a person cannot feel emotion alone -- the book explains that the concepts necessary for a brain to make emotion must be learned -- they cannot be learned from the world independent of the existence of other people -- those concepts must from someone else. So they are inherently social. Once a brain has learned those concepts, that brain can use them when alone, but those concepts are still inherently social.

When a brain cannot make an emotion concept -- either because the concept was not learned or because that brain cannot do conceptual combination to make the concept on the fly -- then the person cannot make that emotion

Best wishes

Lisa

On 7/4/17 11:35 PM, YON - Jan C. Hardenbergh wrote:

> Dear Dr. Barrett,
>
> I am awed by your book: HEAM.
>
> This is very well articulated: " your brain is wired to model your world, driven by what is relevant for your body budget, and then you experience that model as Reality"
>
> I've never seen anyone (else) say that consciousness is experiencing a model of Reality. Do you clam credit for that? It's brilliant.
>
> I really liked Feinberg and Mallet, when they came close - p. 111: "But to us, real consciousness is indicated by the (optic tectum) making a multisensory map of the world and then attending to the most important object in this map and then signalling behaviors"... based on the map.
>
> I put up a bunch of notes, all fair use I believe, except for a low-res image of figure 4-1 on page 61. 10X projections from V1 to LGN than vice versa. I can take that down if you like. jch.com/notes/BarrettHEAM.html

YON - Jan C. Hardenbergh <> jch.com <> Pixelsmith
We act as though comfort and luxury were the chief requirements
of life, when all that we need to make us happy is something to
be enthusiastic about. Charles Kingsley 1819-1875

--

Lisa Feldman Barrett, Ph.D.
University Distinguished Professor of Psychology, Northeastern University
Director, Interdisciplinary Affective Science Laboratory

Web:
https://lisafeldmanbarrett.com

Lab:
http://www.affective-science.org

Phone: 617-373-2044
Fax: 617-373-8714
Facebook:
https://www.facebook.com/lisa.barrett.5667

Twitter: @LFeldmanBarrett

<Barrett & Satpute in press Historical Pitfalls and New Directions in the Neuroscience of Emotion .pdf>

--

Lisa Feldman Barrett, Ph.D.
University Distinguished Professor of Psychology, Northeastern University
Director, Interdisciplinary Affective Science Laboratory

Web: https://lisafeldmanbarrett.com
Lab: http://www.affective-science.org
Phone: 617-373-2044
Fax: 617-373-8714
Facebook: https://www.facebook.com/lisa.barrett.5667
Twitter: @LFeldmanBarrett

--

Lisa Feldman Barrett, Ph.D.
University Distinguished Professor of Psychology, Northeastern University
Director, Interdisciplinary Affective Science Laboratory

Web: https://lisafeldmanbarrett.com
Lab: http://www.affective-science.org
Phone: 617-373-2044
Fax: 617-373-8714
Facebook: https://www.facebook.com/lisa.barrett.5667
Twitter: @LFeldmanBarrett