Radicalizing Enactivism:

Basic Minds without Content
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Basic Minds without Content

Daniel D. Hutto and Erik Myin
For our wives and children,

*ad augusta per angusta*
**Abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AORs</td>
<td>Action Orientated Representations</td>
</tr>
<tr>
<td>CIC</td>
<td>Content Involving Cognition</td>
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<tr>
<td>CEC</td>
<td>Conservative Enactive/Embodied Cognition</td>
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<tr>
<td>cEMH</td>
<td>Complementarity-motivated Extended Mind Hypothesis</td>
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<tr>
<td>DEUTS</td>
<td>Dynamical Entanglement plus Unique Temporal Signature</td>
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<td>DIM</td>
<td>Default Internal Mind</td>
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<td>EMH</td>
<td>Extended Mind Hypothesis</td>
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<td>pEMH</td>
<td>Parity-motivated Extended Mind Hypothesis</td>
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<tr>
<td>PCS</td>
<td>Phenomenal Concepts Strategy</td>
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<tr>
<td>REC</td>
<td>Radical Enactive/Embodied Cognition</td>
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<tr>
<td>SMH</td>
<td>Scaffolded Mind Hypothesis</td>
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<td>WASP</td>
<td>Well-Known Argument for Shared Phenomenality</td>
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Preface

“Man is so intelligent that he feels impelled to invent theories to account for what happens in the world. Unfortunately, he is not quite intelligent enough, in most cases, to find correct explanations”

“The deepest sin against the human mind is to believe things without evidence”

— Aldous Huxley

Catching a swirling leaf, finding one’s way through unfamiliar terrain, attending and keeping track of another’s gaze, watching the sun rising at the horizon: the vast sea of what humans do and experience is best understood by appeal to nothing more than dynamically unfolding, situated embodied interactions and engagements with worldly offerings.

Where we find such familiar activity we find basic minds, but – we propose – the nature of the mentality in question is neither underwritten by processes involving the manipulation of contents nor is it, in itself, inherently contentful. To think otherwise, as many do, is
to ascribe features and characteristics to basic minds that only belong to enculturated, scaffolded minds that are built atop them.

Just what is content? At its simplest, there is content wherever there are specified conditions of satisfaction. And there is true or accurate content wherever the conditions specified are, in fact, instantiated.

For many it is near enough definitional that minds – of any sort at all, including basic minds – entail the existence of content. Content – some hold – is necessitated by any intelligent interaction with the world. They take it that the best explanation of even the most basic kinds of cognition requires positing contents that are acquired and transformed in order to create representations that then inform and guide what an organism does or experiences.¹

Certainly, it is widely believed, that wherever there is intentionally directed cognition or – at least – wherever there is perceptual experience – there must be content in the sense defined above. To think either of these things is to endorse CIC – the thesis that Cognition necessarily Involves Content – in its ambitious forms.

This book challenges the popular, deeply rooted intuition that either of these versions of CIC is true. We advance the fortunes of the counter thesis: there can be intentionally directed cognition and, even, perceptual experience without content. We maintain that this thesis is possibly true, and we try to make the reader believe it too. Not only is it not ruled out a priori, on close inspection we find no compelling
reasons to doubt its truth: Quite the opposite. As philosophers, we are in the possibility promoting business. We will have succeeded if, having reached the end of the book the reader is convinced that the idea of contentless basic minds cannot be cursorily dismissed; that it is a live option that needs to be taken much more seriously than it is currently.

Our game plan is to achieve this by radicalizing enactivism. Radicalizing enactivism?! Surely, enactivism is already quite radical enough! Enactivism or embodied approaches to cognition, after all, gives explanatory pride of place to dynamic interactions between organisms and features of their environments over the contentful representation of such environmental features.

Many contemporary philosophers and cognitive scientists acknowledge the critical importance of situated, environment-involving embodied engagements as a means of understanding basic minds. Yet despite being daring and ground breaking in many respects, most existing enactive and embodied proposals about cognition are advanced in theoretically modest forms, often retaining some residual commitment to CIC. This normally takes the form of holding fast to the view that basic minds are contentful but allowing that the vehicles that bear such contents – those at the coalface of cognitive processing – might be extra-neural; that the latter might stretch into the wider body or environment, at least in some instances.
This is to endorse a form of Conservative Enactive or Embodied Cognition, or CEC.

By our lights, CEC does not go nearly far enough for its own good. We explain why, focusing on a prominent example, in Chapter 2. In a nutshell, it is only by totally rejecting CIC about basic minds that enactivism gains the resources for robustly seeing off its critics. If we are right, radicalizing enactivism is necessary if enactivism is to provide a stable, defensible and strategically viable framework for thinking about basic minds. This requires nothing short of a thoroughgoing and wholehearted rejection of CIC. Since certain prominent variants of enactivism fail to break with tradition in the required way – because they harbour conservative tendencies – it is necessary to press for a radicalized enactivism; that is to press for REC, aka Radical Enactive/Embodied Cognition. REC denies that basic minds are contentful, full stop.

Isn’t this this just to ride the crest of a fashionable wave? It is certainly true that the widespread acceptance of embodied and enactive approaches has outpaced and preceded a clear articulation and philosophical defence of such approaches – one that would motivate rational acceptance of their framework commitments. A convincing justification for believing in such approaches has lagged behind their general endorsement by the cognitive scientific community.
This raises the worry that the whole enactive and embodied turn in cognitive science is backed by little or nothing more than an unreasoned attachment to certain attractive, but ultimately empty, pictures and slogans. For this reason, Prinz (2009) is right to proclaim that – at least in one sense – enactive and embodied approaches may be easier to ‘sell than to prove’ (p. 419).

We aim to supply the philosophical clarifications and strong support that has been sorely missing. Given this ambition we recognize that in another sense Prinz is quite wrong about REC being any easy sell. Even when backed by solid philosophical arguments that favour REC we don’t expect it will be attractive to many analytic philosophers. For it to gain acceptance will be an uphill struggle. As things stand, there is great resistance even to the mere suggestion that the prominent forms of basic mentality of the sort that we discuss (which include human visual experience) might lack content. To many this is downright counterintuitive and plainly false.

We think REC has a better chance of being true than its CIC or CEC rivals. But we have to work hard to show this. We are well aware that there will be an immediate temptation on the part of some readers to dismiss – out of hand – the view we favour as a non-starter. Worse, some will regard it as simply inconceivable. Thus we concentrate our efforts on ensuring on that REC gets a fair hearing. This is done by testing its mettle against the best proposals of those who represent the avant garde of thinking in the philosophy of cognitive sciences – for
example, in order of appearance, we critically review how it fares in comparison to claims made by Noë, Thompson, Clark, Wheeler, Dretske, Millikan, Gauker, Burge, Chalmers, McDowell, Menary and Block.

Chapter 1 sets the stage for this labour, describing the revolutionary atmosphere of today’s cognitive science, clarifying the core theses that REC leans upon and introducing the main players – traditional CIC, newly articulated CEC and REC in more detail. Rather than trying to argue for REC straightaway, it prepares the reader for that task, asking readers to flex their imaginative muscles by first picturing: What things would have to look like if REC were true. And, by comparison, where REC lives in conceptual space.

The core of the book – Chapters 3 to 6 – is devoted to making a two-phase argument for REC. These chapters upset several bedrock assumptions about the nature of basic minds – assumptions that many regard to be, if not utterly beyond question, then at least wholly secure and needing little attention.

Chapter 3 overturns the CIC applecart by examining familiar reasons for thinking that we can go at least a some way in explaining basic cognition without having to call on the notion of content in any way, shape or form. For example, the well-known successes in building flexible, behaviour-based robots and understanding the environment-involving cognitive antics of certain insects look to have progressed precisely because CIC thinking was rejected. Having first established
this, it is then argued that there is every reason to think the same approach will work when it comes to explaining many sophisticated human doings too, especially those associated with manual activity – such as reaching and grasping. If this is right, it is possible that cognitive science may go much further than is typically supposed without CIC; potentially REC has real reach. This overcomes a familiar worry that even if REC is true in some domains it has only very limited scope.

Three main options present themselves to defenders of CIC at this point. Option A: These aren’t cases involving *bona fide* cognition. The activities in question are too simple and on-line to require genuine cognitive explanation. This looks like mere *post hoc, ad hoc* stipulation. Option B: These are cases of *bona fide* cognition. REC is true of them. But cognition of this kind is extraordinarily limited. It won’t ‘scale up’ greatly and hence poses no interesting challenge to CIC’s larger ambitions. Option C: These are cases of *bona fide* cognition. But they imply CIC – although the most promising CIC proposal about such cases comes in the form of CEC. Ergo, REC is false across the board.

Obviously, option C is the strongest, least concessionary move for fans of CIC to make. In considering if this might work we describe the features of the most credible CEC challenger; one which makes appeal only to Action Oriented Representations, or AORs.

To deal with this threat we go beyond Chapter 3 style arguments that were only designed to establish that we ‘don’t need’ CIC in order
to explain many forms of basic cognitive activity. Chapter 4 ups the ante, arguing that we simply ‘can’t have’ CIC accounts at this level, not even in the form of CEC – that is not without surrendering explanatory naturalism.

All CIC accounts about basic cognition face a crippling problem; they are unable to account for the origins of content in the world if they are forced to use nothing but the standard naturalist resources of informational covariance, even if these are augmented by devices that have the biological function of responding to such information.

Defenders of CIC must face up to the Hard Problem of Content. The bottom line is that posting informational content is incompatible with explanatory naturalism. The root trouble is that Covariance doesn’t Constitute Content. Assuming that covariance is the only scientifically respectable notion of information that can do the work required by explanatory naturalists, it follows that informational content does not exist in nature – or at least independently from and prior to the existence of certain social practices. If so, then cognitive systems don’t ‘literally traffic’ in informational content as CIC and CEC stories assume. This is so, a fortiori, if there is no naturally occurring informational content in the world.

This presents proponents of CIC with a dilemma, and the customary three possible moves. First, they might try to avoid its horns, either by demonstrating that Covariance does Constitute Content, showing that what they proposes is already consistent with
explanatory naturalism after all or by finding another naturalistic candidate to explain informational content to put in its place. We examine these possibilities but regard them to be forlorn.

Second, they can opt to be impaled on the first horn: Posit informational content but reject explanatory naturalism. This might take the form of assuming that facts (including correspondences between facts) entail truth-bearing contents. This might work if contents were identical with their own truth conditions: if they are imagined to, somehow, both specify and realize their conditions of satisfaction, in absence of thinkers. If this idea has legs then informational contents might be primitive, unexplained features of reality itself. However, there is a price – since it is not obvious that this proposal is compatible with physicalism. Still, it might be compatible with some kind of unexplanatory naturalism. For example, informational content might an irreducible property of fundamental reality, having status similar to that of qualia in Chalmers’ system.

Finally they can opt to be impaled on the second horn. This looks less painful. It requires accepting that covariance does not entail or constitute content – i.e. that it lacks inherent, truth-bearing properties. But is also to accept that the only scientifically respectable notion of information in play – the only one that can do the work required by naturalists – is the ‘information as covariance’ notion. Putting this together, it follows that sensitivity to covariances is not sensitivity to informational content.
In line with this, basic cognition takes the form of systems making informationally sensitive, engaged interactions with environmental offerings. This involves being sensitive to covariant information but it does not involve literally picking up and processing informational contents. Cognitive systems do not literally ‘pick up’ or ‘take in’ any informational contents; there are no such things as informational contents to take in. If so such imagined contents are not ‘objective commodities’ and cognitive systems do not ‘traffic in’ them, in the ways CIC and CEC require.

At this point, the best, and most strategically secure, move that friends of CIC can make is to cut their losses. This can be achieved by surrendering the idea that content is needed in order explain the kinds of engaged activity that has been the focus of attention up until to this point. This retreat might take the form either of a concession to REC or of a revival of the Option A strategy, that of denying that the activity in question implies bona fide cognition.

Either way, CICers who go this way insist content only comes into play when there are quite distinctive mental phenomena that need to be accounted for. With this in mind, it turns out that there are good reasons to try to draw the CIC line when what is being dealt with is full-blown perception and perceptual experience. Prima facie, it looks like a good bet that this where we will – undeniably – find the most basic, truly contentful minds.
Chapter 5 lays out the options for those prosecuting this sort of fall back strategy. In particular, it reveals why adopting a hyperintellectualist position is of no avail at this juncture. Apart from assuming the perceptual experience is inherently contentful, hyperintellectualists also assume that it depends on a great deal of background representational activity. These latter commitments inherit the problems of the discredited CIC accounts – those examined and dismissed already in Chapter 4.

Nevertheless, three of its core commitments can be rejected to fashion a minimal intellectualism – one that skirts the crippling Hard Problem of Content while remaining a solid CIC proposal about perceptual experience. We consider how those who want to defend CIC in this domain might go even lower still, adopting maximally minimal intellectualism – the latter being the most modest and credible CIC view about the way in which perceptual experience might be essentially contentfully representational.

This sets the stage for CIC’s last stand. Having clarified these matters, we are able to assess whether REC might not plausibly advance further into what is generally taken to be utterly safe CIC territory, extending its reach to include perceptual experience – even human visual experience. To show that it possibly can, Chapter 6 argues against the best and most plausible maximally minimal intellectualist proposals trading on today’s market. After detailed examination, it is found – in the cold light of reason – that they offer no
serious resistance and that there is no compelling ground for rejecting the conclusion that perceptual experience is inherently contentless.

Let us be clear. In pressing for REC, we do not say that CIC is never true. We do not say that cognition is never informed by or involves content. We have no beef with this idea. We are not advancing Really Radical Enactive or Embodied Cognition as thesis about the nature of all minds. Some cognitive activity – plausibly, that associated with and dependent upon the mastery of language – is surely content involving. Still, if our analyses are right – a surprising amount of mental life, including some canonical forms of it, such as human visual experience – may well be inherently contentless. If true this is not trivial since such forms that are often taken to definitively imply the existence of representational content. If REC is true then CIC’s picture of basic minds – one that has dominated mainstream philosophical and scientific thinking, in one shape or another, since the early modern era – must be completely rejected as false.

Some interesting results follow. In Chapter 7 we examine what acceptance of REC means for the now stagnating debate about the extent and boundaries of mind. We argue that – at least, with respect to their intentional aspects – that basic minds extensive and not merely extended if they are contentless. We demonstrate how REC decisively enables those interested the question about whether minds extend to move beyond traditional stalemates and how it is possible to re-house some of the best proposals to have come forth from these discussions.
If REC is accepted thinking on this topic must be reframed in terms of extensive but contentless basic minds. But starting from this platform allows for the possibility that such minds might be transformed, though engaging in wider practices, to yield contentful scaffolded minds.

Finally, to round things off fully, Chapter 8 considers REC’s implications for thinking about phenomenal consciousness. Does REC imply similar conclusions for the extent of phenomenality, as many enactivist argue? Is there any compelling reason to suppose that phenomenality is extensive too?

The answers are complex. We use this chapter as an opportunity to correct some understandable confusions about the exact value of the enactivist strategy of going wide and looking to environmental features when explaining why the phenomenal characters of experiences are as they are. This – it is often thought – to be motivated by hopeless attempt to directly solve the Hard Problem of Consciousness.

Rejecting this standard interpretation, we argue that the purpose of going wide has a different, subtler explanatory function. Moreover, the explanatory value of this move is not undermined, even if it is accepted that the supervenience basis of phenomenality is wholly brainbound.

As a finale, we consider how such considerations can be brought to bear not in effort to provide a straight solution to the Hard Problem of Consciousness – something we regard as asking the impossible – but as
motivating belief in the relevant identities that obviate having to think that such a solution is so much as needed.

Ultimately, our purpose in advancing REC is in a sense political. Like Noë, our aim is “to change the world. Or at least to shake up the cognitive science establishment” (Noë 2009, p. xiv). We intend to show that, at least in this case, Prinz (2009) is wrong to hold that “Radicalism may be good for politics, but it’s bad for science” (p. 419).

This short book is really an enactivist manifesto – an argumentative one in the service of philosophy and science; it presses for REC by articulating key considerations that make it clear that REC is not only possibly true but in fact a good bet. At the very least we hope to expose that, despite enjoying the status of the default view in some circles, there is reason to kick the CIC habit when it comes to thinking about basic minds. CIC-ish thinking in this domain is much more rickety than is typically supposed, while rival REC proposals, while radical, are not reckless.

Acknowledgements

First and foremost we wish to acknowledge the tolerant patience of each of our long-suffering families, our wives – Farah Hutto and Inez Germeys —and children – Alexander, Justin and Emerson, the three Hutto boys and Elise, Charlotte and Laure, the three Myin girls. A great deal of family time was lost during our collaboration and we both
spent more time away from home than we, or our families, would have wished.

We are especially grateful to the Research Foundation Flanders (FWO), the Research Council of the University of Antwerp and the University of Hertfordshire for supplying funds that made our regular collaboration possible – and to the staff of Elzenveld Centrum, Antwerp; the Pennyfarthing Hotel, Berkhamsted; and the Hôtel du Panthéon, Paris for their kind services while housing us over the years. We especially thank the latter for allowing two philosophers to feature as part of the lobby décor during the last days of finishing the book. We also thank Joanna Gillies for proof reading the final manuscript in the days before its submission.

For their insightful comments, challenges and other intellectual stimuli along the way we thank: Kristin Andrews, Malika Auvray, Tim Bayne, Tony Chemero, Sam Coleman, Ed Cooke, Ron Chrisley, Andy Clark, Daniel Dennett, Shaun Gallagher, Vittorio Gallese, Christopher Gauker, Susan Hurley, Fred Keijzer, Steven Laurence, Richard Menary, Danièle Moyal-Sharrock, Bence Nanay, Alva Noë, Kevin O’Regan, Jesse Prinz, John Searle, Corrado Sinigaglia, Marc Slors, Pierre Steiner and Mike Wheeler.

We thank our colleagues and PhD students for providing an enjoyable and stimulating work environment, in particular, Lars De Nul, Jan Degenaar, Geert Gooskens, Victor Loughlin, Peter Reynaert, Joachim Leilich, Johan Veldeman and Karim Zahidi.
We are grateful to the organizers of the many events at which we have been invited to present our work. We would like to thank the organizers and audiences of events that took place at the following venues for having provided opportunities to clarify and develop ideas that turned out to be critical to the main themes of this book: Sheffield, November 2011; Philosophy of Neurosciences Workshop, Louvain la Neuve, November 2011; School of Visual Arts, New York, October 2011; Ecap7, Milan, September 2011; Swedish Graduate Summer School for Cognitive Science (SweCog), August 2011; Arcus Foundation, New York, August 2011; International conference on Memory, York, August 2011; Royal College of Arts, London, June 2011; Extended Cognition Workshop; University of Amsterdam, June 2011; Free University of Amsterdam, May 2011; King’s College, London, April 2011; The Berlin School of Mind and Brain, the Zentrum für Kulturforschung and Collegium for Advanced Studies, Berlin, Oct 2010; Third Workshop on the Philosophy of Information, November 2010, Brussels; Institute of Cognitive Science, University of Osnabrück, 20th October 2010; University of Sydney, December 2009, VAF IV, Louvain, January 2010; University of Wollongong, , November 2009; Humboldt-University Berlin, November 2009; Clark Centennial Conference, Worcester, Mass. October 2009; ESF workshop on Neuroesthetics, Milan, September 2009; University of Milan, May 2009; Dubrovnik, April 2009; Universidad de Sevilla, February 2009; University of Heidelberg, Sept 2008; Fondazione Rosselli, Turin, September 2008; University of


Last but far from least, we are grateful to Phillip Laughlin, our editor at MIT, for his patience and cheerful support in all matters – both during the early stages of obtaining the contract and the latter stages of bringing this Fodor-weight manifesto into being.
Terminological note: As we use it, the term ‘basic cognition’ is more narrow than basic mentality. The former denotes mental activity that exhibits intentional directedness but does not necessarily imply phenomenality. The latter denotes mentality that might exhibit both.